Personal/Microcomputer Survey

The Personal/Microcomputer Systems Survey briefly outlines features of most of the microprocessor-based small computers on the market today. Because of the proliferation of these low-end systems, this survey does not include pocket computers, nor does it include systems that are sold only to OEMs.

Computer system profile descriptions, or entries, are arranged alphabetically by vendor. Each entry uses a standard set of bold headings to identify major profile sections. In addition, within these sections, individual topic areas are delineated by solid dots (•).

A cross-reference chart on the following pages graphically depicts important product characteristics for all computer systems covered in the survey. Each chart entry corresponds to a specific computer system entry in the main body of the survey. Topic areas covered in the chart are also covered in more detail within the profile descriptions. These topic areas are Operating Systems (which ones are available from the vendor for the particular system); CPU (what CPU comes standard with the system); Number of Users (is this a single-user or multiuser system); Base Configuration; Hard Disk Capability; Price Range (for the base system models; no options are included); and Survey Page (on what page can each particular entry be found).

Following the cross-reference listing is another chart of selected systems and their level of IBM PC compatibility.

PERSONAL/MICROCOMPUTER FEATURES

Classification • this section consists of a number of topic areas that summarize important characteristics used to classify the covered system. The first topic area tells how many users the system can handle and what kind of computer it is (e.g., desktop, portable, component). The next area shows whether the system has an 8-bit, 16-bit, or dual-processor-based CPU. Other information cited under Classification might include number of models and their differences, whether the vendor claims compatibility with another system, plus any other relevant information not covered elsewhere that may better explain the product line.

Systems Software • this section outlines the systems software that is offered by the manufacturer. First, a brief description of the operating systems that run on the computer is provided. Next, the programming languages are presented. This is followed by data/database management systems and lastly by communications software.

Applications Software • this section covers applications software that is offered by the manufacturer. In most cases, only the names of word processing and electronic spreadsheets are cited; other products are mentioned according to their application category (e.g., accounting, legal, etc).

Systems Hardware • this section provides brief descriptions of packaged hardware, CPUs, memory, and I/O and communications facilities.

Mass Storage • this section gives the maximum hard disk and diskette capacity for a system. It tells what size disks are being used and the individual disk capacities. It also presents magnetic tape storage information, if available from the vendor.

Printers • this section shows what kinds of printers are available from the vendor.

Display/Keyboard • this section covers the major characteristics of displays and keyboards.

Pricing/Support/Availability • this section begins with the base price of a system and what that price includes. It then outlines software and hardware support and service arrangements, lists the first delivery date, and notes the number of systems installed to date.

Personal/Microcomputer Survey

PERSONAL/MICROCOMPUTER OUTLINE

Column headers (left to right):

OPERATING SYSTEMS: CP/M-80 (2.2) · CP/M-86 · CP/M Plus (3.0) · Concurrent CP/M · MP/M-MP/M-86 · MS-DOS · UCSD p-System · UNIX-UNIX-like · Proprietary · Others

CPU: 8-bit 6502/6509/6510 · 8-bit Zilog Z80 · 8-bit Intel 8080/8085 · 16-bit Intel 8086 · 16-bit Intel 8088 · 16-bit Intel 80186 · 32/16-bit Motorola MC68000 · Others

NUMBER OF USERS: Single-User · Multiuser

BASIC CONFIGURATION: Display · Keyboard · Disk Drives

HARD DISK CAPABILITY

PRICE RANGE: Under $2,000 · $2,000-$5,000 · $5,000-$10,000 · Over $10,000

SURVEY PAGE

COMPANY ● PRODUCT	SURVEY PAGE
Acorn Computer	1
ACT Apricot	1
Action Discovery 500	1
Action Discovery 1600	1
Actrix Portable Computer	2
Alpha Micro AM-1000, 1000E	2
Alpha Micro 1042E, 1072, 1082, 1092	3
Alspa ACI-1, ACI-2	3
Alspa Bottomline	3
Altos 580-20, 580-40	3
Altos 586, 986	4
Apple IIe	4
Apple III Plus	4
Apple Lisa	5
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California Computer Calcstar	9
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California Computer 200, 300, 400	9
California Computer Slimline	9
California Computer Turbostar	10
Callan Data Unistar 100, 200	10
Canon AS-100	10
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Charter Information System 4	11
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CIES 680/30, 680/35, 680/40	11
Codata 3300	12
Codex CDX-268 Series	12
Coleco ADAM	12
Colonial Data SB-80, SB-80/4	13
Columbia MPC	13
Columbia VP Portable	13
Commodore C128/80	14
Commodore Executive 64 Portable	13
Commodore PET, 8032, SuperPET	14
Commodore 64	14
Commodore VIC-20	15
Compal 8200	15
Compaq Portable Computer	15
Compaq PLUS Portable	15
CompuPro 816/A, B, C, D	16

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COMPANY ● PRODUCT	CP/M-80 (2.2)	CP/M-86	CP/M Plus (3.0)	Concurrent CP/M	MP/M·MP/M-86	MS-DOS	UCSD P-System	UNIX, UNIX-like	Proprietary	Others	8-bit 6502/6509/6510	8-bit Zilog Z80	8-bit Intel 8080/8085	16-bit Intel 8086	16-bit Intel 8088	32/16-bit Motorola MC68000	Others	Single-User	Multiuser	Display	Keyboard	Disk Drives	Hard Disk Capability	Under $2,000	$2,000-$5,000	$5,000-$10,000	Over $10,000	SURVEY PAGE
CompuPro 816/E										●					●	●		●				●	●				●	16
CompuPro 816/F		●		●										●					●			●	●				●	16
CompuPro 816/Z	●													●				●				●	●			●		17
Computershop Star-Lite Portable	●													●				●		●	●	●	●			●		17
Computer Systems PC/8088 Portable	●	●				●								●				●				●	●		●			17
Computer Transceiver Execuport	●	●	●			●								●				●		●	●	●			●			17
Convergent Technologies Workslate									●					●				●		●	●	●			●			18
Corona PC & Portable		●				●	●							●				●		●	●	●	●		●			18
Corvus Concept							●		●							●		●		●	●	●	●		●			18
Cromemco C-10 Personal Computer									●			●						●		●	●	●		●				19
Cromemco D-Series								●	●			●				●		●	●			●	●			●		19
Data General Desktop Generation		●					●	●				●						●	●	●	●	●	●			●		19
Datapoint 1560	●						●					●							●	●	●	●	●			●		20
Data Technology Associate	●	●			●		●					●						●	●	●	●	●	●		●			20
Datavue DV80-200 Series	●											●						●				●		●				20
Datavue DV80-300 Series	●	●				●						●				●		●	●			●	●		●			21
DBSI-16		●				●				●				●				●	●			●	●		●			21
DEC DECmate II	●								●	●		●						●		●	●	●	●		●			22
DEC Professional 325, 350	●				●		●					●						●		●	●	●	●		●			22
DEC Rainbow 100, 100+	●	●				●						●			●			●		●	●	●	●		●			21
Digital Microsystems 3/F Fox	●								●			●						●		●	●	●			●			22
Digital Microsystems DMS 15	●								●			●						●		●	●	●	●			●		22
Docutel/Olivetti M20	●	●			●			●						●				●		●	●	●	●			●		23
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Durango Poppy		●			●		●					●						●	●	●	●	●	●			●		23
Durango Pop II		●				●		●										●	●	●	●	●				●		23
Dynabyte Monarch	●	●			●		●			●								●				●	●			●	●	24
Eagle IIe Series	●											●						●		●	●	●		●	●			24
Eagle PC Series		●				●									●			●		●	●	●			●			25
Eagle PC Spirit Portable		●				●									●			●		●	●	●	●			●		25
Eagle 1600 Series		●		●	●	●								●					●	●	●	●	●			●		25
Electro Design IMP								●						●				●				●	●			●		26
Epson HX-20 Portable								●				●						●		●	●	●		●				26
Epson QX-10	●							●				●						●		●	●	●		●				26
ETR Star Systems	●											●						●		●	●	●	●			●		27
Euclid E-1				●	●							●							●	●	●	●	●			●		27
Facit DTC-6500	●							●				●						●		●	●	●				●		27
Fortune 32:16								●										●	●	●	●	●	●			●		28
Franklin Ace 1000									●		●							●			●	●	●	●				28
Franklin Ace 1200	●								●		●	●						●			●	●	●	●				28
Fujitsu Micro-16s		●	●	●		●								●				●		●	●	●	●			●		28
Gavilan Mobile Computer						●		●						●				●		●	●	●		●				29
Gen'l Auto Zebra 700, 2000, 3000						●		●						●					●	●	●	●	●			●		29
Gen'l Auto Zebra 750, 5500									●					●					●	●	●	●	●				●	29
Gimix 6809									●							●		●	●			●	●			●		30
Gould Power Station 1000		●			●	●	●							●				●	●	●	●	●	●		●			30
Grid Compass Portable					●			●						●				●		●	●	●	●			●		30
Hewlett-Packard HP 120, 125	●											●						●		●	●	●	●		●			31
Hewlett-Packard HP 150	●			●		●								●				●		●	●	●	●		●			31
Hewlett-Packard Series 80	●					●		●			●					●		●		●	●	●		●				31

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COMPANY ● PRODUCT	OPERATING SYSTEMS / CPU / NUMBER OF USERS / BASE CONFIGURATION / HARD DISK CAPABILITY / PRICE RANGE	SURVEY PAGE
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Honeywell microSystem 6/20		32
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Kaypro 2 & 4 Portable Computers		37
Kayrpo 2 Plus 88, 4 Plus 88		37
Kaypro 10 Portable Computer		37
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Leading Edge Personal Computer		38
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Logical Microcomputer LMC 68000		40
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Microcraft Dimension		41
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Micromation MiSystem		41
Microstandard M3000		42
Microstandard M6000P		42
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Monroe System 2000		43
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Morrow Designs Decision 1		45
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Morrow Designs MD3P Portable		45
Morrow Designs MD11		45
Multi-Tech MT500		45
Nabu 1600		46
NCR Personal Computer		46
NEC Home Elec PC-6000		46
NEC Home Elec PC-8000		47

Column header categories (angled): OPERATING SYSTEMS — CP/M-80 (2.2), CP/M-86, CP/M Plus (3.0), Concurrent CP/M, MP/M, MP/M-86, MS-DOS, UCSD p-System, UNIX, UNIX-like, Proprietary, Others; CPU — 8-bit 6502/6509/6510, 8-bit Zilog Z80, 8-bit Intel 8080/8085, 16-bit Intel 8086, 16-bit Intel 8088, 16-bit Intel 80186, 32-/16-bit Motorola MC68000, Others; NUMBER OF USERS — Single-User, Multiuser; BASE CONFIGURATION — Display, Keyboard, Disk Drives; HARD DISK CAPABILITY; PRICE RANGE — Under $2,000, $2,000-$5,000, $5,000-$10,000, Over $10,000; SURVEY PAGE.

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COMPANY • PRODUCT	OPERATING SYSTEMS	CPU	NUMBER OF USERS	BASE CONFIGURATION	HARD DISK CAPABILITY	PRICE RANGE	SURVEY PAGE
NEC Home Elec PC-8200							47
NEC Home Elec PC-8800							47
NEC Information Sys APC							48
Nelma Data Persona							48
Northern Telecom Model 503							48
Northern Telecom Models 565, 585							48
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North Star Advantage 8/16							49
North Star Dimension							50
North Star Horizon							49
North Star Horizon 8/16							49
Omnidata Omni Convertible							50
Onyx C5001A, C5001/MU, C8001/MU							50
Onyx C5012D, C5012V, C8002							51
Onyx Sundance, Sundance II							51
Onyx 2000, 3000, 4000, 5000							52
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Otrona Attache							52
Perkin-Elmer 7350							53
Pertec 3205, 3215, 3230, 3240							54
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PMC MicroMate							53
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Quay 500 Series, 900 Series							57
Radio Shack TRS-80 Color Computer							57
Radio Shack TRS-80 Micro Color							59
Radio Shack TRS-80 Models 4 & 4P							58
Radio Shack TRS-80 Models 12 & 16B							58
Radio Shack TRS-80 Model 100							59
Radio Shack TRS-80 2000 & 2000HD							59
Rair Business Computer							59
Regency R2B, R2C							60
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Royal Alphatronic PC							60
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Sanyo MBC 1200/1250							62
Sanyo MBC 4000/4050							62
Seattle Gazelle II							62
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Column headers (left to right): OPERATING SYSTEMS — CP/M-80 (2.2), CP/M-86, CP/M Plus (3.0), Concurrent CP/M, MP/M-MP/M-86, MS-DOS, UCSD P-System, UNIX-UNIX-like, Proprietary, Others; CPU — 8-bit 6502/6509/6510, 8-bit Zilog Z80, 8-bit Intel 8080/8085, 16-bit Intel 8086, 16-bit Intel 8088, 32/16-bit Intel 80186, Motorola MC68000, Others; NUMBER OF USERS — Single User, Multiuser; BASE CONFIGURATION — Display, Keyboard, Disk Drives; HARD DISK CAPABILITY; PRICE RANGE — Under $2,000, $2,000-$5,000, $5,000-$10,000, Over $10,000; SURVEY PAGE

Personal/Microcomputer Survey

COMPANY • PRODUCT	Operating Systems: CP/M-80 (2.2)	CP/M-86	CP/M Plus (3.0)	Concurrent CP/M	MP/M-MP/M-86	MS-DOS	UCSD p-System	UNIX, UNIX-like	Proprietary	Others	CPU: 8-bit 6502/6509/6510	8-bit Zilog Z80	8-bit Intel 8080/8085	16-bit Intel 8086	16-bit Intel 8088	16-bit Intel 80186	32-/16-bit Motorola MC68000	Others	Number of Users: Single-User	Multiuser	Base Config: Display	Keyboard	Disk Drives	Hard Disk Capability	Price Range: Under $2,000	$2,000-$5,000	$5,000-$10,000	Over $10,000	Survey Page
Sharp PC-5000						●								●					●		●	●			●				64
SKS 2000	●				●							●							●	●	●	●	●	●		●			64
SKS Nano Portables	●				●							●							●		●	●	●	●		●			64
SKS Pico Portables	●				●							●							●		●	●	●			●			64
Sony SMC-70	●	●										●							●			●	●	●	●				65
Sord M5										●		●							●						●				65
Sord M23 Series				●	●		●					●							●		●	●	●	●		●			65
Sord M23P				●	●		●					●							●		●	●	●			●			66
Sord M68					●	●		●				●					●		●		●	●	●	●		●			66
Sord M343		●				●	●		●			●					●		●	●	●	●	●	●			●		66
SpectraVideo SV-318	●											●							●			●			●				67
SpectraVideo SV-328	●											●							●			●			●				67
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Sperry Personal Computer			●		●	●								●					●		●	●	●	●		●			68
Stearns Desktop Computer			●		●								●							●	●	●	●	●		●			68
STM Pied Piper	●											●							●			●	●		●				69
Strategic Technologies PC Traveler				●										●					●		●	●	●	●		●			69
Sumicom System 330		●			●							●							●		●	●	●	●		●	●		69
Sumicom System 830	●											●							●		●	●	●	●			●		69
Systems Group System 2900	●				●					●		●							●	●			●	●			●	●	70
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Syte Series 3000 Model 300							●	●	●						●		●	●	●		●	●						●	71
Tab System 830	●			●								●			●				●		●	●	●	●			●		71
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Teleram 3000, 4000, 5000	●					●						●							●		●	●			●				72
TeleVideo TPC 1 Portable							●								●				●		●	●			●				73
TeleVideo TPC 2 Portable					●										●				●		●	●	●	●			●		73
TeleVideo TS802, TS803	●											●							●		●	●	●			●			73
TeleVideo TS802H, TS803H	●											●							●		●	●	●	●		●			73
TeleVideo TS804	●			●						●		●								●	●	●	●	●			●		74
TeleVideo TS806/20, TS806/40	●					●						●								●			●	●			●	●	74
TeleVideo TS1602G, TS1602GH		●												●					●				●	●			●		74
TeleVideo TS1603, TS1603H		●			●														●				●	●		●			75
TeleVideo TS1605					●										●				●				●	●		●			75
TI Business System 200						●		●								●			●		●	●	●	●		●			75
TI Business System 300						●		●								●			●	●	●	●	●	●			●		75
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Vector Graphic Vector 4	●	●				●						●			●				●		●	●	●	●		●			78
Vector Graphic Vector 4-S	●	●				●						●			●				●		●	●	●	●		●			78
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Video Tech VZ 200												●							●			●	●		●				80

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COMPANY • PRODUCT	OPERATING SYSTEMS										CPU								NUMBER OF USERS		BASE CONFIGURATION			HARD DISK CAPABILITY	PRICE RANGE				SURVEY PAGE
	CP/M-80 (2.2)	CP/M-86	CP/M Plus (3.0)	Concurrent CP/M	MP/M-MP/M-86	MS-DOS	UCSD p-System	UNIX, UNIX-like	Proprietary	Others	8-bit 6502/6509/6510	8-bit Zilog Z80	8-bit Intel 8080/8085	16-bit Intel 8086	16-bit Intel 8088	16-bit Intel 80186	32-/16-bit Motorola MC68000	Others	Single-User	Multiuser	Display	Keyboard	Disk Drives		Under $2,000	$2,000-$5,000	$5,000-$10,000	Over $10,000	
Visual Technology Visual 1050	—	—	●	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	●	—	●	●	●	●	—	●	—	—	80
Visual Technology Visual Commuter	—	—	—	—	●	—	—	—	—	—	—	—	●	—	—	—	—	—	●	—	●	●	●	—	●	—	—	—	81
Wang Professional Computer	—	—	—	—	●	—	—	—	—	—	—	—	—	●	—	—	—	—	●	—	●	●	●	—	—	●	—	—	81
Wave Mate Bullet IV	●	—	—	●	—	—	—	●	—	—	●	—	—	—	—	—	—	—	—	—	—	—	●	—	—	●	—	—	81
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Wicat System 155, 160, 200, 220	—	—	—	—	—	—	—	●	●	—	—	—	—	—	—	—	—	●	—	●	—	—	●	●	—	—	—	—	81
Wordplex Desktop PC, Portable	—	—	—	—	●	—	—	—	—	—	—	—	—	—	●	—	—	—	●	—	●	●	●	●	—	—	—	—	82
Wyse WY-100	—	—	—	—	●	—	—	—	—	—	—	—	—	●	—	—	—	—	●	—	●	●	●	●	—	●	—	—	82
Xerox 16/8	●	●	—	—	—	●	—	—	—	—	●	—	●	—	—	—	—	—	●	—	●	●	●	●	—	●	—	—	83
Xerox 820-II	●	—	—	—	—	—	—	—	—	—	—	●	—	—	—	—	—	—	●	—	●	●	●	●	—	●	—	—	83
Zenith Z-100	—	—	—	—	●	—	—	—	●	—	—	—	●	●	—	—	—	—	●	—	●	●	●	●	—	●	—	—	83
Zentec Series 2000	—	—	—	—	—	—	●	—	—	—	—	●	●	—	—	—	—	—	●	—	●	●	—	●	—	●	—	—	84
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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

PERSONAL/MICROCOMPUTER LISTINGS

■ **ACORN COMPUTERS CORPORATION/A Division of Acorn Computers LTD of England**

400 Unicorn Park Drive, Woburn, MA 01801 • 617-935-1190/ 800-225-8001

☐ **Acorn Computer**

Classification • single-user/multitasking component system with separately available CRT • based on 8-bit processor; co-processor optional • aimed primarily at educational market • in England system is known as the BBC

Systems Software • proprietary operating system resides in ROM and is bundled with the computer, which is also capable of running CP/M and XENIX • BASIC interpreter resides in ROM with a 6502 Assembler; LOGO, FORTH, PILOT, COBOL, and Pascal optionally provided by Acorn

Applications Software • VIEW word processing package included in ROM; over 150 "schoolware" educational programs with lesson plans and student workbooks optionally provided by Acorn

Systems Hardware • basic system includes CPU, memory, voice and music synthesis, speech generation system with processor and PHROM (Phrase Read Only Memory), cassette interface and RGB composite video and TV interfaces • CPU features 8-bit 2-MHz 6502 processor with 32K-byte RAM and 32K-byte memory; optionally available processors include: a second 6502 with 64K-byte RAM, a Z80 with 64K-byte RAM capable of running CP/M, and a 32-/16-bit NS 16032 processor with 256K-byte RAM capable of running the XENIX operating system • diskette interface, 4 analog input channels, cassette interface, RS-423 serial port (an enhanced RS-232C), and a Centronics-type parallel port standard • Econet local area network enables the BBC micro to connect up to 254 other systems • a high-speed data channel, called the Tube, gives the main computer the ability to communicate with the co-processors

Mass Storage • maximum of 800K-byte formatted diskette storage using optionally available dual 5.25-inch diskette drives with a data transfer rate of 15.6K cps and an average access time of 125 milliseconds

Printers • none supplied by vendor

Display/Keyboard • system uses separately available CRT or TV set; displays B/W or RGB in 25 lines of 80, 40, or 20 characters with a graphics capability of 640x200 pixels • 73-key Qwerty keyboard features 10 programmable function keys

Pricing/Support/Availability • base price—$995 includes CPU, 32K-byte RAM, 32K-byte ROM, diskette, serial and parallel interfaces, voice and music synthesis, speech generation system, RGB interface, 4 analog input channels, keyboard, Econet, operating system, BASIC interpreter, and VIEW word processing package • 90-day warranty • software service available from Acorn; hardware maintenance from independent service organization • sales through a national sales force, dealer/ distributor network, and computer stores • first shipped December 1983

■ **ACT (NORTH AMERICA) INC**

3375 Scott Boulevard, Suite 336, Santa Clara, CA 95051 • 408-727-8090

☐ **Apricot**

Classification • single-user/multitasking desktop/portable system; 17.5 pounds in portable mode • based on 16-bit processor • keyboard clips onto the back of the briefcase-sized chassis; monitor is not transportable; uses 2-line LCD in portable mode • runs IBM software using a built-in transfer utility

Systems Software • MS-DOS 2.0, CP/M-86, and Concurrent CP/M bundled with the computer; UCSD p-System also available • Microsoft BASIC and Personal BASIC bundled; Pascal, FORTRAN, COBOL, UCSD Pascal, C optional • dBASE II optionally available • asynchronous communications package bundled with system

Applications Software • WordStar word processing optionally available from ACT • SuperCalc electronic spreadsheet, SuperPlanner calendar and a transfer utility for downloading files from an IBM PC are included with the Apricot

Systems Hardware • basic system includes CPUs, memory, MicroFloppy diskette storage, I/O ports, and keyboard • CPU features the 16-bit Intel 8086 processor and the Intel 8089 processor for I/O management; an 8087 math co-processor optional • 256K-byte RAM expandable to 768K bytes • single-board system with one RS-232C and one parallel ports, and two open slots • on-board modem with auto-dialer optional

Mass Storage • maximum 10M bytes of hard disk storage with optional 3.5-inch Winchester disk drive • maximum 1.44M bytes of diskette storage using 2 3.5-inch Sony double-sided Micro Floppies; 315K-byte Micro Floppies are also offered by ACT

Printers • none offered by vendor

Display/Keyboard • detached 9-inch green phosphor CRT displays 25 lines of 80 characters or 50 lines of 132 characters in upper-/lowercase alphanumerics; graphics capability of 800x400 pixels • programmable keyboard has 90 keys, including 8 fixed function keys and a numeric keypad; a 2-line x 80-character "Micro Screen" LCD located on the keyboard is underscored by 6 programmable, touch-sensitive keys and also acts as a clock, calendar, and calculator

Pricing/Support/Availability • base price—$3,100 includes CPU, 256K-byte RAM, 630K-byte diskette storage, I/O ports, CRT, keyboard with built-in LCD, operating systems, BASIC, and applications software; ACT also offers a $2,495 version of Apricot that includes the above, with the exception of monitor and diskette drives • 90-day warranty • software updates/corrections available from ACT; hardware maintenance through dealer/distributors • sales and warranties available from a dealer/distributor network • date of first U.S. customer shipment January 1984

■ **ACTION COMPUTER ENTERPRISE, INC**

430 North Halstead Street, Pasadena, CA 91107 • 213-351-5451

☐ **Discovery 1600, Discovery 500**

Classification • multiuser/multiprocessor component systems with separate user-supplied CRTs; up to 16 users on Discovery 1600, up to 7 users on Discovery 500 • based on 8-bit and 16-bit co-processors

Systems Software • overall multiuser system control is through proprietary Distributed Processing Operating System (dpc/os) which resides in the Service (system control) Processor; each individual user operates under CP/M downloaded from the Service Processor to his User Processor; supported versions of CP/M include CP/M 2.2, CP/M Plus, and CP/M-86; CP/M is bundled on both Discovery 1600 and Discovery 500; dpc/os is bundled in multiuser versions; dpc/os is not required for single-user systems since they operate under resident CP/M • independently available CP/M-supported languages include COBOL, FORTRAN, C, BASIC, Pascal, FORTH, PL/1, assembly, and ADA • Data Access Corporations' Dataflex DBMS • Keith Teruya and Associates' Ace Comm Telecommunication package

Applications Software • complete business management system including A/R, A/P, G/L, payroll, inventory control, sales, and purchase order entry available from vendor

Systems Hardware • Discovery 1600 includes desktop or rackmountable chassis, service processor board, memory expansion board(s), user processor board(s), and optional disk

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storage and serial I/O communications board(s); Discovery 500 includes desktop chassis, single board service processor, expansion board, Winchester/floppy disk controller, disk storage; multiuser versions also include 1 or more single-board 8-bit user processors; all other memory expansion boards, single-board 16-bit user processor(s), serial I/O communications boards, and floppy and/or hard disk storage are optional ● single-board service processor is available in 2 versions both based on 4-MHz Z80A microprocessor; both versions are S-100 bus, have M60 multiprocessing expansion bus, and have on-board interrupt control logic; first version is for CP/M 2.2 and comes with 64K-byte 200-nanosecond RAM, programmable baud rate serial I/O port, and 1.8M-bps interprocessor communications channel; second version is for CP/M Plus and comes with 96K-byte 200-nanosecond RAM, 32K of which is bank switchable, dual programmable baud rate serial I/O ports, and 5M-bps interprocessor communications channel ● service processor requires multiprocessor expansion board with Centronics-configured parallel I/O, programmable baud rate serial I/O port, up to 4K of EPROM, M60, and real-time clock ● user processors may employ either processor board described above or 16-bit 5-MHz 8086 single-board processor available with or without 8087 arithmetic unit; this board, designed to run with CP/M-86 is S-100 bus compatible and comes with 128K bytes of 200-nanosecond RAM expandable by second board to 1M bytes, 2 programmable serial baud rate I/O ports and programmable interrupt controller ● serial I/O board provides up to 8 ports supporting either asynchronous/synchronous protocols including SDLC; ties together up to 10 Discovery Systems into local area network of up to 150 8-bit and 16-bit processors (DPC/Net)

Mass Storage ● 10M-byte formatted 5.25-inch Winchester standard on Discovery 500; 22M-byte drive optional ● maximum hard disk storage on Discovery 1600 is 128M bytes; optional drives include 10M-byte fixed Winchester, 20M-byte, 33M-byte, and 66M-byte 14-inch fixed Winchester, 10M-byte fixed and 10M-byte removable cartridge, and 60M-byte, 90M-byte, and 120M-byte 10.5-inch fixed Winchester ● maximum diskette storage 2.4M bytes on Discovery 1600; maximum of 1.28M bytes of formatted diskette storage on Discovery 500 (1 640K-byte drive standard); 2.65M-byte formatted drive optional cartridge tape and standard 9-track magnetic tape for disk backup

Printers ● supports up to 2 RS-232C printers simultaneously; additional 8 printers possible with expansion board; none available from Action

Display/Keyboard ● none offered by the vendor

Pricing/Support/Availability ● base price for single-user Discovery 1600 is $3,540 up to $24,055 for 16-user system; base price for single-user Discovery 500 System is $6,590 up to $14,295 for 7-user system ● single-user Discovery includes chassis, 1 CPU, 64K bytes of RAM, 1 extension board, and CP/M; 16-user Discovery includes chassis, 16 CPUs each with 64K bytes of memory, and extension board; single-user Discovery 500 includes chassis, 1 CPU, 64K bytes of RAM, 1 extension board, Winchester/floppy controller, 10M-byte disk, minifloppy and CPM; 7-user Discovery 500 adds 6 CPUs and dps/os to basic configuration ● service available from dealer/distributor or through manufacturers depot ● sales through dealer/distributors; Action also markets to OEMs at the board level ● first delivered January 1979; about 1,000 Discovery 1600 installations, about 500 Discovery 500

■ ACTRIX COMPUTER CORP
2159 Bering Drive, San Jose, CA 95131 ● 408-263-3660

☐ Actrix Portable Computer

Classification ● single-user/multitasking 33-pound portable computer, 16-1/8 inches wide x 10-13/16 inches deep x 10 inches high; built-in handle; leather carrying case ● based on 8-bit processor

Systems Software ● CP/M-2.2 bundled; MS-DOS, CP/M-86 optional ● Microsoft MBASIC and Digital Research CBASIC bundled ● Personal Pearl data management system bundled ● system utilities and communications programs bundled; Talisman terminal emulator optional

Applications Software ● Perfect Writer, Perfect Calc, Perfect Filer, Perfect Speller, Fancy Font, Money Maestro all bundled with the system

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, integrated printer, and real-time clock ● CPU features 8-bit Zilog Z80 microprocessor; 4 other microprocessors handle video, keyboard, and printer functions; 16-bit 8088 co-processor board optional ● 64K-byte RAM, 4K-byte video RAM, 2 4K-byte system EPROMs; 256K-byte RAM with co-processor option ● proprietary bus with IEEE 488 interface, 2 RS-232C ports, 1 parallel Centronics-compatible port, video output jack, 8-inch disk controller ● integral 300-bps direct-connect acoustic coupler ● internal battery-pack, 1200-baud modem optional

Mass Storage ● maximum of 720K bytes of diskette storage using 2 5.25-inch, double-sided, double-density diskette drives on Actrix DS and 360K bytes using 2 single-sided, double-density drives on Actrix; 2 external 8-inch drives can also be attached

Printers ● maximum of 2 printers per system; includes integrated 80-cps bidirectional dot-matrix printer with 132 columns; I/O port for Centronics-compatible printer

Display/Keyboard ● 7-inch integral CRT displays upper-/lowercase alphanumerics; 64 graphics characters; 24 lines of 80 characters plus status line; amber screen ● detachable typewriter-style keyboard; 15 function keys, numeric pad

Pricing/Support/Availability ● both systems include CPU, 64K-byte RAM, CRT, keyboard, 2 diskette drives, I/O ports, integrated printer and acoustic coupler, CP/M, MBASIC, CBASIC, applications software packages ● Actrix with 180K-byte diskette drives—$2,190; Actrix DS with 390K-byte drives—$2,590 ● mail-/carry-in hardware maintenance plans available from retailer ● sales through computer stores and OEMs ● first delivery May 1983

■ ALPHA MICROSYSTEMS
17332 Von Karman, P.O. Box 18347, Irvine, CA 92713 ● 714-957-8500

Alpha Micro AM-1000 & AM-1000E

Classification ● multiuser desktop component systems supporting from 2 to 7 users; monitor and keyboard optional ● based on 16-bit processor ● 8 models available with different disk configurations

Systems Software ● AMOS/L proprietary multiuser, multitasking timesharing system contains over 150 utilities including sorting, file handling, and spooling; CP/M-2.2 option also available ● AlphaBASIC, macro assembler bundled with AMOS/L; AlphaPascal, FORTRAN 77 optional ● AlphaRJE for IBM 2780/3780 communications

Applications Software ● AlphaWRITE word processing, AlphaCALC spreadsheet

Systems Hardware ● basic system includes CPU, memory, disk storage, I/O ports, and real-time clock/calendar ● CPU features MC68000 microprocessor; Z80 optional ● 128K-byte RAM expandable to 384K bytes (AM-1000); 256K-byte RAM expandable to 512K bytes (AM-1000E); 8K-byte ROM ● single-board computers with 3 RS-232C ports, 50-pin SASI bus connector for adding external drives, 3 coaxial video jacks (2 connect to a VCR); additional 4-port serial board with 1 parallel port optional

Mass Storage ● maximum of 100M bytes (AM-1000), 120M bytes (AM-1000E) of hard disk storage using up to 4 10M-/30M-byte

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If the entry you seek is not found in its alphabetical sequence, please refer to the cross-reference chart beginning on page II.

Winchester drives; 1 10M-byte standard on AM-1000; 1 30M-byte standard on AM-1000E; 85-millisecond average access time, 5M-bps transfer rate ● maximum of 1.6M bytes of floppy disk storage using up to 2 800K-byte diskette drives, double sided, double density, 150-millisecond average access time, 250K-bps transfer rate ● video cassette recorder interface standard on some models

Printers ● AM-302 40-cps letter-quality printer available; 132 to 197 columns, serial or parallel interface

Display/Keyboard ● Alpha Micro offers the AM-60 terminal ● display features tilting, rotating, horizontal/vertical split screen, 80 characters x 24 lines plus 2 status lines, line drawing character set ● detachable keyboard with 16 function keys (8 programmable), numeric pad, cursor control block

Pricing/Support/Availability ● suggested retail price for base systems includes CPU, RAM, 8K-byte ROM, 3 serial ports, disk storage, and on some models, a VCR interface ● AM-1000—$5,750 to $8,750; AM-1000E—$15,000 to $16,166 ● warranties and maintenance available through authorized dealers ● sales through over 300 domestic and 170 overseas dealers, system houses, and OEMs ● first delivered in June 1982; over 10,000 68000-based systems shipped

☐ Alpha Micro AM-1042E, AM-1072, AM-1082, AM-1092

Classification ● multiuser component systems support up to 26 users on AM-1042E and 40 users on other models; monitor and keyboard optional ● based on 32-/16-bit microprocessor ● 10 models available with different disk configurations and backup storage

Systems Software ● AMOS/L proprietary multiuser, multitasking, timesharing system; CP/M 2.2 option also available ● AlphaBASIC, macro assembler bundled with AMOS/L; AlphaPascal, FORTRAN-77 optional ● AlphaRJE for IBM 2780/3780 communications

Applications Software ● AlphaWrite word processing, AlphaCALC spreadsheet ● numerous packages available from Alpha Micro dealers; catalog available

Systems Hardware ● basic systems include CPU, memory, disk storage, I/O ports, and real-time clock/calendar ● CPU features AM-100/L which is based on Motorola MC68000; Z80 optional ● 512K-byte RAM expandable to 3.072M on AM-1042E; 512K-byte RAM expandable to 4.096M on others ● 2 RS-232C ports standard expandable to 60; VCR interface standard on some models; data communications controller board optional

Mass Storage ● hard disk storage—60M-byte formatted Winchester standard on AM-1042E, maximum of 1.44G bytes, 45-millisecond average access time, 800K-bps transfer rate; 70M-byte formatted Winchester standard on AM-1072, 2 standard on AM-1082, maximum of 560M bytes on both systems, 20-millisecond average access time, 1.2M-bps transfer rate; 400M-byte formatted Winchester standard on AM-1092, maximum of 3.2G bytes, 18-millisecond average access time, 1.86M-bps transfer rate ● VCR interface available for all models; 20M-byte streamer tape available for AM-1042E, AM-1072; 0.5-inch magnetic tape available for AM-1082, AM-1092

Printers ● AM-302 40-cps letter-quality printer available; 132 to 197 columns, serial or parallel interface

Display/Keyboard ● AM-60 terminal provides tilting, rotating display with horizontal/vertical split screen; 80 characters x 24 lines plus 2 status lines; line drawing character set ● detachable keyboard with 16 function keys (8 programmable), numeric pad, cursor control block

Pricing/Support/Availability ● suggested retail prices for systems include CPU, memory, 2 serial ports, disk storage, and either VCR interface or magnetic tape backup ● AM-1042E—$21,666/$25,333; AM-1072—$30,500/$34,167;

AM-1082—$48,000/$60,600/$46,600; AM-1092—$56,000/$68,600/$54,600 ● warranties and maintenance available through authorized dealers ● sales through over 300 domestic and 170 overseas dealers, system houses, and OEMs ● first delivered in 1983; over 10,000 68000-based systems shipped (all Alpha Micro systems)

■ ALSPA COMPUTER, INC

300 Harvey West Boulevard, Santa Cruz, CA 95060 ● 408-429-6000

☐ ACI-1, ACI-2, Bottom Line

Classification ● single-user/single-tasking systems; ACI-1 and -2 are component systems with an optional CRT and keyboard; Bottom Line is a fully integrated system ● based on 8-bit processor

Systems Software ● CP/M-80 is soft loaded from 8-inch diskette on all 3 systems but bundled with Bottom Line only ● no compilers or interpreters are provided by the vendor ● Condor database management system bundled with Bottom Line only ● Softcom Data Communications package bundled with Bottom Line only

Applications Software ● Spell Binder word processing and Profit Plan Electronic Spreadsheet bundled with Bottom Line only; MicroPlan financial modeling and UGRAF Graphics Analysis optional on all systems

Systems Hardware ● ACI-1 and -2 include CPU, memory, floppy disk storage; Bottom Line includes CPU, memory, floppy disk storage, CRT, keyboard ● all systems employ Zilog 4-MHz, Z80A microprocessor ● 64K-byte 200-nanosecond RAM, 2K-byte ROM ● single-board computer; 3 RS-232C ports, 1 parallel port, 1 hard disk port ● ACI-1 and -2 also have optional clock calendar with rechargeable battery backup

Mass Storage ● maximum hard disk storage is 22M bytes; optional 10.8M-byte or 21.6M-byte 5.25-inch fixed Winchester disk ● maximum diskette storage 2.4M bytes; 1 8-inch 596K-byte floppy standard with ACI-1 and Bottom Line; 2 with ACI-2; up to 2 8-inch 1.2M-byte floppy drives optional on all systems; all floppy drives offer single-density IBM 3740-compatible format as a user selection

Printers ● maximum of 1 printer per system ● 120-cps dot matrix, 80 to 132 columns available from Alspa

Display/Keyboard ● 12-inch monochrome CRT with 80 characters x 25 lines; graphics character set; upper-/lowercase alphanumerics ● detached keyboard with 10 programmable keys, numeric pad

Pricing/Support/Availability ● base price—Bottom Line—$4,495 includes CPU, 64K-byte RAM, 2K-byte ROM, keyboard, CRT, 1 diskette drive, 3 RS-232C ports, 2 parallel ports, CP/M, Spellbinder, Condor, Softcom; ACI-1—$1,995 includes CPU, 64K-byte RAM, 2K-byte ROM, 1 diskette drive, 3 RS-232C ports, 1 parallel port, 1 hard disk port; ACI-2—$2,995 adds second diskette drive to ACI-1 configuration ● warranty is 120 days from date of purchase or 180 days from original date of factory shipment ● updates for software/corrections are available; service available from manufacturer, dealer, independents either mail, carry-in, or on-site ● sales are through computer stores, office equipment dealers, or OEM ● ACI-1 first delivered July 1981 with about 1,000 installations, ACI-2 first delivered January 1982 with about 1,000 installations; Bottom Line first delivered January 1983 with 100 installations

■ ALTOS COMPUTER SYSTEMS

2641 Orchard Park Way, San Jose, CA 95134 ● 408-946-6700

☐ Altos 580-20, 580-40

Classification ● multiuser component systems supporting up to 3 users; CRT and keyboard optional ● based on 8-bit processor ● models differ in disk storage capacity

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Systems Software ● MP/M II bundled; Oasis is optional ● Business Basic, CBASIC, CB-80, Microsoft BASIC interpreter and compiler, Microsoft COBOL, R/M COBOL, CIS COBOL, Pascal MT+, FORTRAN-80, all optional ● asynchronous communications package, BSC 2780/3780, 3270/3276 emulation optional

Applications Software ● Select word processing, Multiplan spreadsheet, accounting available from Altos

Systems Hardware ● basic systems include CPU, memory, disk storage I/O ports ● CPU features Zilog Z80A microprocessor ● 192K-byte RAM; 4K-byte ROM ● single-board computers with 4 RS-232C ports, 1 parallel port; 1 serial port can be converted to a high-speed 800K-byte multidrop network port

Mass Storage ● maximum 1M-byte unformatted floppy storage using an 8-inch double-sided, double-density drive ● maximum 39M-byte formatted hard disk storage (580-20); 59M bytes formatted (580-40); 19M-byte Winchester, 85-millisecond average access time, standard on 580-20; 40M-byte Winchester, 45-millisecond average access time, standard on 580-40 ● 17M-byte cartridge tape optional

Printers ● none available from Altos

Display/Keyboard ● Altos II terminal provides tilting, rotating, 14-inch green phosphor display; horizontal/vertical split screen; 24 lines x 80 columns or 40 lines x 132 columns plus status line; 128 ASCII character set, 3 graphics character sets; 800x325 pixel resolution; VT100 emulation ● detached keyboard provides 1 programmable function keys; numeric pad; 6 editing keys; 5 cursor keys

Pricing/Support/Availability ● base price includes CPU, 192K-byte RAM, 4 serial ports, 1 parallel port, 1 diskette drive, 1 Winchester drive, MP/M II ● 580-20 with 19M-byte drive—$4,990; 580-40 with 40M-byte drive—$6,990 ● 90-day warranty ● maintenance through more than 30 Altos Service Centers; third-party on-site maintenance through TRW; software corrections sent free of charge, updates available through distributors and dealers ● sales through 1,000 dealers, direct sales force, OEMs ● first delivered 1983; more than 30,000 8-bit and 16-bit systems delivered

☐ Altos 586-20, 586-40, 986-40

Classification ● multiuser component systems (586—up to 5 users expandable to 9; 986—up to 9 users); one detached CRT and keyboard ● based on single 16-bit processor

Systems Software ● XENIX bundled; MP/M-86 optional ● Altos Business BASIC III, CBASIC-16, CBASIC-86, Microsoft BASIC compiler, Microsoft BASIC-86, Microsoft Pascal-86, Pascal MT/+, Microsoft COBOL, R/M COBOL, CIS COBOL, Level II CIS COBOL, Microsoft FORTRAN-86, SOFTBOL compiler and runtime options; C bundled with XENIX ● Informix DBMS optional ● BSC 2780/3780, 3270 emulation optional

Applications Software ● Multiplan spreadsheet, Horizon word processing, accounting packages available from Altos

Systems Hardware ● basic systems include CPU, memory, disk storage, I/O ports, terminal, real-time clock ● CPU features Intel 8086 microprocessor ● 512K-byte RAM expandable to 1M bytes ● single-board computers; 6 RS-232C ports expandable to 10 on 586, 9 RS-232C ports on 986; 1 port configurable to RS-422 800K-baud port; WorkNet local area network optional

Mass Storage ● maximum hard disk storage of 61M bytes unformatted on 586-20 and 54M bytes unformatted on 586-40, 986-40 unformatted drives; 19M-byte Winchester, 85-millisecond average access time, standard on 586-20; 42M-byte Winchester, 45-millisecond average access time, 5M-bps transfer rate, standard on 586-40, 986-40; 42M-byte Winchester optional ● 1M-byte unformatted floppy disk storage for backup ● 17M-byte magnetic tape optional

Printers ● none available from Altos

Display/Keyboard ● Altos II terminal provides tilting, rotating, 14-inch green phosphor display; horizontal/vertical split screen; 24 lines x 80 columns or 40 lines x 132 columns plus status line; 128 ASCII character set, 3 graphics character sets; 800x325 pixel resolution; VT100 emulation ● detached keyboard provides 16 programmable function keys; numeric pad; 6 editing keys; 5 cursor keys

Pricing/Support/Availability ● base price 586-20—$8,990 includes CPU, 512K-byte RAM, 6 serial ports, real-time clock, 14M-byte Winchester, 1 diskette, terminal, XENIX; 586-40—$10,990 includes same as 586-20 except 42M-byte drive; 986-40—$12,990 includes CPU, 1M-byte RAM, 10 serial ports, real-time clock, 42M-byte Winchester, 1M-byte diskette, terminal, XENIX ● 90-day warranty ● maintenance through more than 30 Altos Service Centers; third-party on-site maintenance through TRW; software corrections sent free of charge, updates available through distributors and dealers ● sales through 1,000 computer dealers, direct sales force, OEMs

■ APPLE COMPUTER INC

20525 Mariani Avenue, Cupertino, CA 95014 ● 408-996-1010

☐ Apple IIe

Classification ● single-user/single-tasking desktop computer with integral keyboard; monitor optional ● based on single 8-bit processor ● replaces Apple II Plus

Systems Software ● system monitor and Applesoft Basic with floating-point integer resident in ROM; DOS 3.3 included with Apple diskette drive; ProDOS optionally available ● Pascal, Pilot, FORTRAN, and LOGO all optional ● QuickFile II data management system optional ● VT100 emulator, CommPac communications access programs with auto-dial, auto-logon features optional

Applications Software ● Apple Writer IIe word processing, accounting, business graphics, education, entertainment, financial modeling, stock market packages available from Apple

Systems Hardware ● basic system includes CPU, memory, keyboard, built-in speaker ● CPU features 1-MHz 6502A microprocessor ● 64K-byte RAM expandable to 128K; 16-byte ROM ● single-board computer with 8 expansion slots, cassette and joystick interfaces, monitor or TV interface; serial and parallel ports optional, IEEE-488 interface optional ● Apple local area network and SDLC/BSC 3270 emulation will be available in late 1983 ● 80-column card with/without 64K-byte additional RAM, graphics tablet, joysticks, hand controllers all optional

Mass Storage ● maximum of 840K bytes using 6 optional 140K-byte 5.25-inch diskette drives ● system supports customer-supplied cassette tape drive

Printers ● maximum 1 printer per system; dot-matrix, letter-quality, thermal printers available from Apple

Display/Keyboard ● separately available CRT display or TV set; Monitor III monochrome display available from Apple; system displays 40 columns x 24 lines (80 columns optional); graphics either 40x48 or 280x192 pixels; typewriter-style keyboard is integrated into system housing; maximum pad optional

Pricing/Support/Availability ● base price—$1,295 includes CPU, 64K-byte RAM, 16K-byte ROM, keyboard, cassette and joystick interfaces, monitor or TV interface, Applesoft BASIC ● 90-day warranty ● optional annual warranty includes corrective update for systems software, carry-in maintenance for hardware; third-party on-site maintenance available through RCA ● sales through national accounts program, OEMs, and independent authorized Apple dealers ● Apple II delivered in 1977, Apple IIe in 1983; over 1,000,000 Apples shipped

☐ Apple III Plus

Classification ● single-user/single-tasking desktop computer

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with integral keyboard; monitor optional ● based on single 8-bit processor

Systems Software ● Sophisticated Operating System (SOS) softloaded from a diskette and packaged with the system; Apple Softcard III with CP/M optional ● Applesoft BASIC with floating-point integer included in ROM; Apple III Pascal, Business BASIC, COBOL all optional ● QuickFile III data management system optional ● Access 3270 for IBM 3270 emulation, Access III for file transfer and DEC VT100 and VT52 emulation optional

Applications Software ● Apple Writer III word processing, VisiCalc, accounting, business graphics, financial modeling packages available from Apple

Systems Hardware ● basic system includes CPU, memory, keyboard, 1 diskette drive, speaker, I/O ports ● CPU features 6502B microprocessor ● 256K-byte RAM, 4K-byte ROM ● single-board computer with 4 expansion slots, 1 RS-232C interface, monitor, or TV interface 2 DB-9 connectors for joysticks and/or Apple Silentype printer; parallel interface optional

Mass Storage ● maximum of 20M bytes of hard disk storage using 4 optional ProFile 5M-byte Winchesters ● maximum of 560K bytes of floppy disk storage using 4 Disk III 140K-byte diskette drives (1 standard)

Printers ● maximum of 1 printer per system; dot-matrix, letter-quality, thermal printers available from Apple

Display/Keyboard ● separately available CRT or TV set; Monitor III B/W monitor available from Apple; system displays 80 characters x 24 lines; graphics formats include 280x192 pixels, 16 colors; 140x192 pixels, 16 colors; 560x192 pixels, typewriter-style keyboard is integrated into system housing; includes numeric pad

Pricing/Support/Availability ● base price—$2,995 includes CPU, 256K-byte RAM, 4K-byte ROM, keyboard, 1 diskette drive, joystick interfaces, TV or monitor interface, RS-232C interface, Applesoft BASIC, SOS ● 90-day warranty ● optional annual warranty includes corrective updates for systems software, carry-in maintenance for hardware; third-party on-site maintenance available through RCA ● sales through national accounts program, OEMs, and independent authorized Apple dealers ● Apple III Plus delivered in 1983; over 1,000,000 Apple systems shipped

☐ Apple Lisa

Classification ● single-user/multitasking (up to 6 tasks) desktop computer with integrated CRT ● based on 32-/16-bit processor ● can be upgraded to a Lisa 2/5 or 2/10

Systems Software ● proprietary operating system which provides graphics menu-oriented user interface; transfers information from one application to another to provide total integration of applications; CP/M-86 and XENIX optional ● BASIC-Plus, Pascal, COBOL optional ● LisaList file management system optional ● LisaTerminal for device protocol emulation of ASCII TTY, DEC VT100 and VT52 terminals; 3270 BSC/SNA emulation optional

Applications Software ● proprietary business graphics, graphics editor, project tracking, spreadsheet analysis, word processing packages available

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, mouse, disk storage, real-time clock, built-in speaker, I/O ports ● CPU features MC68000 microprocessor ● 1M-byte RAM, 16K-byte ROM ● 3 memory-mapped, DMA expansion slots, 2 RS-232C ports (full modem control on 1 channel), 1 parallel port ● optional cluster controller for 3270 emulation

Mass Storage ● maximum hard disk storage of 35M bytes; one 5M-byte ProFile Winchester disk standard ● 2 integral 5.25-inch 860K-byte formatted diskette drives standard

Printers ● maximum of 1 printer per system; dot-matrix and

letter-quality printers available from Apple

Display/Keyboard ● integral 12-inch black on white bit-mapped screen displays up to 45 lines of 144 characters; graphics display of 364x720 pixels ● Selectric-style detached keyboard with numeric pad; all keys programmable; 1-button mouse for pointing to and manipulating data on the screen

Pricing/Support/Availability ● base price—$6,995 includes CPU, 1M-byte RAM, 16K-byte ROM, 2 integral diskette drives, 5M-byte hard disk, CRT, keyboard, mouse, 2 RS-232C ports, 1 parallel port, speaker, real-time clock, operating system ● 90-day warranty ● optional annual warranty includes corrective updates for software, carry-in maintenance for hardware; third-party on-site maintenance available through RCA ● sales through national accounts program and selective independent Apple dealers ● first delivered June 1983

☐ Apple Lisa 2

Classification ● single-user, multitasking desktop computer with integrated CRT ● based on 32-/16-bit microprocessor ● 3 models with different storage capacities ● can run Macintosh software; hard disk models with expanded memory can run the complete Lisa Office System

Systems Software ● proprietary operating system which provides graphics menu-oriented user interface; transfers information from one application to another to provide total integration of applications; CP/M-86 and XENIX optional ● BASIC-Plus, Pascal, COBOL optional ● LisaList file management system optional ● LisaTerminal for device protocol emulation of ASCII TTY, DEC VT100 and VT52 terminals optional; 3270 BSC/SNA emulation optional

Applications Software ● proprietary business graphics, graphics editor, project tracking, spreadsheet analysis, word processing packages available plus Macintosh packages

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, mouse, disk storage, real-time clock, built-in speaker, I/O ports ● CPU features MC68000 microprocessor ● 512K-byte RAM expandable to 1M bytes; 16K-byte ROM ● 3 memory-mapped, DMA expansion slots, 2 RS-232C ports (full modem control on 1 channel), 1 parallel port ● optional cluster controller for 3270 emulation

Mass Storage ● 5M-byte external hard disk on 2/5; 10M-byte internal hard disk on 2/10 ● maximum diskette storage of 800K bytes formatted on 3.5-inch 400K-byte drives; one standard

Printers ● maximum of 1 printer per system; dot-matrix and letter-quality printers available from Apple

Display/Keyboard ● integral 12-inch black on white bit-mapped screen displays up to 45 lines of 144 characters; graphics display of 364x720 pixels ● Selectric-style detached keyboard with numeric pad, all keys programmable; 1-button mouse for pointing to and manipulating data on the screen

Pricing/Support/Availability ● base price Lisa 2—$3,495 includes CPU, 512K-byte RAM, CRT, keyboard, mouse, integral 3.5-inch 400K-byte diskette drive, 2 serial ports, 1 parallel port, speaker, real-time clock, operating system; Lisa 2/5—$4,495 includes same as Lisa 2 plus 5M-byte hard disk; Lisa 2/10—$5,495 includes same as Lisa 2 plus 10M-byte hard disk ● 90-day warranty ● optional annual warranty includes corrective updates for software, carry-in maintenance for hardware; third-party on-site maintenance available through RCA ● sales through national accounts program and Apple dealers ● first delivery January 1983

☐ Apple Macintosh

Classification ● single-user, multitasking desktop system weighing 17 pounds and with a 10-inch x 10-inch footprint ● based on 32-/16-bit microprocessor ● uses built-in user interface

Personal/Microcomputer Survey

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software and Lisa Technology to simulate a desktop working environment

Systems Software ● built-in proprietary operating system and user interfaces reside in ROM ● Pascal and an assembler available in second quarter 1984; BASIC and LOGO available third quarter 1984 ● MacTerminal for emulating VT100, VT52, TTY protocols; Apple Line for IBM 3277, 3278 emulation available during first quarter 1984

Applications Software ● MacWrite word processing and MacPoint graphics program available now; other programs currently under development by Apple and third-party vendors

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, mouse, disk storage, I/O facilities, sound and speech hardware ● CPU is 32-/16-bit Motorola MC68000 microprocessor ● 128K-byte RAM; 64K-byte ROM which includes the operating system, Lisa technology, and user interfaces ● 2 RS-232C/RS-422 ports, external disk interface, AppleBus interface standard ● AppleBus point-to-point interconnect system for all Apple computers under development; AppleLine for emulating IBM 3277, 3278 terminals and a 300-/1200-baud modem available as options

Mass Storage ● maximum diskette storage of 800K bytes formatted; one integral 3.5-inch 400K-byte diskette standard; one external drive optional

Printers ● Imagewriter text and graphics printer available from Apple

Display/Keyboard ● integral 9-inch black on white CRT screen; bit-mapped graphics, 512x342 pixels ● detached keyboard with 58 keys, 2-key rollover, all keys programmable; numeric keypad optional ● 1-button mouse for pointing to and manipulating data on the screen

Pricing/Support/Availability ● base price—$2,495 includes CPU, 128K-byte RAM, 64K-byte ROM, CRT, keyboard, mouse, one 400K-byte diskette drive, 2 serial ports, disk interface port, operating system ● 90-day warranty ● optional annual warranty includes corrective updates for software, carry-in maintenance for hardware; third-party on-site maintenance through RCA ● sales through Apple direct sales force and through 3,000 authorized dealers worldwide ● first delivery January 1984

■ APPLIED DIGITAL DATA SYSTEMS (ADDS) INC/ Systems Division

100 Marcus Boulevard, Hauppauge, NY 11788 ● 516-231-5400

□ ADDS Multivision

Classification ● single-user/single-tasking (8-5S and 8-15S) or multiuser/multitasking (8-5M and 8-15M) component systems (up to 4 users) ● based on 8-bit processor

Systems Software ● MUON proprietary multiuser CP/M-compatible operating system ● Microsoft BASIC available ● ASCOM asynchronous communications available

Applications Software ● MVWORD word processor

Systems Hardware ● basic systems include CPU, memory, I/O ports, real-time clock, and disk storage ● CPU is 5-MHz 8-bit Intel 8085A2 ● 64K-byte RAM in the 8-5S and the 8-15S; 256K-byte RAM in the 8-5M and the 8-15M; 4K-byte ROM in all units ● 2 serial ports in 8-5S, 8-15S, 4 in 8-5M, 8-15M; 2 parallel ports

Mass Storage ● hard disk storage is 5M bytes formatted on the 8-5S and 8-5M systems, and 15M bytes formatted on the 8-15S and 8-15M systems ● 800K-byte formatted storage on a single diskette drive; 250K-bps transfer rate

Printers ● none offered by vendor

Display/Keyboard ● system-compatible terminals available from vendor

Pricing/Support/Availability ● basic systems include CPU,

disk storage, clock, and 4 I/O ports ● 8-5S—$5,995 includes 64K-byte RAM, 5M-byte hard disk, 800K-byte diskette drive; 8-15S—$7,195 includes 15M-byte hard disk; 8-5M—$6,745 includes 256K-byte RAM, 5M-byte hard disk, 4 additional RS-232C ports; 8-15M—$7,945 includes 256K-byte RAM, 15M-byte hard disk, 4 additional RS-232C ports ● 90-day warranty ● mail-/carry-in and on-site service available; vendor provides 3 service centers; third-party maintenance through Indeserve ● sales through OEMs and independent dealers ● first delivery August 1982; 500 systems delivered

■ ATARI, INC/Home Computer Division

P.O. Box 50047, 60 East Plumeria Drive, San Jose, CA 95150 ● 408-942-6790

□ Atari 600XL, 800XL, 1400XL, 1450XLD

Classification ● single-user/single-tasking home component systems with integrated keyboards; display optional ● based on 8-bit microprocessor ● software compatible with all Atari computers

Systems Software ● proprietary operating system resides in ROM and is bundled with the computer; CP/M module optional ● Atari BASIC resides in ROM; LOGO, assembler, macro assembler, Pilot, and Microsoft BASIC optional ● Home Filing Manager available ● Telelink modem program offered

Applications Software ● AtariWriter word processing and VisiCalc electronic spreadsheet available ● several software programs offered including home management, entertainment, educational, programming, and personal development packages

Systems Hardware ● basic system includes CPU, memory, keyboard, cartridge slot, and I/O ports; 1400XL also features a modem and speech synthesizer, and disk storage ● CPU features 1.8-MHz 8-bit 6520C microprocessor; optional Zilog Z80 processor incorporated in CP/M module ● 16K-byte RAM on the 600XL, expandable to 64K bytes; 64K-byte RAM on 800XL, 1400XL, and 1450XLD; 24K-byte ROM ● processor bus, 2 controller ports, TV and monitor ports, and serial I/O connector standard; 300-baud direct-connect modem, acoustic modem, light pen, graphics tablet, and joysticks optionally available; optional Expansion Box provides 8 slots, 2 RS-232C ports, and a bidirectional parallel bus; optional CP/M module includes Z80 microprocessor, 64K-byte RAM, CP/M 2.2, 40-/80-column video output, serial port, and monitor output

Mass Storage ● maximum 508K-byte diskette storage on 1450XLD using 5.25-inch slimline drive ● 600-bps program recorder offered by Atari can store 100K bytes of information on each 60-minute cassette

Printers ● Atari offers 4-color printer/plotter and 80-column 40-cps dot-matrix and 20-cps letter-quality printers for their Home Computers

Display/Keyboard ● systems use separately available CRT or TV; color output displays 24 lines of 40 characters in upper-/lowercase alphanumerics with a graphics capability of 320x192 pixels ● integrated typewriter-style keyboard features HELP key, 4 special-function keys, international character sets, 29 graphics keys; 4 programmable keys with 12 preprogrammed functions on the 1400XL and 1450XLD

Pricing/Support/Availability ● base system—Atari 600XL $249 includes CPU, 16K-byte RAM, keyboard, software cartridge slot, I/O ports, operating system, and BASIC language; 800XL $399 same features as 600XL but with 64K-byte RAM ● suggested retail prices for 1400XL and 1450XLD not yet announced ● 1400XL is same as 800XL, but with 4 programmable function keys on keyboard, 300-baud modem, and speech synthesizer ● 1450XLD is same as 1400XL, but includes 254K-byte disk storage ● 90-day warranty ● mail-/carry-in hardware maintenance and on-site service available from Atari and over 1,000 authorized service representatives ● sales through general merchandise ● 600XL

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and 800XL first delivered fourth quarter 1983; 1400XL and 1450XLD not yet available

■ ATHENA COMPUTER & ELECTRONIC SYSTEMS

31952 Camino Capistrano, San Juan Capistrano, CA 92675 ● 714-661-2276

□ Athena I

Classification ● single-user/single-tasking 15-pound portable computer, 11-7/8 inches wide x 14.5 inches deep x 3-3/8 inches high ● based on 8-bit processor

Systems Software ● CP/M 2.2 resides in ROM and is packaged with system ● JRT Pascal is bundled

Applications Software ● Profit Plan electronic spreadsheet and Mini-V EDIT text editor are bundled with the system

Systems Hardware ● basic system includes CPU system, memory, solid state disk memory, external disk storage, LCD, keyboard, clock/calendar, I/O ports, and battery ● CPU features 4-MHz NSC-800 processor (low-power version of Z80); another NSC-800 handles communications ● 64K-byte RAM for main memory, 4K-byte RAM for communications; 12K-byte ROM includes 6K for CP/M, 4K for communications processor operating systems, 2K for bootstrap ● 128K-byte Solid State Disk Memory (SSDM), expandable to 1M bytes in 64K-byte increments ● proprietary network; 2 RS-232C ports, 1 parallel printer port and 2 free slots are standard

Mass Storage ● maximum 150K-byte external floppy disk storage for backup and software loading using 5.25-inch diskette

Printers ● maximum of 1 printer, none offered by vendor

Display/Keyboard ● LCD is integral to system; 4 lines x 80 characters in window that automatically follows on a 24-line page; upper-/lowercase alphanumerics; LCD folds down over keyboard for portability; 16-line x 80-character LCD optional ● Selectric-style keyboard with all keys programmable

Pricing/Support/Availability ● base system—Athena I-128—$3,250 includes CPU, 68K bytes of RAM, 128K bytes of SSDM, LCD, keyboard, 1 diskette drive, I/O ports, battery, and CP/M ● 12-month warranty ● software updates and mail-/carry-in service available from manufacturer ● sales through computer stores and OEMs ● first delivery May 1983

■ BASIC FOUR BUSINESS PRODUCTS CORPORATION

601 San Pedro NE, Albuquerque, NM 87108 ● 505-266-5811

□ Basic Four S/10

Classification ● both single-user/multitasking (2 tasks) and multiuser (2 users) desktop computer with integrated CRT display ● based on dual 8-bit processors

Systems Software ● Business Basic/Micro (BB/M) and CP/M-80 operating systems are softloadable from 5.25-inch diskette ● Business BASIC language standard; FORTRAN 77, COBOL optional ● Records Management System optional ● 3270 BSC, 2780/3780 emulators available

Applications Software ● BB/M word processing, WordStar with MailMerge, SpellStar, accounting, payroll, club management available from Basic Four

Systems Hardware ● basic system includes dual processors, memory, disk storage CRT, keyboard ● CPU features dual Z-80 8-bit processors ● 128K-byte RAM; 16K-byte ROM; error-checking and correction capability available ● proprietary bus structure; 2 RS-232C ports standard; no parallel ports available

Mass Storage ● maximum formatted hard disk storage is 40M bytes on 2 drives; optional 10M-byte and 20M-byte 5.25-inch Winchester ● maximum diskette storage is 1.3M bytes; integral 650K-byte 5.25-inch diskette drive; additional drive optional

Printers ● maximum of 1 printer supported; 80-cps letter-quality and 80-column dot-matrix printers available from Basic Four

Display/Keyboard ● integral CRT displays 132 or 80 columns x 28 lines on 12-inch diagonal monochrome screen; upper-/lowercase alphanumeric characters; bit-addressable and memory-mapped graphics; 800x300 pixels ● IBM Selectric-style keyboard layout with 8 user-programmable function keys

Pricing/Support/Availability ● base price—$3,995 includes CPU, 128K-byte RAM, 16K-byte ROM, CRT, keyboard, 1 diskette drive, BASIC language ● 90-day warranty ● on-site maintenance available through own company (Sorbus) with 160 service centers; mail or carry-in maintenance available from retailers/dealers ● sales through direct sales force, computer stores, office equipment dealers ● first delivered 1982

■ BILLINGS COMPUTER CORPORATION

18600 East 37th Terrace South, Independence, MO 64057 ● 816-373-0000

□ Billings 500 Series

Classification ● single-user/single-tasking desktop computer with integrated CRT ● based on 8-bit processor

Systems Software ● software is unbundled ● Billings Operating System (BOS), TurboDOS from Software 2000 Inc, or Oasis from Phase One; BOS is interactive and CP/M compatible; TurboDOS is multitasking and CP/M compatible; both are softloaded from 5.25-inch diskettes ● B-BASIC (ANS BSR X3.60), interpreter/compiler; E-BASIC; X3.23 1974 ANS COBOL; X3.9 1966 ANS FORTRAN; and Macro Assembler ● Database Manager relational DBMS; Data Center Manager and Access Control Program distributed processing programs; Computamatic Terminal ASCII terminal emulator; E-Mail electronic mail; 3270 emulation

Applications Software ● Billings proprietary Word Master for word processing, letter processor, document communicator; legal and dealer accounting, A/R, A/P, G/L, retail inventory management available from Billings

Systems Hardware ● base system includes CPU, memory, disk storage, CRT, keyboard ● 4-MHz Zilog Z80A microprocessor ● 56K-byte user RAM; 8K-byte reserved memory ● single-board computer; 2 RS-232C ports, 1 parallel printer port standard ● Billings proprietary modem for asynchronous and synchronous transmission optional

Mass Storage ● no hard disk ● maximum diskette storage 2M bytes; dual 5.25-inch 1M-byte drives

Printers ● supports 1 printer; 45 cps, 132-/158-character line daisywheel; 40 to 160 cps 80-/136- or 136-/233-character line dot matrix available from Billings

Display/Keyboard ● integral green phosphor CRT displays 80 characters x 24 lines with upper- and lowercase alphanumerics ● typewriter-style keyboard; 10-key numeric pad, cursor pad, 16 special function keys

Pricing/Support/Availability ● suggested system price—$3,675 includes processor with 56K-byte user RAM, dual floppy disk drives, parallel port, 2 RS-232C ports, display, keyboard, BOS, E-BASIC, and support software ● 90-day warranty ● full year of software update service included with purchase price; further service agreement for software updates/corrections available; maintenance service available from manufacturer or dealer ● sales through computer stores, office equipment dealers, and direct sales force; OEM sales also available ● first delivery 1982

□ Billings 6000 Series

Classification ● multiuser (up to 16) desktop or stackable component configurations; available with or without integrated CRT ● based on 8-bit processor

Systems Software ● software is unbundled ● Billings Operating

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System (BOS), TurboDOS from Software 2000 Inc, or Oasis from Phase One; BOS is interactive and CP/M compatible; TurboDOS is multitasking and CP/M compatible; both softloaded from 5.25-inch diskettes ● B-BASIC (ANS BSR X3.60), interpreter/compiler; E-BASIC; X3.23 1974 ANS COBOL; X3.9 1966 ANS FORTRAN; and Macro Assembler ● Database Manager relational DBMS; Data Center Manager and Access Control Program distributed processing programs, Computamatic Terminal ASCII terminal emulator; E-Mail electronic mail; 3270 emulation

Applications Software ● Billings proprietary Word Master for word processing letter processor, document communicator; legal and dealer accounting, A/R, A/P, G/L, retail inventory management available from Billings

Systems Hardware ● main components of system housed in matching stackable cabinets; CPU cabinet may be desk mounted or be the top component of the stack ● 6000 includes CPU, memory, and other components depending on model ● 4-MHz Zilog Z80A microprocessor ● 64K-byte RAM expandable in 128K-byte increments to 576K bytes ● processor and control boards for video, floppy disk, hard disk, modem interface, and parallel and serial communications; multislot system unit ● up to 16 RS-232C ports optional; 1 parallel printer port standard ● Billings proprietary modem for asynchronous or synchronous transmission optional

Mass Storage ● maximum unformatted hard disk 490M bytes, 6000 XII and 6000X(B); 480M bytes, 6000 II and 6000(B); 5.25-inch 10M-byte fixed Winchester standard on 6000 XII and 6000X(B); up to 8 8-inch 30M- or 60M-byte fixed Winchester optional on all 600 series ● maximum unformatted diskette storage, 2M bytes; dual 5.25-inch 1M-byte floppy drives standard on 6000 XII and 6000 II

Printers ● supports 1 printer; 45 cps, 132-/158-character line daisywheel; 40- to 160-cps, 80-/136- or 136-/233-character line dot-matrix printers available from Billings

Display/Keyboard ● integral to 6000 XI, 6000 II system unit; green phosphor CRT displays 80 characters x 24 lines; graphics character set with upper- and lowercase alphanumerics ● detached typewriter-style keyboard; 10-key numeric pad, cursor pad, 16 special function keys

Pricing/Support/Availability ● suggested minimum system price for 6000(B), $2,025; 6000 X(B), $4,725; 6000 II, $5,025; and 6000 XII, $6,740 ● 6000(B) includes system unit with 64K-byte processor, 9 option board slots, and 1 parallel port plus E-BASIC and utilities; 6000 X(B) includes 6000(B) configuration plus integrated 10M-byte Winchester; 6000 II includes 6000(B) configuration, dual floppy drives, CRT keyboard, and BOS; 6000 XII includes 6000 II plus integrated 10M-byte Winchester drive ● 90-day warranty ● full year of software update service included with purchase price; further service agreement for software updates/corrections available; maintenance service available from manufacturer or dealer ● sales through computer stores, office equipment dealers, direct sales force; OEM sales also available ● first delivery June 1982

■ BURROUGHS CORPORATION

1 Burroughs Place, Detroit, MI 48232 ● 313-972-7000

□ B 20

Classification ● 2 series—B 21 and B 22; both providing single-user and multiuser systems; desktop computers with integrated CRT and keyboard ● used as standalone systems and in distributed processing environment as cluster stations and master stations; maximum of 16 workstations per master B 22, maximum of 3 workstations per B 21 ● based on 16-bit processor ● manufactured by Convergent Technologies

Systems Software ● BTOS operating system, MS-DOS, CP/M-86 available ● BASIC interpreter, COBOL, FORTRAN, Pascal compilers optional ● Data Manager for program development

optional ● X.25, asynchronous terminal emulator, 2738/3780 emulator, BSC and SNA 3270 emulators, Burroughs Poll/Select and MT 983 emulators all optional

Applications Software ● Multiplan, Executive Write-One, accounting, billing, payroll, construction, manufacturing, business graphics available from Burroughs

Systems Hardware ● all basic systems include CPU, memory, CRT, keyboard, some include disk storage ● B 21 CPU features 8-MHz Intel 8086; B 22 CPU features 5-MHz Intel 8086 ● 256K-byte main memory expandable to 512K on the B 21 and 640K on the B 22 ● proprietary bus; B 22 also utilizes a Multibus with 2 slots; from 1 to 3 serial ports (RS-232C and RS-422) depending on model; 1 Centronics parallel port on all models except low-end cluster units ● optional Communications I/O Processor for attaching more than 3 workstations on a B 22; clustering on workstations via RS-422 interface

Mass Storage ● various disk configurations depending on the model ● maximum hard disk storage is 50.4M bytes formatted; 5-, 10-, 15-, 20-, 40M-byte Winchester units are available, both integral to the workstation and as floorstanding cabinets ● maximum floppy disk storage is 1.2M bytes on 2 630K-byte 5.25-inch drives; 1 500K-byte 8-inch floppy is also available with some models

Printers ● most models can support a maximum of 3 printers—1 parallel and 2 serial; dot-matrix and letter-quality printers available from Burroughs

Display/Keyboard ● integral 15-inch green phosphor display with 28 lines x 80 characters on B 21; color display with graphics capabilities on 2 B 21 models only; 34 lines x 80 or 132 characters on B 22; optional graphics board for B 22 displaying 656x510 pixels ● detached typewriter-style keyboard with numeric pad, status/control function pad, cursor control pad, page control pad; 10 user-definable function keys; all keys programmable

Pricing/Support/Availability ● B 21 base price ranges from $2,955 for a B 21-T cluster unit which contains CPU, 256K-byte RAM, 4K-byte ROM, CRT, keyboard, 1 RS-422 port, operating system, and 1 programming language, to $8,745 for a B 21-6T master or standalone unit which includes the same as the B 21-1T plus 15M-byte hard disk, 630K-byte floppy backup, parallel port, 2 RS-232C ports; B 22 base price is $4,595 for same configuration as B 21-1T plus parallel port, 2 additional serial ports, and Multibus for handling up to 16 workstations ● 90-day warranty ● maintenance plans available through Burroughs; hot-line ● first delivered in 1982; approximately 10,000 systems shipped

■ BYTEC-COMTERN

8 Colonnade Road, Ottawa, Ontario, Canada K2E 7M6 ● 613-226-7013

□ Hyperion

Classification ● single-user/single-tasking 21-pound portable computer, 18 inches wide x 11 inches deep x 8.8 inches high, built-in carrying handle, vinyl traveling case ● based on single 16-bit processor ● reportedly compatible with IBM PC down to BIOS level ● 2 models available—Hyperion and Hyperion EX

Systems Software ● Microsoft MS-DOS is softloaded from 5.25-inch diskette drives and is bundled with the system ● Microsoft Advanced Disk BASIC and assembler bundled; COBOL, FORTRAN, and Pascal optional ● IN:TOUCH, electronic mail terminal and telephone management system included in Hyperion Plus package or available from vendor

Applications Software ● optional features include IN:SCRIBE word processing, Multiplan or Lotus 1-2-3 spreadsheet

Systems Hardware ● basic system includes CPU, memory, display, keyboard, diskette drive, time and date clock with battery

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backup, I/O ports • CPU features Intel 8088 4.77-MHz 16-bit processor; optional 8087 floating-point processor available • 256K-byte main memory, 20K-byte display RAM, 8K-byte ROM • single-board computer with 1 RS-232C communications port, 1 parallel printer port, 1 expansion port, modular telephone jacks and a video jack; built-in 300-baud modem included in Hyperion EX package or available from vendor

Mass Storage • maximum of 640K bytes of diskette storage using 2 320K-byte, double-density, dual-sided, 5.25-inch diskette drives; first is standard, second optional; reads and writes IBM PC diskettes • optional 10M-byte 5.25-inch Winchester available on Hyperion EX

Printers • maximum of 1 printer per system; none available from vendor

Display/Keyboard • CRT display is integrally packaged into system unit; 7-inch amber phosphor CRT, 80 characters x 25 lines, upper-/lowercase alphanumeric, graphic display format 640 dots x 250 (or 200) dots fully addressable array or 320 dots x 250 (or 200) dots fully addressable array with 4-level gray scale (200 dot high graphics provided for IBM PC compatibility); detached keyboard compatible with IBM PC keyboard layout; slides into maintenance unit when not in use

Pricing/Support/Availability • base price—Hyperion—$3,195 includes CPU, 256K-byte RAM, display/keyboard, 1 diskette drive, parallel printer port, serial communications port, time and date clock with battery backup, MS/DOS, and Microsoft Advanced Disk BASIC; with 2 diskette drives $3,690; 1-year hardware warranty, 1-year warranty on IN:SCRIBE, Multiplan, Lotus 1-2-3, IN:TOUCH when warranty registration card received from end user; service available from manufacturer, retailer/dealer; service plans available through dealer for mail-/carry-in hardware maintenance, on-site repair service; sales through computer stores • first delivery January 1983 (Hyperion), December 1983 (Hyperion EX)

■ CALIFORNIA COMPUTER SYSTEMS
250 Caribbean Drive, Sunnyvale, CA 94086 • 408-734-5811

☐ Calstar II & III

Classification • multiuser component system handling up to 8 users • based on 8-bit processor • two models available with varying disk storage capacities

Systems Software • Oasis operating system bundled; CP/M 2.2 and MP/M 86 optional • COBOL, FORTRAN, BASIC, Pascal, and assembly languages offered by vendor

Applications Software • WordStar word processing and CalcStar electronic spreadsheet available

Systems Hardware • basic system includes CPU, memory, I/O ports, disk storage • CPU features 8-bit Zilog Z80B processor • 256K-byte RAM • single board; two RS-232C ports expandable to eight, one parallel port

Mass Storage • maximum of 20M bytes of hard disk storage using a 5.25-inch Winchester drive • maximum of 2.4M bytes of diskette storage using two 8-inch drives

Printers • none available from vendor

Display/Keyboard • system uses separately available CRT and keyboard; none offered by vendor

Pricing/Support/Availability • Calstar II—$2,795 includes CPU, 256K-byte RAM, I/O ports, two 1.2M-byte diskette drives, Oasis operating system • Calstar III—$4,395 same as above, but with one 1.2M-byte diskette drive and one 5.25-inch 20M-byte Winchester drive • 1-year warranty • mail-/carry-in hardware maintenance available from manufacturer • sales through direct mail, computer stores, sales force, OEMs, dealers • Calstar II first delivered June 1983, Calstar III October 1983 • 300 systems installed in U.S. as of December 1983

☐ Microstar

Classification • multiuser component system handling up to 32 users • based on 16-bit processor

Systems Software • Oasis 16 or CP/M 2.2 bundled with computer • BASIC bundled; C, FORTRAN, COBOL, Pascal, assembly programming languages optional • ASCII protocol available

Applications Software • Spellbinder word processing package, Multicalc electronic spreadsheet offered by vendor

Systems Hardware • basic system includes CPU, memory, I/O ports, disk storage • CPU features 16-bit Intel 8088 processor • 64K-byte RAM expandable to 1M bytes • S-100 bus; eight RS-232C ports, one parallel port

Mass Storage • maximum of 20M bytes of hard disk storage using a 5.25-inch Winchester • maximum of 2.4M bytes of diskette storage using two 8-inch diskette drives • 1600-bpi streamer tape drive optional

Printers • none offered by vendor

Display/Keyboard • system uses separately available CRT display or television set; none offered by vendor

Pricing/Support/Availability • base system—$3,800 includes CPU, 256K-byte RAM, I/O ports, one 1.2M-byte diskette drive, and CP/M 86 • 1-year warranty • mail-/carry-in maintenance available from manufacturer and dealers • sales through computer stores, direct sales force, and dealers • 30 systems installed in U.S. since October 1983

☐ Series 200, 300 & 400

Classification • multiuser component system handling up to 16 users • based on 8-bit processor • three models with varying disk storage capacities

Systems Software • CP/M 2.2 bundled with system; Oasis, TurboDOS, and MP/M optional • COBOL, FORTRAN, C, BASIC, Pascal, assembly languages also available • SDLC and HDLC protocols standard

Applications Software • none offered by vendor

Systems Hardware • basic system includes CPU, memory, I/O ports, disk storage • CPU features 16-bit Zilog Z80B processor • 64K-byte RAM, expandable to 1M bytes • S-100 bus; two RS-232C ports standard, 14 optional; 1 parallel port standard, 2 optional

Mass Storage • maximum of 20M bytes of hard disk storage using 8-inch Winchester drive • maximum of 2.4M bytes of diskette storage using two 8-inch drives

Printers • none offered by vendor

Display/Keyboard • system uses separately available CRT display or TV set; none offered by vendor

Pricing/Support/Availability • Series 200—$3,800 includes CPU, 64K-byte RAM, I/O ports, CP/M 2.2; Series 300—$5,300 same as Series 200, but with two 1.2M-byte diskette drives; Series 400—$9,695 same as Series 200, but with 20M-byte Winchester and a 1.2M-byte diskette drive • 1-year warranty • mail-/carry-in hardware maintenance available from manufacturer and dealers • sales through computer stores, direct sales force, and dealers • 700 systems installed in U.S. since 1980

☐ Slimline 3000

Classification • single-user/single-tasking component system based on 8-bit processor

Systems Software • CP/M 2.2 bundled with system; TurboDOS and Oasis optional • FORTRAN IV, COBOL, CBASIC, and C programming languages available from vendor • ASCII protocol optional

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Applications Software ● none available from vendor

Systems Hardware ● basic system includes CPU, memory, I/O ports, disk storage ● CPU features 6-MHz Zilog Z80B processor ● 64K-byte RAM expandable to 1M bytes ● S-100 bus, one DMA port, and two RS-232C ports standard

Mass Storage ● maximum of 20M bytes of hard disk storage using 5.25-inch Winchester drive ● maximum of 2.4M bytes of diskette storage using two 8-inch drives ● 20M-byte tape backup optional

Printers ● none offered by vendor

Display/Keyboard ● system uses separately available CRT display and keyboard; none available from vendor

Pricing/Support/Availability ● base system—$3,995 includes CPU, 64K-byte RAM, 2 serial ports, one 1.2M-byte diskette drive, and CP/M 2.2 ● 1-year warranty ● mail-/carry-in hardware maintenance available from manufacturer and dealers ● sales through direct mail, computer stores, direct sales force, and distributors ● 350 systems installed in U.S. since January 1982

☐ **Turbostar**

Classification ● multiuser component system handling up to 16 users ● based on 8-bit processor ● a slave unit is provided for each user on the system

Systems Software ● TurboDOS 1.3 bundled; CP/M 2.2 also available ● BASIC bundled with system; COBOL, FORTRAN, C, Pascal, and assembly optional

Applications Software ● none offered by vendor

Systems Hardware ● basic system includes CPU, memory, and I/O ports ● CPU features 6-MHz Zilog Z80B microprocessor; each slave unit is also a Z80B ● 64K-byte RAM expandable to 128K-byte RAM; 64K bytes with each slave unit ● S-100 bus, two RS-232C ports, one parallel port standard; each slave processor unit features two RS-232C serial I/O ports

Mass Storage ● maximum of 20M bytes of hard disk storage using a 5.25-inch Winchester drive ● maximum of 2.4M bytes of diskette storage using two 8-inch drives

Printers ● none offered by vendor

Display/Keyboard ● system uses separately available CRT and keyboard; none offered by vendor

Pricing/Support/Availability ● base system—$7,345 includes CPU, 64K-byte RAM, I/O ports, TurboDOS, and BASIC ● multiuser system—$17,000 same as above, but with two 1.2M-byte diskette drives, 20M-byte disk drive, and capability to attach up to 16 users ● 1-year warranty ● mail-/carry-in hardware maintenance available from manufacturer and dealers ● sales through direct mail, computer stores, dealers, and a direct sales force ● 30 systems delivered since October 1983

■ **CALLAN DATA SYSTEMS**

2645 Townsgate Road, Westlake Village, CA 91361 ● 805-497-6837

☐ **Unistar 100, Unistar 200**

Classification ● single-user/multitasking (Unistar 100) and multiuser (Unistar 200; up to 4 users) desktop computers with integrated CRTs ● based on 16-bit processor

Systems Software ● UNIX System III from Unisoft bundled with the systems; contains Berkeley enhancements ● C language included with UNIX; ADA, BASIC, FORTRAN 77, R/M COBOL, ISO Pascal with UCSD extensions, all optional ● MicroINGRES database management system optional ● electronic mail included with UNIX

Applications Software ● UNICALC spreadsheet, EasyType/XED word processing available from Callan

Systems Hardware ● basic systems include CPU, memory, disk storage, CRT, keyboard, I/O ports ● CPU features 8-MHz MC68000 microprocessor ● 256K-byte RAM expandable to 1.2M bytes ● Multibus with 6 I/O slots (Unistar 100), 8 I/O slots (Unistar 200); 2 RS-423 ports (Unistar 100), 4 RS-232C ports (Unistar 200); Ethernet interface controller optional

Mass Storage ● maximum of 84K bytes of hard disk storage using up to 4 10M-or 21M-byte 5.25-inch Winchesters (1 integral 10M-/21M-byte drive on Unistar 100/200) ● maximum of 2.4M bytes of floppy disk storage using up to 4 600K-byte 5.25-inch diskettes (1 integral to systems)

Printers ● none available from Callan

Display/Keyboard ● 12-inch green phosphor CRT displays 80 characters x 25 lines; VT100/VT52 compatible; optional graphics controller displays Tektronix 4010-compatible graphics, 752x323 pixels, memory-mapped ● detached keyboard with numeric keypad, 18 programmable keys

Pricing/Support/Availability ● base price—Unistar 100—$9,950 includes CPU, 256K-byte RAM, CRT, keyboard, integral 10M-byte Winchester with 600K-byte floppy backup, 2 RS-423 ports, UNIX; Unistar 200—$13,950 includes same as Unistar 100 except 512K-byte RAM, 4 RS-232C ports, integral 21M-byte Winchester ● 3-month warranty ● software maintenance contracts available for updates and support; hardware maintenance through ITT Courier ● sales through OEMs and distributors ● Unistar 100 first delivered August 1982, Unistar 200 in March 1983; approximately 350 Unistar 100s and 65 Unistar 200s installed

■ **CANON USA INC**

1 Canon Plaza, Lake Success, NY 11042 ● 516-488-6700

☐ **Canon AS-100**

Classification ● single-user/single-tasking desktop system with integrated CRT display ● based on 16-bit processor

Systems Software ● all software comes unbundled ● CP/M-86, MS-DOS, OASIS-16 operating systems ● Canon BASIC, Microsoft GWBASIC, Level II COBOL, RM/COBOL programming languages ● IBM 2780/3780 and 3270 emulation

Applications Software ● WordStar word processing available from Canon

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, and I/O ports ● CPU features 16-bit 4-MHz Intel 8088 processor ● 128K-byte RAM expandable to 512K bytes ● Canon bus line; 4 optional RS-232C ports, 1 Centronics interface standard, 1 optional ● synchronous communications interface and Omninet optional

Mass Storage ● maximum of 1 5-inch external 10M-byte Winchester disk drive ● maximum of 4.8K bytes of floppy disk storage; 2 5.25-inch, 640K-byte or 4 8-inch, 1M-byte diskette drives available; 100-millisecond average access time, 250K-bps transfer rate on 5.25-inch drive; 83-millisecond average access time, 500K-bps transfer rate on 8-inch drive

Printers ● maximum of 2 printers per system; 120-cps dot-matrix printer and 40-cps, 7-color ink-jet printer available from Canon

Display/Keyboard ● standard 12-inch green phosphor or 8-color CRT displays upper-/lowercase alphanumerics in 25 lines of 80 characters; built-in graphics capability with resolution of 640x400 pixels ● detachable, typewriter-style keyboard has numeric keypad and 12 programmable keys; optional pointing device

Pricing/Support/Availability ● base system—$2,325 includes CPU, 128K-byte RAM, monochrome CRT, keyboard, 1 Centronics interface ● 90-day warranty ● carry-in and on-site maintenance available from Canon and dealers ● sales through computer stores, dealers, and OEMs ● first delivered March 1983

Personal/Microcomputer Survey

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■ CENTURY COMPUTER CORPORATION
14453 Gillis Road, Dallas, TX 75234 ● 214-233-3238

□ Vanguard 8000 Series

Classification ● single-user/multitasking system handling up to 4 tasks; multiuser system handling up to 8 users; marketed as desktop computer with integrated CRT ● based on 8-/16-bit dual microprocessors ● 6 models available with different disk storage and number of open slots

Systems Software ● all software is unbundled ● CP/M 2.2, CP/M-86, Concurrent CP/M-86, and MP/M-86 operating systems are softloaded from 5.25-or 8-inch diskette ● C-BASIC, R/M COBOL, and Intel assembler are supported

Applications Software ● WordStar word processing system; generalized order entry, inventory control, G/L, A/P, A/R, payroll, church accounting available from Century

Systems Hardware ● basic system includes dual CPUs, memory, CRT, keyboard, disk storage, real-time clock, I/O ports ● CPU features 16-bit 5-MHz Intel 8088 and 8-bit 4.9-MHz Intel 8085 A-2 microprocessors ● 128K-byte RAM expandable to 1M bytes; 2K- to 64K-byte ROM ● Multibus with either 3 or 4 open slots, 2 full-duplex asynchronous RS-232C ports expandable to 8, 1 parallel port

Mass Storage ● 80M-byte maximum hard disk on 4 drives; 5-, 10-, 15-, 20M-byte Winchester disks available ● 4M-byte maximum diskette storage using up to 4 5.25- or 8-inch single- or double-sided, single- or double-density drives

Printers ● 120-cps 132-character line dot-matrix or 55-cps letter-quality printers optional

Display/Keyboard ● integral 12-inch green phosphor CRT displays 80 characters x 25 lines, upper-/lowercase alphanumerics; bit mapped graphics capability ● detached keyboard includes cursor and numeric keypads, 4 programmable function keys ● vendor offers add-on terminals for multiuser systems

Pricing/Support/Availability ● base price on all models includes CPU, 128K-byte memory, CRT, keyboard, disk storage, one parallel port, 2 serial ports; 8000—$4,995 with 5M-byte hard disk, 8-inch 1M-byte diskette, 3 open slots; 8200—$3,995 with 2 8-inch 1M-byte diskettes, 4 open slots; 8500—$3,295 with 2 5.25-inch 320K-byte diskettes, 3 open slots; 8510—$5,795 with 10M-byte hard disk, 320K-byte diskette, 3 open slots; 8520—$6,995 with 20M-byte hard disk, 320K-byte diskette, 3 open slots ● service is provided by dealer, third-party service organization, or by Century depot ● systems are marketed by Century, dealer/distributors, and OEM ● first delivery 1982 with 495 installed

■ CHARTER INFORMATION CORPORATION
2421 Rutland Drive, Austin, TX 78758 ● 512-835-1111

□ System 4

Classification ● single- or multiuser component system handling up to 16 users ● based on 8-bit processor ● a slave unit is provided for each user on the system

Systems Software ● TurboDOS bundled with system ● COBOL, MBASIC, and CBASIC optional ● Condor database management available ● ILSM modem program and asynchronous ASCII protocol optional

Applications Software ● WordStar word processing, MailMerge, and SpellStar offered by Charter, along with general ledger, accounting, payroll, and order entry/invoicing packages

Systems Hardware ● basic system includes CPU, memory, I/O ports, disk storage, CRT, keyboard ● CPU features 8-bit Zilog Z80 processor; each slave unit is also a Z80 ● 64K-byte RAM plus 64K bytes per user ● S-100 bus with 16 open slots; two RS-232C ports,

1 parallel port standard; additional serial and parallel ports plus 20-mA current-loop interfaces available; each slave processor has 2 serial, 1 parallel port ● integral 300-baud and external 1200-baud modems available

Mass Storage ● maximum of 36M bytes of hard disk storage using one 5.25-inch 5M- to 36M-byte Winchester drive with an average access time of 85 milliseconds ● maximum of 1.5M bytes of diskette storage using 720K-byte drives with a data transfer rate of 500K bps and an average access time of 94 milliseconds

Printers ● 120- and 200-cps dot-matrix, 300-lpm band, 15-, 40-, and 55-cps daisywheel printers offered by Charter Information

Display/Keyboard ● detached 12-inch green phosphor CRT is packaged with basic system and displays 24 lines of 80 characters in upper-/lowercase alphanumerics ● detached keyboard has 85 keys, four of which are special function, and a numeric keypad

Pricing/Support/Availability ● single-user system—$8,995 includes CPU, 64K-byte RAM, I/O ports, 720K-byte diskette drive, CRT, keyboard, and TurboDOS operating system; multiuser—$9,995 same as above, but with one slave processor board and the capability to attach up to 16 users ● mail-/carry-in hardware maintenance, software updates/corrections, and on-site repair service contract available from five Charter Information Corp service centers ● 55 systems installed in U.S. since 1982

■ CIE SYSTEMS, INC
2515 McCabe Way, Irvine, CA 92713 ● 714-660-1800

□ CIES 680

Classification ● 680/20—single-user/multitasking (40 tasks) and multiuser (maximum 4 users) desktop computer with integrated display; 680/30, 680/35, 680/40—multiuser component systems with optional CRT and keyboard, maximum of 8 users on 680/30, 680/35; maximum of 20 users on 680/40 ● systems based on 32-/16-bit microcomputer

Systems Software ● all software is unbundled ● UNIX System III, REGULUS, RM/COS operating systems; FORTRAN-77, C, SMC/BASIC, Pascal, RM/COBOL languages ● 2780/3780, 3270 BSC, SDLC emulation, X.25 protocol

Applications Software ● LEX/680 word processing, Ultracalc spreadsheet, PRO-IV applications development system available from CIE

Systems Hardware ● base system includes CPU, memory, disk storage, I/O ports; 680/20 includes CRT, keyboard; 680/40 includes streaming tape drive ● CPU features 8-MHz Motorola MC68000 microprocessor ● 256K bytes of RAM expandable to 512K bytes (680/20), to 768K bytes (680/30); 512K bytes expandable to 1M bytes (680/35; 680/40) ● Multibus with 6 slots—680/20, 9 slots—680/30, 12 slots—680/40; 3 RS-232C ports—680/20, 4 RS-232C ports—680/30, 680/35, 680/40, expandable to 8 ports on 680/30, 35; 32 ports on 680/40; 1 Centronics parallel port, expandable to 2 on 680/30, 680/35; 32 on 680/40; DMA printer controller optional ● communications processor on all models; planned Ethernet availability

Mass Storage ● various disk configurations available depending on the model ● maximum diskette storage is 1M bytes using 2 5.25-inch floppy disks (1 standard); 281-millisecond average access time, 250K-bps transfer rate ● maximum hard disk storage of 20M bytes on 680/20 using 2 5.25-inch Winchesters (1 standard); maximum hard disk storage of 336M bytes on 680/40 using 4 84M-byte SMD-compatible Winchesters with a 20-millisecond average access time, 1.2M-bps transfer rate; up to 2 84M-byte drives on the 680/35; up to 2 10M-byte Winchesters with a 175-millisecond average access time, 5M-bps transfer rate, and a 40M-byte Winchester available for 680/30 ● 20M-byte streaming tape drive standard on 680/40, optional on 680/30, 35

Personal/Microcomputer Survey

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Printers ● maximum of 1 printer on 680/20, multiple printers on 680/30, 680/35, 680/40; 120-cps dot-matrix printer, 300-/600-lpm dot-matrix printer; 55-cps letter-quality printer, all available from CIE

Display/Keyboard ● 680/20 has tilt-and-swivel CRT packaged with system unit; separately available on other models ● 12-inch green phosphor screen displays 80 characters x 24 lines ● keyboard is 85-key detachable unit with 67 keys similar to IBM Selectric III keyboard, 18-key numeric key pad, 4 general function keys

Pricing/Support/Availability ● base prices—680/20, $10,410 includes 256K-byte RAM, 10M-byte Winchester, 500K-byte diskette, CRT, keyboard, 3 RS-232C ports, 1 Centronics parallel port; 680/30—$9,200 includes 256K-byte RAM, 10M-byte Winchester, 500K-byte diskette, 4 RS-232C ports, 1 Centronics parallel port; 680/35—$24,590 includes same as 680/30 except 512K-byte RAM, 84M-byte Winchester; 680/40—$27,500 includes 512K-byte RAM, 500K-byte diskette, 84M-byte Winchester, 20M-byte streaming tape drive, 4 RS-232C ports, 1 Centronics parallel ports ● 90-day warranty; service plans available through independents; third-party service through Bunker-Ramo ● sales through OEMs, dealers, distributors ● first delivered November 1982

■ CODATA SYSTEMS INC

285 North Wolfe Road, Sunnyvale, CA 94086 ● 408-735-1744

□ Codata 3300

Classification ● multiuser component system supporting up to 16 users; CRT and keyboard available separately ● based on 32-/16-bit processor ● 3 models available with different storage capacities and serial ports

Systems Software ● all software comes unbundled ● UNISIS operating system (variation of UNIX V-7) with "C" compiler ● FORTRAN-77, RM/COBOL, BASIC-Plus, SMC BASIC, APL, 68000, Pascal ● LOGIX and microINGRES database management systems ● UNIX communications packages

Applications Software ● CrystalWriter word processing package, Unicalc electronic spreadsheet available from vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, I/O ports ● CPU features Motorola MC68000 microprocessor ● 256K-byte parity-protected RAM expandable to 1.5M bytes ● Multibus; 2 RS-232C ports tied to CPU board; 2 octal serial I/O cards can be added for total of 18 RS-232C ports

Mass Storage ● maximum of 168M bytes of hard disk storage using up to 2 84M-byte Winchester disks with an average access time of 20 milliseconds, transfer rate of 1.2M bps; 12- and 33M-byte drives also available with an average access time of 75/30 milliseconds, transfer rate of 5M bps; all add-on drives must be same capacity as primary disk drive ● 1M-byte floppy disk drive integral to systems ● 10M-byte cartridge-tape subsystem optional

Printers ● none available from vendor

Display/Keyboard ● none available from vendor

Pricing/Support/Availability ● base price SYS 0120—$13,000 includes CPU, 256K-byte RAM, 2 RS-232C ports, 12M-byte Winchester disk drive, 1M-byte diskette drive; SYS 0330—$16,000 includes same as 0120 except 33M-byte drive, 10 RS-232C ports; SYS 0840—$22,500 includes same as 0120 except 84M-byte drive, 10 RS-232C ports ● 180-day warranty ● service available from manufacturer; provides Customer Response Center ● sales through direct mail and OEMs ● first delivery January 1982; over 650 systems installed

■ CODEX CORPORATION

20 Cabot Boulevard, Mansfield, MA 02048 ● 617-364-2000

□ CDX-268 Series

Classification ● multiuser desktop/component system handling up to 8 users ● based on 8-/16-bit processor ● two models available, one without CRT, keyboard, and mass storage

Systems Software ● ISOS II bundled with computer; MUMPS operating system also available ● COBOL, BASIC, and C languages offered by Codex, along with multikeyed ISAM data management package ● 3270 SNA/BSC, 2780/3780 SNA, TTY packages available

Applications Software ● Q-One word processing, DYNACALC electronic spreadsheet, ASQ Record Management System available from vendor

Systems Hardware ● basic system includes CPUs, memory, I/O, CRT, and keyboard ● CPU features one central 8-/16-bit MC6809E central processor and two I/O processors ● 192K-byte RAM expandable to 760K bytes; 10K-byte ROM ● Motorola Exorbus; two RS-232C and four RS-422 ports standard ● NET-1 local area network and a complete line of modems and multiplexers available from Codex

Mass Storage ● maximum 105M bytes of hard disk storage using seven 5.25-inch Winchester drives ● maximum 1.3M bytes of diskette storage using two 5.25-inch drives

Printers ● 300- to 600-lpm line printers, 100- to 200-cps matrix, and 35-cps character printers offered by Codex

Display/Keyboard ● 15-inch amber CRT is an integral part of the Model 220 system unit and displays 25 lines of 80 characters in upper-/lowercase alphanumerics ● detached keyboard has 80 keys, 12 of which are programmable

Pricing/Support/Availability ● Model 220—$6,995 includes central processor and two I/O processors, two RS-232C ports, four RS-422 ports, two 650K-byte diskette drives, CRT, keyboard, and ISOS II operating system ● Model 240—$5,995 same as Model 220, but without CRT, keyboard, or disk storage ● 90-day warranty ● on-site repair service and software updates/corrections available from over 100 Codex service centers ● sales through a direct sales force ● first delivered August 1983

■ COLECO INDUSTRIES INC

945 Asylum Avenue, Hartford, CT 06105 ● 203-278-0280

□ Coleco ADAM

Classification ● single-user/multitasking desktop component system supporting up to 4 tasks ● based on 4 8-bit processors, 1 in CPU, 3 in other components

Systems Software ● bundled with the system ● CP/M compatibility ● Coleco SmartBASIC (AppleSoft compatible); SmartLOGO, Z80 macro assembler optional ● ADAM-Net multitasking network for interfacing its components ● SmartFiler data management system optional

Applications Software ● Coleco SmartWriter word processing in ROM; spreadsheet, spelling checker, time manager, telephone directory, typing tutor, education, and entertainment programs optional

Systems Hardware ● basic system includes CPU, memory, keyboard, 2 joysticks, game cartridge slot, 1 digital data pack drive, daisywheel printer, 4 I/O expansion slots ● CPU features Zilog Z80A microprocessor ● 80K-byte RAM expandable to 144K bytes ● single-board computer with 4 expansion slots; 1 modular expansion port accepts ColecoVision expansion modules and controllers

Mass Storage ● no hard disk or diskette storage available ● 1M-byte magnetic tape storage available on 2 500K-byte digital data pack drives, 1 included with packaged system, 1 optional

Printers ● SmartWriter printer included in packaged system; 10-cps, 120-word-per-minute bidirectional daisywheel letter-quality printer

Display/Keyboard ● no display available from vendor ● typewriter-style keyboard with own microprocessor provides 75 sculptured full-travel keys and 21 special-function keys all

Personal/Microcomputer Survey

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arranged in standard QWERTY electric typewriter format; 2 detached game controllers can be used for calculator-style input and as second cursor position control

Pricing/Support/Availability ● base price—$750 includes memory console, 80K-byte RAM, SmartWriter word processing program in ROM, 1 500K-byte digital data pack, keyboard, 2 game controllers, 2 games, letter-quality printer, SmartBASIC ● 90-day warranty ● sales and maintenance through all stores handling ColecoVision ● first delivery November 1983

■ COLONIAL DATA SERVICES CORPORATION

105 Sanford Street, Hamden, CT 06514 ● 203-288-2524

□ SB-80, SB-80/4

Classification ● SB-80, single-user/single-tasking system; SB-80/4, up to 4 users, each single-tasking; components systems with separately available CRTs ● based on 8-bit processor

Systems Software ● software is unbundled ● SB-80 runs under CP/M 2.2; SB-80/4 runs under TurboDOS and I/OS; all operating systems are softloaded from 5.25- or 8-inch diskettes ● no compilers or interpreters provided by Colonial Data ● InfoStar DBMS, SuperSort II, and DataStar data entry, retrieval, and update system available

Applications Software ● WordStar with MailMerge and SpellStar; CalcStar electronic spreadsheet, accounting, payroll, order entry, and production inventory available from Colonial

Systems Hardware ● basic systems include CPU, memory, disk storage; real-time clock, DMA controller on SB80/4 only ● SB-80 CPU features 4-MHz Zilog Z80A microprocessor; SB-80/4 includes up to 4 additional Z80s (1 per user) ● 64K-byte RAM; expandable to 320K on SB-80/4 only; 4K-byte ROM on SB-80/4 ● SB-80 is single-board computer with 2 RS-232C ports, 2 parallel ports; SB-80/4 contains a master and a slave board with 6 RS-232C ports, 4 parallel ports, 50-pin expansion connector

Mass Storage ● maximum hard disk storage is 80M bytes; SB-80 has up to 10M bytes of Winchester storage built-in, SB-80/4 has up to 40M bytes built-in; external 10M-byte, 20M-byte, or 40M-byte 8-inch Winchester available ● maximum floppy disk storage is 2.4M bytes; up to 1.2M bytes external; floppy drives may be 8-inch 600K-byte or 1.2M-byte drives ● cartridge tape backup for Winchester drives; up to 40M bytes on SB-80/4

Printers ● up to 2 per SB-80; up to 6 per SB-80/4; 120- or 200-cps dot matrix; 40- or 55-cps letter quality

Display/Keyboard ● separately available; the vendor offers the ADDS Viewpoint terminal ● system displays 80 characters x 24 or 25 lines; monochrome

Pricing/Support/Availability ● base system—SB-80, $2,795 includes CPU with 64K-byte RAM, 640K-byte floppy drive, 2 serial ports, 2 parallel ports; SB-80/4—$6,495 includes 5 CPUs each with 64K-byte RAM, 2.4M-byte floppy disk, 6 serial ports, 4 parallel ports ● warranty is 90 days parts and labor ● manufacturer provides depot service in Hamden, CT, and field service throughout Connecticut and West Chester County, NY; service is available nationally through Indeserve and retailer/dealers ● sales are by direct mail and through computer stores and office equipment dealers; OEM sales also available ● first delivery for the SB-80, June 1981; first delivery for the SB-80/4, September 1982; over 900 installations

■ COLUMBIA DATA PRODUCTS, INC

9150 Rumsey Road, Columbia, MD 21045 ● 301-992-3400

□ Multi-Personal Computer (MPC) & VP Portable

Classification ● MPC—multiuser component system with separately available CRT; VP—portable system with integrated CRT ● both systems based on 16-bit processor ● both systems software and keyboard IBM PC compatible

Systems Software ● all software is bundled ● MS-DOS 1.25 (2.0 available), CP/M-86 (MP/M-86 available) ● BASICA, macro assembler development languages ● Perfect Filer data management system ● asynchronous communications support, diagnostics

Applications Software ● Perfect Writer and Perfect Speller word processing packages, Perfect Calc electronic spreadsheet, MPC Tutorial package, Home Accountant Plus, Fast Graphs, and Space Commanders all bundled with system

Systems Hardware ● all basic MPC systems include CPU, memory, disk storage, disk controller, I/O ports, tone generator/speaker, counter timer circuit; basic VP system includes CPU, memory, diskette storage, monitor, IBM PC-compatible keyboard, and I/O ports ● MPC and VP CPUs feature 8088 processor, 4.77-MHz socket for optional 8087 numeric processor; Z80 card available ● 128K-byte RAM with parity expandable to 1M bytes on MPC; 128K-byte RAM with parity expandable to 256K bytes on VP; both models have 12K-byte EPROM ● MPC is single-board computer with dual RS-232C ports, 1 Centronics parallel printer interface, IBM PC-compatible keyboard port, DMA Winchester hard disk interface, 8-level priority interrupt controller, 8 IBM PC-compatible expansion board slots; expansion boards and additional ports optional; VP is single-board computer with 1 RS-232C port, 1 Centronics port, and IBM expansion slot

Mass Storage ● MPC (1600-1)—maximum of 720K-byte disk storage using dual 5.25-inch floppy disks; MPC (1600-4)—1 360K-byte diskette plus 1 10M-byte Winchester with cache buffer and controller; 10M-byte hard disk expansion unit available as option for either MPC disk configuration ● VP—maximum of 720K-byte diskette storage using dual half-height 5.25-inch floppy disks

Printers ● none available from the vendor

Display/Keyboard ● MPC—12-inch monochrome monitor and IBM PC keyboard available from the vendor; VP—integral CRT with 9-inch diagonal, monochrome screen; systems display 40 or 80 characters x 24 lines; graphics formats include 640x200 pixels, B&W or color; 320x200 pixels, B&W, grey, or color ● IBM PC-compatible keyboard standard on VP and MPC

Pricing/Support/Availability ● base price, MPC 1600-1—$2,945 includes CPU, 128K-byte RAM, dual diskettes, 2 RS-232C ports, Centronics parallel port, IBM PC-compatible keyboard port, interrupt controller, DMA Winchester hard disk interface, generator/speaker, 8 IBM PC-compatible expansion board slots, counter timer circuit, 8087 socket, and Super 3000 Software Pack; Model MPC 1600-4—$4,545 includes same as Model 1600-1 except 360K-byte diskette and 10M-byte Winchester with cache buffer and controller; VP Portable—$2,995 includes CPU, memory, dual diskettes, CRT, keyboard, RS-232C port, Centronics parallel port, 8087 socket, IBM expansion slot, and Super 3000 Software Pack ● 90-day warranty ● mail-/carry-in hardware plans available from vendor; third-party service from Bell & Howell with on-site service contract available; software support through Perfect Software Customer Support Hot-line ● sales through OEMs, sales representatives, retailer/dealers, distributors ● first delivery May 1983

■ COMMODORE COMPUTER

1200 Wilson Road, Westchester, PA 19380 ● 215-431-9100

□ Commodore Executive 64

Classification ● single-user/single-tasking 27.6-pound portable computer, 5 inches high x 14.5 inches wide x 14.5 inches deep ● based on 8-bit processor ● fully compatible with Commodore 64

Systems Software ● proprietary operating system resides in ROM and is bundled with the system; DOS included with disk drives; CP/M softcard optional ● Commodore 64 BASIC included in ROM; LOGO, Pilot, and Assembler 64 languages optional ● The Manager DBMS and VICTERM emulation packages optional

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Applications Software ● EasyScript word processing and EasyCalc 64 electronic spreadsheet available from Commodore ● optional small business systems packages (general ledger, accounts receivable, accounts payable, payroll/check writing, inventory management), finance packages, educational programs, and entertainment programs also available

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, sound generator, music synthesizer, and I/O ports ● CPU features 1.0-MHz 6510 microprocessor; Z80 processor board optional ● 64K-byte RAM, 20K-byte ROM ● serial bus; IEEE-488 interface, dual game ports, cassette interface, and external video port standard; 300-baud modem optional

Mass Storage ● maximum 240K-byte diskette storage using 2 drives (1 standard) ● optional Datasette Recorder

Printers ● 14-cps graphics, 30-cps, 45-lpm, and 100-cps dot-matrix printers available from Commodore

Display/Keyboard ● system uses integral 5-inch color monitor that displays 25 lines of 40 characters in upper-/lowercase alphanumerics ● detached typewriter-style keyboard has 4 programmable keys and closes over CRT and disk drive unit

Pricing/Support/Availability ● base system—$995 includes CPU, 64K-byte RAM, 1 diskette drive, CRT, keyboard, I/O ports, and operating system ● 90-day warranty ● on-site/carry-in hardware maintenance available from over 800 dealers and TRW; software updates/corrections available from dealer ● systems available August 1983

☐ Commodore PET, CBM 8032, SuperPET

Classification ● single-user/single-tasking desktop computers with integrated CRTs ● based on 8-bit processors ● PET and CBM 8032 are identical systems except for keyboard layout and characters per screen; SuperPET is an enhanced CBM 8032

Systems Software ● proprietary operating system resides in ROM and is bundled with the systems; Waterloo microSupervisor (SuperPET only) also resides in ROM; DOS comes with the disk drives ● CBM BASIC 4.0 resides in ROM and is bundled with the systems; Waterloo microBASIC, 6809 Assembler, microAPL, microFORTRAN, microPascal, microCOBOL all bundled with SuperPET only; Compiled Integer BASIC, PETspeed BASIC compiler, Assembler Development Package, Pascal Development Package all optional; UCSD Pascal optional for 8032, SuperPET only ● Ozz—The Information Wizard optional

Applications Software ● Wordcraft word processing, accounting, financial, legal, medical, payroll, sales/distribution, and transportation packages available from Commodore; EasyCalc spreadsheet and other management science packages available from Commodore for SuperPET only

Systems Hardware ● basic systems include CPU, memory, CRT, keyboard, I/O ports ● CPU features MOS Technology 6502 microprocessor; SuperPET includes additional 6809 microprocessor ● 32K-byte RAM, expandable to 96K bytes only on the 8032 by adding a SuperPET upgrade 64K-byte memory expansion board; 96K-byte RAM standard on the SuperPET; 18K-byte ROM (PET, 8032), 38K-byte ROM (SuperPET) ● IEEE-488 bus permits system expansion by daisychaining hardware modules and peripheral devices; 4 integral plug connectors, 2 cassette ports (PET, 8032), parallel port, RS-232C port (SuperPET) ● 300-baud modem optional

Mass Storage ● maximum of 60M bytes of hard disk storage using 8 optional 5.25-inch 5M-/7.5M-byte Winchester drives; maximum of 8.8M bytes of floppy disk storage using 8 optional 5.25-inch 340K-/1.1M-byte dual drive subsystems ● up to 2 optional dataset recorders (PET, 8032)

Printers ● maximum of 1 printer per system; 80-cps and 150-cps dot-matrix and 40-cps daisywheel printers available from Commodore

Display/Keyboard ● 12-inch green phosphor CRT displays upper-/lowercase alphanumerics, 25 lines of 80 characters (8032, SuperPET), 25 lines of 40 characters (PET), 128 graphic character set ● integral typewriter-style keyboard with numeric pad, 64 graphics characters on keys (PET)

Pricing/Support/Availability ● base system—PET/8032, $995/$1,495 includes CPU, 32K-byte RAM, 18K-byte ROM, CRT, keyboard, parallel port, cassette interfaces, operating system, BASIC; SuperPET—$1,995 includes dual CPUs, 96K-byte RAM, 38K-byte ROM, CRT, keyboard, serial, and parallel ports, operating system, several programming language interpreters ● 90-day warranty ● carry-in maintenance available through Commodore; third-party on-site maintenance available through TRW; corrective updates and periodic maintenance on software provided free ● sales through more than 10,000 dealers in the U.S. ● PET first delivered in 1977, CBM 8032 in 1980, SuperPET in 1981

☐ Commodore C128/80

Classification ● single-user/single-tasking desktop computer with integrated keyboard ● based on 8-bit processor

Systems Software ● proprietary operating system included in ROM; DOS included with disk drives; CP/M optional ● Commodore V2 BASIC included in ROM ● VICTERM terminal emulator included with the VICModem

Applications Software ● none available at this time

Systems Hardware ● base system includes CPU, memory, keyboard, I/O ports, and voice synthesizer ● CPU features 2-MHz 8-bit 6509 processor; Z80 optional ● 128K-byte RAM; 24K-byte ROM ● IEEE-488 interface, RS-232C port, parallel port standard ● optional VICModem

Mass Storage ● maximum of 12.5M bytes of hard disk storage using 5.0M-byte and 7.5M-byte optional Winchester disk drives ● maximum of 16M bytes of diskette storage using 8 2.1M-byte dual drives

Printers ● 40-cps letter-quality daisywheel and 30-, 80-, and 150-cps dot-matrix printers available from Commodore

Display/Keyboard ● system uses separately available CRT display or television set; system's display capability is monochrome 25 lines x 80 columns, upper-/lowercase alphanumerics; graphic mode 320x200 pixels ● integrated keyboard has 10 dedicated function keys, numeric keypad

Pricing/Support/Availability ● base system—$895 includes CPU, 128K-byte RAM, keyboard, I/O ports, proprietary operating system, and BASIC language ● 90-day warranty ● carry-in maintenance available through Commodore; third-party on-site maintenance available through TRW; corrective updates and periodic maintenance on software provided free ● sales through more than 10,000 dealers in the U.S. ● available June 1983

☐ Commodore 64

Classification ● single-user/single-tasking desktop computer with integral keyboard; monitor optional ● based on 8-bit processor

Systems Software ● proprietary operating system included in ROM; DOS included with disk drives; CP/M Softcard optional ● Commodore V2BASIC included in ROM; LOGO, Pilot optional ● EasyFile file management system optional ● VICTERM terminal emulator included with the VICModem; PET emulation optional

Applications Software ● EasyScript word processor, EasyCalc electronic spreadsheet, graphics, financial analysis, management science, education, entertainment plus most PET software available from Commodore

Systems Hardware ● basic system includes CPU, memory, keyboard, RF modulator, sound generator, music synthesizer ●

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

CPU features MOS Technology 6510 microprocessor • 64K-byte RAM (39K user accessible for BASIC programs, 52K for machine language); 20K-byte ROM • serial bus; dual game ports, 8-bit user port, 44-pin expansion bus/cartridge slot, display interface, cassette interface, composite video output for monitor • VICModem optional

Mass Storage • maximum diskette storage of 850K bytes using up to 5 170K-byte drives • C2N Datasette tape storage available

Printers • system supports 1 printer; 30-cps dot-matrix printer available from Commodore

Display/Keyboard • system uses optional CRT or user-supplied TV set; displays 40 characters x 25 lines; all 64 PET graphic characters, graphic mode 320x200 pixels; uses 16 colors simultaneously; 8 independently movable Sprites for animated graphics; 13-inch color monitor available from Commodore • keyboard is integrated into system housing; full-size typewriter style with 4 unassigned programmable function keys

Pricing/Support/Availability • base system—$595 includes CPU, 64K-byte RAM, 20K-byte ROM, keyboard, RF modulator, sound, cassette, and monitor interfaces, operating system, BASIC • 90-day warranty • carry-in maintenance available through Commodore; third-party on-site maintenance available through TRW; corrective updates and periodic maintenance on software provided free • sales through more than 10,000 dealers in the U.S. • first delivery October 1982

☐ Commodore VIC 20

Classification • single-user/single-tasking desktop system with integrated keyboard; monitor optional • based on 8-bit processor

Systems Software • proprietary operating system included in ROM; DOS included with disk drives • Commodore V2BASIC included in ROM; VICMON Machine Language Monitor optional • VICTERM terminal emulator included with the VICModem

Applications Software • education, entertainment, personal packages available from Commodore

Systems Hardware • basic system includes CPU, memory, keyboard, 4 internal amplifiers for sound, RF modulator and TV switchbox, plug-in connectors • CPU features MOS Technology 6502A microprocessor • 5K-byte RAM (3.5 user accessible) expandable to 32K; 20K-byte ROM expandable with plug-in cartridges • proprietary serial bus includes serial port, cassette interface, modem interface, expansion/game cartridge port, user-programmable 8-bit port; side connector for paddles, 1 joystick, or light pen; optional RS-232C terminal interface • VICModem optional

Mass Storage • maximum of 640K bytes of floppy disk storage on 4 optional 5.25-inch 170K-byte diskette drives • C2N Datasette Recorder optional

Printers • maximum of 1 printer • 30-cps dot-matrix graphics printer and 4-color printer/plotter available

Display/Keyboard • uses separately available CRT or TV set; displays 22 characters x 23 lines, upper-/lowercase; graphics format 176x184 pixels, 16 colors; 13-inch color monitor available from Commodore • keyboard is integrated into system housing; provides full-size typewriter-style layout, 4 programmable function keys

Pricing/Support/Availability • base system—$199.95 includes CPU, 5K-byte RAM, 20K-byte ROM, keyboard, RF modulator, TV switchbox, sound, serial port, plug-in connectors, cassette and modem interfaces, operating system, BASIC • 90-day warranty • maintenance through authorized Commodore dealer network and Commodore regional dealer support centers • sales through more than 8,000 outlets including dealers, retailers, and mail-order houses • first delivered in 1980; more than 1 million shipped

■ COMPAL, INC

8500 Wilshire Boulevard, Beverly Hills, CA 90211 • 213-652-2263

☐ 8200

Classification • multiuser system, supports up to 3 users; desktop computer with integrated CRT • based on 8-bit processor

Systems Software • Extended CP/M (for multiterminals) operating system packaged with the computer • assembler and BASIC-Z bundled; Microsoft BASIC, C-BASIC, COBOL-80, FORTRAN-80 optional • TIM I, dBASE II database management packages optional • IBM 3270, 2780/3780 BSC, asynchronous TTY, CP/M File Transfer communications packages optional

Applications Software • WORDPAL word processing, accounting, financial modeling, forecasting, job costing, timekeeping and billing, property management packages available; choice of $1,000 worth of software included in system cost

Systems Hardware • basic system includes CPU, memory, CRT, keyboard, disk storage • CPU features Zilog Z80, 6-MHz microprocessor • 128K-byte RAM expandable to 256K bytes; 2K-byte ROM • S-100 bus; 2 RS-232C, 2 parallel I/O ports standard; additional serial or parallel ports optional • RS-232C and direct connect modems available

Mass Storage • maximum hard disk storage is 32M bytes using 1 5.25-inch Winchester; 10M-byte Winchester also available • maximum diskette storage is 1.2M bytes using dual 5.25-inch floppy disks with 200-millisecond average access time, 250K-bps transfer rate • cartridge tape available with hard disk configuration

Printers • Epson MX-80/MX-100, NEC 3575/7715, TI 810, Comrex CR-1, Digital CA50 printers available from vendor

Display/Keyboard • integrated 12-inch green phosphor display screen, 80 characters x 24 lines, upper-/lowercase alphanumerics, graphics character set • detached keyboard provides 14-key numeric pad, 32 programmable keys

Pricing/Support/Availability • base price—$13,500 includes CPU, 128K-byte RAM, 10M-byte hard disk storage, 630K-byte diskette storage, CRT/keyboard, $1,000 worth of software • 90-day warranty • service available by manufacturer or third party; service contracts available for on-site repair with free software/update corrections included with service contract • sales through direct sales force and distributors • first delivered 1980; approximately 1,000 systems installed

■ COMPAQ COMPUTER CORPORATION

20333 FM149, Houston, TX 77070 • 713-370-7040

☐ Compaq, Compaq Plus Portable Computers

Classification • single-user/single-tasking portable computer, 20 inches wide x 16 inches deep x 8.5 inches high; 28 pounds—1 diskette-based system; 31 pounds—hard disk-based system • based on 16-bit processor • compatible with IBM PC and PC/XT

Systems Software • Microsoft MS-DOS is softloaded from 5.25-inch diskette drive and is bundled with the system • Microsoft BASIC is bundled

Applications Software • none available from Compaq

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports • CPU features 16-bit Intel 8088 microprocessor • 128K-byte RAM expandable to 640K bytes, 16K-byte video RAM, 8K-byte ROM • 3 IBM PC-compatible expansion slots on Compaq; 2 on Compaq Plus • parallel printer port, RGB color monitor interface, color or B/W RF modulator interface, composite video monitor interface; RS-232C interface optional

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Mass Storage ● maximum of 640K bytes of diskette storage with 1 320K-byte 5.25-inch diskette drive standard, 1 optional on Compaq ● maximum of 10M bytes of hard disk with 320K-byte diskette drive standard on Compaq Plus

Printers ● maximum of 1 printer per system; no printers available from vendor

Display/Keyboard ● CRT is integrally packaged into system unit; 9-inch green phosphor screen has graphics capabilities up to 640x200 pixels; displays 25 lines of 80 characters in upper-/lowercase alphanumerics ● keyboard contains 10 programmable function keys, numeric pad; folds over front of unit for traveling

Pricing/Support/Availability ● base price—Compaq—$2,995 includes CPU, 128K-byte RAM, display, keyboard, 1 diskette drive, parallel printer port, 3 video interfaces, MS-DOS, Microsoft BASIC; Compaq Plus—$4,995 includes same as Compaq plus 10M-byte hard disk ● 90-day warranty ● service available from retailer ● sales through ComputerLand, Sears, other computer stores, and independent dealers ● first delivery January 1983, Compaq; October 1983, Compaq Plus

■ COMPUPRO

3506 Breakwater Court, Hayward, CA 94545 ● 415-786-0909

□ CompuPro System 816/A, B, C & D

Classification ● both single-user/single-tasking and multiuser component systems supporting up to 12 users; CRT and keyboard not included ● based on single and dual 8-bit and 16-bit CPUs

Systems Software ● CP/M 8-16, CP/M-86, CP/M 2.2, MP/M-86, MP/M 8-16 bundled with various models; CP/M 8-16 and MP/M 8-16 are CompuPro's proprietary versions of MP/M; runs 8-bit and 16-bit software concurrently ● CBASIC, Pascal MT+, CB80, PL/1-80, CIS COBOL, Level II COBOL, all optional ● dBASE II database management system bundled with 816/A, B, C

Applications Software ● SuperCalc-86 electronic spreadsheet bundled with all models; SuperWriter-86 word processing bundled with 816/D only; Write word processor, typing tutor, record keeper bundled with 816/A, B, C

Systems Hardware ● all basic systems include CPU, memory, disk storage, clock calendar, DMA disk controller, interrupt controllers, interval timers ● CPU features 6-MHz Intel 8085 and 8-MHz Intel 8088 on the 816/A, B, C; 10-MHz Intel 8086 on the 816/D; optional 8087 Math processor ● 128K-byte static RAM expandable to 1M bytes ● S-100 bus with 20-slot motherboard; 4 to 12 RS-232C ports standard depending on the model; 1 parallel port, 1 Centronics port standard on 816/A, D; optional serial and parallel ports available

Mass Storage ● maximum hard disk storage of 40M bytes on 1 drive ● maximum floppy disk storage of 4.8M bytes formatted; dual 8-inch 1.2M-byte Qume drives standard, 2 optional; system supports IBM 3740 disk storage protocol ● M-Drive H solid state disk emulator for copying files from a floppy disk or hard disk at RAM speed; contains 512K-byte storage expandable to 4M bytes; included with 816/D, optional for other models

Printers ● maximum of 2 printers per system; none offered by CompuPro

Display/Keyboard ● none offered by CompuPro

Pricing/Support/Availability ● all models include dual 1.2M-byte diskette drives, clock/calendar, software; 816/A base price—$5,495 includes dual CPUs, 128K-byte RAM, 4 serial ports, 1 parallel port, 1 Centronics port; 816/B base price—$6,995 includes dual CPUs, 256K-byte RAM, 9 serial ports; 816/C base price—$8,995 includes dual CPUs, 384K-byte RAM, 9 serial ports; 816/D base price—$14,295 includes single CPU, 512K-byte RAM, 12 serial ports, 1 parallel port, 1 Centronics port ● 1-year warranty on boards, mainframe enclosure, floppy disk drives ● maintenance through network of

CompuPro Full Service Systems Centers and on-site through Xerox Americare ● sales through distributors and independent dealers ● systems first delivered 1982; approximately 10,000 delivered

□ CompuPro System 816/E

Classification ● single-user component system; CRT and keyboard not included ● based on 32-/16-bit CPU

Systems Software ● CP/M 68K operating system bundled ● C runtime library, mapFORTH bundled

Applications Software ● none offered by CompuPro

Systems Hardware ● basic system includes CPU, memory, disk storage, clock/calendar, interrupt controllers, interval timers, battery backed-up RAM ● CPU features 8-MHz MC68000 microprocessor ● 256K-byte static RAM expandable to 16M bytes ● S-100 bus with 20-slot motherboard; 4 RS-232C ports, 1 parallel port, 1 Centronics printer port standard; additional ports available

Mass Storage ● maximum hard disk storage of 40M bytes on 1 drive ● maximum floppy disk storage of 4.8M bytes; dual 8-inch 1.2M-byte Qume drives standard, 2 optional; system supports IBM 3740 disk storage protocol ● M-Drive/H solid state disk emulator for copying files from a disk at RAM speed included with system; contains 1.5M-byte storage expandable to 4M bytes

Printers ● maximum of 2 printers per system standard; none offered by CompuPro

Display/Keyboard ● none offered by CompuPro

Pricing/Support/Availability ● base price—$12,490 includes CPU, 256K-byte RAM, DMA disk controllers, dual 1.2M-byte diskette drives, clock/calendar, 1 parallel, 1 Centronics, 4 serial ports, 1.5M-bps RAM disk, systems software ● 1-year warranty on boards, mainframe enclosure, floppy disk drives ● maintenance through network of CompuPro Full Service Systems Centers and on-site through Xerox Americare ● sales through distributors and independent dealers ● systems first delivered 1983

□ CompuPro 816/F

Classification ● multiuser component system supporting up to 12 users; CRT and keyboard not included ● based on 16-bit processor

Systems Software ● CP/M-86, MP/M-86 operating systems bundled ● CBASIC-86, Pascal MT+, CB-86, PL/1, CIS COBOL, Level II COBOL optional

Applications Software ● none available through CompuPro

Systems Hardware ● base system includes CPU, memory, disk storage, I/O ports, clock calendar, interrupt controllers, DMA controller, RAM disk ● CPU is 16-bit Intel iAPX 286 microprocessor ● 512K-byte static RAM expandable to 1M bytes ● S-100 bus with 20-slot motherboard, 9 slots open; 12 RS-232C ports, 1 Centronics port, 1 parallel port standard; additional ports optional

Mass Storage ● maximum of 40M bytes of hard disk storage on 1 drive standard ● maximum of 1.2M bytes of formatted diskette storage on 1 8-inch drive standard ● 1.5M-byte RAM disk standard; expandable to 4M bytes

Printers ● none offered by CompuPro

Display/Keyboard ● none offered by CompuPro

Pricing/Support/Availability ● base price—$14,195 includes CPU, 512K-byte static RAM, 40M-byte hard disk, 1.2M-byte floppy disk, 1.5M-byte RAM disk, 12 serial ports, 2 parallel ports, CP/M-86, MP/M-86 ● 1-year warranty ● maintenance through CompuPro full-service system centers and on-site through Xerox Americare ● sales through distributors and independent dealers ● system first delivered 1984

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

☐ CompuPro 816/Z

Classification • single-user/single-tasking component system; CRT and keyboard not included • based on 8-bit processor

Systems Software • CP/M 2.2 bundled • CBASIC-80, Pascal MT+, CB-80, PL/1, CIS COBOL, Level II COBOL available • dBASE II bundled

Applications Software • WRITE word processor, typing tutor, record keeper bundled

Systems Hardware • base system includes CPU, memory, I/O ports, storage, clock calendar, interrupt controllers, DMA controller; CPU is 6-MHz Zilog Z80B • 64K-byte static RAM • S-100 bus with 20-slot motherboard, 16 slots open; 3 RS-232C ports, 1 Centronics port, 1 parallel port standard; additional ports optional

Mass Storage • maximum of 40M bytes of hard disk storage on 1 drive • maximum of 4.8K bytes of formatted diskette storage; dual 8-inch 1.2M bytes standard; 2 optional

Printers • none offered by CompuPro

Display/Keyboard • none offered by CompuPro

Pricing/Support/Availability • base price—$4,995 includes CPU, 64K-byte static RAM, 2 diskette drives, 3 serial ports, 2 parallel ports, software • 1-year warranty • maintenance through network of CompuPro full-service system centers and on-site through Xerox Americare • sales through distributors and independent dealers

■ COMPUTERSHOP

139 First Street, Cambridge, MA 02141 • 617-661-2670

☐ Star-Lite

Classification • single-user/single-tasking 34-pound portable computer; 16-3/4 inches wide x 16 inches deep x 7-5/8 inches high • based on 8-bit processor • available in 2 models with differing disk storage capacities

Systems Software • CP/M 2.2 is bundled with the system • optional languages include FORTRAN, BASIC, COBOL, and Pascal • CONDOR database management system optional • modem communications program bundled

Applications Software • PerfectWriter word processing, PerfectCalc electronic spreadsheet bundled with system; accounting, personnel, banking and finance packages available from Computershop

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports • CPU features 4-MHz Zilog Z80A processor • 64K-byte RAM • S-100 bus with 4 open expansion slots; 2 RS-232C ports (1 standard), 1 Centronics-compatible port standard; composite video port

Mass Storage • maximum of 20M bytes of hard disk storage optional on both models using Winchester disk drive • maximum of 400K or 1.5M bytes of diskette storage, depending on model

Printers • system supports 1 printer; none offered by vendor

Display/Keyboard • 9-inch green phosphor CRT integrally packaged into system unit; displays 80 characters x 24 lines in upper-/lowercase alphanumerics • detachable typewriter-style keyboard, 26 programmable keys, numeric keypad

Pricing/Support/Availability • base system—Star-Lite—$2,695 includes CPU, 64K-byte RAM, 400K-byte diskette storage, display, keyboard, I/O ports, software • Star-Lite Quad—$3,195 same features as Star-Lite, but with 1.5M-byte diskette storage • 90-day warranty • service plans for mail-/carry-in maintenance, on-site and software repair available from dealers • sales through dealers and OEMs • 50 systems delivered as of December 1982

■ COMPUTER SYSTEMS

26401 Harper Avenue, St. Clair Shores, MI 48081 • 313-779-8700

☐ PC/8088

Classification • single-user/single-tasking 25-pound portable computer, 7.5 inches wide x 19 inches deep x 16 inches high • based on 16-bit processor • reportedly compatible with IBM PC

Systems Software • MS-DOS bundled; CP/M-80/-86 operating systems optional • BASIC, FORTRAN, Pascal, and COBOL programming languages • DBMS database management system • various communication packages available

Applications Software • word processor available from the vendor

Systems Hardware • basic system includes CPU, memory, disk storage, and 1 I/O port • CPU features 16-bit 7-MHz 8088 processor; optional Z80 dual microprocessors and 8087 microprocessor available • 64K-byte RAM, expandable to 128K bytes • up to 7 IBM PC-compatible expansion slots • 1 RS-232C port standard; IEEE interface, analog/digital interfaces optional

Mass Storage • maximum of 10M bytes of hard disk storage using Winchester disk drive option • maximum of 1M bytes of diskette storage using 2 dual 5.25-inch, 320K-byte floppy disk drives (1 standard)

Printers • maximum of 1 printer per system; 80-/120-cps dot-matrix and daisywheel printers and 1 8-color printer/plotter available from vendor

Display/Keyboard • 7-inch or 9-inch integral monochrome CRT (color optional); displays 25 lines of 80 characters in upper-/lowercase alphanumerics; graphics optional • detached keyboard compatible with IBM PC keyboard layout; includes 10 programmable function keys

Pricing/Support/Availability • base price—$3,300 includes CPU, 64K-byte RAM, display/keyboard, 1 dual diskette drive, 1 RS-232C port, and MS-DOS • 90-day warranty • on-site and carry-in service available from manufacturer and third-party organizations • sales through direct sales force and office equipment dealers • first delivery June 1983

■ COMPUTER TRANSCEIVER SYSTEMS, INC

P.O. Box 15, East 66 Midland Avenue, Paramus, NJ 07652 • 800-526-9068

☐ Execuport XL, XL+

Classification • single-user/single-tasking system • XL is 26-pound, transportable, 8-bit-based computer; XL+ is basic XL with 16-bit processor board plugged in

Systems Software • CP/M 2.2 bundled with XL; MS-DOS bundled with XL+; CP/M-86 available for XL+ • Microsoft MBASIC and assembler bundled • Perfect Filer filing system bundled

Applications Software • Perfect Writer word processor, Perfect Speller, and Perfect Calc spreadsheet bundled with systems

Systems Hardware • basic systems include CPU, main memory, CRT, keyboard, disk storage, and I/O ports • CPU is 4-MHz Zilog Z80A 8-bit processor; XL+ also has 8-MHz Intel 80186 16-bit processor board with 128K-byte RAM plugged into expansion slot • memory ranges from 80K-byte to 512K-byte RAM; 4K-byte ROM • 2 RS-232C ports and one parallel port standard; video connector for external CRT; 2 expansion slots; one slot available to user on XL+ • 103/212A modem available

Mass Storage • maximum storage is 1.6M bytes on two 800K-byte diskette drives; 250K-bps transfer rate, 180-millisecond average access time

Printers • 120-cps 80-/132-column thermal printer with parallel interface available

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Display/Keyboard ● integral 10-inch green CRT screen displays 80 or 132 characters x 24 lines; bit-mapped color graphics board available ● detachable typewriter-style keyboard has 22 function keys and numeric keypad for total of 104 keys; all keys programmable

Pricing/Support/Availability ● basic system includes single CPU, RAM, CRT, keyboard, 2 800K-byte diskette drives, 3 I/O ports, CP/M, and bundled software; XL—$2,695; XL+—$3,495 includes basic system hardware plus 16-bit CPU and 128K-byte RAM board, MS-DOS in place of CP/M, and bundled software ● 90-day warranty ● mail-/carry-in and nationwide on-site service by Computer Transceiver Systems Inc ● first delivery January 1984

■ CONVERGENT TECHNOLOGIES, INC

Advanced Information Products Division, 2441 Mission College Boulevard, Santa Clara, CA 95050 ● 408-727-8830

☐ Workslate

Classification ● single-user/multitasking spreadsheet-dedicated system handling 2 tasks ● based on 8-bit processor ● 3.5-pound notebook-size portable computer measuring 8.5x11x1 inches; A/C or battery powered

Systems Software ● proprietary multitasking operating system bundled ● communications software integrated with spreadsheet software

Applications Software ● proprietary integrated spreadsheet software built into ROM, as well as calendar, memo pad, and phone list spreadsheets ● Taskware pre-formatted worksheets available; recorded on microcassettes; packages include portfolio analysis, estate planning, personal tax, etc

Systems Hardware ● basic system includes CPU, keyboard, memory, liquid crystal display (LCD), cassette storage, A/C adapter-charger, I/O port, clock, internal modem, audio speaker, and microphone ● CPU is 8-bit, 2.7-MHz Hitachi 6303 ● 16K-byte CMOS RAM dedicated to spreadsheet data, 64K CMOS ROM ● proprietary I/O port (modular plug-in serial/parallel adapter not yet available) ● built-in 300-baud modem with auto-dial, auto-answer

Mass Storage ● built-in dual track microcassette recorder; one track for audio, second for data recording; 180K bytes per side of each microcassette tape

Printers ● 5-cps printer based on 4-pen mechanism; 3 pounds, uses standard 3.5-inch wide paper roll

Display/Keyboard ● LCD is built-in; 46 upper-/lowercase characters x 16 lines ● built-in keyboard and numeric keypad with 60 keys and 5 function keys

Pricing/Support/Availability ● base system—$895 includes CPU, 16K-byte CMOS RAM, 64K-byte CMOS ROM, LCD, keyboard, microcassette data/audio recorder, modem, spreadsheet software, proprietary operating system, A/C adapter-charger ● 90-day warranty ● mail-/carry-in service available; toll-free assistance ● sale through computer stores, general merchandisers, direct sales force, OEMs, and direct mail ● first delivery December 1983; 300 systems delivered

■ CORONA

31324 Via Colinas, Suite 110, Westlake Village, CA 91361 ● 213-706-1505

☐ Corona PC & Portable

Classification ● single-user/single-tasking desktop and portable computers ● based on 16-bit processor ● IBM PC compatible at all levels

Systems Software ● MS-DOS Version 1.25, 2.0 bundled; CP/M-86 and UCSD p-system available ● Microsoft BASIC included with package

Applications Software ● Multimate word processing and PC Tutor programs bundled with systems

Systems Hardware ● basic systems include CPU, memory, diskette drive, monitor, I/O ports, DMA floppy disk controller, expansion slots ● CPU features Intel 8088 microprocessor; 8087 floating-point co-processor optional ● 128K-byte RAM expandable to 512K bytes on main board ● 1 RS-232C port, 1 Centronics parallel port, 4 IBM PC-compatible card slots for expansion

Mass Storage ● maximum of 720K bytes (MS-DOS 2.0) of diskette storage using 2 half-height flexible disk drives (1 standard) ● optional 10M-byte internal hard disk, using 1 expansion slot for the PC; optional external, detachable 10M-byte hard disk for the portable

Printers ● maximum of 1 printer per system; none available from vendor

Display/Keyboard ● CRT is integrally packaged into system unit ● 12-inch green phosphor screen on the PC; 9-inch green or amber screen on the Portable; graphics display of 640x325 pixels can be overlayed on alphanumeric display ● detachable keyboard feature compatible with IBM PC

Pricing/Support/Availability ● Corona PC base price—$2,595 includes CPU, 128K-byte RAM, CRT, keyboard, 1 diskette drive, 1 RS-232C port, 1 Centronics parallel port software; Corona Portable base price—$2,545 with same components as PC ● 90-day warranty ● depot service available through distributors ● distribution and sales through computer stores, large OEMs ● first delivery January 1983 for PC, October 1983 for Portable

■ CORVUS SYSTEMS, INC

2029 O'Toole Avenue, San Jose, CA 95131 ● 408-946-7700

☐ Corvus Concept

Classification ● single-user/single-tasking system; network workstation or standalone desktop system with detached keyboard and CRT ● based on 16-bit microprocessor

Systems Software ● Corvus Concept Operating System (CCOS) softloaded from 8-inch diskette drive bundled; UCSD p-system Version IV.1 optional ● ISO Pascal with UCSD extensions, FORTRAN 77 optional; MC68000 assembler bundled ● Constellation II network software bundled

Applications Software ● Edword word processing, LogiCalc spreadsheet, ISYS integrated software package containing spreadsheet, word processor, list manager, business graphics, search and retrieval, and desktop tools available from Corvus

Systems Hardware ● basic system includes CPU, memory, display, keyboard, clock/calendar with battery backup, sound generator with speaker, 2 interval timers, I/O ports ● CPU features MC68000 microprocessor ● 256K-byte RAM expandable to 512K bytes; 3K-byte ROM ● 4 expansion slots, 2 RS-232C asynchronous ports; 1 Corvus Omninet local network interface standard

Mass Storage ● maximum of 73.6 bytes of formatted Winchester disk storage using 4 5.25-inch disk drives ● maximum of 4.8M bytes of diskette storage available using 8-inch 1.2M-byte floppy diskettes (IBM 3740 format); one 720K-byte 5.25-inch diskette also available ● 73M-byte Mirror tape cassette; 100-/200M-byte cartridge tape available for storage backup

Printers ● none available from Corvus

Display/Keyboard ● dual-orientation display; 15-inch, multiple-window screen, black on white or white on black; 120 characters x 56 lines (landscape), 90 characters x 72 lines (portrait); bit-mapped display with 720x560 pixels, graphics character set ● 91-key detached, Selectric-style keyboard with 15-key numeric pad, 10 multifunction soft keys; all keys programmable

Pricing/Support/Availability ● base price—$3,995 includes

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CPU, 256K-byte RAM, CRT, keyboard, 2 RS-232C ports, Omninet interface, CCOS ● 6-month hardware warranty standard, extensions available ● service by manufacturer, service plans available with extended warranty ● sales through direct sales force, dealers ● first delivery May 1982

■ CROMEMCO, INC

280 Bernardo Avenue, P.O. Box 7400, Mt. View, CA 94039 ● 415-964-7400

□ D-Series System One, System Two, System Three

Classification ● both single-user/multitasking (up to 18 tasks) and multiuser component systems with up to 16 users on the System Two and System Three and up to 5 users on the System One; CRT and keyboard optional ● based on dual processors—16-bit/8-bit

Systems Software ● all software comes unbundled ● CROMIX and CDOS operating systems are softloadable from either 8-inch or 5.25-inch diskettes; CROMIX is multiuser, multitasking, and UNIX-like and requires 128K-byte main memory; CDOS is CP/M compatible ● FORTRAN 77, COBOL, C Compiler, Pascal, 68000 BASIC, Macro Assembler ● DBMS database management system and report writer ● remote batch terminal emulator

Applications Software ● Write Master word processing available from Cromemco

Systems Hardware ● all basic systems include dual CPUs, memory, disk storage ● CPU features MC68000 and Z80A processors ● 256K-byte main memory expandable to 16M bytes; error-checking and correction capability available; 4K-byte ROM ● S-100 bus; 8 slots on the System One, 21 slots on the System Two and System Three; 1 RS-232C port standard, additional serial ports optional, parallel ports optional, IEEE-488 interface optional ● 300-/1200-baud modem, Quadart 4-channel synchronous/asynchronous interface optional; C-NET local area network available

Mass Storage ● various disk configurations available depending on the model ● maximum hard disk storage is 1200M bytes; integral 20M-byte Winchester ● maximum diskette storage is 4.8M bytes; 5.25-inch 390K-byte drives, 8-inch 1.2M-byte drives available ● 9-track tape drive and cartridge tape drive optional

Printers ● system supports multiple printers; 55-cps letter-quality and 150-cps and 180-cps dot-matrix printers available from Cromemco

Display/Keyboard ● optional 12-inch monochrome terminal with detachable keyboard; 80 characters x 25 lines; keyboard provides numeric pad, 40 function keys ● optional 13-inch RGB monitor for SDI color graphics; 756x484 pixels

Pricing/Support/Availability ● System One base price—$4,995 includes CPU, 256K-byte RAM, 4K-byte ROM, 2 390K-byte diskettes, RS-232C port; System Two base price—$5,995 includes same as System One; System Three base price—$7,995 includes same as System One except 2 1.2M-byte diskettes ● 90-day warranty ● third-party on-site maintenance through TRW; also factory service and dealer support ● sales through computer stores, OEMs, industrial distributors, manufacturers representatives ● first delivered 1981; more than 35,000 systems shipped

□ Cromemco C-10 Personal Computer

Classification ● single-user/single-tasking desktop computer with integrated CRT ● based on single 8-bit processor

Systems Software ● CDOS operating system softloaded from 5.25-inch diskette; operating system is packaged with computer; CDOS is CP/M compatible ● 32K-byte BASIC bundled with computer; Macro Assembler, FORTRAN IV, RATFOR, LISP optional

Applications Software ● Write Master word processing, Plan Master spreadsheet, investment analysis included with system

Systems Hardware ● all basic systems include CPU, memory, CRT, keyboard, disk storage, I/O ports ● CPU features 4-MHz Zilog Z80A processor ● 64K-byte RAM; 24K-byte ROM ● S-100 bus with 1 RS-232C data communications port, 1 serial printer port, 1 parallel port standard; C-NET local area network available

Mass Storage ● maximum of 780K bytes of diskette storage using 2 5.25-inch diskettes at 390K bytes each

Printers ● maximum of 1 printer per system; 120-wpm letter-quality daisywheel printer available from Cromemco

Display/Keyboard ● 12-inch green phosphor CRT screen displays 80 characters x 25 lines; upper-/lowercase alphanumerics, graphics character set ● standard Qwerty detached keyboard

Pricing/Support/Availability ● base price of C-10 SP—$1,785 includes CPU, 64K-byte RAM, 24K-byte ROM, 12-inch CRT, keyboard, 5.25-inch diskette drive, 3 software packages ● 90-day warranty ● third-party on-site maintenance through TRW; also factory service and dealer support; service plans are available for mail-/carry-in hardware maintenance, on-site repair service and software updates/corrections ● sales through computer stores, direct sales force, OEMs, manufacturer's representatives, and industrial distributors ● first delivered 1982

■ DATA GENERAL CORPORATION

4400 Corporate Drive, Westboro, MA 01581 ● 617-366-8911

□ Desktop Generation

Classification ● multiuser desktop component systems handling up to 4 users; CRT and keyboard included with Models 10, 10/SP only ● Models 10, 10/SP based on dual 16-bit processors which can run in concurrent mode; Models 20, 30 based on single 16-bit processor

Systems Software ● all software comes unbundled ● Data General RDOS, AOS/WS, MP/AOS-SU proprietary operating systems available; MS-DOS and CP/M-86 also available, for Models 10, 10/SP only ● Data General's Extended BASIC, Business BASIC, MP/BASIC, AOS/COBOL, Interactive COBOL, FORTRAN IV, FORTRAN-77, FORTRAN V, MP/Pascal, PL/1, RPG II, DG/L offered; Microsoft's GW-BASIC also available ● Data General's AOS/WS DBMS, INFOS II file management system available ● Data General's DG/GATE terminal emulator, HASP emulator, 3270 BSC emulator, RJE-80 emulator, X.25 protocol, Xodiac Network Manager offered

Applications Software ● Data General's Comprehensive Electronic Office including word processing, spelling, electronic mail, and administrative support packages available; all DG applications that run on 16-bit ECLIPSE minicomputer will also run on Desktop Generation

Systems Hardware ● base system includes CPU, memory, disk storage, I/O port, CRT, and keyboard (Models 10, 10/SP only); firmware floating-point instruction set (Models 10/SP, 20); hardware floating-point accelerator card (Model 30) ● CPU is Data General 16-bit microECLIPSE processor; Models 10, 10/SP also contain a 16-bit Intel 8086 ● 128K-byte RAM expandable to 2M bytes depending on the model ● 3 open expansion slots on all systems except Model 30 which has 2; one serial printer port standard; 5-slot expansion module, IEEE-488 interface, sensor I/O devices, communications interfaces, asynchronous controller card optional

Mass Storage ● maximum hard disk storage of 30M bytes on 2 Winchesters ● maximum diskette storage of 736K bytes formatted on 2 5.25-inch double-density drives ● 15.4M-byte magnetic tape cartridge for backup

Printers ● 150- to 160-cps dot-matrix printers with 136 to 233 or 80 to 160 columns; 35-cps letter-quality printers with 136 to 203 columns available from Data General

Display/Keyboard ● Models 10, 10/SP configured with a monitor and detached keyboard ● 12-inch monochrome or

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13-inch color screen; raster scan; 24 lines x 80 columns; graphics resolution of 640x240 pixels, bit mapped ● keyboard contains 107 keys including 12-key cluster for cursor control and special editing functions; 14-key numeric pad; 20 function keys; n-key rollover ● Models 20, 30 use Data General Dasher terminals

Pricing/Support/Availability ● base prices—Model 10—$3,165 includes dual CPU, 128K-byte RAM, CRT and keyboard, serial port, 368K-byte diskette drive; Model 10/SP—$4,465 includes dual CPU, 256K-byte RAM, CRT and keyboard, firmware floating-point instruction set, dual 368K-byte diskette drives, 15M-byte Winchester, additional power supply; Model 20—$6,570 includes single CPU, 256K-byte RAM, 368K-byte diskette drive, 15M-byte Winchester firmware floating-point instruction set, additional power supply; Model 30—$9,620 includes same as Model 20 except 512K-byte RAM, hardware floating-point accelerator card ● 90-day warranty ● 5 on-site, 2 mail-in, and 2 self-maintenance support options available through DG; sales of Models 10, 10/SP through computer retailers, office machine dealers, OEMs, direct sales force; sales of Models 20, 30 through OEMs, system houses, value-added resellers, and direct sales force ● first delivery October 1983

■ DATAPOINT CORPORATION

9725 Datapoint Drive, San Antonio, TX 78254 ● 512-699-5520

□ 1560 CGM (Commercial-Grade Micro)

Classification ● multiuser desktop computer with integrated CRT supporting up to 3 users plus ARC network users ● based on 8-bit processor

Systems Software ● dual operating systems—CP/M-80 (unbundled) and/or Datapoint's DOS.H (bundled); both systems can be used simultaneously if more than 1 disk system in network ● FORTRAN, BASIC PLUS, or DATABUS with DATASHARE (bundled) ● Burroughs TC-3500, TTY emulation, DATAPOLL, IBM 37XX SDLC, 3780, 3270, CDC UT200, Honeywell VIP communications (bundled)

Applications Software ● Integrated Electronic Office (IEO) word processing and electronic mail program, Multiplan electronic spreadsheet (bundled); WordStar word processing with SpellStar and MailMerge (unbundled)

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, Microbus, I/O ports, diskette drive ● CPU features 8-bit Zilog Z-80A microprocessor ● 64K-byte main memory expandable to 128K bytes ● Datapoint Microbus, Internal Communications Adapter (ICA) and 1 RS-232C serial port, standard ● ARCNET interface and Multifunction Communications Adapter optional; Datapoint modems and multiplexers optional; ARCNET supports up to 255 processors and attached peripherals

Mass Storage ● maximum of 40M bytes of hard disk storage using 4 5.25-inch Winchesters, 10M bytes each; 5M-byte Winchesters also available ● maximum of 2M bytes of diskette storage using 2 8-inch floppy disks

Printers ● maximum of 1 printer per system; 120-cps dot-matrix printer, serial character 45- or 60-cps printer or high-speed 300- or 600-lpm printer available from vendor

Display/Keyboard ● 12-inch amber screen CRT displays 80 characters x 24 lines; upper-/lowercase alphanumerics ● typewriter-style detached keyboard contains 55-key alphanumeric, 11-key numeric pad, 10 programmable keys

Pricing/Support/Availability ● base system price—$5,750 includes CPU, 64K-byte main memory, 1M-byte diskette, CRT, keyboard, ICA, RS-232C port ● 90-day warranty ● service available from manufacturer with service contracts available for on-site maintenance; software corrections/updates supported by vendor and third party ● first delivery November 1982

■ DATA TECHNOLOGY INDUSTRIES

701-A Whitney Street, San Leandro, CA 94577 ● 415-638-1206

□ Associate

Classification ● both single-user/single-tasking and multiuser system; up to 3 users ● desktop computer with integral CRT display ● based on single 8-bit processor

Systems Software ● CP/M-80, CP/M-86, MP/M-80, MP/M-86 softloaded from diskette; CPM diagnostics and utilities included with basic system ● MBASIC, FORTRAN subroutines optional ● Gbase IV DBMS included with basic system ● remote batch terminal emulation optional

Applications Software ● accounting, word processing, spreadsheet analysis, included with basic system

Systems Hardware ● basic system includes single CPU, memory, diskette storage, CRT, keyboard ● CPU utilizes single Zilog Z80A processor ● 64K-byte RAM expandable to 256K bytes; error-checking and correction capability available; 64K-byte ROM ● proprietary bus structure with 5 slots; 2 RS-232C and 1 RS-422 ports standard; RS-449 port IEEE-488 and Centronics parallel interfaces optional ● communications processor board and modems available

Mass Storage ● maximum hard disk storage is 5M bytes on a Winchester drive ● maximum of 1.4M bytes of floppy disk storage on 2 8-inch diskette drives

Printers ● system supports multiple printers; 16-cps, 33-cps, 45-cps letter-quality daisywheel printers available from Data Technology Industries

Display/Keyboard ● 12-inch color CRT displays 80 characters x 25 lines; 8 colors per screen; graphics character set, 640x240 pixels, memory-mapped graphics ● intelligent integrated keyboard contains 1000-character memory; provides numeric pad and 29 programmable function keys

Pricing/Support/Availability ● associate base price of $2,450 includes CPU, 64K-byte RAM, 64K-byte ROM, 1 720K-byte diskette drive, CRT, keyboard, 2 RS-232C and 1 RS-449 interfaces, software ● 90-day warranty ● third-party on-site maintenance through GE; also factory and dealer maintenance provided ● sales through direct sales force, computer stores, OEMs, office equipment dealers, general merchandise stores ● first delivered 1979; 4,000 systems shipped as of December 1982

■ DATAVUE CORPORATION

1911 22nd Avenue South, Seattle, WA 98144 ● 206-322-9330

□ DV80-200 Series

Classification ● single-user/single-tasking desktop component system with separately available CRT display ● based on 8-bit processor

Systems Software ● all software is unbundled ● CP/M 2.2 is softloaded from 5.25-inch diskette ● COBOL-80, BASIC-80 Interpreter, FORTRAN-80, PL/1, C, and Pascal from Microsoft; Basic Compiler from APL ● dBASE II, Personal Pearl and Infostar optional ● DVCom data communications package available

Applications Software ● WordStar with MailMerge, SpellStar, Multiplan spreadsheet available from vendor

Systems Hardware ● single-board microcomputer, with 8-bit 4-MHz Z80A processor, 64K-byte RAM, 4K-byte EPROM, 2 RS-232C asynchronous ports, and 1 Centronics-compatible parallel port (optional) ● processor board mounted in desktop cabinet with diskette drives ● Hayes 300/1200 Series modems optional ● cassette tape drive for mass storage backup ● RS-232C ports provide full- or half-duplex transmission up to 19.2K baud, synchronous capability is optional

Mass Storage ● no hard disk ● 2M-byte diskette storage maximum; DV-80-222 has 2 5.25-inch diskette drives each with a

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capacity of 500K bytes; DV-8-233 has 2 5.25-inch diskette drives each with a capacity of 1M bytes

Printers • maximum of 1 printer per system • various printers with choice of 120 cps to 200 cps, all dot matrix available from vendor

Display/Keyboard • Z80-based display with 16K-byte display memory and 16K bytes optional; 80 or 132 characters x 24 lines, monochrome, graphics character set with bit-addressable or memory-mapped graphics; upper-/lowercase alphanumerics • electronic keyboard with memory switch; includes numeric keypad and 16 programmable function keys with shift capability

Pricing/Support/Availability • base price—DV80-203—$1,995 includes Z80A, 64K-byte memory, 2 serial ports, 2 diskette drives, CP/M, and BASIC • service may be obtained through factory mail-/carry-in service center or on-site through Sorbus or Indeserv third-party maintenance organizations; software updates/corrections are available on a fee basis • systems are marketed through computer stores, office equipment dealers, by direct mail, or OEM • announced 1981; first installation November 1982; approximately 1,400 DV80s (all models) installed in U.S. as of February 1983

☐ DV80-300 Series

Classification • single-user/single-tasking system with multiuser option; desktop component system with separately available CRTs; up to 8 users with optional hardware • based on 8-bit or 16-bit processors

Systems Software • all software is unbundled • CP/M 2.2, CP/M-86, or MS-DOS softloaded from 5.25-inch diskette • COBOL-80, BASIC-80 Interpreter, FORTRAN-80, and Pascal from Microsoft; BASIC Compiler from APL; also PL/1 and C • dBASE II, Personal Pearl, and Infostar optional • DVCom data communications package available

Applications Software • WordStar word processing with MailMerge and SpellStar, Multiplan spreadsheet available from vendor

Systems Hardware • single-board microcomputer with 8-bit 4-MHz Z80A or 16-bit Intel 80186 and 8-bit Z80A co-processors and up to 256K bytes of RAM; Z80A with 64K bytes standard, expanded memory and co-processors optional • 2 asynchronous RS-232C ports and 1 Centronics-compatible parallel port standard • each additional user (up to 8) adds processor board, related memory, and 2 RS-232C ports • processor board(s) mounted in desktop cabinet with diskette drive • Hayes 300/1200 Series modems optional

Mass Storage • maximum of 76M bytes of hard disk storage; 5.25-inch Winchester drive with up to 38M bytes fixed and up to 38M bytes removable • maximum of 2M bytes of diskette storage; 5.25-inch diskette drive with a capacity of 1M bytes • cassette tape drive for storage backup

Printers • maximum 1 user system may have up to 2 printers; 1 via parallel port and the other via RS-232C port • maximum 8 user systems may have 9 printers; 1 via parallel port and 8 via RS-232C ports; various printers with choice of 120 cps to 200 cps, all dot matrix, available from vendor

Display/Keyboard • Z80-based display with 16K-byte display memory and 16K bytes optional; 80 or 132 characters x 24 lines, monochrome, graphics character set with bit-addressable or memory-mapped graphics; upper-/lowercase alphanumerics • electronic keyboard with memory switch; includes numeric keypad and 16 programmable function keys with shift capability

Pricing/Support/Availability • DV80-3043M0—$4,995; for each user up to 8 add $450 each; includes 64K-byte memory and 2 RS-232C ports, 1M-byte diskette drive, CP/M, and BASIC • service may be obtained through factory mail-/carry-in service center, Sorbus or Indeserv third-party maintenance organizations, or retailer/dealer; Sorbus and Indeserv offer both

mail-/carry-in service or on-site repair by contract; software updates/corrections are available on a fee basis • systems are marketed through computer stores, office equipment dealers, direct mail, or OEM • announced 1981; first installation any DV80, November 1982; approximately 1,400 DV80s (all models) installed in U.S. as of February 1983

■ DBS INTERNATIONAL INC

Welsh Road & Park Drive, P.O. Box 425, Montgomeryville, PA 18936 • 215-628-4810

☐ DBSI-16

Classification • single-user/single-tasking or multiuser component system capable of handling up to 16 users in a file-sharing network • based on 16-bit microprocessors • expandable from 1 microprocessor handling up to 4 users to 7 microprocessors handling up to 16 users

Systems Software • CP/M-86 bundled; MP/M-86 optional • CB-86 available • Quic 'N Easi database available

Applications Software • WordStar word processing system, SuperCalc electronic spreadsheet, MailMerge, SpellStar, Q-Pro4 applications generator, general business package, medical package, accounting package available from the vendor

Systems Hardware • base system includes CPU, memory, disk storage, I/O ports • CPU features 1 16-bit, 8-MHz Intel 80186 microprocessor; up to 6 additional processors are added via a multiprocessor expansion chassis; when those extra processors are added, the initial CPU acts as a master processor controlling the slave processors • 256K-byte or 512K-byte RAM per processor • 1 parallel port, 1 RS-232C port, 4 serial ports for additional workstations standard; optional multiprocessor expansion chassis accommodates 1 to 6 processors, each with its own memory, a 6-slot Multibus, and serial ports for up to 16 workstations

Mass Storage • maximum hard disk storage of 40M bytes; 5M-, 10M-, 15M-, and 40M-byte 5.25-inch internal Winchester drives available; 5.25-inch 5M-byte cartridge available • maximum floppy disk storage of 1.6M bytes; 360K-byte and 820K-byte 5.25-inch diskette drives available

Printers • none available from DBSI

Display/Keyboard • optional workstation with 2 serial ports available • display contains 14-inch green phophor screen; display format of 24 lines of 80 characters plus 25th status line; 128 ASCII character set and 33 control characters • detached keyboard features programmable function keys, numeric keypad, cursor control pad

Pricing/Support/Availability • base system—$3,495 includes 1 CPU, 256K-byte RAM, 2 360K-byte diskette drives, and 1 parallel, 1 RS-232C, 4 serial workstation ports, CP/M-86 •90-day warranty • maintenance through dealers and distributors plus third-party on-site maintenance through Indeserv • first delivery date, September 1983

■ DIGITAL EQUIPMENT CORPORATION (DEC)

146 Main Street, Maynard, MA 01745 • 617-897-5111

☐ Rainbow 100 & 100+

Classification • single-user/single-tasking desktop system with detached CRT • based on dual processors, 1 8-bit and 1 16-bit

Systems Software • CP/M-86/80 from Digital Research combining CP/M-80 and CP/M-86 with automatic differentiation of 8-bit and 16-bit programs; MS-DOS optional • C language, MBASIC optional • optional communications packages include document transfer modules; DEC VT125 graphics terminal emulation; poly-BSC/RJE IBM 2780/3780 emulation, poly BSC/3270 emulation of IBM 3275-2/3284-3 or 3271-2/3277-2/3286-3 configurations

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Applications Software ● select word processing; Multiplan electronic spreadsheet, Lotus 1-2-3 available from DEC

Systems Hardware ● basic system includes dual CPU, memory, display, keyboard, disk storage, I/O ports ● CPUs feature an 8-bit 2.03-MHz Zilog Z80A and 16-bit 4.77-MHz Intel 8088 ● 64K-byte RAM expandable to 256K bytes; 128K to 896K bytes for the 100+; 24K-byte ROM ● RS-232C printer port, RS-423C communications port standard, 3 option ports; extended I/O allows second RS-423C async/sync communications port and RS-422 880K-bps DMA Winchester disk port on 1 option slot on the 100

Mass Storage ● maximum hard disk storage is 10M bytes using a 5.25-inch Winchester disk on the 100; 100+ comes with 10M-byte hard disk ● maximum floppy disk storage is 1.6M bytes; up to 4 5.25-inch 400K-byte diskettes available

Printers ● 2 dot-matrix printers including a 50-/100-cps personal printer and a 30-/240-cps letter printer plus a 32-cps daisywheel letter-quality impact printer available from DEC

Display/Keyboard ● 12-inch black and white CRT, 24 lines x 80 or 132 columns; RS-170 compatible; bit mapped with 240x960 pixels ● graphics option for bit-mapped V125 color terminal emulation ● 105-key typewriter keyboard with numeric pad, cursor control pad, 20 programmable function keys

Pricing/Support/Availability ● base price—$3,495 for the 100, $5,475 for the 100+ includes dual CPU, 64K-byte RAM, 128K on 100+, 25K-byte ROM, dual disk drives, CRT, keyboard, 2 serial ports, and CP/M-86/80, 100+ also includes 10M-byte hard disk ● 90-day warranty ● software service contracts; telephone hot-line; on-site hardware maintenance contract, carry-in service agreement, DECmailer service available ● sales through direct sales force, retail dealers, wholesale through Hamilton Avnet ● first delivery late 1982 for 100, late 1983 for 100+

☐ Professional 325, Professional 350

Classification ● single-user/multitasking desktop system with detached CRT ● based on 16-bit microprocessor

Systems Software ● P/OS Professional Operating System developed from DEC PDP-11 RSX-11M-PLUS bundled; UCSD p-system, CP/M softcard optional ● Developers Tool Kit for P/OS 300 series software, runs on PDP-11/23 to VAC-11/780 under RSX or VMS optional ● BASIC PLUS-2 and macro assembler standard; PRO/BASIC, PRO/DIBOL, COBOL, PRO/FORTRAN ● UCSD FORTRAN optional, UCSD Pascal included with p-system ● communications in DEC VT102/VT125 emulation mode, IBM 3276 BSC emulation mode

Applications Software ● VisiCalc electronic spreadsheet; CORTEX Executive Desk Set, CAD/CAM, various other packages available from DEC

Systems Hardware ● basic system includes CPU, memory (expandable to 256K bytes), disk storage, CRT, keyboard, I/O ports ● CPU features DEC SI F-11 (PDP-11/23) 16-bit microprocessor with 22-bit addressing ● 256K bytes of RAM standard; expandable to 1M bytes (350 only); RS-232C/-432 printer port; async/sync communications port to 9600 bps; 1 option slot on 325, 4 option slots on 350

Mass Storage ● maximum 5M-byte hard disk storage using a 5.25-inch Winchester ● maximum floppy disk storage is 800K bytes on dual diskette drives

Printers ● 2 dot-matrix printers with bit mapped graphics include a 50-/100-cps personal printer and a 30-/240-cps letter printer; 32-cps daisywheel letter-quality impact printer ● floating-point adapter, telephone management system, real-time interface can control up to 15 devices

Display/Keyboard ● 12-inch black and white CRT, 24 lines x 80 or 132 columns; RS-170 compatible; bit-mapped with 240x960 pixels; graphics option for bit-mapped V125 color terminal

emulation ● detached typewriter-style keyboard with numeric pad, cursor control pad, 20 programmable function keys

Pricing/Support/Availability ● base price—Professional 325—$3,975 includes CPU, memory, dual diskette drive, communications port, printer port, 1 free slot, CRT, keyboard, and P/OS ● base price—Professional 350—$4,975, same as Professional 325, but with 4 free slots and hard disk option ● 90-day warranty with Help Line telephone support ● software service contracts; telephone hot-line; on-site hardware maintenance contract, carry-in service agreement, DECmailer service available ● sales through direct sales force, retail dealers, wholesale through Hamilton Avnet ● first delivery for 350, November 1982

☐ DECmate II

Classification ● single-user/single-tasking or single-user/multitasking desktop system with detached CRT ● 12-bit standard microprocessor with optional 8-bit auxiliary microprocessor

Systems Software ● WPS 8 V.1.0 operating system combined with word processing/office automation software; COS 310 V.9.1 (DEC Datasystems compatible) operating system optional; CP/M-80 softcard optional ● DIBOL-8 and DIBOL-11 integrated with COS 310; MS/BASIC optional with CP/M ● WPS supports VT52 or VT100 terminal emulation

Applications Software ● office automation integrated into WPS 8; WPS 8 also supports WPS Math ● CP/M supports Multiplan spreadsheet, BPI General Accounting, DAS Digital Accounting System

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports ● CPU features 6120 (PDP-8) 12-bit microprocessor; Zilog Z80 8-bit microprocessor optional ● 64K 12-bit word RAM (equivalent to 96K bytes) on 6120; 64K 8-bit bytes of RAM on Z80 for equivalent of 160K-byte system total ● RS-232C printer port, async/sync communications port to 9600 bps, 3 option slots

Mass Storage ● maximum hard disk storage is 5M bytes using a 5.25-inch Winchester disk ● maximum floppy disk storage is 1.6M bytes using 800K-byte 5.25-inch dual diskette drives (1 standard); RX02 diskette drive interface allows DECmate I 8-inch diskette drives to be interfaced, read into system, or converted to 5.25-inch diskettes

Printers ● 2 dot-matrix printers including a 50-/100-cps personal printer and a 30-/240-cps letter printer, plus a 32-cps daisywheel letter-quality impact printer available from DEC

Display/Keyboard ● 12-inch black and white CRT, 24 lines x 80 or 132 columns; RS-170 compatible; bit-mapped with 240x960 pixels; graphics option for bit-mapped V125 color terminal emulation ● detached typewriter-style keyboard with numeric pad, cursor control pad, 20 programmable function keys

Pricing/Support/Availability ● unbundled components; system unit—$2,675; keyboard—$245; monitors—$325 or $375; DECmate Office Workstation operating system—$1,490 (includes WPS and CP/M board and software); COS-310 V.9.2—$1,600 (license only, $400); WPS V.1.0 Word Processing—$995 ● 90-day warranty with Help Line telephone support ● software service contracts; telephone hot-line; on-site hardware maintenance contract, carry-in service agreement, DECmailer service available ● sales through direct sales force, retail dealers, wholesale through Hamilton Avnet ● first delivery January 1983

■ DIGITAL MICROSYSTEMS

1755 Embarcadero, Oakland, CA 94606 ● 415-532-3686

☐ DMS 3/F FOX, DMS 15

Classification ● both are single-user/single-tasking systems; when used in a HiNet LAN as a Network Master, supports up to 32 users ● marketed as a desktop computer with integrated CRT display ● based on 8-bit microprocessor

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Systems Software ● CP/M 2.2 bundled with the systems ● languages available from outside sources ● terminal emulation for ADDS Regent 25, ADDS Viewpoint, Hazeltine 1500

Applications Software ● none available from Digital Microsystems at present

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, integral disk storage, I/O ports, real-time clock ● CPU features 4-MHz Zilog Z80A microprocessor ● 64K-byte 250-nanosecond RAM; 16K-byte dedicated CRT memory; 2K-byte ROM ● single-board computers; 3 or 4 RS-232C ports, 1 RS-422 port for HiNet, 2 parallel ports (DMS 3/F only), 1 for printer, 1 for CRT

Mass Storage ● maximum hard disk 15M bytes formatted on 5.25-inch fixed Winchester (DMS-15 only) ● maximum diskette storage of 1.2M bytes using 5.25-inch, 640K-byte drives on DMS 3/F; 1 drive on DMS-15

Printers ● none available from vendor

Display/Keyboard ● CRT displays 80 characters x 25 lines, monochrome, on 9-inch screen; upper-/lowercase alphanumerics ● detached keyboard is standard typewriter style with 90 keys including numeric keypad, 30(X3) programmable function keys

Pricing/Support/Availability ● DMS 3/F—$3,995 purchase; DMS 15—$7,495 purchase ● DMS 3/F includes processor, memory, ports, CRT, keyboard, 2 diskette drives, and CP/M 2.2; DMS 15 is the DMS 3/F with slightly different port arrangement (as noted in System Hardware) and 1 Winchester disk substituted for 1 diskette drive ● service is provided by mail-in or carry-in to the factory or on-site through third-party organization ● systems are marketed through a network of computer stores and on an OEM basis ● first delivery of the DMS 3/F, April 1982 with 150 installed; first delivery of the DMS 15, June 1983

■ DOCUTEL/OLIVETTI CORP

155 White Plains Road, Tarrytown, NY 10591 ● 914-631-8100

□ M20 Personal Computer

Classification ● single-user/multitasking desktop system with detached CRT ● based on 16-bit processor

Systems Software ● PCOS (Professional Computer Operating System) is softloaded from diskette and packaged with computer; MS-DOS, CP/M-86, CP/M (Z80 Emulator) ● Microsoft BASIC 5.2 bundled with computer; macro assembler optional ● sequential/random files supported directly by BASIC; ISAM is integral to the system; Data Factory Plus, dBASE II optional ● TTY and Remote Batch Terminal Emulators available for data communication using both synchronous and asynchronous protocols; electronic mail available

Applications Software ● OLIWORD and Executive Secretary Plus word processing systems; Multiplan and SuperCalc spreadsheets, self-instruction, financial planning, medical management, tax manager, accounting, facilities management, graphics available from Docutel/Olivetti

Systems Hardware ● basic system includes CPU, memory, display, keyboard, diskette controllers, 2 interfaces, 5-slot expansion bus, diskette drive ● CPU features 4-MHz Zilog Z8001 microprocessor; Intel 8086 co-processor board optional ● 128K-byte RAM expandable to 512K bytes by adding up to 3 boards optional; 8K-byte ROM ● single-board computer allows for 3 memory expansion boards, 2 peripheral extension boards; 1 RS-232C I/O port standard, 2 optional; 1 Centronics parallel I/O port standard; 1 IEEE-488 interface optional ● Corvus Omninet interface available in near future

Mass Storage ● maximum of 640K bytes of diskette storage using 5.25-inch minifloppy disk units, 320K bytes each, with double-sided, double-density recording (1 standard) ● 5.25-inch Winchester with 11M-byte unformatted capacity, housed in place of 1 diskette unit or externally connected

Printers ● maximum of 1 printer per system; parallel interface connects 120-/200-cps dot-matrix impact printer, 20-cps daisywheel printer, or 240-lpm thermal printer are available from vendor

Display/Keyboard ● 12-inch CRT displays 80 characters x 24 lines; graphics formats include 512x256 pixels, memory mapped, bit addressable; white or green phosphor display, color display optional; display unit may be rotated and placed on top of or beside central unit ● keyboard is integral to unit and contains 72 programmable keys, numeric keypad

Pricing/Support/Availability ● base system price—$2,965 includes CPU, 128K-byte RAM, 8K-byte ROM, keyboard, monochrome display, 320K-byte diskette, PCOS operating system, real-time clock, parallel and serial interfaces, BASIC language ● 90-day warranty ● service available from manufacturer or retailer with service plans available for mail-/carry-in hardware maintenance, on-site repair service, and software updates/corrections ● sales through computer stores (Microage), office equipment dealers, direct sales force ● first delivered May 1982

■ DURANGO SYSTEMS INC

3003 North First Street, San Jose, CA 95134 ● 408-946-5000

□ Durango 800/900 Series

Classification ● single-user/single-tasking, single-user/multitasking (5), and multiuser desktop computers with integral CRTs; supports up to 5 users ● based on single 8-bit processor ● 800 models are diskette based; 900 models are Winchester based

Systems Software ● CP/M 2.2 CP/M-86, MP/M-80, MP/M-86, MS-DOS, XENIX, available; DX-85M (proprietary) operating systems packaged with system ● STAR BASIC packaged with DX-85M operating system ● proprietary file management system included in DX-85M ● 2780/3780, 3270, SDLC terminal emulation available

Applications Software ● STAR Text and WordStar word processing, MicroPlan spreadsheet, general accounting, several other applications available from Durango

Systems Hardware ● basic system includes single CPU, memory, disk storage, CRT, keyboard ● CPU utilizes single 8-bit Intel 8085 microprocessor ● 64K-byte main memory expandable to 196K bytes; error checking and correction capability available; 16K-byte ROM ● proprietary Durango bus structure; 1 RS-232C port standard; up to 8 additional RS-232C ports optional

Mass Storage ● maximum hard disk storage is 80M bytes on 2 Winchester drives; 10M-byte Winchester drives also available ● up to 2M bytes of diskette storage on 2 5.25-inch diskette drives

Printers ● multiple printers may be attached ● Durango 800 multipass dot-matrix printer provides up to 200 cps at 50 characters per line

Display/Keyboard ● 9-inch monochrome display, 80 characters x 24 lines; upper-/lowercase alphanumerics; 720x216 pixels ● IBM Selectric-compatible keyboard; 15 special function keys

Pricing/Support/Availability ● 800/900 Series base price of $6,795 for single-user diskette-based system includes CPU, 64K-byte RAM, 16K-byte ROM, 2 diskette drives, CRT, keyboard, 200-cps printer, 1 RS-232C interface, operating system, BASIC ● multiuser Winchester-based systems with integral high-speed printer from $8,500 ● 90-day warranty ● third-party on-site maintenance through Dow Jones; carry-in maintenance provided at 10 manufacturer service centers and by retailers and dealers ● sales through direct sales force, office equipment dealers, OEMs, distributors, and systems houses ● first system delivered January 1979; 6,000 systems delivered as of February 1983

□ Durango Poppy/Poppy II

Classification ● single-user/multitasking (up to 16) and multiuser desktop systems with CRT and keyboard; supports up to

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4 users on Poppy and 12 users on Poppy II ● based on 16-bit processors

Systems Software ● Concurrent CP/M-86, MS-DOS, XENIX operating systems softloaded from diskette; MS-DOS bundled with Poppy, XENIX bundled with Poppy II ● Star BASIC, Microsoft C, Microsoft BASIC, SMC BASIC, RIM COBOL, Microsoft FORTRAN, Microsoft C, Digital Research Pascal, Persona BASIC available ● dBASE II DBMS ● 3271/3275 and 2780/3780 BSC; 3270/SNA/SDLC emulation available

Applications Software ● Star Text and WordStar word processing, general accounting, MicroPlan spreadsheet analysis, dental management, insurance management packages available from Durango

Systems Hardware ● basic Poppy system includes single CPU, memory, diskette storage, CRT, keyboard ● Poppy utilizes single 16-bit Intel 80186 processor; Poppy II utilizes Intel 80186 and Intel 80286 processors ● 128K-byte main memory expandable to 640M bytes for Poppy; 256K bytes to 1M bytes for Poppy II; error checking and correction; 8K-byte ROM ● proprietary Durango bus structure similar to Multibus with 2 open slots; expansion unit optional ● 2 RS-232C/RS-422 ports, one capable of handling BSC and SNA/SDLC protocols; 1 parallel printer port standard; up to 12 additional serial ports optional

Mass Storage ● maximum hard disk storage 20M bytes on 1 Winchester drive; 10M-byte Winchester drive also available ● up to 1.6M bytes of diskette storage on 2 5.25-inch diskette drives

Printers ● Poppywriter 165-cps dot-matrix printer available from Durango; accommodates parallel or serial interface

Display/Keyboard ● detached CRT with 14-inch monochrome screen displays 80/132 characters x 25 lines, 2 status lines; upper-/lowercase alphanumerics; 720x480 pixels ● detached keyboard features 16 function keys, 10-key numeric pad, IBM Selectric layout

Pricing/Support/Availability ● Poppy base price—$4,395 for single-user diskette-based system includes 16-bit CPU, 128K-byte RAM, 8K-byte ROM, 1.6M-byte diskette storage on dual drives, CRT and keyboard, 2 RS-232C/RS-422 ports, parallel printer port, MS-DOS operating system; Poppy II base price—$9,975 for multiuser Winchester-based systems includes dual processors, 384K-byte RAM, 8K-byte ROM, 1 floppy disk, 1 10M-byte Winchester drive, same ports, CRT and keyboard, XENIX operating system ● 90-day warranty ● third-party on-site maintenance through Dow Jones; carry-in maintenance provided at 5 manufacturer service centers and by retailers and dealers ● sales through direct sales force, office equipment dealers, OEMs, distributors and systems houses ● first delivery June 1983; 1,300 systems delivered

■ DYNABYTE BUSINESS COMPUTERS, INC

521 Cottonwood Drive, Milpitas, CA 95035 ● 408-263-1221

□ Monarch

Classification ● multiuser (up to 16) component system with separately available CRT display and keyboard ● based on 16-bit/8-bit co-processors; single-CPU 8-bit models also available

Systems Software ● all software comes unbundled ● 16-bit operating systems: CP/M-86, MP/M-86, SMC Business Basic, UNIX, OASIS-16; 8-bit operating systems: CP/M-80, MP/M-80, OASIS; softloaded from 8-inch diskettes

Applications Software ● WordStar word processing, accounting, financial modeling packages available from vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, I/O ports ● CPU features 16-bit 8-MHz Intel 8086 and 8-bit 6-MHz Zilog Z80B processors; 8087 math processor optional ● 256K-byte RAM expandable to 1M bytes in 256K-byte increments; error-correction capability available ● single-board computer with interface to S-100 and Multibus add-on boards; 8

asynchronous RS-232C, 1 RS-232C async/sync, and 1 RS-422 synchronous ports standard; expansion to 17 asynchronous ports optional; 1 dedicated parallel printer port (Centronics compatible) standard

Mass Storage ● maximum of 76M bytes of hard disk storage using 4 5.25-inch Winchesters (1 19M-byte Winchester standard); maximum of 800K bytes of diskette storage on 8-inch Tandon Thinline (3741 compatible) standard; 17M-byte cartridge tape drive optional

Printers ● multiple printers supported; none offered by vendor

Display/Keyboard ● none supplied by Dynabyte

Pricing/Support/Availability ● base system price—Model 6600—$10,995, includes dual CPU, 256K-byte RAM, 19M-byte Winchester disk drive, 800K-byte diskette drive, RS-232C ports, 1 RS-422 port, 1 parallel port; Model 6900—$13,995, includes same as Model 6600 plus 17M-byte cartridge tape drive; Model 6900/8—$11,995, includes same as Model 6900, but 8-bit processor only; Model 6600/8—$8,995 includes same as Model 6600, but 8-bit processor only ● 90-day warranty; third-party on-site maintenance available through Sorbus; mail/carry-in hardware maintenance and software updates/corrections service plans also available ● sales through OEMs and distributors ● first delivered September 1982; over 400 systems installed

■ EAGLE COMPUTER INC

983 University Avenue, Los Gatos, CA 95030 ● 408-395-5005

□ Eagle IIE Series

Classification ● single-user/single-tasking desktop computers with integral CRT display ● based on 8-bit processor ● 4 models available; difference is in the amount of disk storage capacity

Systems Software ● CP/M 2.2 included with basic system as well as self-loading floppy disk bootstrap ● CBASIC language bundled

Applications Software ● Spellbinder word processing and UltraCalc electronic spreadsheet bundled; general accounting, medical management, dental management, CPA client accounting available as options from Eagle

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, disk storage ● CPU features 4-MHz Zilog Z80A processor ● 64K-byte RAM on all systems; 4K-byte ROM ● S-100 bus structure; 2 RS-232C ports, 1 parallel printer port standard; 1 parallel port standard for hard disk expansion; 2 Winchester add-on ports for additional hard disk without a controller, and a Shugart-compatible systems interface port standard on Eagle II-4

Mass Storage ● maximum hard disk storage of 42M bytes formatted on Eagle II-4 and 32M bytes formatted on Eagle II-1, -2, -3; choice of 10M-byte and 32M-byte formatted 5.25-inch Winchester drives available; 10M-byte drive standard on Eagle IV ● maximum floppy disk storage of 1.6M bytes; 2 780K-byte diskettes on Eagle II-3, 1 on Eagle II-4; 2 390K-byte diskettes on Eagle II-2, 1 on Eagle II-1

Printers ● systems support 1 printer; none available from the vendor

Display/Keyboard ● 12-inch green phosphor display provides 80 characters x 24 lines ● 75-key integrated keyboard with 14-key numeric pad, 32 preprogrammed special function keys for word processing

Pricing/Support/Availability ● base prices—Eagle II-1—$1,995, includes CPU, 64K-byte RAM, 4K-byte ROM, 1 390K-byte diskette, 2 RS-232C ports, 1 Centronics parallel port, CRT, keyboard, CP/M, and applications software; Eagle II-2—$2,495, includes same as Eagle II-1 except 2 diskette drives; Eagle II-3—$2,995, includes same as Eagle II-1 except 2 780K-byte diskette drives; Eagle II-4—$4,495, includes same as Eagle II-1 except 10M-byte Winchester hard disk drive, 1 780K-byte diskette ● 90-day warranty on labor; 1 year on parts ●

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third-party on-site maintenance through Bell and Howell; service also provided through manufacturer service center, retailers and dealers; software updates/corrections made available; support from manufacturer software troubleshooting department ● sales through direct sales force, office equipment dealers, OEMs, computer stores ● 20,000 systems delivered as of January 1983

☐ Eagle PC Spirit (Portable)

Classification ● single-user/single-tasking portable computer with integral display and detached keyboard ● based on Intel 8088 16-bit microprocessor ● 2 models available; difference is in the packaged amount of disk and floppy diskette storage

Systems Software ● MS-DOS and CP/M-86 operating systems and GWBASIC language included in packaged system ● EagleNet LAN (local area network) software available from Eagle

Applications Software ● EagleWriter word processing, EagleCalc electronic spreadsheet, and general accounting available as options from Eagle

Systems Hardware ● basic system includes CPU, 128K-byte memory, 9-inch monochrome CRT, 84-key keyboard, hard disk storage ● CPU features 4.77-MHz Intel 8088 microprocessor ● 128K-byte to 640K-byte main memory; 4K-byte ROM ● 4-slot I/O bus that accepts IBM PC-compatible I/O boards (2/1 actually available on SPIRIT-2/SPIRIT-XL); 2 RS-232C serial ports standard, 1 parallel port standard

Mass Storage ● maximum of 64M bytes of formatted hard disk storage on two 32M-byte Winchester drives ● maximum of 720K bytes of formatted diskette storage on 2 5.25-inch floppy disks

Printers ● not available from Eagle Computer

Display/Keyboard ● 9-inch green phosphor display provides 80 characters x 25 lines; graphics resolution of 640x200 pixels; full color displays optionally available ● detached keyboard contains 84 keys with 10 user-definable function keys; 10-key numeric pad

Pricing/Support/Availability ● base prices—Eagle PC SPIRIT-2—$3,295 includes CPU, 128K-byte RAM, 4K-byte ROM, 2 360K-byte diskettes, CRT, keyboard, 2 RS-232C serial ports, 1 Centronics-compatible parallel port, MS-DOS and CP/M-86 operating systems, and GWBASIC language; Eagle PC SPIRIT-XL—$4,795 includes same as SPIRIT-2 except with 1 360K-byte diskette and 10M-byte Winchester hard disk ● 90-day warranty on labor; 1 year on parts ● third-party on-site maintenance through Bell and Howell; service also provided through manufacturer service center, retailers, and dealers; software updates/corrections made available; support from manufacturer software troubleshooting department ● sales through direct sales force, office equipment dealers, OEMs, computer stores ● first delivery October 1983

☐ Eagle PC Series

Classification ● single-user/single-tasking desktop microcomputer system with integral display and detached keyboard ● based on Intel 8088 16-bit microprocessor ● 4 models available; difference is in the packaged amount of disk and floppy diskette storage, type of keyboard, and if packaged system contains a monitor and applications software

Systems Software ● MS-DOS and CP/M-86 operating systems and GWBASIC language included in packaged system ● EagleNet LAN (local area network) software available from Eagle

Applications Software ● EagleWriter word processing and EagleCalc spreadsheet bundled in PC-2 model, optional on PC PLUS-1, PC PLUS-2, and PC PLUS-XL ● general accounting available as option from Eagle

Systems Hardware ● basic system includes CPU, 128K-byte memory, and diskette(s) ● CPU features 4.77-MHz Intel 8088 microprocessor ● 128K-byte to 640K-byte main memory ● 4K-byte ROM ● 4-slot I/O bus that accepts IBM PC-compatible

I/O boards (3/1 actually available on PC PLUS-1 and PC PLUS-2/PC-2 and PC PLUS-XL; 2 RS-232C serial ports standard; parallel port standard

Mass Storage ● maximum of 64M bytes of formatted hard disk storage on two 32M-byte Winchester drives ● maximum of 720K bytes of formatted diskette storage on 2 5.25-inch floppy disks

Printers ● not available from Eagle Computer

Display/Keyboard ● 12-inch green phosphor display provides 80 characters x 24 lines; graphics resolution 720x352 pixels; 2-color amber and full-color displays optional ● detached keyboard contains 105 keys with 24 user-definable function keys; 10-key numeric pad on Eagle PC-2; detached keyboard contains 84 keys with 10 user-definable function keys, 10-key numeric pad on Eagle PC PLUS-1, Eagle PC PLUS-2, and Eagle PC PLUS-XL

Pricing/Support/Availability ● base prices—Eagle PC PLUS-1—$2,395 includes CPU, 128K-byte RAM, 4K-byte ROM, 1 360K-byte diskette, 84-key keyboard, 2 RS-232C serial ports, 1 Centronics-compatible parallel port, MS-DOS and CP/M-86 operating systems, and GWBASIC language; Eagle PC PLUS-2—$2,795 includes same as Eagle PC PLUS-1 except 2 360K-byte diskettes ● Eagle PC-2—$3,495 includes same as Eagle PC PLUS-1 except 2 360K-byte diskettes, 12-inch monochrome terminal, 105-key keyboard, and EagleWriter word processing and EagleCalc spreadsheet applications software; Eagle PC PLUS-XL—$4,295 includes same as Eagle PC PLUS-1 except 10M-byte Winchester disk drive is included ● 90-day warranty on labor; 1 year on parts ● third-party on-site maintenance through Bell and Howell; service also provided through manufacturer service center, retailers, and dealers; software updates/corrections made available; support from manufacturer software troubleshooting department ● sales through direct sales force, office equipment dealers, OEMs, computer stores ● first delivery May 1983

☐ Eagle 1600 Series

Classification ● multiuser desktop system with detached CRT; supports up to 8 users ● based on 16-bit processor ● 3 models available differing in base storage capacity or internal memory

Systems Software ● MS-DOS and CP/M-86 operating systems included in packaged system; Concurrent CP/M, MP/M-86 optional GWBASIC language

Applications Software ● EagleWriter word processing, EagleCalc electronic spreadsheet included with system; general accounting, medical and dental management, CPA accounting optional

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, diskette, hard disk storage, I/O ports ● CPU features 8-MHz Intel 8086 microprocessor ● 128K-byte to 512K-byte main memory; 4K-byte ROM ● 8-slot I/O bus that accepts IBM PC-compatible I/O boards; 2 RS-232C ports standard, 1 parallel port on 1620; 2 on 1630, 1640; additional serial ports optional

Mass Storage ● maximum of 64M bytes of formatted hard disk storage two 32M-byte Winchester drives ● maximum of 1.6M bytes of formatted diskette storage on 2 5.25-inch floppy disks

Printers ● not available from Eagle Computer

Display/Keyboard ● 12-inch green phosphor display provides 80 characters x 24 lines; graphics resolution of 720x352 pixels; 2-color amber and full-color displays optional ● detached keyboard contains 105 keys with 24 user-definable function keys, 10-key numeric pad

Pricing/Support/Availability ● base prices—1620—$4,495 includes CPU, 128K-byte RAM, 4K-byte ROM, dual-port serial board, single-port parallel board, video CRT/graphics board, floppy disk controller board, 2 780K-byte floppy disks, green phosphor monitor, keyboard, software; 1630—$6,995 includes same as 1620 except 1 780K-byte floppy disk and 1 10M-byte

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hard disk; 1640—$8,995 includes same as 1620 except 1 32M-byte hard disk, 1 780K-byte floppy disk, and 512K-byte RAM • 90-day warranty for labor; 1 year for parts • third-party on-site maintenance through Bell and Howell; service also provided through manufacturer service center, retailers, and dealers; software updates and corrections made available; support from manufacturer troubleshooting department • sales through direct sales force, office equipment dealers, OEMs, computer stores • first delivery May 1983

■ ELECTRO DESIGN, INC

690 Rancheros Drive, San Marcos, CA 92069 • 619-471-0680

□ Electro Design IMP

Classification • single-user/single-tasking system • based on 16-bit processor • may be used in process control applications without CRT or keyboard

Systems Software • MS-DOS bundled • Microsoft GWBASIC available

Applications Software • none available from vendor

Systems Hardware • 3 basic systems (IMP-6, IMP-12, IMP-18) include CPU, keyboard, disk storage, CRT, clock/calendar, I/O ports, and printer • CPU is 16-bit Intel 8088 • 64K-byte RAM expandable to 256K bytes • 1 serial and 2 parallel ports standard; RGB color graphics board • IMP-6, IMP-12, and IMP-18 have 6, 12, and 18 slots, respectively; slots are IBM PC compatible; 2, 8, and 14 slots available to user, respectively

Mass Storage • maximum hard disk storage is 168M bytes using 4 42M-byte hard disks; 5M-bps transfer rate; 75-millisecond average access time • diskette storage capacity is 2M bytes unformatted using 500K-byte diskette drives; 125-/250K-bps transfer rate; 93-millisecond average access time

Printers • Juki 17-cps 80-/110-column, variable-pitch daisywheel printer bundled

Display/Keyboard • 12-inch color graphics CRT; 80 characters x 24 lines; video graphics board produces 1 color or shade 80-character graphics or 4-color or shade 40-character graphics • IBM PC-compatible detachable 83-key keyboard with 10 function keys and numeric keypad

Pricing/Support/Availability • basic systems include CPU, 64K-byte RAM, CRT, keyboard, 2 diskette drives, diskette drive controller, color graphics board, and MS-DOS • IMP-6—$2,626 includes diskette drives in separate chassis; IMP-12—$3,291 includes the 12-slot chassis with 2 internal diskette drives; IMP-18—$3,700 includes 18-slot chassis with 2 internal diskette drives • mail-/carry-in service available • sales through computer stores, OEMs, and manufacturers' representatives • first delivery October 1983

■ EPSON AMERICA, INC

3415 Kashiwa Street, Torrance, CA 90505; 213-539-9140

□ Epson QX-10

Classification • single-user/single-tasking desktop system with detached CRT • based on 8-bit processor

Systems Software • CP/M 2.2 and TPM II operating systems are bundled with the system • MBASIC 5.0 standard • VALDOCS integrated software package and electronic mail bundled • Peachtree Telecommunications available from vendor

Applications Software • VALDOCS word processing, scheduler, address book, business graphics drawing system, electronic mail bundled; Peachtree PeachCalc and PeachText available from Epson

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports, speaker, calendar/clock, DMA controller, interrupt controller • CPU features 4-MHz Zilog Z80 processor and 2 other processors that handle video and keyboard functions • 256K-byte RAM; 128K-byte video RAM; 2K-byte RAM battery backup; up to 8K bytes of ROM • 1 RS-232C interface, 1 parallel printer port, 1 light-pen interface standard; 5 free I/O slots • CX-20 modem and battery powered, 300-baud acoustic coupler optional

Mass Storage • 2 double-sided, double-density 5.25-inch 380K-byte diskettes standard

Printers • system will support up to 2 printers (1 parallel, 1 serial); 100-/160-cps dot-matrix and 200-cps daisywheel printers available from Epson

Display/Keyboard • 12-inch detached green phosphor CRT has its own integrated processor; displays 80 characters x 25 lines in upper-/lowercase alphanumerics; memory-mapped and bit-addressable graphics, 640x400 pixels • detached, typewriter-style HASCI keyboard has its own integrated processor, 17 programmable keys, and numeric keypad

Pricing/Support/Availability • base system—$2,995 includes CPU, 256K-byte RAM, 2 diskette drives, CRT, keyboard, I/O ports, calendar/clock, CP/M 2.2, TPM II, MBASIC, and VALDOCS software • 90-day warranty; extended warranty available • mail-/carry-in hardware maintenance available from Epson, dealers, and third-party organization (Xerox Service Department) • sales through computer stores • first delivery March 1983

□ Epson HX-20

Classification • single-user/single-tasking 4.2-pound notebook-size portable computer, 11.4 inches wide x 8.5 inches deep x 1.7 inches high • based on dual 8-bit processor • runs on its own power supply for up to 50 hours • preserves everything in RAM when turned off

Systems Software • proprietary monitor resides in ROM and is bundled with the system • Microsoft EBASIC resides in ROM • Epson Link Terminal communications program in ROM optional

Applications Software • Skiwriter word processing standard; electronic spreadsheet being developed; amortization/payments, investment and financial software available from Epson

Systems Hardware • basic system includes CPU, memory, LCD, keyboard, integrated printer, clock/calendar, battery, and I/O ports • CPU features dual Hitachi CMOS 6301 microprocessors • 16K-byte RAM expandable to 32K bytes; 32K-byte ROM expandable to 64K bytes • 2 proprietary busses—1 for memory expansion and 1 for microcassette or ROM cartridge; 1 RS-232C port (8-pin DIN connector), 1 high-speed serial port (5-pin DIN connector) standard • optional CX-20 modem and 300-baud acoustic coupler

Mass Storage • approximately 120K-byte storage on a 60-minute microcassette tape

Printers • integral dot-matrix printer, 20 cps, 24 characters per line; system can also support 1 RS-232C printer; several are available from Epson

Display/Keyboard • 3.5-inch LCD is integral to system unit; displays 4 lines of 20 characters in upper-/lowercase alphanumerics; acts as a window to a 255-character-wide screen; bit-addressable and memory-mapped graphics, 120x32 pixels • integrated full-stroke typewriter-style keyboard includes 5 programmable keys, 15 special-function keys, numeric keypad

Pricing/Support/Availability • base system—$795 includes CPU, 16K-byte RAM, 32K-byte ROM, LCD, keyboard, integrated printer, microcassette, 2 serial I/O ports, battery, proprietary OS, and EBASIC • 90-day warranty; extended warranty available • mail-/carry-in hardware maintenance available from Epson, dealers, and third-party organizations (Xerox Service Department) • sales through computer stores • first delivery December 1982

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

■ ENVIRONMENTAL TRANSDUCER RESEARCH (ETR) STAR SYSTEMS

1316 North Avalon Boulevard, Wilmington, CA 90744 ● 213-835-2421

□ Star Systems I & II

Classification ● single-user/single-tasking component system with detached CRT display ● based on 8-bit microprocessor

Systems Software ● all come bundled with the system ● CP/M 2.2-compatible Super CCP softloaded from diskette ● GBS Report Program Generator and GBS Relational Filing System ● system-to-system file transfer package

Applications Software ● Supervyz menu control, Select word processing, Profit Plan spreadsheet bundled with system; MicroPlan, general accounting, business graphics optional from the vendor

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, printer, disk storage, I/O ports, real-time clock ● Zilog Z80A-based microcomputer ● 64K-byte RAM standard, up to 128K bytes optional; 8K-byte ROM ● single-board computer; asynchronous RS-232C ports, 1 IEEE-488 port ● RS-232C switchable modem; ETR Net local area network for 2 to 124 nodes available

Mass Storage ● maximum of 10M bytes of hard disk using 5.25-inch fixed Winchester disk drive with tape backup ● maximum of 1.6M bytes of diskette storage using dual 5.25-inch diskette drives providing 800K bytes of storage each

Printers ● maximum of 1; 80-cps, 80- or 132-column, dot-matrix printer available

Display/Keyboard ● 12-inch from ETR monochrome screen provides 80 characters x 24 lines, upper-/lowercase alphanumerics ● detached keyboard provides 74 keys including numeric keypad, 6 programmable function keys

Pricing/Support/Availability ● basic system—Star System I—$5,950 includes processor, 64K-byte RAM, dual diskette drives, printer, CRT, all software except Graftalk, Graflib, and MicroPlan; Star System II—$7,950 includes Star System I with Winchester substituted for diskette drives ● 90-day limited warranty with 12-month hardware and software extension ($900) ● ETR provides mail-/carry-in service; retailer/dealers provide various maintenance plans including on-site repair service contract; software updates/corrections provided under service agreement; software modification and user training services available for fee ● systems marketed through computer stores, franchised dealers, and direct sales force ● first delivery July 1982; number of systems installed not available

■ EUCLID COMPUTER INCORPORATED

2809 Oregon Court, Building I-7, Torrance, CA 90503 ● 213-618-9642

□ E-1

Classification ● multiuser system for up to 8 users; marketed as component system with detached CRT display ● based on 16-bit microprocessor

Systems Software ● all software is unbundled ● MP/M-86 Release 2.1 softloaded from 8-inch diskette; MS-DOS emulator runs under MP/M-86 ● C-86, CBASIC-86, Pascal, COBOL, CIS COBOL, and ADA (planned) optional ● dBASE DBMS available ● DATAFLEX communications software for 3278, 2780, RJE, and HASP emulations; bisync communication available

Applications Software ● WordStar-86, SuperWriter-86 SuperCalc-86 available from the vendor

Systems Hardware ● basic system includes CPU, memory, cabinet, ports, 1 diskette drive ● CPU features 16-bit 10-MHz Intel 8086-1; optional Intel 8087 Arithmetic Co-processor ● 512K-byte

RAM expandable to 1M bytes (2 boards); 8K-byte ROM ● S-100 bus configuration; I/O board with 5 serial RS-232C ports expandable to 10 ports and real-time clock in each group of 5

Mass Storage ● basic unit with 35M bytes, and up to 70M bytes of hard disk storage on 8-inch Winchester, 1.04M-byte-per-second data transfer rate, 45-millisecond average access time; 0.25-inch streaming tape drive for disk backup ● one 8-inch 576K-byte drive standard

Printers ● maximum 2 printers per system; 250-cps dot-matrix, 35-cps and 55-cps, letter-quality printers available from Euclid

Display/Keyboard ● CRT display 80 characters x 26 lines, monochrome, upper-/lowercase alphanumerics ● detached keyboard with 105 keys including 16 programmable function keys, 25 special function keys ● maximum 8 CRT displays per system

Pricing/Support/Availability ● entry-level E-1 system—$6,295 includes CPU, 512K-byte memory, 5 ports, one 576K-byte diskette drive, keyboard, CRT, and MP/M-86 ● 90-day warranty ● service is provided by Euclid through mail-/carry-in policy and through retailer/dealers for on-site repair; 1-year software update is free ● marketed through distributor/dealer network including computer stores and office equipment dealers; OEM sales are also offered; first delivery March 1983

■ FACIT INC

235 Main Dunstable Road, Nashua, NH 03061 ● 603-883-4157

□ Facit DTC-6500

Classification ● single-user/single-tasking component system with separate CRT display ● based on 8-bit processor ● 2 models available, 6520 and 6528; variant models 6520/S and 6528/S also available

Systems Software ● Facit DOS residing in ROM and CP/M 2.2 are bundled with the system ● BASIC, C-BASIC 2, and Pascal languages are provided ● DTC-Database available

Applications Software ● DTC Word plus calculation and graphics packages available from Facit

Systems Hardware ● basic system includes CPU, memory, diskette unit, CRT, keyboard, I/O ports ● CPU features Zilog Z80 microprocessor plus 3 additional Z80s for I/O functions ● 64K-byte RAM expandable to 160K bytes; 32K-byte ROM includes 24K bytes for BASIC Interpreter, 4K bytes for DOS, and 4K bytes optional for PROM (2K-byte high resolution, 2K-byte printer and terminal) ● proprietary bus structure; 2 RS-232C ports, 1 synchronous, 1 asynchronous

Mass Storage ● maximum of 1.28M bytes of disk storage using 2 320K-byte dual 5.25-inch floppy disks

Printers ● Facit provides variety of printers for the DTC including dot-matrix, full-character, letter-quality, text and graphics, daisywheel, multipurpose character, and interfaced typewriters

Display/Keyboard ● detached CRT features a 15-inch screen displaying 80 characters x 24 lines, upper-/lowercase alphanumerics; graphics character set, bit-addressable, memory-mapped ● detached ASCII standard keyboard; 55 alphanumeric keys, 8 separate programmable function keys—programmable to 24, 14-key separate numeric pad

Pricing/Support/Availability ● base price of 6520—$3,995 includes CPU, 64K-byte RAM, 32K-byte ROM, CRT, keyboard, dual disk drives of 320K bytes each, 2 I/O ports, Facit DOS, CP/M; base price of 6528—$4,395 includes same as 6520 except 128K-byte RAM ● 90-day warranty ● service available from manufacturer, retailer/dealer, or third party through RCA; service plans available for on-site maintenance, mail-/carry-in hardware maintenance, software updates/corrections ● sales are handled through office equipment dealers ● first delivered November 1981

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■ FORTUNE SYSTEMS CORPORATION
300 Harbour Boulevard, Belmont, CA 94002 ● 415-593-9000

□ Fortune 32:16

Classification ● single-user/single-tasking and multiuser desktop computer with integrated display ● based on 16-bit microprocessor with 32-bit architecture ● expansion to multisystem via local network

Systems Software ● all software comes unbundled except for single-user Fortune operating system, which is based on UNIX ● C, C BASIC, Business BASIC, Microfocus COBOL, FORTRAN-77, Pascal languages available from vendor ● IDOL Database Management System ● Asynchronous Interactive Terminal Emulator, Bisynchronous Batch 2780/3780, 3741, 2770, 2968, Bisynchronous Interactive 327X available

Applications Software ● Fortune:WORD, Extended Fortune:WORD word processing packages; MultiPlan spreadsheet, accounting, graphics packages available from Fortune

Systems Hardware ● base system includes CPU, memory, diskette drive, I/O port, display, keyboard, video display controller ● CPU features Motorola MC68000, 5-MHz microprocessor ● 256K-byte RAM (with parity) expandable to 1M bytes; 4K-byte to 16K-byte ROM; error checking and correction available with 256K-byte option ● proprietary dual bus structure utilizes 16-bit data bus, 24-bit memory address bus; 1 RS-232C port standard, parallel I/O port optional ● intelligent communications controller available; Ethernet local network available

Mass Storage ● maximum hard disk storage is 80M bytes using 4 20M-byte 5.25-inch Winchester hard disks, 5M-byte, 10M-byte hard disk also available ● maximum diskette storage is 3.2M bytes (formatted) using 4 800K-byte floppy disks ● 20M-byte tape cartridge available

Printers ● Prism 80, 132; IDS 480; NEC 2000R, 3500I, 3500R, 7710R available from vendor

Display/Keyboard ● integrated monochrome 12-inch CRT display (color optional), 80 characters x 24 lines, upper-/lowercase alphanumerics; 15 limited graphic symbols, bit-mapped graphics optional ● detached typewriter-style keyboard features 99 sculptured keys, 15-key numeric pad, 9-key cursor control pad, 16 programmable function keys

Pricing/Support/Availability ● Fortune 32:16 PS 10 system package—$7,995 includes CPU, 512K-byte memory, 800K-byte dual diskette drives, 10M-byte hard disk, CRT, keyboard, single-user FOR:PRO ● 90-day warranty ● service available from manufacturer (maintenance centers), depot, or third-party service ● sales through direct sales force, OEMs, dealers ● first delivery August 1982; over 5,000 systems installed

■ FRANKLIN COMPUTER CORPORATION
2128 Route 38, Cherry Hill, NJ 08002 ● 609-482-5900

□ ACE 1000, ACE 1200

Classification ● single-user/single-tasking desktop system with integrated keyboard; CRT display optional ● based on 8-bit processor ● hardware and software compatible with Apple II microcomputers; software compatible with CP/M 2.2 systems

Systems Software ● system monitor is included in ROM ● Apple DOS is packaged with the disk drive component; CP/M 80 software is standard with the 1200 model ● Apple BASIC is bundled with the system; CBASIC also included with 1200 model

Applications Software ● ACEWriter and WordStar word processing and ACECalc (VisiCalc-compatible) spreadsheet programs available from vendor

Systems Hardware ● basic systems include CPU, memory, 8 peripheral connectors, keyboard speaker, joystick/paddle connector; ACE 1200 also includes CP/M card with separate processor, disk storage, I/O ports, 80-column card ● CPU features 1.02-MHz 6502 microprocessor in both models; 6-MHz Zilog Z80 also incorporated in the ACE 1200 ● 64K-byte RAM under DOS operating system; 128K under CP/M (ACE 1200 only); 6 sockets for 12K-byte EPROM ● 1 RS-232C port, 1 Centronics parallel port optional; joystick/paddle connector, 8 peripheral board connectors on both models; only 3 available on the ACE 1200 for other peripherals

Mass Storage ● maximum diskette storage is 858K bytes on the ACE 1000 and 582K bytes on the ACE 1200; 143K-byte 5.25-inch diskettes available; single integral disk drive standard with ACE 1200 ● up to two 5.25-inch 10M-byte Winchesters supported; 570K-byte-per-second transfer rate, 35-millisecond average access time

Printers ● maximum of 1 printer per system; none available from vendor

Display/Keyboard ● system uses separately available CRT display or television set; monochrome, upper-/lowercase alphanumerics, 40 characters x 24 lines on both models; 80-column card on ACE 1200 expands display capabilities to 80 characters x 24 lines, graphics character set available as an option on ACE 1000; 40x48 resolution and 280x192 high resolution; color display standard ● typewriter-style keyboard is integrated into the system housing; features 72 keys including numeric pad and reset, VisiCalc designated keys, alpha lock key; ACE 1200 has cursor control pad with WordStar function keys

Pricing/Support/Availability ● base system price—ACE 1000—$1,095 includes CPU, 64K-byte RAM, 12K-byte EPROM keyboard, 8 peripheral connectors, joystick/paddle connector; ACE 1200—$1,995 includes 2 CPUs, 128K-byte RAM, 12K-byte EPROM, integral diskette drive, joystick/paddle connector, 8 peripheral board connectors, speaker ● 90-day warranty ● service available from manufacturer (4 regional service centers), retailer/dealer ● sales through computer stores, general merchandise stores, office equipment dealers, OEMs ● first delivery August 1982 for the ACE 1000, March 1983 for the ACE 1200; 80,000 ACE systems installed

■ FUJITSU MICROELECTRONICS
2840 San Tomas Expressway, Suite 103, Santa Clara, CA 95051 ● 408-980-0755

□ Micro-16s

Classification ● single-user/multitasking desktop computer with detached CRT display ● based on 8-bit/16-bit dual processors

Systems Software ● CP/M-86 operating system bundled with computer; CP/M 3.0, concurrent CP/M, MS-DOS optional ● F-BASIC (variation of Microsoft BASIC) available from vendor ● no database management or communications software currently available from vendor

Applications Software ● word processing program and SuperCalc electronic spreadsheet bundled with computer

Systems Hardware ● base system includes CPUs, memory, diskette storage, CRT, keyboard, I/O ports ● CPUs incorporated in the system are the Zilog Z80A (8-bit) and Fujitsu 8086 (16-bit) microprocessors; system also contains a video sub-processor and a keyboard processor; 68000 softcard is optional ● 128K-byte user RAM expandable to 1M bytes; 64K-byte video RAM; 10K-byte monitor ROM ● Fujitsu bus with 5 expansion slots; 1 Centronics printer interface, 1 RS-232C port, color RGB interface, B/W interface, 4 channel A/D converter, light-pen interface ● link to Corvus Omninet communications network optional

Mass Storage ● maximum hard disk storage of 80M bytes formatted; 4 5.25-inch Winchesters of 10M or 20M bytes each available ● maximum of 1.2M bytes of formatted diskette storage using 4 5.25-inch floppy disk drives of 320K bytes each; 2 drives standard

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Printers ● 1 printer per system; Fujitsu SP830 daisywheel 80-cps printer available from vendor

Display/Keyboard ● 12-inch color CRT, 80 characters x 25 lines or 40 characters x 25 lines, 8 colors; graphics subsystem contains 64K-byte video support RAM, 10K-byte monitor ROM, dedicated microprocessor, 640x200 pixels ● typewriter-style, detached keyboard, low profile, with its own microprocessor; 98 sculptured keys, numeric keypad, cursor control cluster, 10 programmable function keys

Pricing/Support/Availability ● base system price—$3,995 includes dual CPUs, 128K-byte RAM, 640K-byte diskette storage, RS-232C port, parallel port, CP/M-86 word processing and spreadsheet software ● 90-day warranty ● service provided by dealers, depot, and third party ● sales through dealers, OEMs, and ISOs ● first delivery March 1983

■ GAVILAN COMPUTER CORPORATION

240 Hacienda Avenue, Campbell, CA 95008 ● 408-379-8000

□ Gavilan Mobile Computer

Classification ● single-user/multitasking 9-pound portable computer, 2.75 inches x 11.4 inches wide and long ● based on 16-bit microprocessor

Systems Software ● Gavilan Integrated Operating Environment with print spooling and background communications resides in ROM; MS-DOS is also bundled with the computer ● MBASIC interpreter included with MS-DOS; Pascal optional ● CapsuleComm communications and mail system bundled

Applications Software ● CapsuleWord word processing and CapsuleCalc electronic spreadsheet bundled with the system, along with CapsuleOffice portable secretary, CapsuleForm forms processing, and an application development package ● MS-DOS application programs available from Gavilan on 3-inch diskettes

Systems Hardware ● basic system includes CPU, memory, disk storage, I/O ports, touch panel, modem, and battery pack ● CPU features 16-bit Intel 8088 processor ● 32K-byte CMOS static RAM expandable to 208K bytes; 48K-byte CMOS ROM; optional 32K-byte plug-in memory expansion capsules available in RAM, ROM, PROM, or EPROM ● 1 RS-232C port, 300-baud modem, video monitor interface, and system I/O bus standard; acoustic modem, video monitor, and AC adapter optional

Mass Storage ● up to two 3.5-inch 360K-byte and one 5.25-inch 360K-byte diskette drives optional

Printers ● optional 5-pound 50-cps thermal transfer printer with rechargeable battery; printer can hook onto the back of the system; 80 plus columns

Display/Keyboard ● system uses flip-up LCD with 16 lines of 66 characters in upper-/lowercase alphanumerics; 24x80 video monitor optional ● integrated typewriter-style keyboard is fully programmable and has a numeric keypad; a touch panel is used as a pointing device

Pricing/Support/Availability ● base system—$3,995 includes CPU, 32K-byte RAM, disk storage, modem, I/O ports, LCD, keyboard, battery pack, and software ● 9-day warranty ● mail-/carry-in hardware maintenance available; software updates/corrections through manufacturer ● first delivery October 1983 from OEMs and manufacturer representatives

■ GENERAL AUTOMATION

1045 South East Street, P.O. Box 4883, Anaheim, CA 92803 ● 714-778-4800

□ Zebra 700, 2000 & 3000

Classification ● multiuser/multitasking desktop and floor unit systems ● based on 32-/16-bit processor ● Zebra 700 supports four users; 2000 supports eight; and 3000 supports 16; the Zebra 2000 is upgradeable to a Zebra 3000

Systems Software ● XENIX operating system bundled with computer ● C programming language bundled ● SMC Thoroughbred BASIC and RM/COBOL optional ● Informix relational database management system available from vendor

Applications Software ● Q-ONE-WORD processing system, Q-ISAM file management and office automation packages available from General Automation

Systems Hardware ● basic system includes CPU, memory, I/O ports, and disk or tape storage ● CPU features 32-/16-bit Motorola MC68000 microprocessor ● 256K-byte RAM on Zebra 700 expandable to 512K bytes; 1M-byte RAM on Models 2000 and 3000 expandable to 1.5M bytes on Model 3000 ● four CRT ports, one serial port, and one parallel port on Zebra 700; eight CRT ports, and two serial ports on Zebra 2000 and 3000 expandable to 16 and 4, resepectively, on Model 3000

Mass Storage ● maximum of 45M bytes of hard disk storage on Zebra 700; 10M-byte Winchester and 5M-byte removable disk standard; 20M-byte drive optional; maximum of 96M bytes of hard disk storage on Model 2000; 32M-byte Winchester standard; 64M-byte Winchester optional; maximum of 256M bytes of hard disk storage on Model 3000 using four 64M-byte Winchester drives; 1 standard ● 0.25-inch and 0.5-inch streaming tape drives available from vendor

Printers ● none available from the vendor

Display/Keyboard ● system uses separately available CRT and keyboard

Pricing/Support/Availability ● Zebra 700—$9,100 includes CPU, 256K-byte RAM, I/O ports, 15M-byte disk storage, XENIX operating system, software, and the capability to support four users ● Zebra 2000—$22,000—same as 700 but with 1M-byte memory, 32M-byte drive, 0.25-inch tape storage, and capability to support eight users ● Zebra 3000—$28,900—same as Zebra 2000 but a floorstanding unit with 64M-byte drive and capability to support up to 16 users ● service available through SORBUS ● sales through a network of dealers and distributors ● available during the first quarter of 1984

□ Zebra 750 & 5500

Classification ● multiuser/multitasking desktop systems based on 32-/16-bit processor ● Zebra 750 can support up to four users; Zebra 5500 can support up to 48

Systems Software ● PICK operating system bundled along with BASIC programming language ● 2780/3780 emulation optional

Applications Software ● word processing system and COMPU-SHEET electronic spreadsheet bundled along with ACCU PLOT business graphics

Systems Hardware ● basic system includes CPU, memory, I/O ports, and disk storage ● CPU features 32-/16-bit Motorola MC68000 processor ● 128K-byte RAM expandable to 256K bytes on Zebra 750, 1M-byte RAM on Zebra 5500 expandable to 1.5M bytes ● four CRT ports, one serial port, and one parallel printer port standard on Zebra 750; 10 serial ports on Zebra 5500, 40 optional ● local area network will be available in first quarter of this year

Mass Storage ● maximum of 35M bytes of hard disk storage on Zebra 750; 10M-byte Winchester and 5M-byte cartridge standard; 20M-byte Winchester drive optional ● maximum of 568M bytes of hard disk storage on Zebra 5500 using 4 142M-byte drives; 1 standard ● 0.5-inch streaming tape drive standard on 5500; 0.25-inch streaming tape optional for both systems

Printers ● none available from the vendor

Display/Keyboard ● system uses separately available CRT display and keyboard

Pricing/Support/Availability ● Zebra 750—$9,300 includes CPU, 128K-byte RAM, I/O ports, 5M-byte removable cartridge

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disk, 10M-byte fixed disk, PICK operating system, and other software; Zebra 5500—$55,300 includes CPU, 1M-byte RAM, 142M-byte hard disk, 0.5-inch streaming tape drive, 10 serial ports, uninterruptable power supply, PICK operating system, and other software ● service available through SORBUS ● sales through a network of dealers and distributors ● available during the first quarter of 1984

■ GIMIX INC

1337 West 37th Place, Chicago, IL 60609 ● 312-927-5510

□ GIMIX 6809

Classification ● single-user/multitasking or multiuser component systems; CRT display and keyboard optional ● based on 8-bit microprocessor ● various models available depending on memory capacities, I/O ports, disk storage

Systems Software ● OS-9 Level One or Level Two, UniFLEX, FLEX operating systems, softloaded from diskette; bundled with computer or sold separately depending on configuration ● OS-9 assembler, BASIC 09, BASIC, Extended BASIC, UniFLEX BASIC, CIS COBOL, UniFLEX Pascal, OS-9 Pascal, FORTRAN 77, C Compiler available from vendor

Applications Software ● variety of packages available from software houses to run on the 6809 operating systems; none offered by the vendor

Systems Hardware ● base system includes CPU, memory, diskette storage with DMA controller, time-of-day clock, I/O ports ● CPU features 2-MHz 68B09 microprocessor; arithmetic processors optional ● 64K-byte RAM for single-user system, 128K bytes to 1M bytes for multiuser systems ● SS-50 bus; 2 RS-232C ports standard on single-user system, 4 standard on multiuser systems, additional ports optional; parallel ports optional

Mass Storage ● maximum hard disk storage is 144M bytes using 2 Winchesters of 72M bytes each; 19- and 40M-byte Winchesters also available ● maximum diskette storage is 2.2M bytes using dual 8-inch floppy disk drives of 1.1M bytes each; 5.25-inch floppy disks also available

Printers ● none available from vendor

Display/Keyboard ● system uses separately available CRT and keyboard; none available from vendor

Pricing/Support/Availability ● basic system—$4,398 includes CPU, 64K-byte RAM, 2 RS-232C ports, DMA controller, cables, two 40-track double-sided, dual-density diskette drives, and OS-9 Level One and FLEX operating systems; 192K-byte multiuser system—$8,998 with CPU, 3 ports, DMA controller, cables, one 80-track double-sided, dual-density diskette drive, one 19M-byte Winchester, and OS-9 Level 3 ● 90-day warranty ● service available from manufacturer ● sales through direct mail, computer stores, OEMs ● first delivery 1979

■ GOULD INC/Computer Systems Division

6901 West Sunrise Boulevard, Ft. Lauderdale, FL 33313 ● 305-587-2900

□ Power Station 1000

Classification ● single-user and multiuser systems; desktop computers with CRT and keyboard ● used as standalone systems and in a distributed processing environment as cluster stations ● based on 16-bit processor ● manufactured by Convergent Technologies as "N-Gen"

Systems Software ● Power Station Executive (PSX) proprietary operating system will also run MS-DOS and CP/M-86; XENIX 3.0 may be used in a non-PSX environment; all OS unbundled ● Micro Focus FORTRAN, Convergent Technology "C," and COBOL available ● Mistress, Unify, and ISAM access methods available ● SNA emulation, asynchronous terminal emulation optional

Applications Software ● word processing program, Multiplan electronic spreadsheet, and Business Graphics software optional

Systems Hardware ● base system includes CPU, memory, I/O, CRT, and keyboard ● CPU features 16-bit Intel 80186 processor ● 256K-byte RAM expandable to 1M bytes ● single-board X-bus; Multibus optional; 2 RS-232C ports, 2 RS-449/-422 ports, 1 Centronics port ● modems, multiplexers, and Ethernet LAN optional

Mass Storage ● maximum of 80M bytes of hard disk storage using 4 optional 5.25-inch 20M-byte Winchester drives ● maximum of 2.5M bytes of diskette storage using 4 optional 5.25-inch drives ● 9-track, 1600-bps magnetic tape drive and 0.5-inch streamer or stop/start drives available

Printers ● 20- to 50-cps letter-quality and 75- to 150-cps dot-matrix printers available from Gould

Display/Keyboard ● detached 12-inch green phosphor CRT is packaged with basic system; displays 29 lines of 80 characters in upper-/lowercase alphanumerics ● detached 96-key keyboard features 10 programmable and 22 special function keys

Pricing/Support/Availability ● base system—$2,675 includes CPU, 256K-byte RAM, I/O ports, CRT, keyboard, operating system ● 90-day warranty ● mail-/carry-in hardware maintenance and on-site repair service available from Gould ● sales through direct sales force and OEMs ● 10 systems delivered since September 1983

■ GRID SYSTEMS CORPORATION

2535 Garcia Avenue, Mountain View, CA 94043 ● 415-961-4800

□ Compass Computer

Classification ● single-user/multitasking 9.25-pound portable computer measuring 11.2x15x2 inches ● based on 16-bit processor ● can be used in conjunction with GRiD Central, an online central computer network which services individual Compass computers by acting as a central software distribution center, data storage facility, and message system

Systems Software ● proprietary Compass Computer Operating System (CCOS) resident in bubble memory and included with the system; MS-DOS 2.0 optional ● Pascal, C, PL/M, FORTRAN-77, and Microsoft-compatible BASIC available ● GRiDFile file management system optional ● GRiDTerm asynchronous terminal emulator, GRiD 3101, an IBM 3101, 3270 emulator, GRiDVT100, a DEC VT102 terminal emulator available

Applications Software ● GRiDWrite text editor, GRiDPlan spreadsheet, plus business graphics, document formatter, auto-dialing available from GRiD Systems

Systems Hardware ● basic system includes CPU, memory, integrated modem, display, keyboard ● CPU features 16-bit Intel 8086 microprocessor, and 80-bit Intel 8087 floating-point arithmetic processor ● 256K-byte RAM; 384K-byte non-volatile bubble memory ● IEEE-488 bus structure; one RS-232C interface standard ● built-in 1200-/300-based AT&T 212A-/103A-compatible modem

Mass Storage ● maximum hard disk storage of 10M bytes on 1 5.25-inch Winchester drive ● maximum diskette storage of 360K bytes on 5.25-inch portable diskette drive or on Winchester floppy combination drive

Printers ● system supports 1 printer; 80-cps bidirectional dot-matrix printer available from GRiD

Display/Keyboard ● integral 6-inch diagonal flat-panel display, 53 characters x 24 lines in amber; upper-/lowercase alphanumerics; bit-addressable graphics, 320x240 pixels ● 57-key fixed keyboard ● for portability, display folds down over top of keyboard

Pricing/Support/Availability ● basic system price—$8,150 includes CPU, 256K-byte RAM, 384K-byte bubble memory,

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integrated CRT, keyboard and modem; 1 RS-232C port, operating system • 90-day warranty • on-site or carry-in maintenance from vendor; software updates available through GRiD Central online distribution center. • sales through direct sales force and Businessland store chain; an additional 50 retail outlets will be added • first delivered October 1982

■ HEWLETT-PACKARD/Personal Office Computer Division

978 East Arques Avenue, Sunnyvale, CA 94086 • 408-735-1550

☐ HP 150

Classification • single-user/single-tasking desktop system with detached CRT • based on 16-bit microprocessor • incorporates touchscreen facility which enables a user to interact with the system simply by pointing to the various commands on the screen

Systems Software • MS-DOS 2.0 bundled with the system along with a shell called P.A.M. for accessing the HP Touch facility through MS-DOS • Microsoft BASIC, Pascal, COBOL, FORTRAN available • Condor DBMS and Personal Card File optional • DSN Link available for file transfer between 2 HP 150s or HP 150 and HP 3000

Applications Software • VisiCalc and Multiplan electronic spreadsheets, WordStar word processor, Multiplan financial modeling system, Perfect Pac word processor, speller, spreadsheet, file management system available plus various other third-party programs being converted to utilize HP TOUCH

Systems Hardware • basic system includes CPU, memory, CRT, keyboard, I/O ports, battery backup, real-time clock • CPU is 16-bit 8-MHz Intel 8088 microprocessor • 256K-byte RAM expandable to 640K bytes; 6K-byte static RAM display memory; 160K-byte ROM • 2 expansion slots, 2 RS-232C ports, 1 HP-IB (IEEE-488) port standard

Mass Storage • maximum of 120M bytes formatted of hard disk storage; 14.5M-byte and 4.6M-byte Winchesters available; 14.5M-byte drives have an 85-millisecond average access time; 4.6M-byte drives have a 173-millisecond average access time • maximum of 8 3.5-inch or 5.25-inch diskette drives; both 270K bytes formatted, single sided, double density; 3.5-inch drives have 415-millisecond average access time; 5.25-inch drives have 187-millisecond average access time

Printers • 20- to 40-cps daisywheel printers; 80- to 200-cps dot-matrix printers available from HP as well as an integral thermal printer and graphics plotter

Display/Keyboard • 9-inch green phosphor diagonal screen displays 80 characters x 24 lines; 25th and 26th lines for screen labeling; 27th line for system status; graphics resolution of 512x390 pixels; 11 fully supported national graphics character sets; Tektronix 4014 emulation • detached keyboard has 12 programmable function keys, 18-key numeric pad, auto-repeat, n-key rollover

Pricing/Support/Availability • base system—$3,150 includes CPU, 256K-byte RAM, CRT, keyboard, 2 serial ports, 1 HP-IB port, MS-DOS, and P.A.M.; $3,995 with dual 3.5-inch diskette drives • 90-day warranty • several maintenance plans available covering on-site, mail-in, and carry-in service; phone consulting service • sales through direct sales force, dealers, distributors • first delivery October 1983

☐ HP 120, 125

Classification • single-user/single-tasking desktop computer with detached CRT • based on dual 8-bit processors • HP 120 (compact) occupies 1.7 square feet of space

Systems Software • CP/M 2.2 bundled with systems • Series 100/BASIC optional • Condor 20-1, 20-2, 20-3 database manager, extended relational version, and report writer and indexer • DSN/Link communications package available; intelligent terminal functions in ROM

Applications Software • WordStar/100, Series 100/Word with mailing list management, Series 100/VisiCalc electronic spreadsheet, spelling checker, mail management, accounting, payroll, financial modeling, business graphics packages offered by Hewlett-Packard

Systems Hardware • basic system includes dual CPUs, keyboard, memory, CRT, I/O ports • CPU utilizes dual 3.68-MHz Zilog Z80A microprocessors: 1 for execution in standalone computer mode, 1 for control of CRT and terminal functions • HP-IB (IEEE-488) channel bus for specific HP peripheral devices (allows configuration of up to 14 peripherals to 1 port); 2 RS-232C ports included; HP 125B can support 20-mA current-loop interface or 300-baud modem

Mass Storage • maximum 8.8M-byte formatted hard disk storage using 2 5.25-inch Winchester disk systems • maximum of 8.8M-byte formatted diskette storage using 4 dual 1.1M-byte 8-inch flexible disk systems; 3.25 and 5.25-inch flexible disk systems also available • maximum of 8.8M-byte (formatted) combination hard and flexible disk storage using 1 5.25-inch 4.4M-byte Winchester and 2 8-inch 2.2M-byte dual/flexible disk systems

Printers • variety of printers available from HP for Series 100; daisywheel at 40 cps, 20 to 25 cps; serial dot matrix, 180 cps; thermal or serial dot matrix (HP-IB interface); integral thermal printer available for 125B • graphics plotters (2 or 8 pens; HP-IB interface)

Display/Keyboard • HP 120 has 9-inch diagonal display, HP 125B—12-inch; B/W (green phosphorous optional), 80 characters x 24 lines, upper-/lowercase alphanumerics; 16K-byte display memory • detached, typewriter-style ASCII keyboard features full cursor positioning, 8-user programmable function keys; numeric pad standard with HP 125B, optional with HP 120

Pricing/Support/Availability • basic system price of HP 120 and 125—$1,920 includes CPUs, 64K-byte memory, HP-IB channel, 2 RS-232C ports, CRT, keyboard, operating system • 90-day warranty • service available from manufacturer with service plans for on-site maintenance, mail-/carry-in hardware maintenance; phone-in consulting service • sales through direct sales force, dealers, distributors, service offices • first delivery HP 120, 1982; HP 125B, 1981; over 1,200 systems installed

■ HEWLETT-PACKARD COMPANY/Personal Computer Division

1000 NE Circle Boulevard, Corvallis, OR 97330 • 504-757-2000

☐ HP Series 80

Classification • single-user/single-tasking desktop computer with integrated CRT on HP 85 and HP 87XM; HP 86B has separately available CRT • based on 8-bit processor

Systems Software • HP proprietary operating system resides in ROM and is bundled with system; CP/M softcard and UCSD p-System optional • BASIC, AGL, and assembler languages also in ROM and bundled; FORTRAN-77, Pascal offered with/without UCSD p-System • dBASE II DBMS, FILE/80 file management system available for HP 86B, HP 87XM; File Manager available for HP 85 • Data Communications Pac and TERM/80 available for asynchronous communications

Applications Software • Write Idea word processing, Documate and text editing for HP 85; WordStar plus SpellStar and MailMerge and WORD/80 for HP 86B, and HP 87XM available from vendor, along with VisiCalc PLUS electronic spreadsheet; accounting, financial analysis, portfolio management, statistics, engineering, and entertainment programs also offered by HP

Systems Hardware • base systems include CPU, memory, I/O ports, keyboard; HP 85 also has an integrated thermal printer, CRT, tape drive; HP 87 also has a CRT • CPU features proprietary HP 8-bit microprocessor; Z80 card optionally available for HP 86B, HP 87XM • HP 85 has 32K-byte RAM, 8K-byte video RAM,

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and 48K-byte ROM expandable to 96K bytes in 8K-byte increments; HP 86B has 128K- to 640K-byte RAM, HP 87XM has 128K- to 640K-byte RAM, both expandable in 64- and 128K-byte increments; both have 16K-byte video RAM and 48K-byte (on 87XM) or 56K-byte (on 86B) ROM expandable to 96K bytes (on 87XM) or 104K bytes (on 86B) • all 3 systems include Hewlett-Packard Interface Bus, 4 expansion slots, optional RS-232C, HP-IL, BCD, GPIO and parallel printer interfaces, and an HP-ROM drawer for interfacing optional ROMs to the computer • full-duplex, 300-baud modem available for all systems

Mass Storage • up to eight 3.5-inch 270K-byte diskette drives supported per system, 950K-byte-per-second data transfer rate, 415-millisecond average access time; up to eight 5.25-inch 270K-byte drives, 620K bytes per second, 187 milliseconds • up to four 5.25-inch 4.6M- or 9.6M-byte Winchesters supported, 1400-byte-per-second data transfer rate, 60-millisecond average access time • 195K- to 210K-byte tape cassette storage for HP 85

Printers • HP 85 includes integral 64-cps 32-column dot-matrix printer; 80-/200-cps dot-matrix printers, 25-cps daisywheel and 120-cps thermal matrix printer available for all 3 systems; plotters also available

Display/Keyboard • 5-inch integrated green phosphor CRT on HP 85 displays 16 lines of 32 characters in upper-/lowercase alphanumerics; graphics capability of 256x192 pixels; HP 86B uses separately available 9- or 12-inch green phosphor CRT; HP 87XM has integrated 10-inch green phosphor CRT; both systems display 24 or 16 lines of 80 characters in upper-/lowercase alphanumerics; graphics capability of 400 or 544x240 pixels • integrated HP 85 typewriter-style keyboard has 8 programmable keys and numeric keypad; integrated HP 86B, HP 87XM Selectric-style keyboards have 14 programmable keys and numeric keypad

Pricing/Support/Availability • base system—HP 85—$2,995 includes CPU, 32K-byte RAM, 48K-byte ROM, cartridge tape drive, CRT, keyboard, thermal printer, I/O ports, operating system, BASIC, AGL, and assembler; HP 86B—$1,595 includes CPU, 128K-byte RAM, 56K-byte ROM, keyboard, I/O ports, operating system, BASIC; HP 87XM—$2,995 includes same features as HP 86B but with CRT • 90-day warranty • on-site/carry-in maintenance available from vendor • sales through dealer network and direct sales force • HP 85 first delivered 1980, HP 86N first delivered July 1982, HP 87XM first delivered March 1982

■ HONEYWELL INC

200 Smith Street, Waltham, MA 02154 • 617-895-3658

□ microSystem 6/10

Classification • single-user/single-tasking or 2-user system with detached CRT display; desktop and floor-unit models available • based on 16-bit microprocessor • hardware and software compatible with Honeywell's DPS 6 minicomputers

Systems Software • General Comprehensive Operating System (GCOS) 6 MOD 400, Release 3.0 operating system, bundled with floor unit and dual diskette version of desktop system; Personal Computing Option allows execution of MS-DOS and CP/M-86 operating systems which are packaged with the option • GW-BASIC, CBASIC available with the Personal Computing Option, GW-BASIC bundled; COBOL, FORTRAN, BASIC, Pascal optional under GCOS • numerous communication packages available for terminal emulation, remote batch, 2780/3780 facilities; distributed processing software capabilities also available

Applications Software • word processing, spreadsheet, office automation programs available

Systems Hardware • desktop base system includes CPU, memory, CRT, keyboard, diskette storage, I/O ports; floor-unit base system includes same with hard disk storage and Workstation Kit • CPU features Honeywell Micro 6 microprocessor; Intel 8086 processor available with Personal Computing Option • 128K-byte main memory expandable to 512K bytes in desktop model, 512K bytes standard in floor unit • 1 asynchronous RS-232C-/RS-422A-compatible port (linkage for second workstation or modem), 1 printer port standard; optional synchronous port supports connections to Honeywell's Distributed Systems Architecture (DSA), non-DSA networks, computers using IBM BSC and SNA networking protocols, Value-Added Networks (VAN) and Public Data Networks (PDN) via X.25 packet-switching protocols • AT&T-compatible modem available; supports conventional external modems and automatic calling units

Mass Storage • maximum hard disk storage is 19.5M bytes formatted using 8-inch Winchester, 1 standard with floor unit only • maximum diskette storage is 1.3M bytes using 2 650K-byte formatted 5.25-inch floppy disks, 1 standard with both models

Printers • 36-cps letter-quality printer and 2 100-cps (80 characters per line, 132 characters per line) dot-matrix printers available from vendor

Display/Keyboard • detached CRT with 12-inch green phosphor diagonal screen; 80 characters x 24 lines • detached low-profile, typewriter-style keyboard, color-coded, 10-digit numeric pad, cursor control keys; all keys programmable • Honeywell VIP workstations available as add-on unit

Pricing/Support/Availability • base price—desktop unit—$3,995 includes CPU, 128K-byte memory, single diskette drive, 2 I/O ports, CRT, keyboard; floor unit—$9,995 includes same as desktop except 512K-byte memory, 20M-byte hard disk storage, Workstation Extension Kit, and MOD 400; Personal Computing Option is available for $875 • 90-day warranty • service available from manufacturer; service plans for on-site repair and mail-/carry-in hardware maintenance; Honeywell's Customer Assisted Maintenance Program (CAMP) allows users to replace defective models from own inventory or from vendor • sales through direct sales force and National Distribution Center • first delivery June 1983

□ microSystem 6/20

Classification • multiuser component system supporting up to 4 users; CRT and keyboard available separately • based on 16-bit microprocessor • hardware and software compatible with Honeywell's DPS 6 minicomputers

Systems Software • Honeywell GCOS 6 MOD 400 Release 3.0 operating systems • intermediate, reentrant, runtime, and advanced COBOL; advanced FORTRAN; BASIC interpreter and compiler; Pascal compiler; advanced assembler; RPG II; Interactive RPG II programming languages available • DM6 IDS/II database management system; INFO6 file management system; TOTAL 6 database management system • Honeywell RNP and DSA networks; IBM BSC and SNA protocols; file transfer facilities available

Applications Software • all applications that will run under Honeywell's GCOS MOD 400 operating system

Systems Hardware • base system includes CPU, memory, disk storage, I/O ports • CPU is Honeywell's LSI 6 microprocessor • 512K-byte RAM expandable to 1M bytes • 5 RS-422 ports, 1 communications expansion slot standard; dual-line communications controller, networking controller, RS-422 to RS-232C interface converter optional

Mass Storage • maximum of 80M bytes of hard disk storage; one 8-inch cartridge with 20M bytes fixed and 20M bytes removable standard, 1 optional; 43.55-millisecond average access time • maximum of 655K bytes of formatted diskette storage on a 5.25-inch double-density, double-sided diskette standard

Printers • 35- and 55-cps letter-quality printers, 100- and 400-cps dot-matrix printers available from Honeywell

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Display/Keyboard ● system supports Honeywell VIP 7201, VIP 7300 Series, and VIP 7823 Workstation

Pricing/Support/Availability ● base price—$17,000 includes CPU, 512K-byte RAM, 40M-byte cartridge disk, 655K-byte diskette drive, 5 RS-422 ports, 1 communications expansion slot ● 90-day warranty ● service available from manufacturer, service plans for on-site repair and mail-/carry-in hardware maintenance; Honeywell's Customer Assisted Maintenance Program (CAMP) allows users to replace defective models from own inventory or from vendor ● sales through direct sales force and National Distribution Center ● first delivery June 1983

■ IMS INTERNATIONAL
2800 Lockheed Way, Carson City, NV 89701 ● 702-395-6051

□ IMS 5000IS

Classification ● single-user/single-tasking or multiuser desktop computer with integral CRT display; up to 4 users ● based on 8- or 16-bit microprocessor

Systems Software ● all software unbundled ● CP/M 2.2, CP/M-86, MS-DOS, TurboDOS, TurboDOS with spooling, TurboDOS M/P all softloaded from 5.25-inch diskette ● CBASIC interpreter, BASIC compiler, BASIC-80 interpreter, FORTRAN-80, COBOL-80 compiler

Applications Software ● ICALC spreadsheet; WordStar word processing, MailMerge, SpellStar, DataStar, and Supersort I

Systems Hardware ● basic system includes CPU, CRT, memory, diskette storage, 8-slot chassis, real-time clock/calendar, keyboard, serial I/O port ● single-board processor may be either Z80A- or 8088 S-100-based system ● 8088-based system cannot at present be expanded beyond single user; separate memory board provides 256K-byte RAM; 3 more 256K-byte boards may be added for a maximum of 1M bytes ● Z80A-based system may be expanded up to 4 users by the addition of 3 Z80A processor boards; each Z80A may have a maximum of 64K bytes of memory ● I/O boards provide port capability; 2 asynchronous serial RS-232C ports and 1 parallel port with or without boot PROM socket or 4 serial RS-232C ports; 2 serial ports standard, 4 optional ● I/O processor board provides Z80A-based standalone communications processor with 4 programmable internal timers; dual-channel synchronous/asynchronous communications controller with full modem support including auto-answer and auto-dial; interfaces to host CPU via parallel port; I/O processors per system limited only by chassis capacity

Mass Storage ● maximum of 24M bytes of hard disk using 1 5.25-inch Winchester fixed disk ● maximum of 2M bytes of diskette storage using two 5.25-inch double-sided double-density drives

Printers ● 200 cps, 136 characters per line, dot-matrix; maximum of 5

Display/Keyboard ● 12-inch screen, 80 characters x 24 lines, monochrome, 720x300 pixels, bit-addressable and memory-mapped graphics; upper- and lowercase alphanumerics ● 96-key typewriter-style keyboard with numeric keypad and 15 programmable function keys

Pricing/Support/Availability ● basic system 5000IS—$3,430 ● includes processor, memory, 1 diskette drive, CRT, keyboard ● 2-year warranty ● service provided by retailer/dealer and Western Union ● marketed by office equipment dealers and through OEM sales ● introduced 1982; over 14,000 installed of all models

□ IMS 5000SX, 8000SX, 8000S

Classification ● single-user/single-tasking or multiuser desktop or standalone component system with separate CRT display(s); up to 16 users ● based on 8- or 16-bit microprocessor

Systems Software ● all software unbundled ● CP/M 2.2, CP/M-86, MS-DOS, TurboDOS, TurboDOS with spooling, TurboDOS M/P all softloaded from 5.25-inch diskette ● CBASIC interpreter, BASIC compiler, BASIC-80 Interpreter, FORTRAN-80, COBOL-80 compiler

Applications Software ● ICALC spreadsheet; WordStar word processing, MailMerge, SpellStar, DataStar, and Supersort I

Systems Hardware ● basic system includes single-board processor, memory board, mass storage controller boards, 12 or 20 (8000S only) slot chassis, real-time clock/calendar serial and parallel ports, single-board processor may be either Z80A- or 8088 S-100-based system ● 8088-based system cannot at present be expanded beyond single user; separate memory board provides 256K-byte RAM; up to three 256K-byte boards may be added ● Z80A-based system may be expanded up to 8 users (5000SX and 8000SX) or up to 16 users (8000S) by the addition of 3 Z80A processor boards; each Z80A may have a maximum of 64K bytes of memory ● I/O boards provide port capability; 2 asynchronous RS-232C ports and 1 parallel port with or without boot PROM socket or 4 RS-232C ports; 2 serial ports standard, 4 optional ● I/O processor board provides Z80A-based standalone communications processor with 4 programmable internal timers; dual-channel synchronous/asynchronous communications controller with full modem support including auto-answer and auto-dial; interfaces to host CPU via parallel port; I/O processors per system limited only by chassis capacity ● 5000SX and 8000SX are desktop systems while the 8000S is a standalone system

Mass Storage ● maximum of 40M bytes of hard disk on the 5000SX, 80M bytes on the 8000SX, and 160M bytes on the 8000S; 5.25-inch Winchester drives with a capacity of 20M-byte 8-inch Winchester drives with a capacity of 40M bytes available ● maximum of 2M bytes of diskette storage on the 5000SX, 3.2M bytes on the 8000SX and 8000S; 2 5.25-inch double-sided, double-density diskette drives on the 5000SX; 2 8-inch double-sided, double-density diskette drives on the 8000SX; 4 on the 8000S ● the 8000SX and 8000S may be configured with cartridge tape drives for system backup

Printers ● 200 cps, 136 characters per line, dot matrix; maximum of 14 on the 5000SX and 8000SX and 16 on the 8000S

Display/Keyboard ● 12-inch screen, 80 characters x 24 lines, monochrome, 720x300 pixels, bit-addressable and memory-mapped graphics; upper- and lowercase alphanumerics ● 96-key typewriter-style keyboard with numeric keypad and 15 programmable function keys ● maximum of 16 CRTs on the 8000S

Pricing/Support/Availability ● basic 5000SX—$3,030; 8000SX—$4,475, and 8000S—$5,600 ● 5000SX includes processor, memory, diskette drive, and cabinet; 8000SX and 8000S both include processor, memory, 2 diskette drives, and cabinet ● 2-year warranty ● service provided by retailer/dealer and Western Union ● marketed by office equipment dealers and through OEM sales ● introduced 1982; over 14,000 installed of all models

■ INTEGRATED BUSINESS COMPUTERS (IBC)
21592 Marilla Street, Chatsworth, CA 91311 ● 213-882-9007

□ IBC Cadet, Middi Cadet

Classification ● multiuser desktop component systems handling up to 9 users; CRT display optional ● based on 8-bit microprocessor

Systems Software ● all software comes unbundled ● CP/M 2.2, MP/M, and Oasis multiuser operating systems softloaded from diskette ● supports Oasis BASIC, C, and R/M COBOL

Applications Software ● IBC Oasis networking software available from vendor; MultiCalc spreadsheet bundled with Oasis operating system

Systems Hardware ● basic Cadet and Middi Cadet systems

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include processor, memory, disk storage, and serial I/O ports all built into a desktop cabinet ● processor is based on 6-MHz Zilog Z80H 8-bit microprocessor ● Cadet has 64K-byte RAM standard with a maximum of 256K bytes; Middi Cadet has 256K-byte RAM standard with a maximum of 512K bytes; memory on the Cadet and Middi Cadet employs 64K-bit chips and is bank switched to allow allocation of equal memory segments to each user; 256K bytes of cache memory is optional ● single-board computer; RS-232C ports are user programmable with baud rates up to 38,400; Cadet has 6 RS-232C ports standard with 4 optional, Middi Cadet has 10 standard; parallel Centronics port is optional on the Cadet and standard on the Middi Cadet; high-speed parallel ports for networking are optional on Middi Cadet (IEEE-488) ● local area networking though IBC Global Network

Mass Storage ● maximum of 85M bytes of hard disk on the Cadet and 20M bytes on the Middi Cadet; Cadet uses 8-inch fixed Winchester, while Middi Cadet uses 5.25-inch Winchester ● maximum of 2M bytes of diskette storage on the Cadet and 1M bytes on the Middi Cadet; Cadet uses up to 2 8-inch double-sided, double-density diskette drives; Middi Cadet uses 1 5.25-inch double-sided, double-density diskette drive ● 17M-byte cartridge tape drive optional

Printers ● none available from vendor

Display/Keyboard ● none available from vendor

Pricing/Support/Availability ● entry-level Cadet—$8,000 up to $14,000 for a large system ● entry-level system includes processor, 64K-byte memory, 6 serial ports, 1 diskette drive, fixed Winchester disk, cabinet, and operating system; entry-level Middi Cadet—$7,500 up to $10,995 for a large system ● entry-level system includes processor, 256K-byte memory, 10 serial ports, 1 parallel port, 1 diskette drive, fixed Winchester disk, cabinet, and operating system ● 120-day warranty; service is available on-site from vendor and distributor/dealers; software updates/corrections are available ● systems are marketed through distributors and dealers and to OEMs ● first delivery of the Cadet was 1980; for the Middi Cadet, 1983; 1,600 systems installed in the U.S.

■ INTERNATIONAL BUSINESS MACHINES (IBM) CORPORATION/Information Systems Division

Entry Systems Business, P.O. Box 1328, Boca Raton, FL 33432 ● 305-998-6607

□ 5150 & 5160 (XT) Personal Computers

Classification ● single-user/single-tasking or single-user/multitasking desktop systems; separately available CRTs ● based on 16-bit processor

Systems Software ● MS-DOS V.1.1, MS-DOS V.2 combined with BASIC 2, CP/M-86, UCSD p-System combined with a macro assembler for operating system ● standalone cassette-level BASIC interpreter in ROM operates independently, with or without any of the above operating systems; ROM BASIC extended to diskette version at no charge; separately available MS BASIC diskette-level compiler, MS Pascal, MS FORTRAN 78, MS COBOL 74 compilers, and MS macro assembler; separately available UCSD Pascal and UCSD FORTRAN 77 ● async, BSC, or SDLC communications; emulators for TTY (async), 3101 (async), 5250 (BSC), 3270 (BSC/SDLC), 3770 RJE (BSC/SDLC)

Applications Software ● PeachText or Easy Writer 1.1 word processing, professional editor, VisiCalc 1.1, spreadsheet, general accounting, inventory control, typing tutor, stock market, others available from IBM

Systems Hardware ● basic PC models all contain CPU, main memory, ROM, diskette drives and adapter, CRT monitor adapter, and audio speaker; depending on the PC submodel, the basic system may also contain a keyboard, hard disk and/or communications line ● CPU is 4.77-MHz 16-bit Intel 8088 CPU with 8-bit data paths ● 64K- to 544K-byte main memory on 5150

models; 128K- to 640K-byte main memory on 5160 (XT) models; all models have 40K-byte ROM ● basic systems contain 8 I/O slots with 4 or 5 slots available for user options; 8-slot expansion units for all systems with 6 slots available to the user

Mass Storage ● maximum hard disk storage is 20M bytes on all systems, using 2 fixed disks residing in the expansion unit ● maximum diskette storage is 640K bytes on the 5150 models and 720K bytes on the 5160 models; up to 2 5.25-inch diskette drives with a storage capacity of 160K or 320K bytes per diskette on the 5150 and 360K bytes per diskette on the 5160; 320K-byte diskettes can be read by 360K-byte-oriented drives ● cassette interface for audio-tape drives (drives not available from IBM)

Printers ● 80-cps bidirectional basic dot-matrix printer, 40 to 132 columns; or 80-cps bidirectional printer with 40 to 132 columns, allowing mixing of text and graphics

Display/Keyboard ● 11.5-inch B&W display with 27 rows x 80 columns; 12.5-inch 16-color/graphics display with 24 rows x 80 columns, all points addressable; both have 25th line for status; user can also attach home TV as monitor ● certain 5150 submodels use 3278-2/3274 as display unit and hence have no keyboard; all other basic systems include detached 83-key, detached typewriter-style keyboard with 10 programmable function keys

Pricing/Support/Availability ● 7 basic subsystem packages include 6 Model 5150 versions and 1 Model 5160 version; low-end 5150 base price—$1,594 includes CPU, 64K-byte main memory, 40K-byte ROM with BASIC interpreter; 160K-byte diskette drive and adapter, cassette drive interface, audio speaker, 4 expansion slots, and adapter to be integrated into 3278 display subsystems (no PC keyboard); high-end 5150 base price—$2,633 includes CPU, 64K-byte memory, 40K-byte ROM with BASIC interpreter, 2 320K-byte diskette drives and adapter, cassette drive interface, audio speaker, keyboard, 4 slots, and CRT adapter suitable for attaching either a home TV or IBM-supplied monitor; 5160 "PC XT" base price—$4,995 includes CPU, keyboard, 128K-byte main memory, 40K-byte ROM with BASIC 2 interpreter, single 360K-byte diskette drive with adapter, a 10M-byte fixed disk drive with adapter, audio speaker, asynchronous communications adapter, and 8 slots ● 90-day hardware warranty ● lower-cost warranty extension option available for pick-up/delivery maintenance for 1 year; other maintenance contracts also available ● no-charge telephone hot-line assistance for hardware and software problems ● sales through Information Systems Division Entry Systems Business direct sales offices, Sears & Roebuck, Computerland, and other independent dealers ● first delivery 1981

□ IBM XT/370

Classification ● single-user desktop system ● operates in 32-bit System/370 VM-compatible mode or 16-bit PC/XT microcomputer ● DOS-compatible mode (but not concurrently)

Systems Software ● VM/PC is a multitasking, virtual memory, virtual machine operating system; a compatible subset of VM/SP R.2 designed for the XT/370; allows local CMS session, remote 3277-2 emulation, remote 3101 emulation; DOS 2.1 is a single-user interactive/batch processing system for standalone environments, supported by ROM-based Cassette Level BASIC interpreter, for diskette- or hard disk-configured systems; UCSD p-System is for configurations with diskette ancillary storage only ● COBOL, FORTRAN, BASIC/VM, PL/1, Pascal, Assembler H languages supported under VM; BASIC interpreter and compiler, COBOL, FORTRAN, Pascal, macro assembler, APL, and LOGO supported under DOS ● VM mode includes standard 3277-2 emulation, provides control when XT/370 connected by coaxial cable to 3274, supports upload/download of files via 3270 system, supports separate async 3101 terminal emulation program, BSC; SDLC pathway separate from 3270 not supported ● DOS mode supports TTY, async 3101, BSC 3270/3770, SDLC communications, 5520/5250/3270 coaxial connections and emulation

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Applications Software • no packages authorized under VM • all standard PC-DOS word processing, spreadsheet, electronic products can run under DOS mode

Systems Hardware • base system includes 4 CPUs, memory, keyboard, disk storage • CPU includes 2 Motorola 68000 and 1 Intel 8087 microprocessor for VM, and 1 Intel 8088 microprocessor for DOS • 256K-byte RAM expandable to 640K bytes, 40K-byte ROM • 2 dedicated interfaces for disks; 8 basic slots, 3 open; optional monitor interface required; optional expansion unit with 8 slots • various optional communications devices

Mass Storage • up to two 10M-byte 5.25-inch Winchester hard disk drives for a maximum capacity of 20M bytes • up to two 5.25-inch, 360K-byte diskette drives for a maximum diskette capacity of 720K bytes

Printers • single printer typically; matrix-impact and graphics models available from IBM

Display/Keyboard • optional display can be color/ monochrome; color/graphics monitor adapter or monochrome display/printer adapter available; detached standard typewriter-style keyboard; same as the PC and PC/XT

Pricing/Support/Availability • 5160-588 XT/370—$8,995 includes 2 CPU cards (4 processors), keyboard, 640K-byte user memory, 40K-byte ROM containing Cassette Level BASIC interpreter, one dual-sided 360K-byte diskette drive with adapter, 10M-byte fixed disk drive with adapter, audio speaker, 8 slots with 3 available to user; requires operating system, display, and display interface • 5160-568 XT/370—$6,720, same as 5160-588 except no hard disk drive or adapter but includes an expansion unit adapter • VM/PC operating system—$1,000 one-time charge; DOS 2.1—$65 license • 90-day warranty on hardware products; XT/370 sold only through IBM direct sales; on-site, courier pickup, carry-in, and mail-in maintenance contracts available • first delivery second quarter 1984

☐ IBM 3270 Personal Computer

Classification • single-user multitasking desktop system, can operate in a standalone environment but geared more to configuration in a multihost environment as an intelligent workstation

Systems Software • 3270-PC Control Program and DOS 2.1; DOS 2.1 supports single-user interactive/batch processing in standalone environment or as intelligent workstation; 3270-PC controlled by 3270-PC Control Program, a multitasking communications executive that allows PC-DOS 2.1 to run as one of the concurrent system tasks; no other operating environment is supported • ROM-based Cassette Level BASIC runs independently of disk/diskette operating systems; DOS languages include Disk Level BASIC, Advanced Level BASIC, BASIC 2, Pascal, FORTRAN, APL, LOGO, COBOL, macro assembler, and UCSD macro assembler • communications/ network configuration through 3274 interconnection; TTY-terminal emulation and file transfer operations supported by communications utility under DOS

Applications Software • word processing and electronic spreadsheet applications packages available from IBM

Systems Hardware • 3270-PC is a highly defined, specialized version of the PC designed to be attached to a 3274 control unit in communications local-attach environments • base system includes CPU, 256K-byte memory expandable to 640K bytes, 40K-byte ROM, and integrated adapters for connecting keyboard, diskette, display, and the 3270 system; 5271 Base System Unit has 8 expansion slots, and features implemented leave from 1 to 4 slots for user-selected options • 5271-2 System Unit includes Base System Unit, keyboard, and dual-sided diskette drive; requires 5151 monochrome or 5272 color display and operating system • Intel 8088 microprocessor implemented • 3270-to-processor local attachment requires the 3274 models

control units except "C" models • remote 3270 models communicate with S/360, S/370 (including 3030 and 3080), or 4300 processors by transmitting to channel-attached 3704, 3705, or 3725 communications front end, or to integrated adapters on S/370-115/125/135/138 or 4300

Mass Storage • 10M-byte hard disk drive available, can be installed in 5161-1 Expansion Unit for 5150 to expand disk capacity to 20M bytes; requires fixed-disk drive adapter and DOS 2.1 • up to two 5.25-inch dual-sided 360K-byte diskette drives can be attached to standard diskette adapter

Printers • one optional printer supported through optional printer adapter; 5152-2 Graphics Printer or 5182-1 PC Color Printer available from IBM

Display/Keyboard • 5151-1 monochrome display, 11.5-inch green phosphor CRT, 25-row x 80-character display, upper-/lowercase alphanumerics; requires standard 3270-PC Display Adapter • 5272-1 Color Display, 14-inch 8-color monitor, 720x350 pixels for graphics, 1920 characters for host and notepad sessions, 2000 characters for PC-DOS sessions • typewriter-style special alphanumeric keyboard; 3270 host keytop graphics in black, keytops unique to PC-DOS operations in blue; program function keys; ALT key for access to all 256 ASCII and special characters

Pricing/Support/Availability • 5271-2 System Unit—$4,290; DOS 2.1—$65 license; 3270 PC Control Program—$300 license • 3270 products can be leased • 90-day hardware warranty • on-site, courier pick-up, carry-in, mail-in maintenance contracts available from IBM; warranty extension option available; carry-in/mail-in maintenance contracts available as annual option • first delivery in first quarter of 1984

■ INTERNATIONAL SYSTEMS MARKETING INC (ISM)

932 Hungerford Drive, Suite 6, Rockville, MD 20850 • 301-279-5775

☐ Unisystem PC, Unisystem XT

Classification • single-user/single-tasking desktop system with detached CRT • based on 16-bit processor • reportedly IBM PC and PC/XT compatible

Systems Software • MS-DOS 2.0 bundled with system; CP/M-86 also available • Microsoft GWBASIC bundled • dBASE II DBMS and Microrim's RBASE available • PC Talk and Crosstalk modem-support communications package

Applications Software • WordStar and The Word word processors available from the vendor

Systems Hardware • base system includes CPU, memory, CRT, keyboard, I/O ports, disk storage • CPU is 16-bit Intel 8088 microprocessor; 8087 coprocessor optional • 256K-byte RAM expandable to 640K bytes; 8K-byte ROM expandable to 32K bytes • IBM PC-compatible bus with 3 open slots on PC version, 2 open slots on XT version; 2 RS-232C ports, 1 parallel port standard; 2 additional parallel ports optional • DC Hayes modem available

Mass Storage • maximum of one 10.6M-byte 5.25-inch Winchester on XT version only; 90-millisecond average access time; 5M-bps transfer rate • maximum of 2 half-bright 360K-byte 5.25-inch diskette drives on PC version, 1 on XT; 93-millisecond average access time, 250K-bps transfer rate

Printers • Epson FX80 and FX100 120-cps dot-matrix printers with 80 and 132 columns, respectively, available • Diablo 1630 45-cps 132-column letter-quality printer also offered

Display/Keyboard • detached monochrome CRT has 12-inch screen displaying 80 characters x 25 lines; utilizes color graphics card with resolution of 320 or 640x200 pixels; higher-resolution monochrome display with no graphics and color monitor with graphics also available • detached keyboard contains 10 programmable function keys utilizing 4 modes for a total of 40 functions; separate cursor keys and numeric keypad

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Pricing/Support/Availability • Unisystem PC—$2,705 includes CPU, 256K-byte RAM, 8K-byte ROM, CRT, keyboard, dual diskette drives, 2 serial ports, 1 parallel port, MS-DOS, GWBASIC; Unisystem XT—$4,495 includes same as Unisystem PC except 1 diskette drive, 10M-byte Winchester • 90-day warranty • mail-in, carry-in, and on-site repair service available through the vendor • sold through direct sales force and computer stores • 160 systems installed since October 1983

■ INTERTEC

2300 Broad River Road, Columbia, SC 29210 • 803-798-9100

□ Head Start

Classification • single-user/single-tasking 25-pound transportable/desktop system with integral CRT and detached keyboard • based on 8- and 16-bit processors • three models available with varying memory and disk storage capacities • transportable version uses smaller keyboard

Systems Software • CP/M 2.2 and MS-DOS bundled with the system • proprietary networking operating system, LAN DOS networks up to 255 systems

Applications Software • none available from vendor

Systems Hardware • basic system includes dual CPUs, memory, diskette storage, I/O ports, CRT, keyboard • CPU features 8-bit, 4-MHz Z80A and 16-bit 8-MHz 8086 microprocessors • 128K- to 1M-byte RAM • one RS-449/RS-232C-compatible serial port for asynchronous/synchronous communications, one Centronics port, 50-pin external expansion bus, 50-pin external disk I/O interface, and coaxial communications interface for local area network; local area networking capability enables Head Start to connect up to 255 VPUs

Mass Storage • maximum of 200M bytes of hard disk storage using four optional 50M-byte 8-inch Winchester drives with 25M bytes fixed and 25M bytes removable; 10M-byte 5.25-inch Winchester also available • 1M- or 500K-byte unformatted diskette storage using an integral 3.5-inch drive with a data transfer rate of 250K bps and an average access time of 250 milliseconds; external 5.25-inch 360K-byte diskette drive available for downloading software to the 3.5-inch format

Printers • none offered by vendor

Display/Keyboard • 12-inch green phosphor CRT is an integral part of the system unit; displays 25 lines of 132 or 80 columns in upper- and lowercase alphanumerics • detached, typewriter-style keyboard features 18 programmable keys and numeric keypad on desktop version; portable version has 14 programmable keys, and the keyboard snaps over the front of the screen

Pricing/Support/Availability • Model 128—$1,895 includes dual CPUs, 128K-byte RAM, RS-449/RS-232C serial port, Centronics port, 50-pin external expansion bus, 50-pin external disk I/O interface, coaxial communications interface, CRT, keyboard, CP/M 80, MS-DOS, and LAN DOS • Model 512—$3,495—same as Model 128, but with 512K-byte RAM and 500K-byte diskette storage on 3.5-inch microfloppy; Model 1000 is the same as Model 128 but with 1M-byte RAM and 1M-byte diskette storage on a double-sided 3.5-inch microfloppy • 1-year warranty • hardware and software service available from Intertec; on-site third-party service through Bunker Ramo • sales through computer stores, OEMs, and a direct sales force • first delivered January 1984

□ Intertec CompuStar II

Classification • single-user/multitasking desktop computer with integrated CRT • based on dual 8-bit processors • 4 models available with varying floppy disk storage capacities • multiuser capability is achieved by daisychaining systems together to share the resources of a single hard disk drive

Systems Software • CP/M 2.2 and LAN DOS networking operating system are bundled with computer • Microsoft BASIC bundled

Applications Software • none available from vendor

Systems Hardware • all models include CPU, memory, disk storage (except Model 10), CRT, keyboard, I/O ports, and time/date clock • CPU features dual 4-MHz Zilog Z80 processors • 64K-byte RAM (12K bytes for CP/M), 2K-byte static RAM, 2K-byte ROM • single-board computer with 2 RS-232C ports

Mass Storage • maximum of 144M bytes of shared hard disk storage using optional 14-inch Winchester-type drive; 10M-byte 8-inch Winchester also available; Intertec provides a special disk controller and multiplexer circuitry to "tie" user stations into a common disk • maximum of 1.5M bytes of diskette storage on VPU 40 using 2 drives; maximum of 1.5M bytes of diskette storage; 350K-/750K-byte 5.25-inch drives available

Printers • system can support up to 2 printers; none available from vendor

Display/Keyboard • 12-inch integral black/white CRT displays 24 lines of 80 characters in upper-/lowercase alphanumerics; memory mapping; line-drawing graphics • integrated typewriter-style keyboard has programmable 18-key numeric pad

Pricing/Support/Availability • base system—VPU 10—$1,795 includes CPU, memory, CRT, I/O ports, time/date clock, CP/M, BASIC • VPU 20—$2,495—same features as VPU 10 plus 350K-byte diskette drive • VPU 30—$2,995—same as VPU 10 plus 2 350K-byte diskette drives • 90-day warranty • mail-/carry-in and on-site hardware maintenance available from Intertec; software updates and hardware maintenance available from dealers and distributors • sales through computer stores, dealers, OEMs • first delivery January 1981

■ ITHACA INTERSYSTEMS INC

200 East Buffalo Street, Ithaca, NY • 800-847-2088

□ Encore 580, 880

Classification • single-user/single-tasking and multiuser component systems handling up to 8 users • based on 8-bit processor • difference between 580 and 880 is in the size of the diskette drive

Systems Software • CP/M 2.2 or MP/M bundled, depending on the model • Intersystems Pascal/Z and R/M COBOL-80 languages available • Infoshare local networking software available

Applications Software • WordStar word processor, Interedit line editor, and American Business Accounting system including Accounts Receivable, Accounts Payable, General Ledger, Inventory, and Payroll available

Systems Hardware • basic models include CPU, memory, disk storage, and I/O ports • CPU is 6-MHz 8-bit Zilog Z80B processor • 128K-byte to 1M-byte RAM • 2 serial plus 2 parallel ports standard on floppy-based systems; 6 serial ports standard on hard disk-based systems; 20-mA current loop available • S-100 bus with 10 slots, 5 available to user

Mass Storage • maximum hard disk storage is 80M bytes formatted using 2 8-inch hard drives in external chassis or 2 5.25-inch hard drives mounted internally; 10M-, 19M-, 23M-, 31M-, and 40M-byte Winchesters available; 5M-bps transfer rate; 30-millisecond to 105-millisecond average access time for 5.25-inch drive and 55 milliseconds to 80 milliseconds for 8-inch drive • storage capacity is 640K bytes formatted per 5.25-inch diskette drive and 1.2M bytes formatted per 8-inch diskette drive; maximum diskette storages of 2.6M bytes and 4.8M bytes on the 580 and 880, respectively; data transfer rates for 5.25-inch and 8-inch drives are 250K bps and 500K bps, respectively; average access times are 95 milliseconds and 91 milliseconds, respectively • 0.5-inch tape cartridge backup available

Printers • Okidata 80- to 132-column compressed, 120-cps bidirectional dot-matrix printer available from vendor

Display/Keyboard • third-party terminals available from vendor

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Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Pricing/Support/Availability • 4 basic subsystems include CPU, RAM, disk storage, I/O ports, and operating system • Encore 580—$4,995 includes dual 5.25-inch diskette drives, 2 serial ports, 2 parallel ports, and CP/M; 580H—$8,995 includes a 5.25-inch diskette drive, a 10M-byte hard disk, 6 serial ports, and MP/M; Encore 880—$5,595 includes dual 8-inch diskette drives, 2 serial ports, 2 parallel ports, and CP/M; 880H—$9,495 includes an 8-inch diskette drive, a 10M-byte hard disk drive, 6 serial ports, and MP/M • 90-day warranty • mail-in factory service; on-site service through TRW • sales through direct sales force and OEMs • first delivery June 1978; approximately 3,000 systems installed

☐ Encore 58000, 88000

Classification • single-user/single-tasking or multiuser component systems handling up to 8 users • based on 16-bit processor • difference between models is solely the choice of 5.25-inch or 8-inch diskette drives

Systems Software • XENIX multiuser operating system bundled • R/M COBOL, FORTRAN, and CBASIC 16 available

Applications Software • American Business Accounting system including Accounts Receivable, Accounts Payable, General Ledger, Inventory, and Payroll available

Systems Hardware • basic model includes CPU, memory, disk storage, and I/O ports • CPU is 6-MHz 16-bit Zilog Z8002 processor • 256K-byte RAM • 4 serial RS-232C ports standard; 20-mA current loop available; additional serial ports available • S-100 bus with 10 slots, 5 available to user

Mass Storage • maximum hard disk storage is 80M bytes formatted using 2 8-inch hard drives in external chassis or 2 5.25-inch hard drives mounted internally; 10M-, 19M-, 23M-, 31M-, and 40M-byte Winchesters available; 5M-bps transfer rate; 30-millisecond to 105-millisecond average access time for 5.25-inch drive and 55 milliseconds to 80 milliseconds for 8-inch drive • storage capacity is 640K bytes formatted per 5.25-inch diskette drive and 1.2M bytes formatted per 8-inch diskette drive; maximum diskette storage of 2.6M bytes and 4.8M bytes on the 58000 and 88000, respectively; data transfer rates for 5.25-inch and 8-inch drives are 250K bps and 500K bps, respectively; average access times are 95 milliseconds and 91 milliseconds, respectively • 0.5-inch tape cartridge backup available

Printers • third-party 80- to 132-column compressed, 120-cps bidirectional dot-matrix printer available from vendor

Display/Keyboard • third-party terminals available from vendor

Pricing/Support/Availability • 2 basic subsystems include CPU, 256K-byte RAM, one diskette drive, one hard disk drive, I/O ports, and XENIX operating system • Encore 58000—$11,495 includes one 5.25-inch diskette drive and 10M-byte hard disk; Encore 88000—$11,995 includes one 8-inch diskette drive and 10M-byte hard disk • 90-day warranty • mail-in factory service; on-site service through TRW • sales through direct sales force and OEMs • first delivery January 1983; approximately 100 systems installed

■ JONOS INTERNATIONAL CORP

1835 Dawns Way, Fullerton, CA 92631 • 714-999-6661

☐ JONOS

Classification • single-user/single-tasking 27-pound portable computer, 17.25 inches wide x 7.25 inches high x 13.25 inches deep • based on 8-bit processor • 8 models available with differing memory and disk storage capacities

Systems Software • operating system bundled—CP/M 2.2 on C2100, CP/M 3.0 on C2150, C2500, and C2600; Models 2150, 2500, and 2600; runs MS-DOS • MBASIC 80 interpreter bundled

Applications Software • Spellbinder word processing and Multiplan electronic spreadsheet bundled with system

Systems Hardware • base model includes Z80B CPU, 64K-byte RAM, 322K-byte diskette drive, CRT, keyboard, I/O ports • STD bus, 2 RS-232C ports, and 5 free slots standard; 1 parallel printer port

Mass Storage • dual 3.5-inch 322K-byte diskette drives standard on C2100, C2100-2 has two 1M-byte 5.25-inch drives replacing 3.5-inch drives, C2100-3 has two 1.6M-byte 5.25-inch drives • same configurations, respectively, for C2150, C2150-2, C2150-3 • C2500 has one 5M-byte 3.9-inch fixed-disk Winchester and one 5M-byte removable disk • C2600 has one 10M-byte fixed-disk Winchester and one 3.5-inch 322K-byte diskette drive • C2150 can have optional 15M-byte Winchester

Printers • JONOS GP-250X attachable dot-matrix printer available; 50 cps, 5x8 dot matrix, 10 cpi, 6 lpi; 9 pounds • serial 2400

Display/Keyboard • 9-inch green phosphor CRT is integral to system unit and displays 25 lines of 80 characters in upper-/lowercase alphanumerics • detachable Selectric-style keyboard has 10 programmable keys, 4 cursor keys, and numeric keypad; keyboard folds up to cover CRT for portability

Pricing/Support/Availability • base system—C2100—$3,195; C2100-2—$3,495; C2100-3—$3,795; C2150—$3,695 with 128K-byte RAM; C2150-2—$3,995; C2150-3—$4,295; C2500—$5,995 with 128K-byte RAM; C2600—$5,995 with 128K-byte RAM • 90-day warranty • mail-/carry-in and on-site maintenance available from Western Depot Service; software updates/corrections handled by Jonos • sales factory-direct or through retail stores and OEMs • first delivery June 1982 for C2100

■ KAYPRO DIVISION/NON-LINEAR SYSTEMS INC

533 Stevens Avenue, Solana Beach, CA 92075 • 619-755-1132

☐ Kaypro Computers

Classification • single-user/single-tasking transportable computers; 26 pounds to 31 pounds, depending on the model; includes self-contained steel carrying case with handle • based on a single 8-bit processor or 8-/16-bit coprocessors, depending on the model • 5 models available

Systems Software • CP/M 2.2 bundled with all systems; MS-DOS bundled with Plus 88 models only • MBASIC bundled with all models; CBASIC, SBASIC bundled with the 4, 4 Plus 88, and 10 only • Perfect Filer data management system bundled with all systems; dBASE II optional • Superterm communications package bundled with the 4, 4 Plus 88, and 10 only; KAYLINK HASP station emulator optional

Applications Software • WordStar and Perfect Writer, Speller, and Calc bundled with all systems; Profit Plan bundled with the 2 and 4 only; Microplan bundled with the 4, 4 Plus 88, and the 10 only • accounting software optional

Systems Hardware • base systems include CPU, memory, disk storage, CRT, keyboard, I/O ports; battery optional • all systems have an 8-bit Zilog Z80 microprocessor with a 2.5-MHz cycle speed except the 10 which has a 4-MHz cycle speed; the 2 Plus 88 and 4 Plus 88 also have a 16-bit Intel 8088 microprocessor • 64K-byte RAM on the 2, 4, and 10 models; 320K-byte RAM on the 2 Plus 88 and 4 Plus 88; 2K-byte ROM • 1 RS-232C port on the 2 and 2 Plus 88; 2 RS-232C ports on other models; 1 parallel Centronics-type printer interface on all models; no expansion slots

Mass Storage • maximum of 10M bytes of hard disk storage on Kaypro 10 using one 5.25-inch Winchester drive • maximum of 784K bytes of formatted diskette storage on Kaypro 4 and 4 Plus 88 using dual 5.25-inch double-sided, double-density drives, 1 included with Kaypro 10; maximum of 382K bytes of formatted diskette storage on Kaypro 2 and 2 Plus 88 using dual single-sided, double-density drives

Printers • none offered by Kaypro

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Display/Keyboard ● 9-inch green phosphor CRT integral to all units; displays 24 lines x 80 characters; Kaypo 4, 4 Plus 88, and 10 also include a 25th status line and 160x100-pixel graphics display, bit addressable ● detached keyboard includes 4 cursor control keys and a 14-key numeric pad ● keyboard folds up to cover CRT and disk drives for portability

Pricing/Support/Availability ● base price includes CPU, memory, CRT, keyboard, 1 or 2 serial ports, 1 parallel port, disk storage, and several software packages ● Kaypro 2—$1,595; Kaypro 2 Plus 88—$1,995; Kaypro 4—$1,995; Kaypro 4 Plus 88—$2,395; Kaypro 10—$2,795 ● 90-day warranty ● maintenance and repairs through MAI Sorbus ● sales through 900 dealers nationwide plus OEMs, system houses, and direct sales force ● Kaypro 2 delivered June 1982; Kaypro 4, June 1983; Kaypro 10, September 1983; 2,000 shipments in fiscal 1982 and 53,000 in fiscal 1983

■ LANIER BUSINESS PRODUCTS, INC/Division of Harris Corporation

1700 Chantilly Drive, NE, Atlanta, GA 30324 ● 404-329-8000

☐ Lanier Business Processor 1000

Classification ● single-user/single-tasking desktop system with integral CRT ● based on 8-bit processor; 16-bit coprocessor optional

Systems Software ● CP/M available; MS-DOS available with optional coprocessor ● Lanier Business Basic available ● Data-Manager DBMS available ● Telecom communications package

Applications Software ● Lanier ONE-STEP and Peachtext word processors, PeachCalc, List Manager, and medical, insurance, and legal packages available

Systems Hardware ● basic model includes CPU, keyboard, CRT, memory, disk storage, I/O ports ● CPU is 6-MHz 8-bit Zilog Z80B; 16-bit Intel 8088 coprocessor optional ● 128K- to 256K-byte RAM ● 1 RS-232C communications port, 1 proprietary printer port standard; system supports SNA, SDLC, 3270, 3780, and TTY-ASCII without additional hardware ● graphics board is optional ● proprietary I/O bus with 4 open slots; slots may be used for graphics board, communications board, network interface board, and add-on memory ● Lanier Business Processor 5000 network processor can serve several 1000s or other Lanier workstations

Mass Storage ● maximum hard disk storage is 10M bytes; 5M-bps transfer rate ● maximum diskette storage capacity is 1.3M bytes formatted; 650K bytes per drive; 250K-bps transfer rate

Printers ● 45-cps bidirectional, letter-quality printer with variable pitch, takes up to 15-inch paper; 80-cps and 150-cps dot-matrix printers with graphics capabilities, uses 8.5-inch-wide paper and 15-inch-wide paper, respectively

Display/Keyboard ● 12-inch green phosphor CRT integral to system; optional stand allows system to swivel and tilt; 80 characters x 25 lines plus 2 status lines ● detached typewriter-style keyboard with 103 keys includes 14 programmable function keys

Pricing/Support/Availability ● base system—$2,995 includes CPU, 128K-byte memory, CRT, keyboard, 1 diskette drive, and I/O ports ● 90-day warranty ● on-site service available by Lanier ● sales through direct sales force ● first delivery September 1983

■ LEE DATA CORPORATION

7075 Flying Cloud Drive, Eden Prairie, MN 55344 ● 612-828-0300

☐ Lee Data Personal Workstation

Classification ● single-user/single-tasking and single-user/ multitasking (up to 5 tasks concurrently) system ● based on 16-bit processor

Systems Software ● MS-DOS 2.0 bundled, CP/M-86 and Concurrent CP/M available ● Microsoft BASIC available, Macro-86 assembler bundled ● with optional controller, system will emulate the following terminals: IBM 3270 Models 2, 3, 4, and 5, DEC VT52, VT100 and VT132, TTY ASCII

Applications Software ● Lee Data-enhanced WordStar (supports 24-, 32-, or 43-line x 80-character, and 27-line x 132-character display), SpellStar, MailMerge, and MultiPlan available

Systems Hardware ● basic model includes CPU, keyboard, CRT, memory, mass storage, clock, and I/O ports ● CPU is 4.77-MHz Intel 8088 processor ● memory ranges from 128K bytes to 640K bytes; 8K-byte ROM ● 1 RS-232C communications port, 1 parallel port standard; IBM PC-compatible bus; 5 slots, 4 available to user

Mass Storage ● maximum hard disk storage is 10M bytes on 1 drive; 5M-bps transfer rate, 85-millisecond average access time ● maximum storage on diskette drives is 720K bytes with 2 360K-byte drives; 250K-bps transfer rate, 120-millisecond average access time

Printers ● 80-cps, 80/132 (condensed) column dot-matrix printer with 8.5-inch paper width available from the vendor

Display/Keyboard ● 15-inch tilt-swivel green display screen; 4 display sizes (24, 32, or 43 lines x 80 characters; 27 lines x 132 characters) ● detachable typewriter-style keyboard has 87 keys, including 24 function keys and numeric pad

Pricing/Support/Availability ● base system—$2,733 includes CPU, 128K-byte RAM, 2 diskette drives, CRT, keyboard, I/O ports, and bundled software ● 90-day warranty ● on-site service by manufacturer; Lee Data has 70 service centers; economy maintenance plan available ● sales through direct sales force ● first delivery April 1983; approximately 600 delivered

■ LEADING EDGE PRODUCTS, INC

225 Turnpike Street, Canton, MA 02021 ● 800-343-6833

☐ Leading Edge Personal Computer

Classification ● single-user/single-tasking system ● based on 16-bit processor

Systems Software ● MS-DOS 1.25 bundled ● Microsoft GWBASIC bundled

Applications Software ● Leading Edge Word Processing bundled

Systems Hardware ● basic system includes CPU, keyboard, disk storge, main memory, CRT, battery-powered clock, and 2 I/O ports ● CPU is 7.16-MHz 16-bit Intel 8088 ● RAM ranges from 128K bytes to 640K bytes ● 7 IBM PC-compatible expansion slots, with 5 available to user; RS-232C port, parallel printer port standard

Mass Storage ● diskette drive storage capacity is 640K bytes on 2 5.25-inch double-sided, double-density diskettes

Printers ● 50-cps dot-matrix printer with 8.5-inch paper width ● other third-party dot-matrix and letter-quality printers available from Leading Edge

Display/Keyboard ● 12-inch green phosphor CRT; 80 characters x 25 lines ● detachable 83-key keyboard utilizes IBM PC format; includes 10 programmable function keys and numeric keypad

Pricing/Support/Availability ● base system—$2,895 includes CPU, keyboard, 128K-byte main memory, CRT, two diskette drives, drive controller board, CRT controller board with parallel I/O port, battery-powered clock, BASIC, MS-DOS, Leading Edge Word Processor ● 6-month warranty ● carry-in service available ● sales through dealers and OEMs ● first delivery December 1983

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

■ LOBO DRIVES INTERNATIONAL

358 South Fairview, Goleta, CA 93117 ● 805-683-1576

☐ MAX-80

Classification ● single-user/single-tasking desktop system with integrated keyboard; CRT optional ● based on 8-bit processor ● reportedly capable of emulating a TRS-80 Model III when using LDOS 5.1

Systems Software ● CP/M 3.0 is bundled with system; Logical Systems Inc LDOS 5.1 optional ● FORTRAN compiler, Z80 macro assembler available from LOBO; LBASIC similar to Microsoft BASIC

Applications Software ● none available from vendor

Systems Hardware ● basic system includes CPU, memory, keyboard, real-time clock, disk interfaces, I/O ports ● CPU features 5-MHz Zilog Z80B processor ● 128K-byte RAM ● SASI hard disk interface, interfaces for 5.25-inch and 8-inch floppy drives; double-board configuration; 2 RS-232C ports, 1 Centronics-type port standard

Mass Storage ● maximum of 8.3M bytes of hard disk storage; 8-inch 8.3M-byte and 5.25-inch 5M-byte Winchester disk drives available ● maximum of 4.8M bytes of diskette storage; up to 4 5.25-inch, 720K-byte diskettes and 8-inch, 1.2M-byte diskettes available

Printers ● none available from the vendor; Epson and Toshiba printers supported

Display/Keyboard ● system uses separately available CRT with video generator; 12-inch, green phosphor CRT displays 24 lines of 80 characters; graphics capability of 640x225 pixels ● integrated typewriter-style keyboard has numeric keypad with 4 function keys

Pricing/Support/Availability ● base system—$945 includes CPU, 64K-byte RAM, keyboard, disk interfaces, I/O ports, real-time clock, and CP/M ● 1-year warranty ● mail-/carry-in hardware maintenance and software updates available from vendor ● sales through direct mail and OEMs ● first delivery October 1982

■ LOGICAL BUSINESS MACHINES

1294 Hammerwood Avenue, Sunnyvale, CA 94086 ● 408-744-1290

☐ L-XT

Classification ● single-user/single-tasking desktop system with detached CRT ● based on 16-bit processor ● reportedly IBM PC compatible

Systems Software ● MS-DOS 2.0 bundled with system along with Logical's Natural Language ● L-Net available for local area networks

Applications Software ● word processor and spreadsheet bundled

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, I/O ports, disk storage ● CPU is 16-bit Intel 8088 microprocessor; 8087 coprocessor optional ● 192K-byte RAM expandable to 320K bytes ● IBM PC-compatible bus with 2 open slots; 2 RS-232C ports, 1 parallel port standard

Mass Storage ● maximum hard disk storage of 60M bytes; one 10M-byte Winchester standard ● maximum diskette storage of 360K bytes formatted on one floppy drive ● streaming tape backup optional

Printers ● dot-matrix printers available from Logical

Display/Keyboard ● detached CRT with 12-inch amber screen; 80 characters x 25 lines ● detached 84-key IBM-compatible keyboard with 10-key numeric pad, 10 function keys

Pricing/Support/Availability ● basic system—$5,985 includes CPU, 192K-byte RAM, CRT, keyboard, 10M-byte Winchester, 360K-byte diskette drive, 1 parallel, 2 serial ports, software ● on-site repair service contracts available from dealers and distributors ● sales through dealer/distributor network

☐ Adam, Goliath

Classification ● multiuser floor-standing component systems with separate CRTs ● based on 16-bit processor ● 2 models available—Adam, which can support up to 4 workstations, and Goliath, which can support up to 20 workstations

Systems Software ● proprietary operating system is bundled ● 1 of 22 native languages (English, French, German, Italian, etc) incorporated in system; no programming languages necessary, user interfaces in his/her own language ● file creation and management facilities included in operating software

Applications Software ● letter-processor, accounting packages available from vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, tape cassette, CRT, keyboard, I/O ports ● CPU features an 8-MHz, 16-bit Intel 8086 processor ● 128K-byte RAM expandable to 256K bytes on both models, 4K-byte ROM on Adam, 8K on Goliath ● Multibus structure; 2 RS-232C ports standard, up to 20 optional RS-232C ports on Goliath

Mass Storage ● up to 80M bytes of formatted hard disk storage on Goliath; uses 20M-byte Winchester disk drives; one 20M-byte formatted Winchester hard disk drive on Adam ● 20M-byte tape cassette standard

Printers ● multiple printer can be attached; Logical offers 150-cps dot-matrix printers

Display/Keyboard ● 12-inch detached monochrome CRT displays 24 lines of 80 characters in upper-/lowercase alphanumerics ● detachable, typewriter-style keyboard has numeric keypad

Pricing/Support/Availability ● base system—Adam and Goliath—$19,170 includes CPU, 128K bytes of RAM, 20M-byte Winchester drive, 20M-byte streaming tape backup, CRT, keyboard, I/O ports, proprietary operating system ● on-site repair service contract available from dealer/distributors ● sales through dealer/distributor network ● Adam systems installed in U.S. since 1974, Goliath systems installed in U.S. since 1980

☐ Tina, David

Classification ● single-user/single-tasking desktop computers with integrated CRTs ● based on 16-bit processor ● 2 models differ in modularity, CRT size, and standard diskettes available

Systems Software ● proprietary operating system is bundled ● 1 of 22 native languages (English, French, German, Italian, etc) bundled with system; no programming languages necessary, user interfaces in his/her own language ● file creation and management facilities included in operating software

Applications Software ● letter-processor, accounting packages available from vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, tape cassette, CRT, keyboard, I/O ports ● CPU features an 8-MHz, 16-bit Intel 8086 microprocessor ● 64K-byte RAM (expandable to 128K on David), 2K-byte ROM ● 16-bit data bus with 16-bit addressing on Tina and 20-bit addressing on David; 1 RS-232C port on Tina, 2 on David, 1 parallel printer port on both

Mass Storage ● maximum of 2.4M bytes (formatted) of floppy disk storage using 1.2M-byte diskettes (2 standard on Tina, 1 standard on David)

Printers ● both systems can support 1 printer; Logical offers 150-cps dot-matrix printers

Display/Keyboard ● David's 9-inch monochrome CRT is integral to system unit; Tina's 12-inch monochrome CRT is

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

detached; both display 24 lines of 80 characters in upper-/lowercase alphanumerics • David's keyboard is integrated into CRT housing, Tina's keyboard is detached; both are typewriter-style and have numeric keypads

Pricing/Support/Availability • base system—David—$3,200 includes CPU, 64K-byte RAM, 1 diskette drive, 9-inch CRT, keyboard, I/O ports, and proprietary operating system; Tina—$6,430 includes same as David, but with 2 diskette drives and 12-inch CRT • on-site repair service contract available from dealer/distributors • sales through dealer/distributor network • Tinas delivered in U.S. since 1979; Davids delivered in U.S. since 1980

■ LOGICAL MICROCOMPUTER COMPANY (LMC)

140 South Dearborn Street, Chicago, IL 60603 • 312-580-0250

□ LMC 8000 Series, LMC 68000 Series, LMC 16032 Series

Classification • multiuser desktop component systems with separate CRT displays; up to 32 users • based on 16-bit and 32-bit microcomputers

Systems Software • all software unbundled • IDRIS (UNIX compatible by Whitesmiths for the Motorola 68000), ZENIX (UNIX compatible by Microsoft for the Zilog 8000), and UNIX with Berkeley 4.2 enhancements (for the National Semiconductor 16032) all are softloaded from diskette or hard disk • supports Pascal and C on the LMC 8000, 68000, 16032 Series; R/M COBOL on the LMC 8000 and 16032 Series; BASIC on the LMC 8000 and 16032 Series; FORTRAN 77 and PL/1 on the LMC 16032 Series • Relational DBMS package • software support for Ethernet

Applications Software • Horizon word processing package • SAS (Summer 1983)

Systems Hardware • basic system includes 15-slot backplane and motherboard in 19-inch rack, processor board, memory, ports, diskette drive controller, and chassis • LMC 8000 Series is built around the 4-MHz, 16-bit Zilog Z8001; the LMC 68000, 8-MHz, 16-bit Motorola MC 68000; and the LMC 16032, 10-MHz, 32-bit National Semiconductor NS 16032 • 128K-byte RAM standard; optionally memory can go up to 16M bytes • all processor boards are implemented with Multibus architecture • all processors have vectored, prioritized interrupt capability • LMC 16032 Series provides up to 16M bytes of program space and 16M bytes of data space through full support of demand-paged virtual memory addressing implemented by memory management hardware • 2 serial RS-232C ports standard on LCM 68000; 8 on the LMC 8000 and 16032; up to 32 asynchronous/synchronous RS-232C ports allowable on all series • 4 parallel ports standard on the LMC 68000; up to 32 optional on all series • optional intelligent I/O board • capability for up to 8 EPROMs on the LMC 68000 and 2 on the LMC 8000 • specialized PROM sets available which include monitor, disk bootstrap, and CPU test routines • local area network capability through Ethernet interface/controller

Mass Storage • maximum of 3200M bytes of hard disk; up to 32 drives with up to 60M bytes per drive for Winchester and 100M bytes for other hard disk; Winchester disk must have ST506 or ANSI standard interface; other hard disk must have SMD interface • up to 2 8-inch double-sided, double-density diskette drives • optional streaming tape backup

Printers • up to 32 can be configured; none provided by vendor

Display/Keyboard • up to 32 can be configured; none provided by vendor

Pricing/Support/Availability • basic purchase price for lowest-cost system is $6,000 • typical system can be purchased for $10,000 • typical system includes MC68000 or Z8001 with 128K-byte RAM, monitor program in ROM, chassis, 2 serial and 4 parallel I/O ports, diskette and Winchester disk controllers, 1 8-inch dual-density double-sided diskette drive, 1 5M-byte

removable cartridge Winchester disk drive, IDRIS or ZENIX, and C • limited 1-year warranty • vendor provides mail-/carry-in hardware maintenance (hourly rate) as well as on-site repair service; special optional service feature provides a replacement system shipped at vendors' expense anywhere in the free world within 24 hours if hardware failure occurs • systems are marketed by direct sales force and to OEMs • first delivery of the LMC 8000, December 1980; LMC 68000, January 1983; LMC 16032, April 1983

■ MAD COMPUTER INC

3350 Scott Boulevard, Building 13, Santa Clara, CA 95051 • 408-980-0840

□ MAD-1, MAD Encore

Classification • single-user/single-tasking desktop computer with integrated CRT • based on 16-bit processor • reportedly compatible with IBM PC and PC/XT

Systems Software • MS-DOS 2.0 is bundled with system; concurrent CP/M-86 optional • Microsoft GWBASIC bundled; COBOL, FORTRAN 77, and Pascal also available from MAD

Applications Software • MadVision word processor software available

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports • CPU features 16-bit Intel 80186 processor; optional 8087 co-processor available for mathematics functions • 128K-byte RAM expandable to 704K bytes with 64K-byte RAM chips; 16K- to 32K-byte ROM • IBM PC-compatible bus; 2 RS-232C ports standard (1 user configurable to RS-422) and 1 parallel printer port standard; optional expansion module has 4 slots

Mass Storage • dual 360K-byte diskette drives on MAD-1, 10M-byte hard disk and one 360K-byte diskette drive on MAD Encore; diskette data transfer rate 125K bps, 93-millisecond average access time; hard disk 5M bps, 85 milliseconds

Printers • system can support 1 printer; none offered by vendor

Display/Keyboard • 12-inch green phosphor CRT displays 25 lines of 80 characters in upper-/lowercase alphanumerics; monochrome graphics capability of 720x350 pixels, 16-color graphics—640x200 pixels; standard video controller provides for both color and monochrome display (color monitor not offered by vendor) • detached typewriter-style keyboard includes 10 programmable keys and numeric keypad

Pricing/Support/Availability • MAD-1—$4,195 includes CPU, 128K-byte RAM, 2 diskette drives, CRT, keyboard, I/O ports, software; MAD Encore—$6,295 with 256K-byte RAM and Winchester, one diskette drive • 120-day warranty • mail-/carry-in hardware maintenance and on-site repair service available from MAD and dealer • sales through computer stores, office equipment dealers, OEMs, systems houses, and a direct sales force • first delivery July 1983

■ MAGIC COMPUTER COMPANY, INC

2 Executive Drive, Fort Lee, NJ 07024 • 201-944-6700

□ Magic PCB 88

Classification • single-user/single-tasking desktop system with detached monitor and keyboard • based on 8-bit processor • two models available with varying disk storage capacities

Systems Software • CP/M-80 bundled with system along with CBASIC language • Perfect Filer and Filebase data management programs also bundled • optional modem program available

Applications Software • Perfect Writer word processing package and Perfect Calc electronic spreadsheet bundled with system

Systems Hardware • basic system includes CPU, memory, I/O ports, disk storage, CRT, keyboard • CPU features 8-bit Z80A processor, 6502 display processor also included • 64K-byte

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RAM, 4K-byte ROM • single board, STD bus interface, two RS-232C ports, one Centronics port • TTY and ASCII code supported

Mass Storage • maximum of 800K bytes of formatted diskette storage using two 5.25-inch drives with a data transfer rate of 12.5K bytes and average access time of 6 milliseconds

Printers • supports serial and parallel printers; none available from vendor

Display/Keyboard • detached 12-inch CRT is packaged with basic system and displays 24 lines of 80 characters in upper- and lowercase alphanumerics; graphics capability of 640x240 pixels • detachable typewriter-style keyboard has numeric pad with three programmable function keys

Pricing/Support/Availability • Model PCB 88/2—$1,795 includes CPU, 64K-byte RAM, I/O ports, two 400K-byte diskette drives, CRT, keyboard, CP/M-80, and software • Model PCB 88/1—$1,295 same as PCB 88/1, but with one drive • 120-day warranty • hardware and software service available from Magic and dealers • sales through direct mail, computer stores, and a direct sales force • first systems delivered June 1983

■ MICRO CRAFT CORPORATION
4747 Irving Boulevard, Suite 241, Dallas, TX 75247 • 214-630-2562

□ Dimension 68000

Classification • single-user/single-tasking system • based on 32-/16-bit processor • 8- and 16-bit coprocessors optional • emulation hardware system allows hardware mapping of computer systems up to 448K bytes

Systems Software • CP/M-68K operating system available; UniBASIC Interpreter, assembler, and "C" bundled with operating system; CP/M-86, CP/M-80, Apple II series DOS, TRSDOS, and IBM PC-DOS emulators available

Applications Software • none available from vendor

Systems Hardware • basic system includes CPU, keyboard, disk storage, main memory, clock, speaker, game ports, and 2 I/O ports • CPU is 8-MHz 32-/16-bit Motorola MC68000L8 processor; Z80, 6512, and 8086 coprocessors optional • 128K-byte RAM expandable to 512K bytes on board and 16M bytes using expansion slots; 16K-byte ROM • 1 RS-232C modem port, Centronics-type parallel printer port; RS-170 composite video output interface; 6 expansion slots available to user; 16-slot expansion chassis with power supply optional

Mass Storage • maximum hard disk storage is 100M bytes using 1 internal and 1 external 50M-byte hard disk drive with own power supply; 10M-byte Winchester also available • maximum diskette storage is 3.2M bytes using 4 800K-byte internal drives

Printers • supports serial and parallel printers • none available from vendor

Display/Keyboard • CRT not available from vendor; video output can be 20, 40, 80, or 92 characters x 20 to 50 lines depending on software control; full color graphics supported • detachable IBM PC-compatible keyboard with 10 function keys, 10 programmable keys, and numeric keypad

Pricing/Support/Availability • basic system—$3,995 includes CPU, 128K-byte RAM, dual 400K-byte diskette drives, keyboard, 2 I/O ports; 256K-byte model with dual 800K-byte diskette drives is $4,545 • 1-year warranty • mail-/carry-in service available; end-user hot-line • sales through OEMs and computer stores • first delivery fall 1983

■ MICRO FIVE CORPORATION
17791 Sky Park Circle, Irvine, CA 92714 • 714-957-1517

□ Series 1000

Classification • multiuser (up to 6)/multitasking component

system with separately available CRT • based on 16-bit processor • available in 3 models with varying disk storage capacities

Systems Software • CP/M-86 bundled with model 1050; 1 operating system comes bundled with models 1440 and 1540—user's choices are: CP/M-86, MP/M-86, SMC Business BASIC, or proprietary, multiuser, multitasking STARDOS and MBOS/5-MicroCOBOL operating systems • BASIC and Business BASIC programming languages bundled • Update DBMS with report writer and IDOL DBMS available from Micro Five

Applications Software • FLEXITEX word processor and Mail List System run under STARDOS, Word Concept One word processing program runs under SMC Business BASIC, both are optionally provided by vendor; accounting, order entry, invoicing, inventory, sales analysis, general ledger, payroll, retail, medical billing, auto parts distribution, insurance and real estate programs also available

Systems Hardware • basic system includes CPU, memory, disk storage and I/O ports • CPU features 8-MHz 16-bit Intel 8088 processor • 128K-byte RAM expandable to 512K bytes; 16K-byte ROM • single-board computer; up to 6 RS-232C ports (2 standard), 8-port expansion module available

Mass Storage • maximum of 58M bytes of hard disk storage on 1540, 25.6M bytes on 1440 using 19M-byte and 12.8M-byte Winchester drives • maximum of 2M bytes of diskette storage on 1050 using 5.25-inch 1M-byte diskette drives; 1 drive used on 1440, 1540 • optional 20M-byte tape cartridge available

Printers • system supports multiple printers; none available from vendor

Display/Keyboard • system uses separately available CRT and keyboard; none offered by Micro Five

Pricing/Support/Availability • base system—1050—$4,495 includes CPU, 128K-byte RAM, 2 diskettes, 2 serial ports, operating system, BASIC, and Business BASIC • 1440—$7,995—same as 1050, but with 1 diskette drive, 12.8M-byte Winchester drive • 1540—$8,995—same as 1440, but with 19M-byte Winchester • 90-day warranty • on-site and mail-/carry-in hardware maintenance available from retailer/dealer and TRW • sales through computer stores, OEMs, and a dealer/distributor network • first delivery fall 1982

■ MICROMATION, INC
1620 Montgomery Street, San Francisco, CA 94111 • 415-398-0289

□ Mariner, M/System, MiSystem

Classification • multiuser, multitasking component systems with separately available CRT; support maximum of 8 users in a master/slave relationship with central disk storage • based on 8-bit microprocessors • 3 models available, Mariner, floor unit; M/System, rackmounted unit; MiSystem, entry-level desktop unit

Systems Software • all software comes unbundled; CP/M 2.2; M/NET (Rev 1.2 of MP/M operating system adapted for use on Micromation systems); DBOS (CP/M-compatible operating system with embedded DBMS), TurboDOS (CP/M-compatible operating system adapted for use on Micromation systems) • M/SOFT Bisync-3270, M/SOFT Bisync-3780 communications software

Applications Software • word processing, accounting, financial, business management packages available from vendor

Systems Hardware • basic systems include CPU, memory, I/O ports, real-time clock, floppy disk controller; MiSystem also includes disk storage • master and slave CPUs are 4-MHz Zilog Z80A microprocessors • 64K bytes on master processor board plus 64K bytes per user on satellite processor board • S-100 bus with 17 slots on Mariner, M/System, 9 slots on MiSystem; 4 RS-232C ports, 1 parallel port standard; optional boards containing 4 serial ports and 1 parallel port available • optional

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

M/LINK for linking to another Micromation system or IBM host, features communications controller, AT&T 201C modem, IBM 3270 protocol, IBM 3780 protocol; M/NET local area network

Mass Storage ● maximum hard disk storage on Mariner and M/System is 42M bytes using an 8-inch Winchester; 21M-byte Winchester also available; maximum hard disk storage on MiSystem is 10M bytes using a 5.25-inch Winchester ● maximum diskette storage on Mariner and M/System is 4M bytes using 4 8-inch floppy disks; 250K- and 500K-byte floppy disks also available; maximum diskette storage on MiSystem is 256K bytes using a 5.25-inch floppy ● 21M-byte 0.25-inch streaming tape drive available

Printers ● none available from vendor

Display/Keyboard ● none available from vendor

Pricing/Support/Availability ● basic price—Mariner—$4,500 includes CPU, 64K-byte RAM, 1 parallel, 4 serial ports, floppy disk controller; M/System—$3,000 includes same as Mariner except rackmount enclosure; MiSystem—$6,990 includes same as Mariner plus 256K-byte floppy disk drive, 10M-byte hard disk drive ● 90-day warranty ● service available from manufacturer and third-party organization, TRW; service plans available for on-site repair, mail-/carry-in hardware maintenance ● sales through distributors/dealers ● first delivery on M/System 1979, Mariner 1981, MiSystem 1983

■ MICROOFFICE SYSTEMS TECHNOLOGY, INC

35 King's Highway East, Fairfield, CT 06430 ● 203-367-2525

☐ MicroOffice RoadRunner

Classification ● single-user/single-tasking 5-pound portable computer with integral LCD and keyboard; measures 11 inches wide x 3 inches high x 7.8 inches deep; comes with rechargeable batteries ● based on 8-bit processor

Systems Software ● CP/M-compatible proprietary operating system ● Microsoft BASIC available on program cartridge ● DEC VT100 terminal emulator in ROM; ASYCOM asynchronous communications software available

Applications Software ● Personal Scheduler and Name/Address/Phone List reside in ROM; MicroOffice text editor, Supercalc spreadsheet available

Systems Hardware ● basic system includes CPU, memory, liquid crystal display (LCD), keyboard, removable battery pack, A/C adapter/charger, I/O port, clock with wake-up mode, and four data/program cartridge slots; one slot may be used as parallel port ● CPU is 2.5-MHz 8-bit NSC800 microprocessor (Z80 compatible) ● 48K-byte RAM; 36K-byte ROM includes 20K-byte applications software ● one serial RS-232C port, one parallel port optional (using slot on cartridge bus) ● 300-baud modem optional

Mass Storage ● storage on removable 8K-, 16K-, 32K-, 64K-byte RAM data cartridges; up to four cartridges may be plugged in simultaneously and accessed as separate areas

Printers ● 18-cps serial, bidirectional, 10/12/15-pitch, daisywheel printer; 80- to 110-character line ● 4-pound, 11.5-inch wide x 2.25-inch high x 6-inch deep, 30-cps thermal printer with graphics; uses thermal or typewriter paper, A/C power (rechargeable battery pack optional)

Display/Keyboard ● LCD display is built into case and folds over to cover the keyboard; displays 8 lines x 80 characters in upper-/lowercase; full graphics capabilities ● typewriter-style integral keyboard has 73 keys including 8 function keys and 10 other programmable keys; keyboard serves as the bottom half of the computer's case

Pricing/Support/Availability ● base system—$1,775 includes CPU, 48K-byte RAM, 36K-byte ROM, of which 20K bytes are applications software (Personal Scheduler, Name/Address/Phone Directory, and DEC VT100 emulator), RS-232C port, clock, Text Editor, and User Manual ● 90-day warranty ● mail-/carry-in

service available from MicroOffice ● sales through direct sales force and OEMs ● first delivery October 1983; approximately 100 systems delivered

■ MICROSTANDARD TECHNOLOGIES, INC

P.O. Box 319, New Lebanon, OH 45345 ● 513-687-1395/513-854-2381

☐ M3000

Classification ● single-user/single-tasking portable computer with detachable keyboard ● based on 8-bit microprocessor ● 7.25x16.3x14.8 inches; water-resistant, dustproof aluminum carrying case, can be locked

Systems Software ● runs under CP/M-80 2.2, CP/M-86, MS-DOS, UNIX, and CP/M Plus operating systems ● BASIC/Z bundled with computer

Applications Software ● WordStar, SpellStar, MailMerge word processing packages, CalcStar electronic spreadsheet available through MicroStandard Technologies

Systems Hardware ● basic system includes CPU, 64K-byte RAM, 8K-byte ROM, 376K-byte diskette drive, S-100 bus, 1 RS-232C and 1 Centronics I/O port, up to 4 slots ● CPU features Zilog Z80A processor and clock; 8088/68000 optional ● RAM expandable to 512K bytes, ROM expandable to 32K bytes ● up to 4 additional I/O slots optional ● 103/212A modem optional

Mass Storage ● 1 double-sided, dual-density 5.25-inch 376K-byte diskette drive standard, one more optional; optional 10M-byte 5.25-inch Winchester with one 376K-byte diskette drive; diskette unit data transfer rate is 250K bps, 300-millisecond average access time

Printers ● a variety of printers are supported on the M3000

Display/Keyboard ● CRT is integrated in system, 9-inch green phosphor, 25 lines x 80 characters, 200x600 pixels, displays upper- and lowercase alphanumerics ● detachable keyboard with 6-foot cord, 93-key IBM format, 14 programmable function keys, 18-key calculator numeric keypad

Pricing/Support/Availability ● M3000 single-diskette system—$1,645 ● factory service only; 120-day warranty period ● first delivery December 1983

☐ M6000P

Classification ● single-user/single-tasking 35-pound portable computer; 17 inches wide x 20 inches deep x 7 inches high ● based on 8-bit processor ● available in 6 models with varying disk storage capacities

Systems Software ● CP/M 2.2 included with system ● BASIC Z bundled

Applications Software ● WordStar word processing with SpellStar and MailMerge, CalcStar electronic spreadsheet bundled with system ● instructional, entertainment, and filing programs also bundled

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports, real-time clock; battery optional ● CPU features Zilog Z80 processor ● 64K-byte RAM, 2K-byte video RAM; 8K-byte PROM ● 10-slot STD card cage, 6 free slots; 1 RS-232C and 1 parallel port standard ● optional 300-baud acoustic coupler

Mass Storage ● 10M- to 40M-byte integral hard disk storage using Winchester disk drives (replaces 1 of the diskettes in the unit) ● maximum 752K bytes of formatted diskette storage using 2 integral 5.25-inch 376K-byte diskette drives; optional 8-inch diskette drives can be connected to rear of system

Printers ● system can support 1 printer

Display/Keyboard ● 9-inch green phosphor CRT displays 24 lines of 80 characters in upper-/lowercase alphanumerics ●

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detachable typewriter-style keyboard has 8 programmable keys, 19 softkeys and a numeric keypad; keyboard folds over front of unit

Pricing/Support/Availability • base system—M6000P—$2,995 includes CPU, 64K-byte RAM, 2 diskette drives, I/O ports, real-time clock, and software • M6000PH/10—$4,595—base system, but with 10.3M-byte Winchester in place of 1 diskette drive • M6000PH/20—$6,095; M6000PH/30—$8,295; M6000PH/40—$9,195 • M6000P/B—$1,995—unit with no software, drives or, STD bus (except video card) • 120-day warranty • software updates/corrections and mail-/carry-in maintenance available from MicroStandard Technogolies • sales through distributors and a direct sales force • first delivery October 1981

■ MICRO TECHNOLOGY UNLIMITED

2806 Hillsborough Street, P.O. Box 12106, Raleigh, NC 27609 • 919-833-1458

□ MTU-140

Classification • single-user/single-tasking desktop system with detached CRT • based on 8-bit microprocessor

Systems Software • proprietary CODOS disk operating system bundled with computer; CP/M 2.2 and UCSD p-System optional • BASIC (Microsoft with extensions) bundled with system; C, FORTH available • AUTOTERM communications package for hookup with Hayes Smartmodem bundled

Applications Software • WORDPIC word processing package available; graphics, music generation programs offered

Systems Hardware • basic system includes CPU, memory, keyboard, CRT, I/O ports • CPU features 6502 1-MHz microprocessor; 8-MHz MC68000 microprocessor on DATAMOVER board and/or 4-MHz Z80 processor board optionally available; with 68000 and/or Z80A configured in system, 6502 operates as dedicated I/O processor • 80K-byte RAM internally expandable to 1.36M bytes, 57K-byte minimum memory capacity available to user; 250K-byte ROM expandable to 16K bytes • AIM/KIM/SYM proprietary bus with 18-bit addressing; 1 RS-232C asynchronous port standard, 2 parallel ports standard; audio cassette tape read/write port, audio 8-bit D/A converter port for sound generation and fiber optic light-pen connector, all on rear panel; optional Multi-0 board provides 2 synchronous serial ports, 2 parallel ports, 1 IEEE-488 port, real-time clock, 12-bit A/D and D/A converters

Mass Storage • maximum of 2M bytes of diskette storage using 8-inch 1M-byte floppy disks; optional MULTIDISK controller board allows mixing of floppy and hard disks

Printers • NEC 8023, 100-cps; Santec S700, 390-cps, and Brother HRl, 16-cps printers available from vendor; Digipad and plotter optional

Display/Keyboard • 12-inch monochrome CRT displays 80 characters x 25 lines, upper-/lowercase alphanumerics; graphics character set, 480x256 pixels, memory mapped, bit addressable; standard composite video interface available on rear panel • keyboard is detachable; contains 96 keys, numeric pad, 8 programmable function keys, 5-key cursor cross; all keys are programmable

Pricing/Support/Availability • base system price—MTU-140-1D—$3,195 includes CPU, keyboard, 80K-byte RAM, CRT, 1 1M-byte diskette drive, I/O ports, operating system; MTU-140-2D—$3,995 includes same as MTU-140-1D except 2 diskette drives • 6-month warranty on parts; 45-day warranty on CRT, disk drives, printers • service available from manufacturer with service plans available for mail-/carry-in hardware maintenance, limited software updates/corrections • sales through direct mail, sales force, OEMs • first delivery 1983; over 2,000 systems installed (includes MTU-130, no longer marketed, first delivered 1978)

■ MODULAR MICROS, INC/Division of Modular Computer Systems (MODCOMP), Inc

1650 West McNab Road, P.O. Box 6099, Ft. Lauderdale, FL 33310 • 305-974-1380

□ Zorba Personal Computers

Classification • 22-pound to 25-pound transportable single-user/single-tasking systems with integral CRT and keyboard • based on 8-bit processor; 16-bit processor board optional • 4 models available; differences in disk storage capacity and screen size

Systems Software • CP/M 2.2 operating system bundled; CP/M-86 and MS-DOS optional • Microsoft C-Basic and Macro-80 Assembler bundled • InfoStar bundled • terminal mode built-in

Applications Software • WordStar, MailMerge, SpellStar, and CalcStar bundled

Systems Hardware • 4 basic models all include CPU, fold-up keyboard, disk storage, memory, CRT, I/O ports • CPU is 4-MHz 8-bit Zilog Z80A processor; 16-bit Intel 8088 board optional • 64K-byte RAM; 16K-byte ROM in GC-200, 8K bytes in 2000 models • one RS-232C modem port, one printer port programmable for either parallel or serial interface, one IEEE port, and composite video connector for external CRT • 110/300/1200-baud internal modem optional

Mass Storage • maximum hard disk storage is 10M bytes, available in the 2000HD; 5M-bps transfer rate, 65-millisecond access time • maximum diskette storage on 2-drive GC-200 is 800K bytes; 800K bytes on 2-drive 2000/4, 1.6M bytes on 2-drive 2000/8; single 800K-byte diskette drive on 2000HD

Printers • supports serial and parallel printers; none supplied by vendor

Display/Keyboard • GC-200 has 7-inch, green CRT; the 2000/4, 2000/8, and 2000HD have 9-inch, green or amber CRTs; all models have 80-character x 24-line display; 25th status line • detachable keyboard has 95 keys including a numeric keypad and 19 function keys

Pricing/Support/Availability • CPU, 64K-byte RAM, CRT, keyboard, disk storage, RS-232C port, printer port either parallel or serial, IEEE port, bundled software • GC-200—$1,595 includes 7-inch CRT, dual 400K-byte diskette drives; 2000/4—$1,995 includes 9-inch CRT, dual 400K-byte diskette drives; 2000/8—$2,295 includes 9-inch CRT, dual 800K-byte diskette drives; 2000HD—$2,995 includes 9-inch CRT, one 800K-byte diskette drive, and one 10M-byte hard disk drive • mail-/carry-in service available • sales through computer stores, direct sales force, and OEMs • first delivery October 1982

■ MONROE SYSTEMS FOR BUSINESS

The American Road, Morris Plains, NJ 07950 • 201-993-2000

□ System 2000

Classification • single-user/single-tasking system • based on 16-bit processor; 8-bit coprocessor option allows user to run 8-bit programs

Systems Software • MS-DOS 2.0, CP/M-86 DPX bundled; MP/M-86 available • Microsoft GWBASIC bundled • Condor II database available

Applications Software • WordStar word processor, SpellStar, MailMerge, and SuperCalc II spreadsheet available; MBSI Accounting, medical, dental, pharmacy, and financial packages available

Systems Hardware • basic model includes CPU, keyboard, CRT, memory, mass storage, clock, and I/O ports • CPU is 8-MHz Intel

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

80186; 4-MHz Z80A coprocessor optional ● memory ranges from 128K bytes to 896K bytes ● 2 RS-232C ports, 1 parallel port standard; up to 3 RS-232C interface boards optional ● 5 expansion slots available to user ● 300-/1200-baud modem available

Mass Storage ● maximum of 20M bytes of hard disk storage using 1 internal 10M-byte drive and 1 external 10M-byte drive ● maximum diskette drive storage is 1.28M bytes on dual drives under CP/M-86 and 1.44M bytes under MS-DOS 2.0

Printers ● 200-cps, 80-/132-column dot-matrix printer has 15-inch carriage and graphics capability; 33-cps letter-quality printer with 15-inch carriage and bidirectional print mechanism

Display/Keyboard ● 12-inch amber CRT; 80 characters x 24 lines; 25th line for status and messages; 128K-byte RAM used for memory-mapped graphics (192K-byte option for RGB color graphics output); 640x400 pixels ● detachable, typewriter-style keyboard has 92 keys including 10 function keys, numeric pad, and 4 programmable keys

Pricing/Support/Availability ● base system—$3,695 includes CPU, RAM, CRT, keyboard, 1 diskette drive, I/O ports, and bundled software ● 90-day warranty ● carry-in and on-site service provided by vendor ● sales through direct sales force ● first delivery January 1984

☐ OC 8820 & OC 8828

Classification ● single-user/single-tasking and single-user/multitasking (12 tasks) desktop computers with integrated CRT displays ● based on 8-bit processor

Systems Software ● proprietary MS-8 and MS-9 operating systems included with OC 8820 and OC 8828, respectively; CP/M 2.2 optional ● optional BASIC, Pascal, and assembler languages available from vendor ● Superbase and CONDOR database management facilities available ● 3270 SNA/SDLC, TTY, and ASCOM (Asynchronous Terminal Emulator), 2780/3780 bisync, 3270 bisync, HASP bisync terminal emulators available

Applications Software ● word processing, spreadsheet analysis, general accounting and medical practice packages available from vendor

Systems Hardware ● base system includes CPU, memory, diskette storage, CRT ● CPU features 8-bit Zilog Z80A processor ● 128K-byte main memory on OC 8820, 256K bytes on OC 8828 (Monroe operating systems use 40K; BASIC 32K) ● both systems employ proprietary Z80 bus structure, 3 RS-232C ports (1 DTE port for communications, and 2 DCE ports for optional peripherals)

Mass Storage ● maximum of 20M bytes of hard disk storage on 2 5.25-inch 10M-byte Winchester drives; 5M-byte Winchester drives also available ● maximum of 640K bytes of diskette storage on 2 320K 5.25-inch diskette drives

Printers ● 120 cps, 80 columns; 120-cps, 136-column dot-matrix and 35-cps, 136-column letter-quality printer available from vendor

Display/Keyboard ● CRT built-in to system unit; 9-inch amber screen displays 80 characters x 24 lines, low-resolution 160x72 pixels, upper-/lowercase alphanumerics ● selectric-type keyboard employs Hall effect technology; 93 keys, 15-key numeric pad with 4 basic math functions, 8 user-/program-definable keys providing 32 additional keyboard functions

Pricing/Support/Availability ● base system price OC 8820—$3,835 includes CPU, 128K-byte RAM, 320K-byte diskette drive, CRT with integral keyboard, and operating system; OC 8828—$4,625 includes same as 8820 except 256K-byte RAM ● 90-day warranty ● maintenance provided at vendor service centers; on-site repair service contracts available; software updates/corrections available ● sales through direct sales force ● first delivered December 1981

■ MOLECULAR COMPUTER

251 River Oaks Parkway, San Jose, CA 95134 ● 408-262-2122

☐ Supermicro 8, 32X Microcomputers

Classification ● multiuser/multitasking component systems for up to 32 users, depending on the model; each user's applications CPU/workstation unit is interconnected to a universal file-sharing unit by means of a proprietary Ethernet-type bus ● both the file-sharing unit and the applications workstations are based on 8-bit CPUs; optional 16-bit processor

Systems Software ● n/STAR multiuser operating system compatible with CP/M 2.2; also compatible with CP/M-86 if performance accelerator processor is added ● languages and other system software not available directly from Molecular Computer

Applications Software ● n/WORD word processing and n/CALC electronic spreadsheet applications software available through Molecular

Systems Hardware ● 4 models are all defined by the central file processor, which controls a local network of 8, 32, or 64 intelligent applications processors/workstations ● the applications processor CPUs for each individual workstation are on boards physically located within the file processor rather than within the CRT unit ● all basic file processors include CPU, memory, disk storage, I/O ports, and an Ethernet-type "CSMA/CD" proprietary bus (M/Bus) for attaching intelligent applications processor boards for the workstations; all intelligent applications workstations include CPU, memory, and I/O ports ● Supermicro 8 file processor model is based on Zilog Z80A 8-bit microprocessors; Supermicro 32X and 64X file processor models are based on Zilog Z80B 8-bit microprocessors; applications processors are all based on Zilog Z80A CPUs, but the AP/80 series supports a lower memory capacity than the AP/80X series; special-purpose, high-performance mathematics and floating-point AP 8600 series applications processors are based on Intel 8086 CPU cards ● memory capacity for the Supermicro 8 is 64K-byte RAM and 2K-byte EPROM, for the Supermicro 32X and 64X it is 256K-byte RAM and 4K-byte EPROM; memory capacity of the AP/80 applications processors is 64K-byte RAM and 2K-byte EPROM, for the AP/80X it is 256K-byte RAM and 4K-byte PROM, for the AP 86 it is 256K bytes expandable to 1M bytes (with parity checking) ● Supermicro 8 and 32X file processors attach 8 and 32X AP 80 or AP 80X applications processors, respectively; the AP 86 math processor takes up 2 to 5 slots depending on its own memory capacity, however, 50 slots available for AP 80 or AP 80X applications processors are reduced according to the number of AP 86 processors; each AP 80 processor has 2 ports for asynchronous or synchronous I/O devices

Mass Storage ● maximum Winchester disk storage is 10M to 30M bytes on Supermicro 8 file processor, 60M to 180M bytes on Supermicro 32X file processor; these capacities represent 1 to 4 10M/30M/60M drives on Supermicro 8 or 32X ● maximum diskette storage is 512K bytes on single standard 8-inch drive in the file processor ● optional streamer tape drive available

Printers ● none available from Molecular Computer

Display/Keyboard ● green phosphor, 80-column display, vertical/horizontal split-screen modes, graphics capabilities ● 105-key detached keyboard with 14-key numeric pad, 8-key cursor control pad, and programmable function keys

Pricing/Support/Availability ● basic prices Supermicro 8—$5,995 includes file processor with Z80A CPU, 64K-byte RAM, 2K-byte EPROM, 10M-byte Winchester disk, 512K-byte diskette, M/Bus interprocessor link, n/STAR network operating system, and supporting hardware for attachment of up to 8 application processors and their workstations, plus other I/O devices; Supermicro 32X—$14,995 includes more processor power and larger memory for the same price as the older Supermicro 32, i.e., a file processor with a Z80B CPU and

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256K-byte RAM; its applications processors must be of the Zilog Z80B or Intel 8086-based "X" types ● Supermicro 8 applications processor base price—$665 includes Z80A CPU, 64K-byte RAM, 2K-byte EPROM, 2 ports; cannot be attached to "X" systems; Supermicro "X" applications processor—$995 includes Z80A CPU, 256K-byte RAM, 4K-byte EPROM, 2 ports; versions available for all models; AP186 series applications processors—$2,795 includes Intel 8086 CPU, 256K-byte RAM expandable to 1M bytes, 2 ports ● on-site hardware maintenance, software updates/corrections available from Molecular Computer, Bunker Ramo, and distributors, depending on the location ● sold by Molecular Computers, 10 U.S. distributors, and a number of international distributors who target OEMs, sophisticated end users (particularly multiunit end users); systems houses industrial applications and specialty applications ● first delivery April 1981; more than 2,000 systems delivered as of December 1983

■ MORROW DESIGNS

600 McCormick Street, San Leandro, CA 94577 ● 415-430-1970

□ MD2, MD3, MD3P & MD11

Classification ● single-user/single-tasking desktop component systems with a separately available CRT; MD3P is a portable system with integral CRT and detached keyboard ● based on 8-bit microprocessor; 16-bit processor optional ● 4 models available; they differ in disk storage capacity and bundled software

Systems Software ● all software bundled with system ● CP/M 2.2; CP/M-86, MS-DOS bundled with 16-bit option ● supports Microsoft BASIC 80 Interpreter, MicroMike's BaZic (compatible with NorthStar BASIC), Morrow Designs' Pilot ● Personal Pearl Data Base Manager

Applications Software ● LogiCalc electronic spreadsheet; WordStar word processing system; Correct-It spelling checker packaged with system; Quest Inc Quest Bookkeeper spreadsheet bundled with MD11; SuperCalc 2 bundled with 16-bit option

Systems Hardware ● basic system includes desktop cabinet, CPU, memory, mass storage ports, diskette drive controller for 4 drives ● single-board processor built around 4-MHz, 8-bit Zilog Z80A; 16-bit Intel 8088 optional ● all models except MD11 have 64K-byte RAM and 2K-byte ROM standard; MD11 has 128K-byte RAM and 8K-byte ROM; additional 128K or 256K RAM included with 16-bit option ● EPROM provided for all diagnostics and part of I/O routines; 2 RS-232C serial ports standard on MD2 and MD3/MD3P; third RS-232C or RS-422 connector on MD11; ports provide asynchronous transmission in half- or full-duplex mode at speeds from 75 to 19.2K baud; ports provide configurability for terminal, and printer or modem

Mass Storage ● maximum diskette storage capacity of 768K bytes; MD11 also contains one 11M-byte 5.25-inch hard disk

Printers ● Morrow offers 3 letter-quality daisywheel printers, differing in print speeds and column widths

Display/Keyboard ● optional 12-inch monochrome screen, 80 characters x 24 lines, upper-/lowercase alphanumerics; 9-inch standard on MD3P ● detachable keyboard; 92 keys including 14-key numeric pad and 7 user-programmable function keys; uses RS-232C interface

Pricing/Support/Availability ● MD2—$1,054; MD3—$1,354; MD3P—$1,895; MD11—$2,200 ● Quest Bookkeeper requires $37.50 registration fee ● service available from dealer and vendor ● 90-day warranty on parts and labor ● marketed through distributor/dealers and OEMs ● first delivery 1982

□ Decision 1

Classification ● single-user/single-tasking or multiuser/multitasking desktop component systems with separate CRT(s) ● up to 16 tasks per user without swapping and up to 15 users under Micronix ● based on 8-bit microprocessor

Systems Software ● software partially bundled depending on configuration ● CP/M 2.2 for single-user system and Micronix for multiuser system softloaded from diskette; Micronix is based on UNIX and is compatible with it; CP/M compatibility is provided by built-in emulator ● supports Microsoft BASIC 80 Interpreter, MicroMike's BaZic, Whitesmith's C Compiler, and Whitesmith Pascal ● Personal Pearl Data Base Manager

Applications Software ● LogicCalc electronic spreadsheet, WordStar word processing system; Correct-It spelling checker

Systems Hardware ● basic system includes desktop cabinet, CPU, memory, 14-slot chassis, real-time clock/calendar, programmable interrupt controller, and ports ● single-board S-100 bus processor built around 4-MHz 8-bit Zilog Z80A ● all models have 64K-byte static RAM and 2K-byte ROM standard; RAM is expandable to 1M bytes in 64K-byte increments ● 3 RS-232C serial ports and 1 parallel printer port are standard on all models; serial ports provide asynchronous transmission in half- or full-duplex mode at speeds from 75 to 19.2K baud ● options include DMA or memory-mapped double-density diskette drive controllers; DMA hard disk controller; I/O mapped controller for SA4008 interface; switchboard I/O controller to provide 2 serial and 4 parallel ports; multi-I/O controller to provide 3 serial and 1 parallel ports, real-time clock, programmable interrupt controller

Mass Storage ● maximum of 64M bytes per controller for hard disk; 5.25-inch 5M-byte or 16M-byte fixed Winchester disk drive available ● maximum of 4M bytes of diskette storage per controller; 5.25-inch 400K-byte, 8-inch 500K-byte, 8-inch 1M-byte disk drives available

Printers ● none offered by vendor

Display/Keyboard ● 12-inch monochrome screen, 80 characters x 25 lines, upper-/lowercase alphanumerics ● detachable keyboard; 92 keys including 14-key numeric pad and 7-user programmable function keys; RS-232C interface

Pricing/Support/Availability ● D1—$2,395; D2—$3,495; D2A—$3,995; D3A—$4,400; D3C—$5,400; for any model with CRT, add $595; all models include cabinet, 14-slot chassis, CPU, 64K-byte RAM, ports, clock/calendar, interrupt controller, CP/M 2.2, Microsoft BASIC; D1 includes aforementioned standard but no disk; D2 includes standard configuration plus 2 400K-byte diskette drives and controller; D2A includes standard configuration plus 1 200K-byte diskette drive and controller, 5M-byte Winchester and controller; D3A includes standard configuration plus 1 400K-byte diskette drive and controller, 1 5M-byte Winchester drive and controller, and WordStar, LogiCalc, Correct-It, BaZic, and Personal Pearl software packages; D3C includes same as D3A except Winchester is 16M bytes ● service available from dealer and vendor ● 90-day warranty on parts and labor ● marketed through distributor/dealers and OEMs ● first delivery 1981; over 1,000 installed (all models)

■ MULTI-TECH SYSTEMS, INC

82 Second Avenue SE, New Brighton, MN 55112 ● 612-631-3550

□ MT500

Classification ● single-user/single-tasking desktop computer with integrated CRT ● based on 8-bit processor ● 5 models available with differing disk storage capacities

Systems Software ● CP/M 2.2 bundled with system ● BASIC-80 interpreter, FORTRAN-80, COBOL-80, Microsoft macro assembler, and Digital Research macro assembler available from vendor ● InfoStar DBMS and SOFTCOM communications program offered by Multi-Tech

Applications Software ● WordStar plus MailMerge and SpellStar, CalcStar electronic spreadsheet, and accounting packages optionally provided by Multi-Tech

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports ● CPU features Zilog Z80A

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processor ● 64K-byte RAM (8K for CP/M 2.2) expandable to 256K bytes; 2K-byte ROM ● single board with 5 S-100 expansion slots; 2 RS-232C ports (1 standard), 1 parallel port optional ● 300-, 1200-, and 2400-bps modems available from vendor

Mass Storage ● maximum of 5M bytes of Winchester hard disk storage on MT 500-V and 10M bytes on MT 500-X; data transfer rate of 5M bytes per second ● maximum of 450K bytes of diskette storage on MT 500-I using 1 5.25-inch drive, 900K bytes on MT 500-III using 2 450K-byte diskette drives, 1.8M bytes on MT 500-IV using 2 900K-byte diskette drives; 900K-byte drive backup on MT 500-V, -X

Printers ● system can support 2 printers; Diablo 45-cps daisywheel and Data South 80-/180-cps dot-matrix printers available from Multi-Tech

Display/Keyboard ● 12-inch amber CRT is integral to system unit and displays 24 lines of 80 characters in upper-/lowercase alphanumerics; memory-mapped graphics—640x192 pixels ● detached, selectric-style keyboard has 31 programmable keys and a numeric keypad

Pricing/Support/Availability ● prices range from $4,295 to $8,995, depending on storage options ● mail-/carry-in hardware maintenance and software updates/corrections available from Multi-Tech ● sales through OEMs and direct mail ● MT 500-A, -I, -III, -IV first delivered fall 1980; MT 500-V and -X first delivered fall 1981; 350 systems installed in U.S as of January 1983

■ NABU MANUFACTURING CORPORATION

1051 Baxter Road, Ottawa, ONT K2C 3P2 Canada ● 613-596-6700

□ NABU 1600

Classification ● multiuser, multitasking component system for up to 3 users; CRT separately available ● CPU/controller based on 16-bit microprocessor; workstations based on 8-bit microprocessor

Systems Software ● XENIX operating system bundled with system ● C language bundled with XENIX; optional COBOL, BASIC, Pascal ● file management, editor, screen management software, database management system ● 2780/3780, 3270 support available

Applications Software ● word processing, spreadsheet analysis, data entry, accounting

Systems Hardware ● basic system includes CPU, memory, I/O ports, disk storage, memory management unit ● CPU is based on 4.9-MHz, 16-bit Intel 8086 microprocessor; optional Intel 8087 coprocessor for high-speed floating-point calculations ● 256K- or 512K-byte on-board RAM, 64K-bit chips, 150-nanosecond access; 8K-byte ROM, 32K-bit chips, 290-nanosecond access; Memory Management Unit handles 4K-byte paging ● 4 asynchronous RS-232C ports, to 19,200 bps for communications or peripheral attachment; 2 ports configurable to synchronous operation

Mass Storage ● maximum of 40M bytes of formatted hard disk capacity on up to 4 Winchester disks; 1 10M-byte disk is standard ● maximum of 1.6M bytes of formatted diskette storage on 2 5.25-inch drives; 800K-byte formatted data per drive

Printers ● none available from NABU

Display/Keyboard ● Model 3116 Workstation contains its own Z80A microprocessor; 12-inch green phosphor screen displays 24 lines x 80 characters plus 25th line for status information, upper-/lowercase; bidirectional scrolling, split-screen with user- or host-defined scrolling region; TTY-compatible transmission up to 9600 bps ● detached 96-key typewriter-style keyboard has its own microprocessor; provides 14-key numeric pad, 16 programmable string keys allowing 256K-character total for all keys, 31 line graphics characters

Pricing/Support/Availability ● base price—U.S. $8,995

includes CPU, 256K-byte RAM, 10M-byte formatted Winchester 800K-byte diskette drive, 4 serial ports, XENIX Operating System, and C Language ● sold by NABU through direct international sales force to end users or OEMs ● service available from 39 centers in North America or from company sales offices; service plans include on-site repair, carry-in hardware maintenance; software updates/corrections available ● first delivery March 1983 in Canada; June 1983 in U.S.

■ NCR CORPORATION

1700 South Patterson Boulevard, Dayton, OH 65479 ● 513-445-5000

□ Personal Computer

Classification ● single-user/single-tasking desktop system with an integrated CRT display ● 2 models available: 1 based on a single 8-bit processor, the other on dual 8-/16-bit processors ● system can interface to NCR's Decision Net which consists of NCR's Omninet local area network and NCR's Modus File Sharer ● disk and data compatible with IBM PC

Systems Software ● CP/M-80 available for 8-bit processor; MS-DOS, CP/M-86 available for 16-bit processor ● MBASIC, GWBASIC, UCSD Pascal, R/M COBOL programming languages ● InfoStar database management system ● communications software

Applications Software ● WordStar word processing plus SpellStar and MailMerge; SuperCalc II and CalcStar electronic spreadsheets; GSS Graph business graphics and other software available from NCR

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, disk storage, graphics subsystem ● CPU features Intel 8088 16-bit microprocessor and 4-MHz Zilog Z80A 8-bit microprocessor ● 64K-byte to 512K-byte main memory expandable in increments of 64K, 192K, and 448K; 32K-byte monochrome video RAM, 96K-byte color video RAM; 4K-byte ROM ● proprietary bus with 7 I/O slots; 5 available for optional serial and parallel interfaces, 1 slot for optional diagnostic module ● NCR Omninet local area network optional

Mass Storage ● maximum hard disk storage is 10M bytes internal or 30M bytes external formatted using 5.25-inch Winchesters ● maximum floppy disk storage is 640K bytes formatted using 2 integral 5.25-inch diskette drives ● NCR MODUS File Sharer provides on-board memory and controlware, 5.25-inch diskette, 10- to 96M-byte hard disk; streaming tape drive is an optional feature for MODUS

Printers ● NCR offers 120-cps dot-matrix printer; needs parallel printer interface; 33-cps daisywheel printer uses RS-232C serial interface

Display/Keyboard ● integral 12-inch green phosphor screen CRT (color and tilt options) displays 84 characters x 24 lines, upper-/lowercase; graphics subsystem provides NEC 7220 graphics chip plus 32K-byte RAM (monochrome) or 96K bytes (color), 640x400 pixels, bit-mapped ● detached, low-profile keyboard; typewriter-style layout, numeric pad, 20 programmable function keys

Pricing/Support/Availability ● base price—8-bit system—$2,800 includes CPU, 64K-byte RAM, monochrome CRT, keyboard, dual diskette drives, graphics subsystem, CP/M 2.2; 8-/16-bit system—$3,140 includes same as 8-bit system except dual CPUs ● 90-day warranty, parts and labor ● maintenance through NCR field engineering and dealers ● sales through NCR plus independent computer dealers ● 8-bit systems shipped February 1983; 8-/16-bit systems shipped May 1983

■ NEC HOME ELECTRONICS

1401 Estes Avenue, Elk Grove Village, IL 60007 ● 312-228-5900

□ PC-6000

Classification ● single-user/single-tasking desktop system with

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integrated keyboard, separately available monitor; based on 8-bit microprocessor

Systems Software • system monitor is in ROM • Microsoft BASIC incorporated in ROM

Applications Software • Electric Pencil available from NEC

Systems Hardware • basic system includes CPU, memory, keyboard, I/O ports • CPU features NEC uPD, 4-MHz Z80A-compatible microprocessor, 16K-byte to 32K-byte RAM • proprietary bus, optional RS-232C port, 1 parallel port standard

Mass Storage • maximum diskette storage is 150K bytes (formatted) using 1 5.25-inch floppy disk on PC-6000

Printers • PC-6021 thermal or PC-8023 printers offered by NEC; PC-6051 touch panel digitizer, thermal 4-pen plotter also available

Display/Keyboard • systems use separately available CRT with 12-inch screen in monochrome or color, 32 characters x 16 lines, upper-/lowercase alphanumerics, graphics character set typewriter-style keyboard is integrated into system unit; 82 keys total, numeric pad, control keys, function keys

Pricing/Support/Availability • base price—$349.95 includes CPU, 16K-byte RAM, I/O ports, keyboard • 90-day warranty • service available from manufacturer with service plans for mail-/carry-in hardware maintenance • sales through computer stores • first delivered March 1983

☐ PC-8000

Classification • single-user/single-tasking desktop system with integrated keyboard; monitor optional • based on single 8-bit microprocessor

Systems Software • NBASIC-DOS operating system is bundled, CP/M 2.2 is optionally available • Microsoft BASIC bundled • dBASE II database management available • TERM II

Applications Software • SELECT, WordStar word processing systems, accounting, business turnkey packages available for PC-8000

Systems Hardware • basic system includes CPU, memory, keyboard, I/O ports, monochrome and color CRT interfaces, tape cassette interface • CPU features NEC uPD, 4-MHz Z80A-compatible microprocessor • 32K- to 64K-byte RAM, 24K-to 40K-byte ROM • proprietary bus; 1 RS-232C interface standard, 2 optional; 1 parallel port standard, expansion bus port; 2 expansion units available which include I/O bus extensions, diskette adapter, 32K-byte RAM, real-time clock, either 8 or 16 priority interrupt levels, 1 unit contains 2 RS-232C interfaces, IEEE-488 interface, parallel interface, the other unit provides 6 function slots

Mass Storage • maximum diskette storage is 300K bytes formatted using 5.25-inch 150K-byte floppy disk drives

Printers • PC-8023A 100-cps dot-matrix printer available for PC-8000

Display/Keyboard • systems use separately available CRT with 12-inch screen in monochrome or color (8 colors) 80 characters x 24 lines, upper-/lowercase alphanumerics, graphics character set • typewriter-style keyboard is integral to system unit; 82 keys total, numeric pad, control keys, 5 function keys

Pricing/Support/Availability • basic system price—$995 includes CPU, 32K-byte RAM, keyboard, I/O ports, cassette interface, CRT interface • 90-day warranty • service available from manufacturer with service plans for mail-/carry-in hardware maintenance • sales through computer stores • first delivered 1981 in U.S.

☐ PC-8800

Classification • single-user/single-tasking desktop system with

separately available black/white or color CRT • based on 8-bit or optional 16-bit processor

Systems Software • system monitor and N-BASIC and N-88 BASIC reside in ROM and are bundled with the computer; CP/M 2.2 optional • dBASE II DBMS and DataStar data management separately available

Applications Software • WordStar word processing and MailMerge bundled • Multiplan electronic spreadsheet bundled; Calcstar, SuperCalc optionally available along with accounting, general ledger, inventory control, payroll, investment, mail, spelling, and entertainment packages

Systems Hardware • basic system includes CPU, memory, keyboard, I/O ports, and calendar clock • CPU features 8-bit Z80A-compatible uPD780C-1 processor or optional 16-bit 8086 processor • 64K-byte RAM expandable to 192K bytes with 3 bank-selected 128K-byte cards; 72K-byte ROM • standard 600-/1200-baud audio cassette interface, parallel and synchronous/asynchronous RS-232C ports; DMA interface card included with drive units, light pen optional

Mass Storage • maximum of 1.2M bytes of formatted diskette storage using 2 8-inch drives; 5.25-inch, 320K-byte drives also available

Printers • NEC offers 100- or 120-cps dot-matrix printers in the 80- and 132-column format and a 14-cps letter-quality printer

Display/Keyboard • separately available black/white or color CRT displays 25 or 20 lines of 40 or 80 characters in upper-/lowercase alphanumerics; 640x400 pixels; detached typewriter-style keyboard has 10 programmable keys

Pricing/Support/Availability • base system—$1,199 includes CPU, 64K-byte RAM, 72K-byte ROM, keyboard, I/O ports, calendar clock, and software • 90-day warranty • software updates/corrections and hardware carry-in maintenance available from NEC service centers and distributors • sales through dealers/distributors • first delivery date May 1983

☐ NEC PC-8200

Classification • single-user/single-tasking 3.8-pound notebook-size portable computer with built-in LCD • based on 80C85 8-bit processor

Systems Software • system monitor resides in ROM and is bundled with the computer • Microsoft BASIC bundled • standard Telecom telecommunications package accesses online database or information services

Applications Software • text-editing program bundled with system

Systems Hardware • basic system includes CPU, memory, LCD, keyboard, I/O ports, battery, and time/date clock • CPU features 80C85 microprocessor • 16K-byte CMOS RAM expandable to 96K bytes with RAM disk cartridge; 32K-byte ROM expandable to 64K bytes • 1 RS-232C port and 1 parallel printer port standard along with cassette tape and bar code interfaces

Mass Storage • diskette drives under development, plug-in cartridges available

Printers • NEC offers 100-cps dot-matrix printers in the 80- and 132-column format and a 14-cps letter-quality printer

Display/Keyboard • integral LCD displays 8 lines of 40 characters in upper-/lowercase alphanumerics • Selectric-style keyboard has 10 programmable function keys

Pricing/Support/Availability • $799 includes CPU, 16K-byte CMOS RAM, 32K-byte ROM, LCD, keyboard, I/O ports, battery, time/date clock, and software • 90-day warranty • software updates/corrections and hardware carry-in maintenance available from NEC service centers and distributors • sales through dealer/distributor network • first delivery September 1983

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

■ NEC INFORMATION SYSTEMS, INC

1414 Massachusetts Avenue, Boxborough, MA 01719 ● 617-264-8000

□ APC—Advanced Personal Computer

Classification ● single-user/single-tasking and single-user/multitasking desktop computer with integrated CRT ● based on 16-bit microprocessor ● word processing hardware/software configurations available

Systems Software ● all software is unbundled; CP/M-86, Concurrent CP/M-86, MS-DOS 2.0, UCSD-p System available ● dBASE II database management system ● asynchronous terminal emulation; 3270, 3780 BSC; Tektronix 4010 emulation; modem package available

Applications Software ● BENCHMARK word processing, MicroPlan spreadsheet, Context MBA, business planning, mail manager, accounting, graphics packages offered by NEC

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, disk storage, I/O facilities, audio, clock/calendar with battery backup ● CPU features NEC uPD 8086 microprocessor with Direct Memory Access (DMA) controller; optional APC 2-MHz Arithmetic Processing Unit (APU) ● 128K-byte RAM expandable to 640K bytes, 8K-byte ROM, 4K-byte CMOS RAM ● proprietary bus; 1 RS-232C port standard, up to 3 optional; 1 Centronics parallel port standard

Mass Storage ● maximum fixed hard disk storage is 20M bytes using 2 10M-byte Winchester optional add-ons ● maximum diskette storage is 2M bytes using 2 integral 1M-byte 8-inch floppy disk drives

Printers ● printers offered by NEC include APC-H16 dot-matrix, 100 cps, 80 columns and Spinwriter letter-quality, 35 cps, 55 cps, 132 columns

Display/Keyboard ● CRT is integrally packaged into system unit; 12-inch diagonal screen, monochrome or color (8 colors), 80 characters x 24 lines, upper-/lowercase alphanumerics; graphics character set, 640x475 pixels, bit-addressable ● detached keyboard, 86 keys with 22 dual-mode programmable function keys, 10-key numeric pad, cursor control keys

Pricing/Support/Availability ● base system price—APC-HO1—$2,748 includes CPU, monochrome, CRT, keyboard, 128K-byte RAM, 1M-byte diskette drive, I/O ports, 4K-byte CMOS RAM, clock-calendar ● 90-day warranty ● service available from retailer/dealer and Sorbus; service plans available for mail-/carry-in hardware maintenance, on-site repair; software updates/corrections available with registration updates at handling cost, corrections at no charge ● sales through computer stores, office equipment dealers, direct sales force, OEMs ● first delivery July 1982, APC-HO2 (monochrome); November 1982 for APC-HO3 (color)

■ NELMA DATA CORPORATION

5170A Timberlea Boulevard, Mississauga, ONT, Canada L4W 2S5 ● 416-624-0334

□ NDC Persona

Classification ● single-user/single-tasking component system with separate CRT display ● based on 8-bit processor ● compatible with DEC VT180 disk format

Systems Software ● all come bundled with the system ● CP/M-80 operating system softloaded from diskette ● Microsoft BASIC ● Modem 7 communications software and DEC VT52 screen emulation ● communications software bundled with system

Applications Software ● WordStar word processing and CalcStar spreadsheet included with system; general accounting software also available

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, diskette storage, CRT and keyboard, I/O ports ● CPU features 8-bit Zilog Z80A microprocessor ● 64K-byte RAM expandable to 128K; 4K bytes reserved for operating system ● STD bus structure; 1 RS-232C and 1 Centronics parallel port standard

Mass Storage ● optional 10M-byte hard disk storage available ● maximum diskette storage is 360K bytes on 2 180K-byte 5.25-inch diskette drives

Printers ● none available from vendor

Display/Keyboard ● CRT contains 12-inch monochrome screen, provides 80 characters x 24 lines, upper-/lowercase alphanumerics ● detached keyboard includes 10-key numeric pad, 7 function keys, and 4 cursor movement keys

Pricing/Support/Availability ● base price—$2,195 includes CPU, 64K-byte RAM, 2 diskette drives, CRT, keyboard, RS-232C and Centronics parallel ports, all software except general accounting application software ● 90-day warranty ● maintenance service available from retailers/dealers; mail-/carry-in hardware maintenance ● sales through Computerland stores, and OEMs ● first delivered April 1983

■ NORTHERN TELECOM/Data Terminals Division

9705 Data Park, P.O. Box 1222, Minneapolis, MN 55440 ● 612-932-8000

□ Models 503, 565 & 585 Desktop Information Systems

Classification ● single-user/multitasking desktop system and multiuser/multitasking systems with detached CRTs ● all based on 8-bit microprocessor with 16-bit I/O data paths ● 3 models differ in number of users (1 on 503, up to 4 on 565, up to 16 on 585) and storage capacity

Systems Software ● CP/M 2.2 or proprietary OMNITASK operating systems; OMNITASK handles 16 to 32 concurrent tasks depending on job size; CP/M 3.0 available on 503 ● ACOBOL/3 with debugger, TAL2000 proprietary source data entry language ● NT Network control software with auto-answer; NT ITS (Interactive TTY Simulator); emulation of IBM 2770/2780/3780 RJE BSC, IBM 3271/3277 interactive BSC, IBM 3274 SDLC, IBM 360/20 RJE; Burroughs TC3000, sync; CDC UT200 sync

Applications Software ● proprietary OMNIWORD word processing package, OMNIMAIL electronic mail package available

Systems Hardware ● basic systems include CPU, memory, CRT, keyboard, mass storage, I/O ports, (I/O ports on 565 and 585 can be multiplexed for multiple workstations, universal adapter card for workstation attachment) ● CPU in all cases is 8-bit Intel 8085; modified for 16-bit I/O data paths on multiuser systems ● 256K-byte memory standard ● 2 RS-232C printer ports and 2 communications ports (1 standard) for async and bisync transmissions and/or multiplexed workstations on 565 and 585 models ● 4 modems available

Mass Storage ● maximum hard disk is the standard 22M-byte Winchester disk drive on 565 and 585 ● maximum of 3.2M bytes of diskette storage on the 503, consisting of 2 standard and 2 optional double-sided, double-density diskettes, 800K bytes per drive ● 15M-byte cartridge tape included with 565 and 585

Printers ● 2 printers can operate concurrently on 503; selected from 180-cps, 132-column dot-matrix printer; 120-cps 80-/132-column desktop dot-matrix printer; or 40-cps letter-quality daisywheel printer available from Northern Telecom ● 300-lpm band printer available on 503/565/585, 600-/1000-lpm band printers on 565/585 only; 565/585 allow multiple concurrent printers

Display/Keyboard ● 15-inch B&W CRT, displays 24 lines x 80 columns, 25th status line, upper-/lowercase alphanumerics ● detached 78-key typewriter-style keyboard with 10-key numeric pad, programmable keys; word processing keys optional on 503, standard on 565 and 585

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Pricing/Support/Availability ● basic systems—503—$5,250 includes CPU, 256K-byte RAM, CRT, word processing, keyboard, 3 RS-232C ports, 2 diskette drives ● 565—$14,950 includes CPU/control unit capable of supporting 1 to 4 workstations; CPU/control unit includes CPU, 256K-byte memory, universal adapter card for workstation attachment, 22M-byte Winchester disk, 15M-byte cartridge tape drive; workstations include CRT, and word processing keyboard ● basic 585 system—$19,950 includes CPU/control unit and single workstation as in 565 model, but the CPU/control unit is capable of handling 1 to 16 workstations ● manufacturer provides on-site service contracts ● sold through Northern Telecom direct sales force ● first delivery Fall 1981

■ NORTH STAR COMPUTERS, INC

14440 Catalina Street, San Leandro, CA 94577 ● 415-357-8500

☐ North Star Advantage

Classification ● single-user/single-tasking desktop system with integral CRT ● 2 models available—one based on 8-bit microprocessor, the other based on 8-/16-bit microprocessors

Systems Software ● all software comes unbundled; Graphics DOS (G-DOS) proprietary operating system supports bit-mapped graphics, floating-point board; Graphics CP/M (GCP/M) controls graphics display in both character mode and graphics mode; Application Support Program (ASP) included with each NS proprietary application package; Graphics MS-DOS also available ● Graphics MS-DOS languages—BASIC-16, BASIC-16 compiler, FORTRAN-16, Pascal-16, COBOL-16; GCP/M languages—NS BASIC, COBOL, FORTRAN, Pascal ● dBASE II DBMS, NS InfoManager data management/inquiry system ● NorthLink 2780/3780 Bisync emulator; NorthNet network available

Applications Software ● NorthWord, WordStar word processing packages, SpellStar, MailMerge, MicroPlan electronic spreadsheet, accounting, client accounting, inventory control, order entry, several business graphics packages available from NorthStar

Systems Hardware ● basic systems include CPU, memory, CRT, keyboard, disk storage ● 8-bit system features 4-MHz Zilog Z80A CPU and an auxiliary Intel 8035 for the keyboard and floppy disk controller; 8-/16-bit system features 16-bit 8-MHz Intel 8088-2 plus Z80A and Intel 8035 ● 8-bit system—64K-byte RAM; 8-/16-bit system—64K-byte to 256K-byte RAM (8088) plus 64K bytes (Z80); 20K-byte display RAM; 2K-byte boot PROM ● proprietary mini-bus with 6 slots for plug-in options; 1 RS-232C port standard, additional RS-232C or current-loop ports optional; parallel ports optional ● NorthNet Workstation Server Board, and/or Workstation Board optional, for interfacing system to NorthNet local area network

Mass Storage ● maximum of 15M bytes formatted hard disk storage using 15M-byte 5.25-inch Winchester disk, 5M-byte Winchester also available ● maximum of 1.4M-byte diskette storage using 4 360K-byte double-sided, 5.25-inch floppy disks

Printers ● NS-100 dot-matrix, 80-cps printer from Epson; NS-3510 letter-quality, 33-cps printer from NEC, available from North Star

Display/Keyboard ● integral CRT has 12-inch monochrome screen and displays 80 characters x 24 lines, upper-/lowercase alphanumerics; bit-addressable graphics, 640x240 pixels ● integral, fixed selectric-style keyboard has 87 keys total; 49 standard, 14-key numeric pad, 15 programmable function keys, 9 control keys

Pricing/Support/Availability ● base price—Advantage—$2,999 includes 8-bit CPU, 64K-byte RAM, 2 floppy disk drives, CRT, keyboard, serial port, and software; Advantage 8/16—$3,399 includes same as Advantage with additional 64K-byte RAM and 16-bit CPU ● 90-day warranty ● service available from the manufacturer, dealers, and third-party

organizations—Sorbus in U.S., TRW elsewhere; service plans include mail-/carry-in hardware maintenance, and on-site service; annual contract for software updates/corrections ● sales through dealers, distributors, computer stores, plus system integrators and OEMs ● first delivery 1981

☐ North Star Horizon

Classification ● single-user/single-tasking and multiuser desktop component systems with separately available CRTs; versions to support from 1 to 5 users ● based on single 8-bit processor ● timeshared use of the CPU

Systems Software ● single-user Horizon comes bundled with either DOS/BASIC or HDOS/BASIC; CP/M 2.2 is optional; TSS/A or TSS/C available for multiuser Horizon; TSS/A provides multiuser version of NS proprietary business applications; TSS/C provides multiuser version of CP/M and HDOS, allocates 56K bytes of memory to each user, supports print spooler and file protection ● North Star BASIC comes with the NS operating systems; Microsoft FORTRAN, COBOL, Pascal-80 also available ● dBASE II DBMS, NS InfoManager II data management/inquiry system optional ● NorthLink 2780/3780 Bisync communications package available

Applications Software ● NorthWord, NorthSpell, Enhanced WordStar, SpellStar, MailMerge word processing software, enhanced MicroPlan, NorthPlan electronic spreadsheets, plus general accounting, inventory control, order entry and invoicing, payroll available from North Star

Systems Hardware ● base system includes CPU, memory, disk storage, I/O ports ● CPU features 4-MHz Zilog Z80A microprocessor; floating-point arithmetic board optional ● 64K-byte RAM—single-user system; 128K-byte to 352K-byte RAM—multiuser system (56K per user); erasable 1K-byte PROM ● S-100 bus with 12 slots; 2 RS-232C or current-loop ports standard (single user), 4 standard (multiuser); additional 4-port serial I/O board optional; 1 parallel port standard ● NorthNet local area network optional

Mass Storage ● maximum hard disk storage of 72M bytes on 4 18M-byte formatted 14-inch Winchesters (daisy chained); 1 5M-byte and 15M-byte formatted 5.25-inch Winchesters also available ● maximum floppy disk storage of 1.4M bytes using 5.25-inch 360K-byte formatted drives ● optional tape backup system, 13.4M bytes, comes with diskettes containing backup and recovery utilities and test/diagnostic routines

Printers ● maximum of 2 printers; none available from North Star

Display/Keyboard ● none available from the vendor ● system displays 80 characters x 24 lines, upper-/lowercase, graphics character set ● supports 5 terminals

Pricing/Support/Availability ● base system—$2,999 includes CPU, 64K-byte RAM, dual diskette drives, 1 parallel, 2 serial ports, DOS/BASIC; 2-user system—$7,049 includes CPU, 128K-byte RAM, 5M-byte hard disk, floppy backup, 1 parallel, 4 serial ports, HDOS/BASIC ● 90-day warranty, parts and labor ● service is available from the manufacturer, dealers, and third-party organizations—Sorbus in U.S., TRW elsewhere; service plans include mail-/carry-in hardware maintenance, and on-site service; annual contract for software updates/corrections ● sales through dealers, distributors, computer stores, plus system integrators and OEMs ● first system delivered January 1978; more than 40,000 shipped

☐ North Star Horizon 8/16

Classification ● single-user/single-tasking and multiuser desktop component system with separately available CRTs; supports up to 8 users ● based on dual processors—one 8-bit, one 16-bit ● in a multiuser environment, each user has his own CPU and can choose between 8-bit or 16-bit

Systems Software ● TurboDOS multiuser operating system available; emulates CP/M ● NBASIC, Microsoft COBOL,

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FORTRAN, and Pascal available ● dBASE II DBMS, NS InfoManager II data management/inquiry system optional ● NorthLink 2780/3780 BSC communications package available

Applications Software ● NorthWord, NorthSpell, Enhanced WordStar, SpellStar, MailMerge word processing software; enhanced MicroPlan, NorthPlan electronic spreadsheets, plus general accounting, inventory control, order entry and invoicing, payroll available from North Star

Systems Hardware ● base system includes CPU, memory, disk storage, and I/O ports ● 8-bit CPU is 4-MHz Zilog Z80A; 16-bit CPU is 8-MHz Intel 8088-2; any combination of up to 7 8-bit and 16-bit CPU boards may be added for multiuser capability ● 64K-byte RAM standard on 8-bit board; 128K-byte RAM standard on 16-bit board; optional 384K-byte memory expansion boards available for 16-bit operation for a maximum of 512K bytes per 16-bit user ● 12-slot S-100 bus; 1 parallel port standard; 2 RS-232C ports standard with each CPU board, one port for a terminal, the other for either printer or modem; one serial terminal/printer driver board included with each CPU board; modem driver boards optional

Mass Storage ● maximum hard disk storage of 72M bytes on 4 18M-byte 14-inch Winchester drives; 5M- and 10M-byte drives also available ● one integrated 5.25-inch 360K-byte floppy drive standard ● 13.4M-byte tape cartridge backup optional

Printers ● none available from North Star

Display/Keyboard ● none available from vendor ● system displays 80 characters x 24 lines, graphics character set

Pricing/Support/Availability ● base system—2 users—$5,199 includes CPUs, memory, 5M-byte hard disk, 360K-byte floppy disk, I/O ports ● 90-day warranty, parts and labor ● service is available from the manufacturer, dealers, and third-party organizations—Sorbus in U.S., TRW elsewhere; service plans include mail-/carry-in hardware maintenance and on-site service; annual contract for software updates/corrections ● sales through dealers, distributors, computer stores, plus system integrators and OEMs ● first system delivered October 1983

☐ North Star Dimension

Classification ● multiuser (up to 12)/multitasking component system with connecting PC-compatible workstations ● central processor and workstation processor based on 16-bit CPUs

Systems Software ● MS-DOS 2.0 bundled with system along with a proprietary operating system for controlling workstations ● 2780/3780 or 3270 Bisync communications and 3270 and 3770 SDLC/SNA links optionally available

Applications Software ● none supplied by vendor

Systems Hardware ● basic system includes "server" (central processor) unit and two workstations; server includes CPU, memory, I/O, disk storage, and time-of-day clock ● CPU features an 8-MHz 16-bit Intel 80186 processor, 256K-byte RAM with parity expandable to 512K bytes; RS-232C port, multiprotocol serial port, Centronics printer port, and 13-slot IBM-compatible bus ● each workstation includes CPU, memory, I/O, CRT, and keyboard ● CPU features 7-MHz 16-bit Intel 8088-2 processor, 128K-byte RAM with parity expandable to 512K bytes, and a local RS-232C port

Mass Storage ● (only utilized on server processor) ● maximum of 60M bytes of hard disk storage using two optional ● 5.25-inch Winchester drives; 15M- and 30M-byte drives available ● maximum of 360K bytes of diskette storage using standard 5.25-inch drive ● 45M-byte tape backup system optional

Printers ● central processor can support two printers; each workstation supports one; no printers are supplied by North Star

Display/Keyboard ● each workstation includes a 12-inch monochrome CRT that displays 25 lines of 80 characters in upper- and lowercase alphanumerics; graphics capability of

640x200 or 640x400 pixels ● detached keyboard is IBM compatible

Pricing/Support/Availability ● base system—$7,000 includes one central processor (server) with CPU, 128K-byte RAM, 13-slot IBM bus, I/O, 360K-byte diskette drive, 15M-byte Winchester drive, MS-DOS, proprietary operating system, and two workstations, each with CPU, 128K-byte RAM, an RS-232C port, and keyboard ● 90-day warranty ● hardware maintenance and software updates/corrections available from dealers and Sorbus ● sales through dealers and OEMs ● date of first U.S. delivery March 1984

■ OMNIDATA

5717 Corsa Avenue, Westlake Village, CA 91362 ● 213-991-5810

☐ Omni Convertible

Classification ● single-user/multitasking system with integral CRT ● based on 8-bit processor; 16-bit processors optional

Systems Software ● Omni-DOS proprietary operating system bundled; CP/M Plus, MS-DOS, UCSD p-System, and UNIX available ● Digital Research CBASIC, UCSD p-System Pascal, and FORTRAN optional ● dBASE II DBMS optional ● IBM 2780/3780, 3275, BSC/SDLC, TTY-ASCII communications; Corvus Omninet network server board available

Applications Software ● Omnitext proprietary word processor (requires additional TI9995 board) bundled; MultiPlan spreadsheet and Step 1 integrated accounting package available

Systems Hardware ● basic system includes CPU, keyboard, CRT, disk storage, main memory, and I/O ports ● CPU is 8-MHz 8-bit Zilog Z80H processor; 16-bit TI9995 runs the word processing software and handles I/O; 16-bit Intel 80186 and 80286, and Motorola 32-/16-bit processors optional ● 128K-byte to 1M-byte RAM memory expansion ● 1 parallel I/O port, 1 RS-232C port; 1 RS-232C port optional ● 4-slot 16-bit Intel Multibus; 4 CPU boards, monochrome CRT adapter, and graphics CRT adapter each use 1 Multibus slot; 5-slot proprietary 8-bit bus has one slot occupied by disk controller ● network server board, communications board (for 2780/3780, 3270 emulation, and TTY), and voice digitizer/synthesizer board optional

Mass Storage ● hard disk storage ranges from 10M bytes to 52M bytes formatted; 5M-bps transfer rate, 85-millisecond average access time; 5M-byte cartridge disk, and 20M-byte and 40M-byte streaming tape backup available ● up to 4 320K-byte diskette drives for capacity of 1.28M bytes; 250K-bps transfer rate, 93-millisecond average access time

Printers ● 20-cps daisywheel printer; variable pitch and bidirectional; takes up to 15-inch paper; other third-party daisywheel printers available from Omnidata

Display/Keyboard ● 12-inch green, amber, or optional color CRT; tiltable and rotatable ● 25 lines x 80 characters; bit-addressable graphics capability with optional board ● detachable keyboard with round keytops; 123 keys including 32 function keys and numeric keypad

Pricing/Support/Availability ● base system—$4,995 includes dual CPUs, RAM, CRT, keyboard, 2 diskette drives, printer, I/O ports, and bundled software ● 90-day warranty ● on-site service and software updates available; third-party service through Western Union ● sales through OEMs and independent dealers ● first delivery January 1984

■ ONYX SYSTEMS INCORPORATED

25 East Trimble Road, San Jose, CA 95131 ● 408-946-6330

☐ Onyx C5001A, C5001/MU, C8001/MU

Classification ● multiuser component systems with separately available CRT displays; up to 3 users on the C5001A; up to 5 users on the C5001/MU and C8001/MU based on 8-bit microprocessor

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Systems Software ● all software comes unbundled ● CP/M 2.2, MP/M 2.1, and single- and multiuser Oasis 5.5C softloaded from cartridge tape ● supports CBASIC-II and R/M COBOL under CP/M and MP/M; supports R/M COBOL and Oasis BASIC under single- and multiuser Oasis

Applications Software ● WordStar word processing plus MailMerge, SpellStar; SuperCalc electronic spreadsheet, payroll, inventory, order entry, point-of-sale all under CP/M or MP/M accounting

Systems Hardware ● basic system includes processor, memory, mass storage, and ports ● CPU based on 8-bit 4-MHz Zilog Z80A microprocessor ● C5001A provides 128K bytes as standard; C5001/MU and C8001/MU provide 256K bytes ● 3 RS-232C serial ports and 1 8-bit parallel Centronics-compatible port standard on C5001A; 1 RS-232C port provides modem support; 5 RS-232C serial ports and 1 8-bit parallel Centronics-compatible port standard on C5001/MU and C8001/MU; serial ports are programmable for baud rates up to 19.2K; serial ports provide synchronous transmission in half- or full-duplex mode

Mass Storage ● maximum hard disk of 80M bytes unformatted on the C8001/MU and 42M bytes unformatted on the C5001A and the C5001/MU; 8-inch Winchester fixed disk of 20M or 40M bytes on the C8001/MU; 5.25-inch Winchester fixed disk of 7M, 14M, or 21M bytes on the C5001A and C5001/MU; 8-inch disks may be 20M or 40M bytes; 5.25-inch disks may be 7M, 14M, or 21M bytes ● 5.25-inch (C5001A and C5001/MU) and 8-inch (C8001/MU) Winchester fixed disk in own chassis optional; optional drives offer same capacities as integral drives ● no diskette storage available ● cartridge tape for backup of 10M bytes of Winchester disk storage standard

Printers ● none supplied by vendor

Display/Keyboard ● 12-inch screen, 80 characters x 24 lines or 132 characters x 24 lines, monochrome, upper-/lowercase alphanumerics ● keyboard provides 85 keys including 18-key numeric pad and 4 user-programmable keys; 3 status and 4 programmable LED indicators ● C5001A may be configured with 3 CRT displays; C5001/MU and C8001/MU, 5 CRT displays

Pricing/Support/Availability ● C5001A—$5,990; C5001/MU—$7,790; C8001/MU—$10,990 ● all systems include processor, minimum memory, standard ports, minimum Winchester disk, cartridge tape backup ● minimum software charge for CP/M 2.2 and CBASIC II would be $600 ● service is provided by vendors through 1 service center providing depot repair and by RCA through on-site maintenance contract ● 90-day warranty, parts and labor ● software subscription service is $95 per year ● systems are marketed through independent sales organizations and to OEM customers ● first installation of C5001/A, May 1982; C5001/MU, August 1981; C8001/MU, May 1981 ● there are 750 C5001/As, 1,000 C5001/MUs, and 2,400 C8001/MUs installed in the U.S.

☐ Onyx C5012D, C5012V, C8002

Classification ● multiuser component systems with separately available CRTs; up to 5 users on the C5012D; up to 11 users on the C5012V; up to 8 users on the C8002 ● based on 16-bit microprocessor

Systems Software ● all software unbundled ● UNIX System III and UCSD p-System softloaded from cartridge tape ● supports CBASIC-16, FORTRAN 77, UCSD Pascal, and R/M COBOL 74

Applications Software ● bundled Onyx Office integrated word processing, spreadsheet, DBMS, menu development software

Systems Hardware ● basic system includes processor, memory, mass storage, and ports ● all models except the C8002 use a 16-bit 6-MHz Zilog microprocessor; the C8002 uses a 16-bit 4-MHz Z8002 ● all models have 512K-byte RAM standard and 1M bytes in the C5012V and C8002 ● C8002 provides 8 RS-232C ports with 1 port having modem capability; C5012D

provides 5 RS-232C ports with 1 port having modem capability; C5012V provides 11 RS-232C ports with 2 ports providing model support; 1 RS-449/-442 port and 1 8-bit parallel Centronic-compatible port are standard on all models ● serial ports are programmable for baud rates up to 19.2K; and provide synchronous transmission in half- or full-duplex mode

Mass Storage ● maximum hard disk of 160M bytes unformatted on the C8002 and 42M bytes unformatted on the C5012D and C5012V ● 8-inch Winchester fixed disk of 20M, 40M, 80M bytes on the C8002; 5.25-inch Winchester fixed disk of 7M, 14M, 21M bytes on the C5012D and C5012V ● no diskette storage ● cartridge tape backing for 10M bytes of Winchester disk storage standard

Printers ● none supplied by vendor

Display/Keyboard ● 14-inch screen, 80 characters x 24 lines; monochrome, upper-/lowercase alphanumerics ● keyboard provides 104 keys including 18-key numeric pad and 28 user-programmable keys ● up to 5 CRT displays on the C5002A and C8002A; up to 11 CRT displays on the C5002B and the C8002B; up to 8 CRT displays on the C8002

Pricing/Support/Availability ● C5012D—$11,990; C5012V—$13,750; C8002—$20,500 ● all systems include processor, minimum memory, standard ports, minimum Winchester disk, cartridge tape backup ● minimum software charge for UNIX System III and CBASIC-16 would be $2,965 ● service is provided by vendor through 1 service center providing depot repair; on-site maintenance through RCA ● 90-day warranty, parts and labor; software subscription service is $95 per year ● systems are marketed through independent sales organizations and to OEM customers

☐ Onyx Sundance, Sundance II

Classification ● both single-user/single-tasking and multiuser desktop computers with integrated CRTs; up to 3 users on Sundance II ● Sundance, Sundance II based on 8-bit microprocessor

Systems Software ● all software comes unbundled ● CP/M 2.2, MP/M 2.1, and single- and multiuser Oasis 5.5B softloaded from cartridge tape for 8-bit systems; UNIX System III for 16-bit system ● support CBASIC-II and R/M COBOL under CP/M and MP/M; support R/M COBOL and Oasis BASIC under single- and multiuser Oasis; 16-bit system supports CBASIC/16, FORTRAN-78, UCSD Pascal, R/M COBOL 74 ● Connexion menu development system for 16-bit model

Applications Software ● WordStar word processing system plus MailMerge, SpellStar; SuperCalc, electronic spreadsheet, accounting, payroll, inventory, order entry, point-of-sale, all under CP/M or MP/M

Systems Hardware ● basic system includes processor, memory, mass storage, CRT, keyboard, and ports ● 8-bit system based on 4-MHz Zilog Z80A ● Sundance is fixed at 64K-byte RAM; Sundance II provides 192K bytes as standard ● single-board computer; 2 RS-232C serial ports standard on Sundance and Sundance II; one 8-bit parallel Centronics-compatible port standard; 1 RS-232C port provides modem support; serial ports are programmable for baud rates up to 19.2K, provides synchronous transmission in half- or full-duplex mode

Mass Storage ● maximum hard disk 42M bytes unformatted; 5.25-inch 7M-, 14M-, or 21M-byte Winchester fixed disk integral to chassis; in its own chassis, optional ● no diskette storage available ● cartridge tape backup for 10M-byte Winchester disk storage

Printers ● none supplied by vendor

Display/Keyboard ● 12-inch CRT screen, 80 characters x 24 lines or 132 characters x 24 lines, monochrome, upper-/lowercase alphanumerics ● keyboard provides 85 keys including

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

18-key numeric pad and 4 user-programmable keys; 3 status and 4 programmable LED indicators ● Sundance II may be configured with 2 additional CRT displays with specifications as above

Pricing/Support/Availability ● base price—Sundance—$6,950 includes 8-bit processor, 64K-byte memory, ports, CRT, keyboard, 7M-byte Winchester disk, cartridge tape backup; Sundance II—$7,250 includes same as Sundance, except memory is 192K bytes ● service is provided by vendor through 1 service center providing depot repair; on-site maintenance through RCA ● 90-day warranty, parts and labor ● systems are marketed through independent sales organizations and to OEM customers ● first installation of Sundance was October 1981; Sundance II, May 1982; there are 560 Sundance systems installed and 260 Sundance IIs

□ Onyx System 2000, System 3000, System 4000 & System 5000

Classification ● multiuser component systems with separately available CRTs; up to 4 users on System 2000 and 3000, up to 8 users on System 4000, and up to 16 users on System 5000 ● based on 16-bit microprocessor ● formerly Mercator product line

Systems Software ● all software comes unbundled ● Oasis-16 (System 2000 and 3000 only), Business BASIC softloaded from cartridge tape ● supports Oasis BASIC, R/M COBOL, and Business BASIC on System 2000 and 3000; supports Business BASIC only on System 4000 and 5000

Applications Software ● none offered

Systems Hardware ● basic system includes processor, memory, mass storage, and ports ● System 2000 and 3000 are based on the 16-bit 5-MHz Intel 8088; System 4000 and 5000 are based on the 16-bit Intel 8086 ● System 2000 has 64K bytes to 256K bytes; System 3000, 64K bytes to 512K bytes; System 4000, 128K bytes to 256K bytes; System 5000, 256K bytes to 1M bytes ● System 2000, 3000 are single-board systems with 4 RS-232C ports and 1 8-bit parallel Centronics-compatible port standard, proprietary bus with 8-bit parallel Centronics-compatible port plus 8 RS-232C ports on the System 4000, 16 on the System 5000

Mass Storage ● maximum hard disk storage is 18M bytes on the System 2000, 80M bytes on the System 3000 and 4000, 320M bytes on the System 5000; 5.25-inch fixed Winchester disk with 6M-, 12M-, 18M-byte capacity on System 2000; 8-inch fixed Winchester disk 20M- or 40M-byte capacity on System 3000 and 4000; 14-inch 160M-byte Winchester disk utilized with System 5000 ● maximum diskette storage on System 2000 is 1M bytes unformatted; 5.25-inch 1M-byte double-density drive ● cartridge tape backup standard with all systems except System 2000, choice of diskette or tape

Printers ● none supplied by vendor

Display/Keyboard ● 14-inch screen, 80 characters x 24 lines; monochrome, upper-/lowercase alphanumerics ● keyboard provides 104 keys including 18-key numeric pad and 28 user-programmable keys ● System 2000 and 3000 may be configured with 4 CRT displays; System 4000 with 8; System 5000 with 16

Pricing/Support/Availability ● System 2000—$5,990; System 3000—$10,500; System 4000—$13,250; System 5000—$32,300 ● all systems include processor, minimum memory, minimum mass storage, backup capability, ports, and cabinet; System 2000 includes 5.25-inch diskette backup; others come with tape backup ● service is provided by vendor through 1 service center providing depot repair and by RCA through on-site maintenance contract ● 90-day warranty, parts and labor ● systems are marketed through independent sales organizations and to OEM customers ● first installation of System 2000, July 1982; System 3000, May 1981; System 4000, August 1980; System 5000, August 1982; more than 1,200 systems installed in U.S.

■ OSM COMPUTER CORPORATION

665 Clyde Avenue, Mountain View, CA 94043 ● 415-961-8680

□ Zeus 3X, Zeus 4, Zeus 4/16

Classification ● multiuser component system with separately available CRT display (up to 32 users on Zeus 3X, up to 8 on Zeus 4, 4/16); based on 8-bit microprocessor

Systems Software ● MUSE (multiuser system executive) resides on master processor board with its own Z80A microprocessor and 64K-byte RAM; Zeus 4/16 contains Intel Z8088 microprocessor; runs programs written under CP/M-80, CP/M-86, MP/M-80, MP/M-86; bundled with computer; features file sharing, password protection, print spooling, ISAM ● BASIC, assembler, COBOL available ● Telecom and 3270 emulation communications packages offered

Applications Software ● none available from the vendor

Systems Hardware ● base system includes CPU, memory, disk storage, tape or diskette backup, I/O ports ● CPU features 4-MHz Zilog Z80A microprocessor plus Z80 with operating system, a Z80 per user; Zeus 4/16 incorporates Z8088 ● 64K-byte RAM per user plus 64K-byte RAM for the operating system; maximum of 2.1M bytes on Zeus 3X, 576K bytes on Zeus 4 and 4/16 ● proprietary bus; 10 slots (7 open) on Zeus 3X, 4 (1 open) on Zeus 4 and 4/16; RS-232C ports standard, Centronics and parallel ports optional

Mass Storage ● 250K-byte diskette drive on Zeus 3X, 250K- to 1M-byte diskette storage on Zeus 4 and 4/16 (up to 2 drives); 20M-byte 6250-bpi 4-track tape drive for Zeus 3X; 12M- to 130M-byte hard disk storage on Zeus 3X, 6M to 25M bytes on Zeus 4 and 4/16

Printers ● none available from vendor

Display/Keyboard ● systems use separately available terminals; monochrome, upper- and lowercase alphanumerics, 4 programmable keys, 10 special function keys, numeric keypad

Pricing/Support/Availability ● Zeus 3X standard configuration—$10,800, for 4 users, with 12.6M-byte 5.25-inch hard disk, 20M-byte tape drive, real-time clock, 2 master console serial ports, 1 user board CRT port, 2 user serial ports, and MUSE operating system; additional 4-user board—$2,295; to expand beyond 8 users requires additional power supply and/or dual drives; Zeus 4 standard configuration—$5,595, for 2 users, with 6.3M-byte 5.25-inch hard disk, 250K-byte 5.25-inch diskette drive, 2 master console serial ports, 1 user board CRT port, 1 user serial printer port, and MUSE operating system; Zeus 4/16 standard configuration—$6,595, for 2 users, with 6.3M-byte 5.25-inch hard disk, 250K-byte 5.25-inch diskette drive, 2 console serial ports, 1 user board CRT port, 1 user serial printer port, and MUSE operating system ● distribution through direct mail, computer stores, direct sales, OEM, and systems houses; 1-year limited warranty; service available through manufacturer, retailer/dealer, or RCA; on-site repair service contract available ● Zeus 3X first delivered August 1983, over 300 installed as of October 1983; Zeus 4 first delivered December 1982; Zeus 4/16 first delivered November 1983, over 2,000 Zeus 4 series systems installed

■ OTRONA CORPORATION

4755 Walnut Street, Boulder, CO 80301 ● 303-444-8100

□ Attache

Classification ● single-user/single-tasking 18-pound portable computer; 12 inches wide x 13.6 inches deep x 5.75 inches high; folds up and can be carried like a briefcase; handle also acts as an adjustable support for CRT ● based on 8-bit processor; 16-bit option board available

Systems Software ● CP/M bundled with system; MS-DOS 1.25 bundled with 16-bit processor option; UCSD p-System optional ● Microsoft BASIC-80 V.5.21 and CP/M assembler bundled;

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Microsoft COBOL and UCSD Pascal V.4.0 optional • dBASE II DBMS available from Otrona • Valet communications package bundled; bisync, HDLC, SDLC protocols supported

Applications Software • WordStar Plus word processing and Charton graphics bundled; Valet time-resource manager, MultiPlan spreadsheet, accounting, financial planning, project management, tax calculations, cash flow analysis, scientific analysis, simulation, and entertainment programs optionally provided by Otrona

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports, time/date clock, and audio synthesizer; battery optional • CPU features 4-MHz Zilog Z80A microprocessor and an AM 9517A DMA processor; 8-MHz 16-bit Intel 8086 optional • 64K-byte RAM, additional 256K bytes included with 16-bit processor option; 4K-byte "phantom" ROM • proprietary bus standard, optional STD expansion bus; 2 serial ports standard, compatible with RS-232C, RS-422, and RS-423; GPIB interface, synchronous communications port optional

Mass Storage • maximum hard disk storage of 10M bytes on optional 5.25-inch Winchester • maximum of 720K bytes of diskette storage using 2 5.25-inch 360K-byte diskette drives; 320K bytes after MS-DOS formatting

Printers • system can support 1 printer; Epson MX-80 dot-matrix printer available from vendor

Display/Keyboard • 5.5-inch green-phosphor CRT is integral to system unit and displays 24 lines of 80 characters in upper-/lowercase alphanumerics; graphics capability of 320x240 pixels; 10K-byte graphics memory; 16-bit option board gives 25th status line and 640x250 pixels graphics resolution • detachable, typewriter-style keyboard folds over CRT for portability

Pricing/Support/Availability • base system—$2,995 includes CPU, 64K-byte RAM, 2 diskette drives, CRT, I/O ports, time/date clock, audio synthesizer, and software • 90-day warranty • maintenance available through authorized dealer service centers and third-party organizations • sales through computer retail stores and systems houses • first delivery November 1981

■ **PERKIN-ELMER**

Data Systems Group, 2 Crescent Place, Oceanport, NJ 07757 • 201-870-4768

□ **7350 Professional Computer System**

Classification • multiuser/multitasking desktop system handling up to 4 users • based on 32-/16-bit processor • available in 3 models that can be used standalone or integrated with other Perkin-Elmer systems—Single-User Workstation, Color Graphics Workstation, and Multifunction Cluster Controller Console

Systems Software • Uniplus operating system bundled with computer; derived of UNIX System III • C, FORTRAN 77, and BASIC programming languages available • PE 3200 and OS/2 communications packages optionally available, along with 3270 SNA, BSC, or 2780/3780 emulation packages

Applications Software • Final Word and Visi Word word processing packages available • Supercomp-Twenty electronic spreadsheet and Grafmaker graphics package offered by Perkin-Elmer

Systems Hardware • base system includes CPU, memory, disk storage, 2 RS-232C ports, CRT, keyboard, calendar/clock • CPU features 8-MHz 32-/16-bit Motorola MC68000 microprocessor • 320K- to 1M-byte main memory • IEEE-488 interface and two additional RS-232C ports optional

Mass Storage • maximum of 15M bytes of hard disk storage using 5.25-inch Winchester drive • maximum of 640K bytes of diskette storage using two 5.25-inch diskette drives

Printers • 55-cps and 20-cps letter-quality printers available

Display/Keyboard • detached CRT is packaged with basic system; 15-inch green phosphor CRT on single-user workstation displays 25 lines of 80 characters with a graphics capability of 256x720 pixels; color CRT has same features as monochrome and displays 8 colors from a palette of 27 • detached, typewriter-style keyboard has 16 special function keys and a numeric pad

Pricing/Support/Availability • single-user workstation—$8,400 includes CPU, 320K-byte RAM, two 320K-byte diskette drives, 15M-byte Winchester drive, keyboard, green phosphor CRT, battery-powered calendar/clock, and Uniplus operating system; Color Graphics Workstation—$10,400—same as single-user workstation, but with 448K-byte RAM and color CRT; Multifunction Cluster Console includes 1M-byte memory and has the capability of attaching up to 3 terminals • 90-day warranty • on-site hardware and software maintenance available from Perkin-Elmer • sales through a direct sales force and OEMs • first delivery March 1984

■ **PERSONAL MICRO COMPUTERS INC**

475 Ellis Street, Mountain View, CA 94043 • 415-962-0224

□ **MicroMate (PMC-101)**

Classification • single-user/single-tasking portable system with separately available CRT; measures 3.5x6x13 inches and weighs 8 pounds • based on single 8-bit microprocessor

Systems Software • CP/M Plus operating system is softloaded from diskette and included with basic system; utilities also included • CBASIC is bundled with basic system • file management capability provided by T/Maker III, bundled with system

Applications Software • T/Maker III provides word processing, electronic spreadsheet, text editing, file management, data transfer, bar chart creation, and Electric Webster software; bundled with basic system; Spelling Checker optionally available

Systems Hardware • base system includes CPU, memory, and diskette storage • CPU features 4-MHz Zilog Z80A microprocessor • 128K-byte main memory with bank switching; 4K-byte ROM • PMC-designed externally expandable single-board architecture includes 2 RS-232C ports, 1 Centronics port, and 1 disk expansion port

Mass Storage • maximum disk storage of 20M bytes using 2 10M-byte 5.25-inch Winchester Disk Drives; 50-millisecond average access time and 5M-byte-per-second data transfer rate • maximum diskette storage is 1.6M bytes on 4 5.25-inch 400K-byte drives

Printers • PMC offers 2 printers; 120-cps, 80-character dot-matrix printer; Electric Typing Fingers (ETF-80) which converts IBM Selectric or electronic typewriters to letter-quality printers at 10 to 12 cps

Display/Keyboard • any asynchronous terminal may be used with the system; PMC offers 11-inch monochrome CRT, 80 characters x 24 lines upper-/lowercase alphanumerics; graphics character set • detachable keyboard contains 67 keys; includes 14-key numeric pad, 4 function keys

Pricing/Support/Availability • base price—$995 includes CPU, 128K-byte main memory, 1 diskette drive, CP/M Plus, CBASIC, T/MAKER III, and Electric Webster software as above with CRT display—$1,590 • 90-day warranty on parts and labor • mail-/carry-in maintenance through manufacturer service center, or retailers/dealers • sales through computer stores, office equipment dealers, and OEMs • first delivered April 1983

□ **PMC-80 & PMC-81**

Classification • single-user/single-tasking desktop system with separate CRT display • based on single 8-bit processor • said to

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be fully compatible with TRS-80 Model I ● available in cassette and diskette versions

Systems Software ● TRS-80 Model I-compatible operating systems provided by outside vendors and softloaded from diskette; DOS bundled with diskette-based systems ● Microsoft Level II BASIC in ROM and bundled with the system ● Maxi Manager data management program available from PMC ● S-Term smart terminal program available from PMC

Applications Software ● Electric Pencil word processing program (cassette version only), business software available from PMC

Systems Hardware ● base system includes CPU, memory, keyboard, CRT, and either cassette interface; built-in cassette recorder on PMC-81 or disk storage ● CPU features 4-MHz Zilog Z80A microprocessor ● 16K-byte main memory expandable to 48K bytes; 12K-byte ROM (PMC-80), 14K-byte ROM (PMC-81) ● proprietary 50-pin bus structure, 1 RS-232C port optional, 1 parallel Centronics port standard; 40-pin TRS-80 bus and S-100 bus optional; expansion interface for disk drives available, provides 32K-byte additional memory, parallel printer interface, real-time clock

Mass Storage ● no hard disk storage available ● maximum of 400K bytes of diskette storage on 4 5.25-inch diskette drives; requires expansion interface ● tape cassette storage unit available

Printers ● PMC offers 2 printers; 120-cps, 80-column, dot-matrix printer; Electric Typing Fingers (ETF-80) which converts IBM Selectric or electronic typewriters to letter-quality printers at 10 to 12 cps

Display/Keyboard ● detached CRT is packaged with basic system; 11-inch monochrome screen provides 64 characters x 16 lines, uppercase (PMC-80), upper-/lowercase (PMC-81) graphics character set, 128x48 pixels ● keyboard is integrated into CPU housing; contains 55-key mechanical keyboard (PMC-80); 53-key mechanical keyboard plus 15-key numeric key pad, 4 function keys (PMC-81)

Pricing/Support/Availability ● base price—PMC-80—$495 includes CPU, 16K-byte main memory, 12K-byte ROM, CRT, keyboard, built-in cassette recorder, BASIC; PMC-81—$595 includes same as basic PMC-80 except 14K-byte ROM, different keyboard, no integral cassette recorder; PMC-80 diskette version base price—$1,495 includes CPU, 48K-byte main storage, 12K-byte ROM, CRT, 2 100M-byte diskette drives (includes expansion interface); PMC-80 diskette version includes same as above except 14K-byte ROM, different keyboards ● mail-/carry-in maintenance available through manufacturer service center or retailers/dealers ● sales through direct mail, computer stores, and OEMs ● PMC-80 first delivered 1980; PMC-81 first delivered 1981; over 40,000 systems installed

■ PERTEC COMPUTER CORPORATION

17112 Armstrong Avenue, Irvine, CA 92714 ● 714-660-0488

□ 3205, 3215, 3230 & 3240

Classification ● single-/multiuser systems supporting 255 tasks; 3205 and 3215 are desktop systems supporting from 1 to 11 users; 3230 and 3240 are floor-cabinet systems supporting 1 to 35 users; all models are suffixed by both C (example 3205C), which indicates coaxial cable interface for workstations, and R (example 3205R), which indicates RS-232C interfaced workstations ● all models based on 16-bit processor

Systems Software ● proprietary Pertec 3200 operating system; UNIX, System III scheduled for 1984 release will be optionally available ● BASIC 3 programming language is bundled with operating system; RM COBOL optionally available ● SMC/IDOL database management system ● 2780/3780 emulation software

Applications Software ● Word/Scribe word processing; over 15 separate applications including business accounting; job costing; mailing list; investment analysis; various payrolls; pharmacy; and tenant management

Systems Hardware ● base system includes CPU, memory, disk/diskette storage, and I/O ports ● CPU features Motorola 16-bit instruction, 32-bit data path microprocessor operating at 10 MHz ● Models 3205 and 3215 have 256K-byte RAM expandable to 1M bytes; Model 3230 has 256K-byte RAM expandable to 2M bytes; and the Model 3240 has 1M-byte RAM expandable to 4M bytes ● proprietary modified versabus architecture; Models 3205 and 3215 have 3 RS-232C ports standard, and the 3205R and 3215R have 8 optional; 3215 has 5 coaxial ports for workstation connection; 3230R and 3240R have 11 and 19 RS-232C ports standard, respectively, and 16 optional; 3230C and 3240C have 3 RS-232C ports standard, 16 optional, 16 and 32 coaxial ports, respectively, and the 3230C has 16 optional

Mass Storage ● maximum hard disk storage of 140M bytes on the 3205 and 3215, and 420M bytes on the 3230 and 3240; all use 8-inch 70M-byte Winchester disk drives; 13M-, 26M-, 35M-, and 53M-byte disk drives optional; both 70M- and 35M-byte drives have 50-millisecond average access times and 8.5M-byte-per-second data transfer rates; 13M- and 26M-byte drives have 98-millisecond average access time, while the 53M-byte has a 52-millisecond average access, all 3 have 5M-byte-per-second data transfer rate ● 3205 and 3215 have 1 and 2 1M-byte diskette drives standard; a single 1.6M-byte diskette drive is optional on all models; the 1M-byte diskette drive has a 275-millisecond average access time and 250K-byte-per-second transfer rate, while the 1.6M-byte drive has a 252-millisecond average access and a 500K-byte-per-second transfer rate ● 21M-byte streaming cartridge tape drive standard on 3230 and 3240, optional on others

Printers ● 300-lpm and 600-lpm 132-column Printronix line printers available for all models, as are a NEC 7710 daisywheel and a Centronics 353 dot-matrix printer

Display/Keyboard ● CRTs are integrated into desktop systems or freestanding on floor cabinet models; includes Z80A microprocessor with 64K-byte RAM ● 14-inch diagonal monochrome or color display; 25 lines x 80 or 132 characters; tilt-and-swivel monitor; 256-character set formed by 7x9 dot matrix in 9x12 cell; line and block graphics ● detached 113-key typewriter-style keyboard; separate cursor control keys, and 16 programmable keys and 36 special function keys

Pricing/Support/Availability ● base price—3205R—$4,995 includes CPU, 256K-byte RAM, 3 RS-232C I/O ports, and 2 1M-byte 5.25-inch floppy disks; 3205C—$5,995 includes same as 3205R and integrated CRT and keyboard; 3215—$8,495 includes same as 3205R and 13.33M-byte 5.25-inch Winchester drive; 3215C—$9,990 includes same as 3205R plus CRT, keyboard, 13.33M-byte 5.25-inch Winchester drive, and basic station interface which supports 4 coaxial workstations; 3230R—$22,800 includes CPU, 256K-byte RAM, 11 RS-232C I/O ports, streaming cartridge tape drive, and 35M-byte 8-inch Winchester drive; 3240—$28,990 includes CPU, 1M-byte RAM, 19 RS-232C I/O ports, streaming cartridge tape drive, and 70M-byte 8-inch Winchester drive; 3230C—$25,900 includes CPU, 256K-byte RAM, 3 RS-232C I/O ports, streaming cartridge tape drive, station controller supporting 16 coaxial workstations, and 35M-byte 8-inch Winchester drive; 3240C—$33,900 includes same as 3240R except only 3 RS-232C I/O ports plus includes 2 station controllers supporting 32 coaxial workstations ● maintenance available through selling agent (distributors/dealers); hardware maintenance available through RCA service organization ● first delivery all models June 1983

□ Sabre Models 4220 & 4240

Classification ● single-/multiuser, single-/multitasking systems; multitasking systems support up to 255 tasks ● 4220 desktop systems support up to 11 users; 4240 floor cabinet systems supporting up to 35 users ● all models based on 16-bit processor

Systems Software ● PICK operating system bundled with packaged system ● Pick Computer Works Data BASIC and

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assembler programming languages bundled with packaged system ● System Builder data management system bundled with packaged system ● 2780/3780 emulation available

Applications Software ● Jet word processing bundled with packaged system

Systems Hardware ● base system includes CPU, memory, disk storage, tape cartridge, and I/O ports ● CPU features Motorola 16-bit instruction, 32-bit data path microprocessor operating at 10 MHz ● 4220 has 256K-byte RAM expandable to 1.5M bytes; 4240 has 256K-byte RAM expandable to 2M bytes ● proprietary modified versabus architecture; 4220 has 3 RS-232C ports standard and 8 optional; 4240 has 11 RS-232C ports standard and 24 optional

Mass Storage ● maximum hard disk storage of 106M bytes on 4220 using 2 53M-byte 5.25-inch Winchester disk drives; 13M-byte and 26M-byte drives optionally available; 13M- and 26M-byte drives have 98-millisecond average access time, while the 26M-byte drive has a 58-millisecond average access time; all drives have 5M-byte-per-second transfer rate; 420M-byte hard disk capacity on 4240 using 6 70M-byte 8-inch Winchester disk drives; 35M-byte drives optionally available; both have 50-millisecond average access times and 8.5M-byte-per-second data transfer rates ● 1M-byte 5.25-inch and 1.6M-byte 8-inch diskette drives optionally available; 275-millisecond and 252-millisecond average access on the 1M- and 1.6M-byte diskette drives, respectively, and 250K- and 500K-byte-per-second data transfer rates ● 21M-byte 0.25-inch streaming cartridge tape drive available

Printers ● 300-lpm and 600-lpm 132-column Printronix line printers available for all models, as are a NEC 7710 daisywheel and a Centronics 353 dot-matrix printer

Display/Keyboard ● none available from vendor

Pricing/Support/Availability ● base price—4220—$12,900 includes CPU, 256K-byte RAM, 3 RS-232C I/O ports, 13M-byte Winchester drive, cartridge tape drive, and software; 4240—$23,900 includes CPU, 256K-byte RAM, 11 RS-232C I/O ports, 35M-byte Winchester drive, cartridge tape drive, and software ● maintenance available through selling agent (distributors/dealers); hardware maintenance available through RCA service organization ● first delivery June 1983 for the 4220 and July 1983 for the 4240

■ PIXEL INC

One Burtt Road, Andover, MA 01810 ● 617-470-1790

☐ Pixel Proline 80

Classification ● multiuser/multitasking system ● 3 models available: 4-user Model 20, 8-user Model 30, and 16-user Model 50 ● based on 16-bit microprocessor with 32-bit data paths

Systems Software ● UNIX operating system derived from Version 7 with Berkley, System III, Programmers Word Bench, and Pixel enhancements bundled with base system ● 13 programming languages available including: RM/COBOL, SIBOL, SMC BASIC, FORTRAN 77, and LISP ● data management packages available include Micro INGRES, UNIFY, MDBS II, and SMC IDOL ● UNIX/MAIL 3780/2780 emulation

Applications Software ● XED, UNIWORD/VERSATEL, Horizon word processing packages ● SUPERCOMP-TWENTY spreadsheet software and financial packages including SUNBURST, BACS, MBSI, CAMIS consulting management system and PTM Professional Time Management

Systems Hardware ● base system includes CPU, I/O processor, memory, disk/diskette storage, and I/O ports ● CPU features 16-bit Motorola MC68000 microprocessor operating at 10 MHz; Models 30 and 50 include dual microprocessors ● 512K-byte Model 20, 1M-byte Model 30, 2M-byte Model 50 all expandable to 6M bytes ● 4 RS-232C serial ports and one parallel port standard; all models can be expanded to 16 serial ports

Mass Storage ● maximum hard disk storage is 280M bytes using 2 140M-byte 5.25-inch Winchester disk drives; 42M-, 65M-, and 105M-byte 5.25-inch drives are also available; 42M (Model 20), 65M (Model 30), and 140M bytes (Model 50) are standard ● 630K-byte diskette storage on single 8-inch floppy drive ● 20M-byte tape cartridge standard on Models 30 and 50, optionally available for Model 20

Printers ● none available from vendor ● supports any serial or Centronics-compatible printer

Display/Keyboard ● 11-inch monochrome display, 80 characters x 24 lines upper-/lowercase alphanumeric; 1728x2180 points displayed, 2048x4096 points addressable ● detached IBM-type keyboard with 10-key numeric pad and 32 programmable function keys (using shift mode)

Pricing/Support/Availability ● base price Proline Model 20—$18,650 includes Motorola MC68000 microprocessor, I/O processor, 512K-byte RAM, 42M-byte Winchester disk storage, 630K-byte floppy disk storage, 4 serial ports, one parallel port, one CRT, and software; Model 30—$27,360 includes same as Model 20 except includes dual microprocessors, 65M-byte disk storage, 1M-byte RAM, and 2 terminals; Model 50—$37,080 includes same as Model 20 except includes 2M-byte RAM, 140M-byte disk storage, and 4 terminals ● hardware service available from manufacturer at 125 service centers; on-site repair service contracts available ● sales through OEMs ● first delivery Model 20—December 1983; Model 30 and 50 scheduled for delivery January 1984

■ POINT 4 DATA CORPORATION

2569 McCabe Way, Irvine, CA 92714 ● 714-754-4114

☐ Point 4 MARK 1A

Classification ● single-user/single-tasking component system with separately available CRT ● based on 8-bit processor ● up to 64 MARK 1As may be networked to a Point 4 mainframe

Systems Software ● CP/M operating system included with packaged system and softloaded from diskette ● supports CP/M-compatible programming languages from third-party vendors ● terminal interface software allowing direct connection to Point 4 mainframe and access to IRIS operating system available from Point 4

Applications Software ● none available with MARK 1A microcomputer; use as a terminal to Point 4 mainframe provides access to IRIS-based software

Systems Hardware ● base system includes CPU, memory, and diskette storage ● CPU features 4-MHz Zilog Z80A microprocessor ● 128K-byte main memory; 4K-byte ROM with diagnostics ● proprietary bus structure; 3 RS-232C ports for terminal, host mainframe, and printer interfaces; 1 optional Centronics port

Mass Storage ● no hard disk storage available ● maximum of 820K bytes of diskette storage; 205K bytes, 410K bytes per diskette drive

Printers ● none available from Point 4

Display/Keyboard ● none available from the vendor

Pricing/Support/Availability ● base price—$1,995 includes CPU, 128K-byte RAM, 4K-byte ROM, 3 RS-232C ports, and 1 205K-byte diskette drive ● 90-day warranty ● maintenance available through OEMs, distributors, and GE service organization ● sales through OEMs, system houses, distributors ● first system delivery March 1983 ● less than 100 systems installed in U.S. to date

☐ Mark 2T, Mark 3/3T, Mark 5, Mark 8 & Mark 9

Classification ● multiuser/multitasking desktop and rackmount systems; available in 5 upward-compatible models up to 7 users on Mark 2T and Mark 3/3T, 32 users on Mark 5, 64 users on

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Mark 8, and over 64 users on Mark 9 ● all models are based on 16-bit microprocessors

Systems Software ● IRIS (Interactive Real-time Information System) operating system bundled with base system ● FORCE automatic programming system (source code generator) and Business BASIC available ● PC Connection software provides intercomputer communications

Applications Software ● TYPIST Business BASIC word processing; STYLUS Business BASIC text processing and Electronic Office, which provides Electronic Calendar, Graphics Files, and Note Pad available from vendor

Systems Hardware ● base system includes CPU, memory, desktop or rackmount enclosure, disk storage, tape backup, and I/O ports ● CPU features 16-bit 600-nanosecond processor (Mark 2T, 3/3T), 400-nanosecond processor (Mark 5), 300-nanosecond processor (Mark 8 and 9) ● maximum memory of 128K bytes (Mark 2T, 3/3T, 5, and 8), 512K bytes on Mark 9 ● Mark 5, 8, and 9 support Lotus Cache Memory to improve system performance for common disk accesses ● 4 asynchronous ports standard on Mark 2T, 3/3T expandable to 7; Mark 5, 8, and 9 support Mighty Mux general-purpose DMA Communications front end with 4- to 128-port capability

Mass Storage ● supports up to 300M-byte disk drives ● disk controller available to interface up to 4 drives in any combination ● 0.25-inch streaming tape cartridge provides backup and program load capabilities, 20M-byte capacity

Printers ● none available from Point 4

Display/Keyboard ● 12-inch diagonal green or amber phosphor tilt-and-swivel display; 80 characters per line x 24 lines plus a 25th for terminal status; 7x10 dot matrix in an 8x11 dot cell; block graphics, wide point graphics, and line-drawing characters ● 2 detached keyboards available; both have sculptured keys and Selectric-type layout, calculator-format numeric keypad; one has 4 and the other has 16 programmable function keys

Pricing/Support/Availability ● base price Mark 2T—under $10,000 includes CPU, 64K-byte memory, 5.25-inch 46M-byte Winchester disk drive and controller, floppy tape streamer cartridge and controller, and 4 I/O ports; at the high end, the Mark 9—$30,000 includes CPU, 256K-byte RAM, 8 I/O ports, 35M-byte Winchester and controller, and 20M-byte tape streamer and controller ● 90-day warranty ● maintenance available through OEMs, distributors, and GE service organizations ● sales through OEMs, system houses, distributors ● first delivery 1983

■ PRONTO COMPUTERS INC

3170 Kashiwa Street, Torrance, CA 90505 ● 213-539-6400

□ Pronto Series 16 Desktop

Classification ● single-user/single-tasking desktop computer with integrated CRT display ● based on 16-bit processor ● available in 10 configurations; difference is in amount of disk storage and if monochrome or color graphics are included

Systems Software ● MS/DOS 2.11 operating system is softloaded from diskette and included with packaged system ● Microsoft BASIC language, diagnostics and utilities included with packaged system

Applications Software ● word processing, financial spreadsheet analysis, and business graphics included with packaged system

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, clock/calendar, disk storage ● CPU features 8-MHz 16-bit Intel 80186 microprocessor ● 256K-byte main memory expandable to 256K on board, and to 1M bytes with an additional card; 16K-byte ROM expandable to 64K bytes ● proprietary 16-bit external bus with 4 expansion slots, 2 async RS-232A ports, 1 parallel Centronics printer port

Mass Storage ● maximum hard disk storage of 11M bytes formatted on 2 removable 5.25-inch 5.6M-byte Winchester drives ● maximum of 1.6M bytes of diskette storage on 2 5.25-inch 800K-byte formatted diskette drives

Printers ● available from third-party vendors

Display/Keyboard ● 12-inch green phosphor screen is integrally packaged into top of system unit; displayed in 80-character x 25-line format; high-resolution graphics option provides 640x480 pixels; optional color monitor allows 8 colors to be selected from a 16-color palette ● 83-key detachable keyboard with cursor controls, 10 programmable function keys, 10-key numeric pad, N-key rollover, and 256-character type-ahead buffer adjusts to 3 height levels

Pricing/Support/Availability ● Pronto Series 16 desktops are available in 10 configurations; all include CPU, 256K-byte RAM, 16K-byte ROM, CRT, keyboard, serial and parallel I/O ports, systems and applications software; system price with 1 diskette—$3,200; with 2 diskette drives—$3,950; 2 diskettes and monochrome graphics—$4,950; 2 diskettes and color graphics—$6,250; 1 diskette and 1 Winchester drive—$5,190; 1 diskette and 1 Winchester drive and monochrome graphics—$5,950; 1 diskette and 1 Winchester and color graphics—$7,250; 2 Winchester drives—$6,190; 2 Winchester drives and monochrome graphics $6,950; and 2 Winchester drives and color graphics—$8,250 ● maintenance will be provided through a network of dealers ● sales through dealers, vertical system houses, and OEM distributors ● first delivery June 1983

□ Pronto Series 16 Transportable

Classification ● single-user/single-tasking transportable computer with integrated CRT display and detachable keyboard ● weighs less than 30 pounds, with overall dimensions of 7.5x17.25x18 inches ● based on 16-bit microprocessor ● available in 5 configurations; difference is in amount of disk storage

Systems Software ● MS-DOS 2.11 operating system is softloaded from diskette and included with packaged system ● Microsoft BASIC language, diagnostics, and utilities included with packaged system

Applications Software ● word processing, financial spreadsheet analysis, and database management system

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, clock/calendar, disk storage, and battery backup ● CPU features 8-MHz 16-bit iAPX 186 (80186) microprocessor ● 256K-byte RAM; 16K-byte ROM ● 2 RS-232C serial ports and Centronics-compatible parallel port

Mass Storage ● maximum hard disk storage of 36.1M bytes on single 36.1M-byte Winchester drive standard on 16/2400; 24.3M-byte Winchester standard on 16/2300; 5.6M-byte removable hard disk cartridges (2 on 16/2200 and 1 on 16/2110) ● 5.25-inch 800K-byte floppy disks are available, 2 standard on 16/2020 and 1 on 16/2110

Printers ● available from third-party vendors

Display/Keyboard ● 9-inch green or amber screen is integral part of system; displays 25 lines x 80 characters ● 83-key detachable keyboard with cursor controls, 10 programmable function keys, 10-key numeric pad

Pricing/Support/Availability ● Pronto Series 16 Transportable available in 5 configurations; all include CPU, 256K-byte RAM, 16K-byte ROM, CRT, keyboard, serial and parallel ports, clock calendar, battery backup, and software; with 2 diskettes—$3,950; with 1 diskette and 1 removable hard disk cartridge drive—$5,190; with 2 removable hard disk cartridge drives—$6,190; with 1 diskette and 23.5M-byte fixed Winchester—$7,190; and with 1 diskette and 36.1M-byte fixed Winchester—$8,690 ● maintenance will be provided through a network of dealers ● sales through dealers, vertical systems

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houses, and OEMs ● first delivery is scheduled for first quarter of 1984

■ QUASAR DATA PRODUCTS, QDP COMPUTER SYSTEMS

10330 Brecksville Road, Cleveland, OH 44141 ● 216-526-0838

□ QDP-100, QDP-200, QDP-300 & QDP-400

Classification ● single-user/single-tasking component systems with separately available CRT; multiuser capability optional ● based on 8-bit microprocessor

Systems Software ● 1 operating system is bundled with computer; CP/M 2.2 and 3.0, MP/M 2.1, and TurboDOS available; CP/M-86 and MP/M-86 optional ● FORTRAN, COBOL-80, CBASIC, MBASIC available from vendor; CBASIC bundled with QDP-100 ● dBASE II database management system offered

Applications Software ● WordStar and Perfect Writer word processing packages, spelling checker, filing management, proprietary accounting programs available from vendor

Systems Hardware ● basic system includes CPU, DMA, memory, diskette storage, real-time clock/calendar with battery backup, I/O ports ● CPU on QDP-100, QDP-200 features single 4-MHz Zilog Z80A microprocessor; on QDP-300, dual 6-MHz Zilog Z80B microprocessor and Z80A Direct Memory Access; on QDP-400 each user has 6-MHz Zilog Z80B microprocessor and system includes a Z80A Direct Memory Access; proprietary cache memory system on QDP-100 and QDP-300, optional on QDP-200 ● 64K-byte RAM expandable to 512K bytes; 256K-byte master, 128K-byte slave, expandable to 512K bytes on Master on QDP-400; 2K-byte ROM to 16K-byte ROM ● 3-slot S100 bus on QDP-200 and QDP-300, 6-slot bus on QDP-100 and QDP-400; 2 RS-232C ports and 2 parallel ports (1 Centronics) standard, maximum of 6 serial ports and 4 parallel ports (6 on QDP-400); RS-232C interface for keyboards, printers, modems on QDP-100, QDP-200; SASI hard disk interface on QDP-300 and QDP-400

Mass Storage ● maximum of 60M bytes of formatted hard disk storage on QDP-100 using 2 add-on 30M-byte 5.25-inch Winchesters; maximum of 30M bytes formatted of hard disk storage on QDP-200, QDP-300, and QDP-400 using 2 add-on 15M-byte 5.25-inch Winchesters; 10M-byte Winchester also available ● maximum of 4.8M bytes of diskette storage using 4 8-inch 1.2M-byte floppy disks

Printers ● none available from vendor

Display/Keyboard ● system uses separately available CRT and keyboard; not available from vendor ● systems support up to 4 workstations

Pricing/Support/Availability ● basic price—QDP-100—$4,695 includes CPU, 64K-byte RAM, 2.4M-byte dual diskette drives, 2 serial and 2 parallel ports, operating system, and CBASIC; QDP-200—$2,995 includes same as QDP-100 except 1.2M-byte single diskette drive, operating system without CBASIC; QDP-300—$3,995 same as QDP-100 except dual CPUs and operating system without CBASIC; QDP-400—$9,995 includes 4 CPUs, DMA, 4 CRTs, 128K-byte memory per user for 640K-byte total RAM, 10M-byte Winchester, and software ● 1-year warranty ● service available from manufacturer and General Electric Apparatus and Engineering Services Division; service plans available for on-site repair and mail-/carry-in hardware maintenance; software updates/corrections available ● sales through office equipment dealers, direct sales force, OEMs, turnkey and systems houses ● first delivery, QDP-100, 1979; QDP-200, 1982; QDP-300, 1983; QDP-400, 1983

■ QUAY CORPORATION

P.O. Box 783, Eatontown, NJ 07724 ● 201-432-7340

□ 500 Series, 900 Series

Classification ● single-user/single-tasking and multiuser component systems with separate CRTs ● based on 8-bit microprocessor

Systems Software ● operating system is packaged with computer; CP/M-80, MP/M-80, or UCSD p-Systems offered

Applications Software ● WordStar word processing package available

Systems Hardware ● basic system includes CPU, memory, disk/diskette storage, I/O ports ● CPU utilizes Zilog Z80A microprocessor ● 64K-byte RAM, single-user version, 208K-byte RAM, multiuser version; 7K- to 16K-byte PROM ● single-board computer; 3 RS-232C ports standard on all models, optionally up to 7 (some models); 1 parallel port standard on all models

Mass Storage ● 500 Series—maximum hard disk storage is 40M bytes using 4 10M-byte 5.25-inch Winchesters, maximum diskette storage is 3.2M bytes using 4 5.25-inch floppy disks ● 900 Series—maximum hard disk storage is 132M bytes using 4 33M-byte 14-inch Winchesters; maximum diskette storage is 5M bytes using 4 8-inch 1.25M-byte floppy disks

Printers ● DS 180, 180-cps dot-matrix printer available from vendor

Display/Keyboard ● terminal is available from the vendor ● 12-inch CRT screen displays 80 characters x 24 lines, upper-/lowercase alphanumerics; graphics character set, memory-mapped, bit-addressable ● detached keyboard features 92 keys, numeric keypad, cursor control, editing and function keys ● system can support up to 4 terminals

Pricing/Support/Availability ● base price—500 Series—$1,995 includes CPU, 64K-byte RAM, dual 200K-byte diskettes, 1 parallel, 3 serial ports, operating system; 900 Series—$3,795 includes CPU, 64K-byte RAM, dual 1.25M-byte diskettes ● 120-day warranty on equipment ● service available from manufacturer, retailer/dealer, or independent service organization; service plans for on-site repair, mail-/carry-in hardware maintenance ● service through direct sales force, computer stores, OEMs ● first delivery 1981 for 500 Series, 1980 for 900 Series

■ RADIO SHACK/Division of Tandy Corporation

1300 One Tandy Center, Ft. Worth, TX 76102 ● 817-390-3011

□ TRS-80 Color Computer

Classification ● single-user/single-tasking desktop component system with integrated keyboard; monitor optional ● based on 8-bit processor ● available in 3 models with differing RAM and ROM memories and color graphics capabilities

Systems Software ● system monitor resides in ROM and is bundled with system; Color Disk Operating System included with drive ● Microsoft BASIC in 8K of ROM; Extended BASIC in 16K ROM; LOGO and Disk BASIC optional ● Color File data management system available ● VIDEOTEX software for access to CompuServ and Dow Jones information services

Applications Software ● Color SCRIPSIT word processing, Spectaculator electronic spreadsheet plus educational, entertainment, and personal finance programs optionally available from Radio Shack

Systems Hardware ● basic system includes CPU, memory, 1500-baud cassette (recorder optional), keyboard, 1 serial port ● CPU features 8-bit 6809F processor ● 16K-byte RAM expandable to 32K bytes, 32K-byte RAM on Extended 32K-byte BASIC Color Computer; 8K-byte ROM, 16K for Extended versions ● 1 RS-232C port, 2 joystick connectors standard; joysticks optional ● modem and Network 2 controller for connecting up to 16 Color Computers available

Mass Storage ● maximum of 624K bytes of diskette storage using 4 optional diskette drives on Color Disk Drive unit

Printers ● system can support 1 printer ● 50- and 120-cps

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dot-matrix and 12-cps 4-color graphics printers provided by Radio Shack

Display/Keyboard ● system uses separately available CRT or TV set; system displays 16 lines of 32 uppercase characters; color graphics capabilities range from 32x64 pixels with 8 colors on Color Computer to 192x256 pixels with 1 color and a background color on Extended versions ● integrated keyboard has calculator-type keys

Pricing/Support/Availability ● base system—$299.95 includes CPU, 16K-byte RAM, 1500-baud cassette, keyboard, 1 serial port, and BASIC ● 16K Extended BASIC Color Computer—$399.95—same as Color Computer, but with 16K-byte ROM, interrupt timer and better graphics capability ● 32K Extended BASIC Color Computer—$549.95—same as 16K Extended, but with 32K-byte RAM ● 90-day warranty ● carry-in and on-site service available from Radio Shack ● sales through Radio Shack stores and computer centers ● first delivery 1980 for 16K-byte RAM versions and 1982 for 32K-byte version

☐ TRS-80 Model 4 Desktop & 4P Portable Microcomputer

Classification ● single-user/single-tasking desktop and portable system with integral CRT ● based on 8-bit microprocessor ● replaces model III

Systems Software ● TRS DOS or upward-compatible DOS single-user, single-tasking operating systems in cassette-based or disk-based versions bundled with system unit CPM/Plus 3.0 optional ● BASIC interpreter bundled with TRS DOS 6.0; optional BASIC compiler, COBOL, FORTRAN, assembly language ● Profile series and Versafile file management systems, Microfile information storage and retrieval system ● emulation of IBM 3270 interactive BSC, 2770/2780/3741/3780 RJE BSC terminals; VIDEOTEX access to public information services

Applications Software ● SCRIPSIT word processing, enhanced VisiCalc spreadsheet analysis, general business accounting, legal and medical accounting, general-purpose and manufacturing inventory management, statistical analyses, personnel search investment management packages

Systems Hardware ● basic system includes CPU, memory, display, keyboard, audio facility, diskette, I/O ports ● CPU is a 4-MHz Zilog Z80A 8-bit microprocessor ● memory is 16K bytes on cassette-based systems or 64K bytes on disk-based systems, expandable up to 128K bytes ● a serial RS-232C interface and parallel printer interface standard; digitizers, graphics boards, modems, acoustic couplers, and plotters optional

Mass Storage ● maximum of 20M bytes of hard disk storage on 1 to 4 optional 5M-byte drives ● maximum of 368K bytes of formatted diskette storage on 1 or 2 optional diskette drives; Model 4P comes with dual 184K-byte 5.25-inch diskette drives, external hard disks available at cost of portability ● cassette-based as well as diskette-based entry-level systems available; at least 1 cassette drive or diskette drive is standard in every version of Model 4; also standard with TRS DOS 6.0 is a "MemDisk" disk cache in unused memory to reduce mass storage access time

Printers ● 6 models of dot-matrix printers, all with dot-addressable graphics capability, pin-fed or friction-fed paper, and choice of serial or parallel interfaces; speeds are 50 cps, 120 cps, 140 cps, 160 cps, and 220 cps; 3 models of daisywheel printers with 18-cps, 25-cps, or 43-cps print speeds, respectively; graphics boards, plotters also available

Display/Keyboard ● integrated 12-inch B&W, 9-inch on 4P, display provides 80-column x 24-line, 64-column x 16-line, or double-width display formats with a high-resolution graphics option ● the integrated, non-detachable 70-key typewriter-style keyboard includes a 12-key numeric pad, 3 programmable function keys

Pricing/Support/Availability ● base price for Model 4—$999 includes desktop CPU with integrated 12-inch CRT and integrated keyboard, 16K-byte RAM, RS-232C and parallel

printer interfaces TRS DOS 6.0 and Microsoft BASIC; Model 4P—$799 comes standard with two 5.25-inch diskettes, 64K-byte RAM, 9-inch CRT, and detached keyboard ● carry-in and limited on-site service plans through 400 Radio Shack Computer Centers for hardware; software is supplied as is, with no support or warranty ● systems sold through 8,700 Radio Shack stores worldwide; systems valued over $1,500 can have 37-month lease ● first delivered in 1983

☐ TRS-80 Models 12 & 16B Desktop Microcomputers

Classification ● single-user/single-tasking Model 12 and multiuser/multitasking Model 16B desktop systems with integral CRTs; Model 16B supports 3 users and 3 tasks ● Model 16B based on dual 8/32/16-bit CPUs; Model 12 based on 8-bit CPU ● Model 12 replaces the Model II; Model 16B replaces the Model 16

Systems Software ● TRS DOS standard for single-user systems; CPM/Plus 3.0 optional; XENIX for multiuser systems; XENIX includes TRS DOS compatibility features; one or the other is included in the basic system price ● BASIC compiler, COBOL, FORTRAN, assembly languages optional ● Profile series and Versafile file management systems, Microfile information storage and retrieval system ● emulation of IBM 3270 interactive BSC terminals, IBM 2770/2780/3741/3780 RJE BSC terminals; VIDEOTEX access to public information services

Applications Software ● SCRIPSIT word processing, enhanced VisiCalc spreadsheet analysis, general business accounting, legal and medical accounting, general-purpose and manufacturing inventory management, statistical analysis, personnel search, investment management packages available from Radio Shack

Systems Hardware ● basic systems for both Models 12 and 16B include CPU, memory, display, keyboard, disk storage, I/O ports; dual CPU is standard on Model 16B, optional on Model 12 ● Model 16B CPUs consist of a 32-/16-bit, 6-MHz MC68000 microprocessor and 8-bit, 4-MHz Zilog Z80A microprocessor; Z80A operates as a satellite processor dedicated to I/O tasks, except when Model II mode is invoked; then it becomes the microprocessor running programs originally developed for the Model II, or for the single processor Model 12; Model 12 standard CPU is the 4-MHz Zilog Z80A 8-bit microprocessor; an enhancement option is available to add an MC68000, effectively field upgrading the Model 12 to Model 16B CPU power ● Model 16B memory capacity is 256K to 768K bytes; Model 12 standard memory is 80K bytes; however, if the additional Model 16B-type MC68000 CPU is added, memory can be expanded up to 768K bytes, which is the Model 16B capacity ● Model 16B contains 2 internal free I/O slots, diskette controller for 2 drives, 2 async/sync RS-232C interfaces and 1 parallel printer interface; a hard disk port can be added for 15M-byte hard disk Model 16B ● Model 12 has the same serial and parallel interfaces, plus an external disk bay port; internal expansion slots are via an optional 6-slot expansion card cage ● digitizers, graphics boards, modems, acoustic couplers, plotters, and remote terminals optional

Mass Storage ● maximum hard disk capacity for Model 12 is 48M bytes; from 1 to 4 5.25-inch Winchester disk drives are optional; formatted data capacity is 11.6M bytes on the primary master drive and 12M bytes each on the 3 secondary drives; Model 16B supports one internal and 3 external 15M-byte 5.25-inch Winchester disks ● maximum diskette capacity for both models is 5M bytes; 1 or 2 8-inch 1.25M-byte drives are integrated into the system unit; 2 drives can be added externally

Printers ● 6 models of dot-matrix printers, all with dot-addressable graphics capability, pin-fed or friction-fed paper, and choice of serial or parallel interfaces; speeds are 50 cps, 120 cps, 140 cps, 160 cps, and 220 cps ● 3 models of daisywheel printers with 18-cps, 25-cps, or 43-cps print speeds, respectively ● graphics boards, plotters also available

Display/Keyboard ● both systems have 12-inch monochrome green monitor with 40 or 80 characters x 24 lines; automatic

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scrolling; 32 business graphics characters; high-resolution graphics board optional ● Model 16B has a movable 76-key typewriter-style keyboard with numeric keypad, 2 programmable function keys; Model 12 has 82-key fixed typewriter-style keyboard with numeric keypad and 6 programmable function keys ● multiuser systems are configured by adding 1 or 2 remote TRS-80 DT-1 terminal workstations; integrate 80-character x 24-line CRT, 70-key keyboard, EEPROM memory (with protocol compatibility with Televideo 950, Lear Siegler ADM-5, ADDS 25, Hazeltine 1410); can add 2 printers per terminal

Pricing/Support/Availability ● base price—Model 12—$3,199 includes single CPU, 80K-byte RAM, bootstrap ROM, I/O ports, TRS DOS and BASIC software, built-in CRT, keyboard, and 8-inch diskette, Model 16B—$4,999 includes dual CPU, 128K-byte RAM, TRS DOS and BASIC software, bootstrap ROM, keyboard, built-in CRT, and 8-inch diskette and I/O ports ● carry-in and limited on-site service plans through 400 Radio Shack Computer Centers for hardware; software is supplied as is, with no support or warranty ● systems sold through 8,700 Radio Shack stores worldwide; systems valued over $1,500 can have 37-month lease ● first delivery in 1983

☐ TRS-80 Micro Color Computer Model MC-10

Classification ● single-user/single-tasking 30-ounce home computer with integrated keyboard; monitor optional ● based on 8-bit processor

Systems Software ● system monitor resides in ROM and is bundled with the computer ● most color basic programs that run on a 4K TRS-80 color computer are compatible with the MC-10, with minor modifications

Applications Software ● software written specifically for the MC-10 will be available September 1983

Systems Hardware ● basic system includes CPU, memory, keyboard, RF modulator, and I/O ports ● CPU features 8-bit 6809F processor ● 4K-byte RAM expandable to 20K in the near future ● 1 serial port and 1 cassette port standard

Mass Storage ● optional cassette recorder available

Printers ● the MC-10 can support any Radio Shack RS-232C printer

Display/Keyboard ● system uses separate TV monitor; 8-color video output displays 16 lines of 32 characters ● chiclet-style keyboard is integral to system unit

Pricing/Support/Availability ● base system—$120 includes CPU, 4K-byte RAM, keyboard, and I/O ports ● 90-day warranty ● carry-in service available from Radio Shack ● sales through Radio Shack stores and computer centers ● first delivery May 1983

☐ TRS-80 Model 100 Portable Computer

Classification ● single-user/single-tasking 4-pound notebook-size portable computer ● based on 8-bit processor ● internal batteries maintain data in memory for up to 30 days with power off ● available in 2 models with different RAM memory sizes

Systems Software ● system monitor in ROM ● Microsoft Extended BASIC resides in ROM ● also in ROM—TELCOM communications software, which works with internal modem for computer-to-computer communications

Applications Software ● ROM-based programs include TEXT word processing, SCHEDL appointment calendar and filing system, and ADDRSS address and phone number file

Systems Hardware ● basic system includes CPU, memory, cassette interface, LCD, keyboard, 5-octave sound generator, I/O ports, and internal batteries ● CPU features 8-bit 80C85 CMOS ● 8K-byte RAM (24K-byte version of Model 100 also available), expandable to 32K bytes in 8K-byte increments, 32K-byte ROM ● 1 serial port, 1 parallel printer port, bar code reader interface ● built-in 300-baud modem with auto-dialer standard

Mass Storage ● data and text can be stored at 1500 baud using optional cassette recorder

Printers ● system can support 1 Radio Shack dot-matrix, daisywheel, or graphics parallel printer

Display/Keyboard ● integrated 8.5x2-inch LCD displays 8 lines of 40 characters in upper-/lowercase alphanumerics and 240x64 dot-matrix graphics ● full-size, typewriter-style keyboard has imbedded numerics and 8 programmable function keys

Pricing/Support/Availability ● base system—8K RAM model—$799 includes CPU, 8K-byte RAM, 32K-byte ROM, cassette interface, 5-octave sound generator, LCD, keyboard, I/O ports, batteries, and software ● 24K RAM model—$999 same as 8K model, but with 24K-byte RAM ● sales and maintenance through Radio Shack stores and Computer Centers ● first delivery March 1983

☐ TRS-80 Model 2000 & 2000HD

Classification ● single-user/single-tasking desktop component system with detached keyboard; monitor optional ● based on 16-bit processor ● runs approximately 50 percent of all IBM PC software

Systems Software ● MS-DOS 2.0 on disk; monitor is ROM with auto-boot facilities ● MS-GWBASIC, MS-Pascal, MS-FORTRAN, MS-macroassembler, R/M-COBOL ● dBASE II database management system optional ● videotex software optional

Applications Software ● PFS-Write, Microsoft Word, MultiMate, PFS-Graph, Multiplan, MAI/Basic Four Small Business Accounting, Home Accountant Plus, and approximately 50 percent of all IBM PC-compatible or MS-DOS software; all packages mentioned are available directly from Radio Shack

Systems Hardware ● basic system includes CPU, memory, keyboard, integrated floppy disks or hard disk and one floppy, 4 chassis slots, serial and parallel port ● CPU features 8-MHz Intel 80186 microprocessor ● 128K-byte RAM expandable to 768K bytes ● single-board computer with 4 expansion slots, monitor interface, serial and parallel ports

Mass Storage ● maximum of 720K bytes of diskette storage or one 360K-byte diskette and one 10M-byte formatted hard disk drive

Printers ● 6 models of dot-matrix printers, all with dot-addressable graphics capability, pin-fed or friction-fed paper, and choice of serial or parallel interfaces; speeds are 50 cps, 120 cps, 140 cps, 160 cps, and 220 cps ● 3 models of daisywheel printers with 18-cps, 25-cps, or 43-cps print speeds, respectively ● graphics boards, plotters also available

Display/Keyboard ● separately available color or monochrome monitor; 80-column x 25-row text, 640x400-pixel 8-color or monochrome graphics ● detached low-profile keyboard with programmable function keys

Pricing/Support/Availability ● base price—$2,750 includes CPU, 128K-byte RAM, detached keyboard, dual 5.25-inch floppy disk drives, monitor interface, RS-232C serial port, 4 chassis slots ● carry-in, on-site, and limited on-site service plans through 400 Radio Shack Computer Centers for hardware; sofware is supplied as-is with no support or warranty ● systems sold through 8,700 Radio Shack stores worldwide; systems valued over $1,500 can have 37-month lease ● first delivery in 1983

■ RAIR COMPUTER CORPORATION

4101 Burton Drive, Santa Clara, CA 95050 ● 408-988-1790

☐ RAIR Business Computer

Classification ● multiuser/multitasking desktop system supporting up to 4 color workstations ● based on concurrent 16-bit and 8-bit processors

Systems Software ● CP/M-80, CP/M-86, MP/M-86, and MS-DOS operating systems available ● Extended BASIC

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interpreter, Pascal, and COBOL programming languages available ● Data Management and Communications packages available

Applications Software ● Electronic spreadsheet and text processing packages available

Systems Hardware ● basic system includes 2 CPUs, memory, disk/diskette storage, display, keyboard, and I/O ports ● CPUs are 16-bit Intel 8088 microprocessor and 8-bit Intel 8085 microprocessor with associated programmable DMA, multilevel priority interrupts, and real-time clock ● 256K-byte RAM expandable to 1M bytes ● 4 RS-422-compatible terminal ports, plus 2 synchronous/asynchronous RS-232C ports

Mass Storage ● maximum hard disk storage of 95M bytes using single 19M-byte integral Winchester disk drive and 4 add-on 19M-byte Winchester drives ● 1M-byte maximum diskette storage using single 1M-byte floppy drive ● streaming tape drive for backup is also available

Printers ● 160-cps matrix printer and letter-quality daisywheel workstation printers available

Display/Keyboard ● line a high-resolution 8-color video display, 80 characters x 24 lines with 25th status line; supports split-screen scrolling regions ● detached ergonomic low-profile, 83-key keyboard, 10-key numeric/editing keypad and 10 programmable function keys

Pricing/Support/Availability ● base system—$9,750 includes dual 16-bit and 8-bit microprocessors, 256K-byte RAM, 19M-byte Winchester disk, 1M-byte floppy disk, and one user workstation ● maintenance available from OEMs and dealers ● distribution through direct sales force, OEMs, and dealers ● first delivery 1983

■ REGENCY SYSTEMS, INC

1610 Interstate Drive, Champaign, IL 61821 ● 217-398-8067

□ R2B & R2C

Classification ● single-user/single-tasking system with integrated CRT ● based on 8-bit microprocessor

Systems Software ● proprietary USE authoring language includes operating system facilities; CP/M-80 also available ● USE authoring language designed for computer-based training ● SERVER network server supporting up to 32 networked users

Applications Software ● RCG (Regency Courseware Generator), CMI (Computer Managed Instruction), and general business accounting packages available

Systems Hardware ● basic system includes CPU, memory, disk/diskette storage, integrated CRT, and I/O ports ● CPU utilizes an 8-bit Zilog Z80A microprocessor operating at 4 MHz ● 64K-byte RAM expandable to 320K bytes ● multibus architecture, 3 RS-232C serial ports, 1 RS-449/-422 serial port, and 2 parallel ports, one Centronics compatible

Mass Storage ● maximum of 70M bytes of hard disk storage on both models using single 70M-byte 5.25-inch Winchester disk drive; 10-, 40-, and 50M-byte 5.25-inch Winchester and 40M-byte 8-inch Winchesters also available; 5.25-inch drive has 30- to 45-millisecond average access time and 5M-byte-per-second transfer rate, while the 8-inch has a 60-millisecond average access and 5M-byte-per-second transfer rate ● 2.4M-byte maximum diskette storage available on both models using 2 1.2M-byte 5.25- or 8-inch diskette drives; both drives have 91-millisecond average access times and 500K-byte-per-second data transfer rates

Printers ● 20-cps and 120-cps 132-column printers are available; both require a Centronics interface

Display/Keyboard ● integral CRT color graphics CRT; 12-inch screen that displays 32 lines x 80 characters in upper-/lowercase alphanumerics; graphics capabilities of 512x512 pixels; includes graphics character set ● detached 81-key keyboard with sculpted

keys; all keys are programmable and can be used for special functions; provides separate cursor control keys and a numeric keypad

Pricing/Support/Availability ● vendor must be contacted for all pricing information ● 90-day warranty; mail-/carry-in hardware maintenance and on-site repair service contracts available from vendor and Indeserv service organization; software updates/corrections available through software maintenance contract ● distribution through vendor's direct sales force ● first delivery November 1983

■ REXON BUSINESS MACHINES CORPORATION

5800 Uplander Way, Culver City, CA 90230 ● 800-421-5184

□ RX100 Marathon Computer System

Classification ● multiuser/multitasking desktop component system with separately available CRT; supports up to 8 users ● based on 16-bit processor ● available in 4 models with differing memory sizes and disk storage capacities

Systems Software ● proprietary operating system RECAP is softloaded from hard disk and is bundled with system; MP/M-86 2.0 optional ● Business BASIC bundled with RECAP ● IDOL DBMS bundled with RECAP ● 2780/3780 bisync communications and TTY-compatible async communications available from Rexon

Applications Software ● On-Word, a proprietary multiterminal word processing system, RexiCalc electronic spreadsheet accounting and medical packages available from Rexon

Systems Hardware ● basic system includes CPU, memory, disk storage, tape cartridge, I/O ports ● CPU features 16-bit 7.3-MHz Intel 8086-2 ● 128K-byte RAM on 101-A1 and 101-A2; 256K-byte RAM on 101-B1 and 101-B2; both memory sizes expandable to 960K bytes on 128K-byte increments; 4K-byte PROM ● proprietary bus with 20 address lines, 16 data lines, power, clock, and control lines; 8 RS-232C ports (4 standard), 4 Centronics-style parallel printer ports (2 standard)

Mass Storage ● maximum 10M bytes of hard disk storage on 101-A1 and 101-B1 using standard 5.25-inch 10M-byte Winchester disk drive; maximum 15M bytes on 101-A2 and 101-B2 using 15M-byte Winchester ● 20M-byte streaming tape drive standard on all models

Printers ● system can support multiple printers; Rexon offers 30-cps and 300-lpm dot-matrix and 150-cps fully formed character printers

Display/Keyboard ● system uses separately available CRT and keyboard; 12-inch green phosphor CRT displays 25 lines of 80 characters in upper-/lowercase alphanumerics; graphics capability of 640x300 pixels ● detached typewriter-style keyboard has 8 programmable keys and numeric keypad

Pricing/Support/Availability ● base system—101-A1—$11,350 includes CPU, 128K-byte RAM, 10M-byte Winchester disk drive, streaming tape cartridge, I/O ports, RECAP, Business BASIC, and IDOL; 101-A2—$12,250 includes same as 101-A1, but with 15M-byte Winchester; 101-B1—$11,850 includes same as 101-A1, but with 256K-byte RAM; 101-B2—$12,850 includes same as 101-B1, but with 15M-byte Winchester ● 30-day warranty ● software updates/corrections and on-site repair service available from dealers and TRW ● sales through office equipment dealers ● first delivery November 1982; 125 systems installed as of March 1983

■ ROYAL BUSINESS MACHINES

500 Day Hill Road, Windsor, CT 06095 ● 203-683-2222

□ Royal Alphatronic PC

Classification ● single-user/single-tasking desktop system with separately available CRT ● based on 8-bit processor

Systems Software ● CP/M bundled with system ● BASIC

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

bundled • Peachtree file manager and telecommunications package optional

Applications Software • proprietary word processing package bundled with system; accounting, electronic spreadsheet, and graphics packages also available from Royal in 16K-byte ROM pack cartridges

Systems Hardware • basic system includes CPU, memory, I/O, and keyboard • CPU features Zilog Z80A microprocessor • 64K-byte RAM; 28K-byte ROM • cassette recorder interface, RS-232C port, and Centronics interface standard

Mass Storage • maximum of 640K bytes of diskette storage using two optional 5.25-inch drives

Printers • Royal Alpha 2002 and Royal Alpha 2015 electronic daisywheel typewriters available from vendor

Display/Keyboard • system uses separately available CRT • chicklet-style ASCII keyboard has 79 keys plus 6 programmable function keys; separate numeric keypad

Pricing/Support/Availability • base system—$695 includes CPU, 64K-byte RAM, I/O ports, keyboard, operating system, and word processing software • 90-day warranty • hardware maintenance and software updates available from Royal and independent service organizations • sales through computer stores • first delivery March 1984

■ RUBICON SYSTEMS INC

215 Candace Drive, Maitland, FL 32751 • 305-834-2393

□ Rubicon 2000-I, II, III & IV

Classification • single-user/single-tasking and multiuser/multitasking desktop computer with integrated CRT; 2000-II, III, and IV support up to 16 users • based on a 16-bit microprocessor • 4 models available • standard configurations vary in memory size and disk capacity

Systems Software • CP/M-86 (1.1), Concurrent CP/M (2.0), and MP/M-86 (2.1) softloaded from diskette and user gets his pick of one to be bundled with the system; MS-DOS (2.0) is also available • Digital Research's "C," CBASIC, Pascal/MT-86, CB-86, Microsoft BASIC 86, Intel's Assembly Language, Microfocus CIS/COBOL, and Laboratory Micro-Systems 80-86 Forth programming languages available • dBASE II and Access Manager data management available • Viewpoint terminal emulation and TeleVideo 950 terminal emulation

Applications Software • MicroPro WordStar word processing and Sorcim SuperCalc 2 available from vendor

Systems Hardware • basic system includes 3 CPUs, memory, CRT, keyboard, mass storage, and I/O ports • host processor CPU features 16-bit Intel 8086 microprocessor; disk and printer I/O processor features 16-bit Intel 8089 microprocessor; and display processor features 16-bit Intel 8088 microprocessor • 128K-byte (2000-I), 256K-byte (all others) RAM expandable to 1M bytes; 8K-byte ROM expandable to 32K bytes • 3 serial RS-232C ports, 1 Centronics-compatible parallel port standard • integral half-duplex 1200-baud modem with auto-dial and auto-answer standard on all models

Mass Storage • maximum hard disk storage of 52M bytes using 1 52M-byte 5.25-inch Winchester disk drive; 42M-byte disk drive also available; 42M-byte drive is standard on 2000-II, III, and IV; both drives have 38-millisecond average access time and 5M-byte-per-second data transfer rate • maximum diskette storage is 1.3M bytes using 2 655K-byte 5.25-inch floppy disk drives; 132-millisecond average access and 250K-byte-per-second data transfer rate; 2 drives standard on 2000-I and 1 standard on 2000-II and 2000-IV • streaming tape drive with 45M-byte capacity standard on 2000-III

Printers • 250-cps dot-matrix 80- to 132-column printer; uses Centronics interface; 40-cps daisywheel 132-column printer; uses serial or parallel interface

Display/Keyboard • integral 13-inch diagonal monochrome display, 80 characters x 25 lines, upper- and lowercase alphanumerics • 83-key detached keyboard with separate cursor keys and numeric keypad; 10 special function keys and 10 programmable keys

Pricing/Support/Availability • base system—2000-I—$3,895 includes 3 CPUs, 128K-byte RAM, 2 655K-byte floppy disk drives, CRT, keyboard, I/O ports, and operating system software; 2000-II—$7,850—includes same as 2000-I except 256K-byte RAM and 1 42M-byte Winchester instead of 2 floppy drives; 2000-III—$8,895 includes same as Model II except includes 45M-byte tape streamer instead of floppy drive; 2000-IV—$9,895 includes same as Model III except includes both streaming tape and diskette drive • 12-month warranty period • mail-/carry-in hardware maintenance and on-site repair service available through manufacturer and Sorbus service organization • distribution through OEMs • first delivery June 1982 for 2000-I, June 1983 for 2000-II and III, and August 1983 for 2000-IV; over 750 installed systems all models

■ SAGE COMPUTER TECHNOLOGY

35 North Edison Way, Suite 4, Reno, NV 89502 • 702-322-6868

□ Sage II & Sage IV

Classification • single-user/multitasking (4 tasks), or multiuser component system with separately available CRT display; 2 users Sage II, 6 users Sage IV • based on single 32-bit processor

Systems Software • p-System operating system softloaded from diskette and packaged with basic system; CP/M 68K, Hyper Forth Plus, PDOS, MODULA-2, BOS, Mirage, and IDRIS optionally available • UCSD Pascal language packaged with basic system, SVS Pascal, SVS FORTRAN, MODULA-2 languages optionally available • SPI LogiQuest III database system available

Applications Software • TIMBERLINE Spreadsheet, Teletalker (communication), Word/7 word processing packaged with basic system; ADI Aladin, Logicalc, Liaison, Sprinter optionally available

Systems Hardware • all basic systems include CPU, memory, real-time clock, scheduler, I/O ports • CPU features 8-MHz MC68000 microprocessor • 256K-byte main memory standard on all systems, expandable to 512K bytes for Sage II and to 1M bytes for Sage IV; error-checking and correction capability available; 8K-byte EPROM standard on all systems, 32K bytes optionally available • single-board systems utilize IEEE bus structure; 2 async RS-232C ports (1 for modem), 1 IEEE-488, and 1 Centronics parallel ports standard; 4 additional RS-232C ports available for Sage IV

Mass Storage • maximum hard disk storage 40M-byte Winchester drive (Sage IV only); 12M-, 18M-byte drives also available; maximum of 1.2M bytes of diskette storage on 2 640K-byte 5.25-inch diskette drives

Printers • 80-cps, 120-cps, 200-cps dot-matrix printers and 45-cps letter-quality printer available

Display/Keyboard • detached 12-inch CRT displays 1920 characters at 80 characters x 24 lines; tilt-and-swivel display • detached keyboard has sculpted keys, 96-key keyboard with separate cursor control keys, and numeric keyboard; includes 8 programmable function keys and 32 special function keys

Pricing/Support/Availability • base price—Sage II—$3,900 includes CPU, 256K-byte RAM, 8K-byte ROM, 1 640K-byte diskette drive, 4 I/O interfaces, operating system, programming languages, and utilities; Sage IV—$7,900 includes same as Sage II except includes 1 12M-byte Winchester drive, 1 floppy drive • 90-day warranty on parts and labor • mail-/carry-in maintenance available through manufacturer service centers and retailers/dealers • sales through computer stores, direct sales force, OEMs, software houses, and educational institutes • Sage II

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

first delivered June 1982; Sage IV first delivered November 1982; 750 systems installed in U.S. as of March 1983

■ SANYO BUSINESS SYSTEMS CORPORATION

51 Joseph Street, Moonachie, NJ 07074 ● 201-440-9300

□ MBC Series—550/555, 1100/1150, 1200/1250, 4000/4050

Classification ● all models single-user/single-tasking desktop systems with integrated CRT ● MBC 1100/1150 and 1200/1250 based on 8-bit microprocessors, MBC 550/555 and 4000/4050 based on 16-bit microprocessors

Systems Software ● operating system included with packaged system; CP/M-80 used on MBC 1100/1150 and 1200/1250, MS-DOS used on MBC 550/555, and CP/M-86 used on 4000/4050 ● Sanyo BASIC bundled with all models; optional languages available: Pascal/M, COBOL-80, FORTRAN-80, Macro-80, and BASIC-80 on CP/M-80 systems; BASIC (8086), GOAL (table formation language), and other CP/M-86 languages ● InfoStar, which includes Data Star and Report Star, available for all models ● Sanycom with Dow Jones News Retrieval available for all models

Applications Software ● WordStar including MailMerge and SpellStar, and CalcStar available from Sanyo

Systems Hardware ● basic system (all models) includes CPU, memory, CRT, keyboard, diskette drive, I/O ports ● 8-bit Zilog Z80A, 4-MHz microprocessor utilized on 1100/1150; dual Z80A (main and subsidiary) microprocessors on 1200/1250; 16-bit Intel 8088, 4.7-MHz microprocessor utilized on 550/555; 16-bit Intel 8086 5-MHz microprocessor on 4000/4050 ● 64K-byte RAM, 4K-byte video, 4K-byte character generator, 4K-byte system ROM on 1100/1150; 64K-byte RAM, 32K-byte VRM, 4K bytes of ROM (IPL), 8K-byte ROM (CRT program) on 1200/1250; 128K-byte RAM expandable to 256K bytes; 8K-byte system ROM on 550/555; 128K-byte RAM expandable to 512K bytes; 8K-byte system ROM on 4000/4050 ● 1 RS-232C port, 1 Centronics parallel port standard on 550/555, 1100/1150, 1200/1250, 4000/4050 ● systems support Hayes Smartmodem, direct-connect modem, acoustic coupler

Mass Storage ● maximum hard disk storage of 20M bytes on 2 10M-byte 5.25-inch Winchester disk drives on MBC 550/555 only; maximum of 1.28M bytes of diskette storage on 1200/1250 and 4000/4050 using 2 5.25-inch 640K-byte floppy disks; maximum of 620K bytes of diskette storage on 1100/1150 using 2 5.25-inch 310K-byte floppy disks

Printers ● 15- to 16-cps daisywheel; 45-cps dot-matrix printers available from Sanyo

Display/Keyboard ● CRT is integrally packaged into system unit on all models; 12-inch green screen displays 80 characters x 24 lines on all models except 80 characters x 33 or 40 lines on 1200/1250, upper-/lowercase alphanumerics; graphics character set (640x400 pixels) on 1200/1250 only ● detached ASCII-type keyboard with 100 keys total on all models except the 550/555 (85 keys total); 10 programmable function keys on 550/555; 15 programmable function keys on 1200/1250 and 4000/4050, 5 cursor control keys, numeric keypad

Pricing/Support/Availability ● base system price MBC 550—$999 includes 16-bit CPU, 128K-byte RAM, 8K-byte ROM, CRT, keyboard, 1 RS-232C port, 1 Centronics parallel port, 160K-byte floppy disk drive, and software; MBC 1100—$1,699 includes 8-bit CPU, 64K-byte RAM, 8K-byte ROM, CRT, keyboard, 1 RS-232C port, 1 Centronics parallel port, 327K-byte floppy disk drive, and software; MBC 1200—$2,495 includes same as 1100 except dual CPUs and 640K-byte floppy disk drive; MBC 4000—$3,295 includes 16-bit CPU, 128K-byte RAM, 8K-byte ROM, CRT, keyboard, 1 RS-232C port, 1 Centronics parallel port, 640K-byte floppy disk drive, and software ● 90-day warranty, parts and labor, except 1 year on memory board ●

service available from manufacturer for mail-/carry-in hardware maintenance; software updates/corrections available ● sales through manufacturer's representatives, computer stores, general merchandise stores, office equipment dealers ● first delivery MBC 550/555, 1100/1150 in 1982; MBC 1200/1250, 4000/4050 in 1983

■ SEATTLE COMPUTER PRODUCTS INC

1114 Industry Drive, Seattle, WA 98188 ● 800-426-8936

□ Seattle Computer Products Gazelle II

Classification ● single-user/single-tasking floorstanding component system with separately available CRT display ● based on 16-bit processor

Systems Software ● MS/DOS operating system is softloaded from diskette and packaged with basic system ● Microsoft BASIC, FORTRAN, Pascal, and COBOL optional

Applications Software ● MINI VEDIT text processor packaged with basic system; Multiplan electronic spreadsheet and general accounting software optionally available

Systems Hardware ● base system includes CPU, memory, disk storage ● CPU features 10-MHz Intel 8086 microprocessor; 256K-byte main memory expandable to 1M bytes; 2K-byte ROM for monitor program ● Regulated S-100 bus; 18-slot motherboard; 2 async RS-232C interfaces standard, up to 16 additional interfaces optional; 1 Centronics parallel port standard

Mass Storage ● maximum hard disk storage of 15M bytes on 1 5-inch Winchester drive with 120-millisecond average access time and 5M-bps transfer rate ● maximum of 5.0M bytes of diskette storage on 4 1.25M-byte 8-inch double-sided, double-density diskette drives with 174-millisecond average access time and 62.5-byte-per-second transfer rate; 320K-byte 5.25-inch drives also available

Printers ● system supports 1 Centronics printer or multiple serial printers; not supplied by Seattle Computer

Display/Keyboard ● terminals/displays not available through Seattle Computer

Pricing/Support/Availability ● base price—$4,995 includes CPU, 256K-byte RAM, 2K-byte ROM, 2.5M-byte diskette storage on 2 8-inch drives, 2 RS-232C ports, 1 Centronics parallel port, software; above configuration with added 15M-byte Winchester hard disk is priced at $6,495 ● 90-day warranty ● mail-/carry-in maintenance through manufacturer service center; software updates/corrections available for nominal fee ● sales through OEMs and dealers ● first delivered December 1983

■ SEEQUA COMPUTER CORPORATION

Annapolis, MD 21401 ● 301-268-6650; 1-800-638-6066

□ Chameleon & Chameleon Plus

Classification ● single-user/single-tasking 28-pound portable computer ● based on 8- and 16-bit processors ● reportedly compatible with IBM PC ● self-contained carrying case has handle which acts as adjustable stand to CRT

Systems Software ● MS-DOS is bundled with the systems; CP/M-80 2.2, CP/M-86, Concurrent CP/M-86, PC-DOS, and UCSD p-System operating systems optional ● MBASIC-86 bundled with both systems and GWBASIC also included with the Plus; FORTRAN, "C", Pascal, COBOL, PL/1, FORTH, LISP, and macro assembler optionally available ● Condor I database management system and communications software used with a modem bundled on Plus; Perfect Filer database software optionally available

Applications Software ● Perfect Writer word processing, Perfect Calc spreadsheet bundled with both systems, Perfect Speller dictionary also included with Plus

Systems Hardware ● basic systems include CPU, memory,

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chartbeginning on page II.

diskette storage, CRT, keyboard, I/O ports, and video output jack ● dual CPU features 8-bit Zilog Z80A microprocessor operating at 2.5-MHz clock speed and 16-bit Intel 8088 microprocessor operating at 5-MHz clock speed; Intel 8087 Arithmetic Coprocessor optionally available ● 128K-byte RAM standard on Chameleon expandable to 256K bytes internally; 256K-byte RAM standard on Chameleon Plus; both can be expanded to 704K bytes externally; 16K-byte ROM optionally expandable to 96K bytes ● 1 RS-232C serial port (up to 76.8K baud asynchronous), 1 Centronics-compatible parallel port; optionally available are 2nd RS-232C serial port, IEEE-488 bus, 8-slot IBM-compatible expansion chassis (permitting use of IBM PC cards), RGB color monitor interface, analog-to-digital interface (4-channel, 8-bit) ● battery pack is optionally available

Mass Storage ● maximum hard disk storage of 10M bytes using 1 10M-byte Winchester drive which can be optionally attached ● 2 5.25-inch 160K bytes each for 320K-byte total on Chameleon; 2 5.25-inch 320K bytes each for a total 640K bytes standard on Chameleon Plus, optionally available on Chameleon

Printers ● none offered by vendor

Display/Keyboard ● 9-inch green phosphor CRT is integrally packaged into system unit and displays 25 lines of 80 characters in upper-/lowercase alphanumerics; graphics capability of 640x200 or 320x200 pixels; 4-color 320x200 graphics can be generated on external CRT ● detachable IBM-style keyboard has 10 function keys and numeric keypad ● keyboard closes over front of unit for portability

Pricing/Support/Availability ● base system Chameleon—$1,995 includes CPU, 128K-byte RAM, 2 diskette drives, CRT, keyboard, battery pack, serial and parallel ports, and software; Chameleon Plus—$2,895 includes same as Chameleon plus 256K-byte RAM, larger diskette drives, and additional software ● 1-year extended warranty optional ● software updates/corrections available from Seequa; mail-/carry-in and on-site hardware maintenance available from dealers ● sales through over 400 authorized dealers ● first delivery March 1983

□ SEEQUA/XT

Classification ● single-user/single-tasking desktop computer ● based on 8- and 16-bit microprocessors

Systems Software ● MS-DOS 2.1 IBM PC-compatible operating system bundled with the system; CP/M-80, CP/M-86, and Concurrent CP/M-86 optionally available ● GWBASIC including graphics bundled ● Condor Plus database management system and C-Term communications for use with a modem bundled

Applications Software ● Perfect Writer word processing, Perfect Calc electronic spreadsheet, and Perfect Speller 50,000-word spelling checker bundled with the system

Systems Hardware ● basic system includes CPU, memory, disk/diskette storage, CRT, keyboad, I/O ports, and a video output jack ● dual CPUs feature Zilog Z80A microprocessor operating at 2.5-MHz clock speed and Intel 8088 microprocessor operating at 5-MHz clock speed; Intel 8087 arithmetic coprocessor optionally available ● 256K-byte RAM expandable to 640K bytes; 8K-byte ROM expandable to 48K bytes ● 4 available IBM-compatible expansion slots, 1 RS-232C serial port (76.8K baud asynchronous), 1 Centronics-compatible parallel port, IBM RGB Monitor-Compatible port, and a video output jack; optionally available are 2nd RS-232C serial port, IEEE-488 bus, and analog-to-digital interface (4-channel, 8-bit)

Mass Storage ● maximum mass storage of 10M bytes using single 10M-byte 5.25-inch Winchester disk drive, which is standard ● 360K-byte diskette storage using 1 5.25-inch diskette drive, which is standard

Printers ● none offered by vendor

Display/Keyboard ● 9-inch green phosphor CRT displays 25 lines of 80 characters in upper-/lowercase alphanumerics;

graphics capability of 640x200 monochrome, 320x200 color; 4-color 320x200 graphics can be generated on external CRT ● detached IBM-style 83-key keyboard with 10 programmable function keys

Pricing/Support/Availability ● base system—$3,995 includes CPU, 256K-byte RAM, 8K-byte ROM, hard disk and diskette drive, CRT, keyboard, serial and parallel ports, and software ● 1-year extended warranty optional ● software updates/corrections availabe from Seequa; mail-/carry-in and on-site hardware maintenance available from dealers ● sales through over 400 authorized dealers ● first delivery scheduled for February 1984

■ SEIKO/SCI-COM
981 Route 22, P.O. Box 6050, Bridgewater, NJ 08807 ● 201-685-0070

□ Seiko 8600 Series

Classification ● single-user/multitasking (2 tasks) and multiuser system (4 users); desktop computer with separate CRT display ● based on 16-bit processor

Systems Software ● CP/M-86 included in packaged system; MBOS operating system is standard with multiuser systems; MS/DOS, XENIX, Oasis-16, UNIDOL, and MP/M-86 optional ● CBASIC language included in packaged system; MBASIC, COBOL, Pascal, C, and PL/1 optional ● IDOL DBMS available under MBOS operating system; communication packages available supporting IBM 3270, 2780/3780, 2740/2741, SDLC, and HDLC

Applications Software ● Spellbinder, Spellguard, Wordstar word processing, Microplan electronic spreadsheet, general accounting software available from the vendor

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, diskette storage ● CPU features 5-MHz Intel 8086 microprocessor ● 128K-byte RAM expandable to 512K; 16K-byte ROM ● proprietary Seiko bus is a subset of Multibus; 4 async RS-232C ports standard, 1 Centronics printer port standard; 4 parallel ports available (1 per attached terminal), and 1 IEEE-488 parallel port is available ● Ethernet and ARCNET options available ● supports all standard AT&T modems

Mass Storage ● maximum of 80M bytes of hard disk storage on 2 40M-byte Winchester disk drives with 30-millisecond average access time; 10M-byte and 20M-byte drives with 75-millisecond average access time also available; all support 5M-bps transfer rates ● maximum diskette storage of 2M bytes on 2 double-sided, double-density drives with 195-millisecond average access time and 250K-byte-per-second transfer rate; if hard disk attached to the system, 1M bytes are maximum ● a 0.25-inch start/stop cartridge tape or 0.25-inch streaming cartridge tape are optionally available for backup

Printers ● supports multiple printers with Centronics-type 8-bit parallel interface; none available from Seiko/Sci-Com

Display/Keyboard ● detached CRT uses 12-inch green phosphor screen and provides 80 characters x 24 lines, upper-/lowercase alphanumerics; graphics character set, 512x480 pixels, bit-addressable detached 100-key sculptured keyboard includes 20 programmable function keys, 18-key numeric/cursor keypad, and 5 special keys

Pricing/Support/Availability ● base price—single user—$5,415 includes CPU, 128K-byte RAM, 16K-byte ROM, CRT, keyboard, 1M-byte diskette drive, 4 RS-232C ports, 1 parallel printer port, CP/M-86 operating system, and C-BASIC ● mail-/carry-in maintenance available through 2 manufacturer service centers and retailer/dealers; on-site repair service available through Western Union at approximately 400 locations ● sales through office equipment dealers and OEMs ● Seiko 8600 first delivered in U.S. in December 1982

Personal/Microcomputer Survey

■ SHARP ELECTRONICS CORPORATION/Systems Division

10 Sharp Plaza, P.O. Box 588, Paramus, NJ 07652 • 201-265-5600

□ PC-5000

Classification • single-user/single-tasking 11-pound, briefcase-size portable computer • based on a 16-bit processor • can be used in a standalone mode or coupled to a host computer • LCD folds flat over the keyboard for portability

Systems Software • MS-DOS is bundled with the system along with enhanced Graphics version of Microsoft BASIC programming language • Executive Planner database manager available • Supercom unattended electronic messaging and ANSEU/transmission database access and minimal terminal emulation optionally available

Applications Software • Superwriter word processor and SuperCalc 2 spreadsheet optionally available

Systems Hardware • basic system includes CPU, memory, keyboard, LCD, 3-octave sound capability, and I/O ports • CPU features Intel's 8088 microprocessor • 128K-byte RAM expandable to 256K bytes; additional 128K-byte bubble memory and 192K-byte ROM cartridges optional • RS-232C port and 1600-bps audio cassette interface standard; external bus driver • optional 300-bps modem/auto-dialer with loudspeaker

Mass Storage • maximum of 740K bytes of diskette storage using 2 optional 5.25-inch 360K-byte drives • optional audio cassette

Printers • Sharp provides optional 12-cpi, 37-cps dot-matrix thermal impact printer that hooks onto the back of the system

Display/Keyboard • flip-up LCD displays 8 lines of 80 uppercase characters; bit-mapped graphics capability of 640x80 pixels • integral typewriter-style 72-key keyboard has 8 definable function keys

Pricing/Support/Availability • base system—$1,995 includes CPU, 128K-byte RAM, keyboard, LCD, I/O ports, MS-DOS, and BASIC • 90-day warranty • hardware and software service available from manufacturer and dealers • the PC-5000 was first delivered November 1983 from computer retail stores, mass merchandisers, and a direct sales force

■ SKS COMPUTERS, INC

4091 Leap Road, Hillard/Columbus, OH 43026 • 614-876-8668

□ SKS 2000

Classification • single-user/single-tasking or multiuser desktop system with detached CRT • based on 8-bit processor

Systems Software • CP/M or MP/M bundled with system

Applications Software • WordStar word processing and MailMerge bundled • Perfect Calc electronic spreadsheet and ADS general accounting package optional

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O port • CPU features Zilog Z80A microprocessor • 64K-byte RAM expandable to 256K bytes, 2K-byte ROM • 1 RS-232C port standard; up to 11 optional; parallel port, RS-422 port, and IEEE-488 interfaces optional

Mass Storage • maximum of 10M bytes of hard disk storage using a 10M-byte Winchester drive, 5M-byte drive also available; maximum of 1.7M bytes of diskette storage using 3 5.25-inch 560K-byte drives; 2 internal, 1 external

Printers • none offered by vendor

Display/Keyboard • detached 12-inch green phosphor CRT is packaged with basic system and displays 24 lines of 80 characters in upper-/lowercase alphanumerics • detached, typewriter-style programmable keyboard has numeric keypad, 5 cursor control keys, 13 word processing keys, 8 function keys

Pricing/Support/Availability • base system—$2,995 includes CPU, 64K-byte RAM, 1.1M-byte diskette storage, CRT, keyboard, serial port, and software • 90-day warranty • carry-in hardware maintenance and software updates/corrections available from dealers • sales through computer stores and systems houses •30 systems delivered since December 1982

□ SKS NANO Portable Computer

Classification • single-user/single-tasking portable computer; 26 to 30 pounds, 16 inches long x 18 inches wide x 6.5 inches high • compatible with SKS line of desktop computers • based on 8- or 16-bit processor • 4 models available with 8- and 8-/16-bit processors, differing memory sizes and disk capacities

Systems Software • CP/M operating system is bundled with computer; MS-DOS optional • modified C-BASIC bundled • Perfect Filer file management system bundled

Applications Software • Perfect Writer word processing, Perfect Speller, and Perfect Calc electronic spreadsheet bundled; ADS general accounting package optional

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports • CPU features 4-MHz Zilog Z80 processor, upgradable to include 16-bit Intel 80186 processor • 80K-byte RAM expandable to 256K bytes; 2K-byte ROM • 2 RS-232C ports standard, parallel port optional

Mass Storage • maximum of 5M bytes of hard disk storage using 5.25-inch Winchester drive (standard on SKS 3500 and SKS 3600 DP) • maximum 800K-byte formatted diskette storage using 2 5.25-inch drives

Printers • none offered by the vendor

Display/Keyboard • 9-inch integrated green phosphor CRT displays 24 lines of 80 characters in upper-/lowercase alphanumerics • detached, typewriter-style programmable keyboard has 22 function keys, numeric keypad, 4 cursor control keys, and 8 word processing keys

Pricing/Support/Availability • base system—SKS 2502—$2,495 includes 8-bit CPU, 80K-byte RAM, 2 diskette drives, 2 serial ports, CP/M, and applications software; SKS 2602 DP—$3,295 same as 2502, but with dual 8-/16-bit CPU, 128K-byte RAM; SKS 3500—$4,495 same as SKS 2502, but with single 5.25-inch 400K-byte diskette and 5.25-inch 5M-byte Winchester; SKS 3600 DP—$5,295 same as SKS 3500, but with 8-/16-bit CPU and 128K-byte RAM •90-day warranty •carry-in hardware maintenance and software updates/corrections available from dealers • sales through computer stores and systems houses • first delivery July 1983

□ SKS PICO Portable Computers

Classification • single-user/single-tasking portable computer, 18 to 22 pounds • based on 8- or 16-bit processor • available in 2 models with differing CPUs and memory sizes

Systems Software • CP/M operating system bundled with computer; MS-DOS optional • modified C-BASIC bundled • PerfectFile file management system bundled

Applications Software • Perfect Writer word processing, Perfect Speller, and Perfect Calc electronic spreadsheet bundled • ADS general accounting package optional

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports • CPU features 4-MHz Zilog Z80 processor upgradeable to include a 16-bit Intel 80186 processor • 80K-byte dynamic RAM expandable to 256K bytes; 2K-byte ROM • 2 RS-232C ports standard, parallel port optional

Mass Storage • maximum of 400K bytes of formatted diskette storage on dual 3.5-inch drives

Printers • none offered by vendor

Display/Keyboard • 9-inch integrated green phosphor CRT displays 24 lines of 80 characters in upper-/lowercase

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

alphanumerics ● detached, typewriter-style programmable keyboard has 22 function keys and numeric keypad

Pricing/Support/Availability ● base system—SKS 252—$2,595 includes 8-bit CPU, 80K-byte RAM, 2 diskette drives, CRT, keyboard, 2 serial ports, CP/M, and applications software ● SKS 262 DP—$3,395 same as SKS 252, but with dual 8-/16-bit CPUs and 128K-byte RAM ● 90-day warranty ● carry-in hardware maintenance and software updates/corrections available from dealers ● sales through computer stores and systems houses ● first delivery July 1983

■ SONY CORPORATION OF AMERICA/Microcomputer Products Division

Sony Drive, Park Ridge, NJ 07656 ● 201-930-1000

□ SMC-70

Classification ● single-user/single-tasking desktop component system with separate CRT; system without CRT is portable with optional carrying case (10.5 pounds, 15 inches wide, 17 inches deep) ● based on 8-bit microprocessor with 16-bit microprocessor option

Systems Software ● all software comes unbundled; CP/M 2.2 and CP/M-86 softloaded from 3.5-inch diskette; CP/M 2.2 is Sony enhanced for color and peripheral support; CP/M-86 is available only if 16-bit Supercharger is configured with the system ● support provided for Digital Research CB80 BASIC compiler and Sony BASIC interpreter (ROM resident) ● Condor DBMS ● 3275/3276 Bisync Protocol software; Multiterminal Emulation package; menu-driven 2780/3780 emulation package

Applications Software ● International Institute of Technology Pilot Plus authoring language for interactive training; SuperCalc electronic spreadsheet; general accounting, inventory control, payroll, order entry; MetaSoft Letter Writer, Word Processing, Spelling Checker, Mail List, WP Math packages all available from Sony

Systems Hardware ● basic system includes CPU, memory, keyboard battery-backup clock/calendar, tone generator, audio speaker; 13 interfaces ● system is built around 8-bit 4-MHz Zilog Z80A; SMC-7086 Supercharger converts system to 10 bits, based on 16-bit 5-MHz Intel 8086; is also available with companion Intel 8087 Arithmetic Processor ● 64K-byte memory for program/data, 32K-byte system ROM, and 38K-byte graphics RAM, plus 2K-byte character RAM, 2K-byte attribute RAM, and 2K bytes for programmable character generator; Supercharger provides 256K-byte on-board memory expandable to 786K bytes ● 13 I/O interfaces are standard including parallel Centronics-compatible port, RS-232C port, and ports for RGB video, black and white composite video, light pen, numeric keypad, and tape cassette plus 5 I/O ports for expansion; 2 expansion ports may be RS-232C; expansion box for 5 additional I/O ports, IEEE-488 port, video signal converter, all optional ● local area network via Corvus Omninet available

Mass Storage ● maximum hard disk, 73.6M bytes; up to 4 5.25-inch Winchester disks with capacity of 5.7M, 12.1M-, or 18.4M bytes; 8.33-millisecond average access time and 687.5K-bps data transfer rate ● up to 4 256K-byte cache disks can be configured ● maximum diskette storage of 1.12M bytes; dual 3.5-inch micro floppy single-sided, double-density drives provide 280K bytes formatted each; up to 4 may be configured 2 internal to keyboard housing and 2 in own cabinet; 15-millisecond average access time and 500K-bps transfer rate

Printers ● up to 4 printers; 1 parallel attached, 3 serially attached; 120-cps, 80- or 136-character-per-line, dot-matrix printer available from Sony

Display/Keyboard ● detached CRT with 12-inch screen, 80 characters x 25 lines, monochrome or color; color CRT provides up to 16 colors (640x400 pixels); upper-/lowercase alphanumerics with character display super imposed over graphics screen; graphics are bit addressable ● keyboard is integral part of system housing; 72 keys total, 5 user programmable; numeric keypad optional ● up to 2 CRT displays per system

Pricing/Support/Availability ● SMC-70—$995 includes CPU, 64K-byte RAM, keyboards, 13 interfaces ● service is offered by on-site contract and through mail-/carry-in arrangement; service is available from vendor and Decision Data ● 90-day warranty, parts and labor ● systems are marketed through a dealer network ● first delivery October 1982

■ SORD COMPUTER OF AMERICA/c/o Mitsui (USA) Inc

200 Park Avenue, New York, NY 10166-0130 ● 212-878-4403

□ SORD M5

Classification ● single-user/single-tasking home computer system that uses separately available CRT or TV ● based on 8-bit processor ● available in 2 packaged configurations—the Fun Computer and the Multi-Computer

Systems Software ● system monitor resides in ROM and is bundled with the computer ● non-programmable BASIC included with Fun Computer, BASIC Color Graphics bundled with Multi-Computer; programmable BASIC optional ● data management capability included in FALC business package

Applications Software ● word processing, household revenues and expenses, and personal manager included in FALC business package

Systems Hardware ● basic system includes CPU, memory, keyboard, sound generator, video controller, I/O ports ● CPU features Zilog Z80 microprocessor ● 4K-byte user RAM expandable to 20K bytes; 16K-byte video RAM expandable to 32K bytes; 8K-byte ROM ● parallel printer port, and cartridge connector standard; optional joypads, RS-232C cartridge, and expansion unit

Mass Storage ● cassette recorder optional

Printers ● Sord offers a 60-cps thermal printer for the M5

Display/Keyboard ● system uses separately available CRT or TV; displays 25 lines of 40 characters in upper-/lowercase alphanumerics ● integral keyboard has chiclet-style keys

Pricing/Support/Availability ● for both versions—$199; the Fun Computer includes CPU, 4K-byte RAM, 16K-byte video RAM, keyboard, I/O ports, operating system, and non-programmable BASIC; Multi-Computer is the same as the Fun Computer, but with BASIC color graphics instead of non-programmable BASIC plus FALC business package and carrying case ● 90-day warranty ● sales through computer stores, office equipment dealers, OEMs, and a direct sales force ● mail-/carry-in and on-site hardware maintenance available from Centronics Data Computer Corp ● first delivery February 1983

□ SORD M23 Series

Classification ● single-user/single-tasking desktop computers with detached CRTs ● based on 8-bit microprocessor, 16-bit processor optional ● available in 4 models with varying disk storage capacities

Systems Software ● proprietary operating system is bundled with the computer; CP/M-compatible SB-80, MS-DOS, and UCSD p-System available ● BASIC programming language and PIPS (Sord's no-programming business language) bundled; UCSD Pascal, FORTRAN, assembler, and SGL graphics language optional ● database management, and telecommunications capabilities included in PIPS; IBM 3270 emulator optional

Applications Software ● electronic spreadsheet, graphics, and word processing included in PIPS

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports ● CPU features 4-MHz Zilog Z80 microprocessor and an arithmetic processor unit; 16-bit

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Intel 8088 processor optional ● 128K-byte RAM ● 2 RS-232C ports, 1 Centronics-compatible port, 2 video ports, and 3 I/O slots standard ● S-Net local area network and communications control units available

Mass Storage ● maximum hard disk storage of 30M bytes using 5.25-inch 7.5M-byte Winchester drives ● maximum diskette storage of 2M bytes using dual 8-inch drives or dual 5.25-inch drives

Printers ● 120-cps dot-matrix printer, 16-cps daisywheel printer, and a color plotter available from Sord

Display/Keyboard ● system uses 12-inch green phosphor or optional 14-inch 8-color monitor; displays 80 lines of 25 characters in upper-/lowercase alphanumerics; graphics mode of 640x256 pixels ● typewriter-style keyboard is built into the system housing; provides separate numeric pad and 7 programmable keys

Pricing/Support/Availability ● base price—M23 mark III—$2,530 includes CPU, 128K-byte RAM, dual 330K-byte diskette drive, green phosphor CRT, keyboard, I/O ports, and software; M23 mark 41—price not yet determined—includes same as M23 mark III, but with dual 5.25-inch 1M-byte diskette drives; M23 mark V—$3,785 includes same as M23 mark III, but with dual 8-inch 1M-byte diskette drives; M23 mark X—$6,215 includes same as M23 mark III, but with 5.25-inch 1M-byte diskette drive and 7.5M-byte Winchester drive ● 90-day warranty ● sales through computer stores, office equipment dealers, OEMs, and a direct sales force ● mail-/carry-in and on-site hardware maintenance available from Centronics Data Computer Corp ● date of first delivery—December 1982 for M23 mark III, V, and X; July 1983 for M23 mark 41

□ SORD M23P

Classification ● single-user/single-tasking 16.5-pound desktop computer ● based on 8-bit processor; 16-bit processor optional ● also marketed as portable system with optional 2-hour battery pack and carrying case

Systems Software ● proprietary operating system bundled with computer; CP/M-compatible SB-80, UCSD p-System and MS-DOS offered by Sord ● BASIC programming language and PIPS (Sord's no-programmable business language) bundled; UCSD Pascal, FORTRAN, and SGL graphics language optional ● database management and telecommunications capabilities included in PIPS; IBM 3270 emulator optional

Applications Software ● electronic spreadsheet, graphics, and word processing included in PIPS

Systems Hardware ● basic system includes CPU, memory, disk storage, keyboard, and I/O ports ● CPU features 4-MHz Zilog Z80A microprocessor and an arithmetic processor unit; 16-bit Intel 8088 processor optional ● 128K-byte RAM ● 2 RS-232C ports, 1 Centronics-compatible port, 2 video ports, and 3 free I/O slots standard ● optional acoustic coupler ● S-Net local area network and communications control units available

Mass Storage ● maximum 30M-byte hard disk storage using 4 5.25-inch 7.5M-byte Winchester drives ● maximum 580K-byte diskette storage using 2 integral 3.25-inch drives; 5.25-inch and 8-inch floppy drives optional

Printers ● 120-cps dot-matrix printer, 16-cps daisywheel printer, and a color plotter available from Sord

Display/Keyboard ● system uses separately available 12-inch green phosphor or 14-inch 8-color monitor that displays 25 lines of 80 characters in upper-/lowercase alphanumerics; graphics mode of 640x256 pixels; 80-character x 8-line LCD also available; can display characters in 5 modes to 160 characters x 16 lines ● integral typewriter-style keyboard built into system unit; provides numeric pad and 7 programmable keys

Pricing/Support/Availability ● base system—$2,185 includes CPU, 128K-byte RAM, 2 diskette drives, keyboard, I/O ports, and

software ● 90-day warranty ● sales through computer stores, office equipment dealers, OEMs, and a direct sales force ● mail-/carry-in and on-site hardware maintenance available from Centronics Data Computer Corp ● first delivery December 1982

□ SORD M68

Classification ● single-user/single-tasking desktop system with integral CRT ● dual processor system based on 32-bit and 8-bit microprocessor ● compatible with Sord's M23 series when in 8-bit mode

Systems Software ● proprietary operating system bundled with computer; CP/M-68K and MS-DOS also offered by Sord ● BASIC programming language and PIPS (Sord's no-programming business language) bundled; RM/COBOL, FORTRAN IV, and FORTRAN-77 optional ● database management and telecommunications capabilities included in PIPS; optional TBASIC program allows for asynchronous communication

Applications Software ● electronic spreadsheet, graphics, and word processing included in PIPS

Systems Hardware ● basic system includes dual CPU, memory, CRT, keyboard, disk storage, I/O ports ● CPU features 10-MHz 32-bit Motorola MC68000; 4-MHz Z80A serves as sub-processor and can handle I/O functions when not processing 8-bit software programs ● 256K-byte RAM expandable to 1M bytes using 3 256K-byte memory boards and expandable to 4M bytes by adding 256K-byte dynamic RAM chips ● 2 RS-232C ports, Centronics-compatible printer port, IEEE-488 port, and light-pen interfaces standard ● S-Net local area network and communications control units available

Mass Storage ● maximum hard disk storage of 80M bytes using 4 20M-byte Winchester drives; 10M- and 20M-byte 8-inch Winchesters and 7.5M-byte 5.25-inch Winchesters available ● maximum diskette storage of 2.4M bytes; 1.2M-byte 5.25-inch and 8-inch drives available

Printers ● 120-cps dot-matrix printer, 16-cps daisywheel printer, and a color plotter available from Sord

Display/Keyboard ● integrated 12-inch CRT, either green phosphor or color, displays 80 characters x 25 lines; graphics mode of 640x400 pixels ● detached keyboard includes standard ASCII keys, numeric pad, 7 function keys, and separate cursor control cluster

Pricing/Support/Availability ● base price—$4,899 includes dual CPU, 256K-byte RAM, CRT, keyboard, 2 integral 5.25-inch diskette drives, 1 parallel port, 2 RS-232C ports, IEEE-488 port, light pen interface, and software; $5,700 for color CRT version ● 90-day warranty ● sales through computer stores, office equipment dealers, OEMs, and a direct sales force ● mail-/carry-in and on-site hardware maintenance available from Centronics Data Computer Corp ● first delivery September 1983

□ SORD M343

Classification ● single-user/single-tasking or multiuser desktop system with integral CRT; handles up to 3 terminals ● based on 16-bit microprocessor ● 6 models available; differences are in disk capacity and choice of color or black/white CRT

Systems Software ● proprietary RDOS disk operating system bundled; proprietary RMDOS, MS-DOS, CP/M-86, UCSD p-System optional ● M-BASIC and PIPS (Sord's no-programming business language) bundled; FORTRAN-77 and SGL graphics language optional ● database management capabilities included in PIPS ● telecommunications capabilities included in PIPS; optional TBASIC program allows for asynchronous communication

Applications Software ● electronic spreadsheet, graphics, and word processing included in PIPS

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, I/O slots ● CPU features 5-MHz Intel

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

8086 plus 8087 floating-point processor; a Z80A controls the display functions ● 256K-byte RAM expandable to 768K bytes ● S-100 bus with 4 RS-232C ports, 1 Centronics parallel port, 4 free I/O slots ● S-Net local area network and communications control units available

Mass Storage ● maximum hard disk storage of 80M bytes using 5.25-inch 20M-byte Winchester drives ● maximum diskette storage of 2.4M bytes on either 2 8-inch or 5.25-inch diskette drives

Printers ● 120-cps dot-matrix printer, 16-cps daisywheel printer, and a color plotter available from Sord

Display/Keyboard ● integrated 12-inch CRT, either green phosphor or color, displays 80 characters x 25 lines; graphics mode of 640x400 pixels ● detached keyboard contains 12 keys including standard ASCII set, numeric pad, cursor control pad, 20 function keys

Pricing/Support/Availability ● base price—M343 mark 41 G/C—$5,800/$6,645 includes CPU, 256K-byte RAM, dual 5.25-inch diskette drives, green/color CRT, keyboard, 1 parallel port, 4 serial ports, operating system, BASIC language, and PIPS business language ● M343 mark V G/C—$6,195/$6,800 includes same as 41 G/C except dual 8-inch diskette drives ● M343 mark X G/C—$7,575/$8,495—same as 41 G/C except 1 Winchester drive, 1 8-inch diskette drive ● 90-day warranty ● sales through computer stores, office equipment dealers, OEMs, and a direct sales force ● mail-/carry-in hardware maintenance and on-site maintenance through Centronics Data Computer Corp ● first delivery October 1983

■ SPECTRAVIDEO INC

45 South Service Road, Plainview, NY 11803 ● 516-420-6990

□ SV-318

Classification ● single-user/single-tasking desktop component system with integrated keyboard; monitor optional ● based on 8-bit microprocessor

Systems Software ● all software comes unbundled ●CP/M 2.2 is softloaded from diskette ● supports Microsoft BASIC in ROM

Applications Software ● up to 100 entertainment and educational software packages available from the vendor

Systems Hardware ● basic system includes desktop console with keyboard, joystick, game cartridge slot, CPU, memory, and composite video and audio output for TV modulator ● based on 8-bit Zilog Z80A microprocessor with proprietary bus similar to SS-50 ● 32K-byte RAM standard (16K bytes for graphic support); optionally memory can go to 144K bytes; 32K-byte ROM standard with up to 64K bytes optional ● proprietary bus similar to SS-50; Super Expander option allows interfacing of up to 7 different devices; expansion cards include 16K-byte RAM board, 32K-byte RAM board, parallel Centronics-compatible interface, RS-232C interface, 80-column display compatibility (40 columns standard), and dual disk drive controller ● optional dual-channel data cassette interfaces directly to SV-318; provides 1 channel data recorder and a second channel for audio recording; includes built-in condenser microphone ● optional Sensor Touch Graphic Tablet ● optional dual baud rate modem with full answer originate capability and 300- or 1200-baud capability

Mass Storage ● no hard disk available ● maximum diskette storage of 340M bytes; 5.25-inch double-density diskette drive providing 170M-byte storage formatted

Printers ● 50-cps, 80-column, dot-matrix printer available

Display/Keyboard ● display is user supplied and can be a monitor or TV set ● system is capable of displaying 32 characters per line in graphic mode and 40 characters per line in text mode x 24 lines, upper-/lowercase alphanumerics; 16 colors with each row possessing a different foreground and background color; color resolution 256x192 pixels ●graphics is bit-addressable and

memory-mapped ● integral keyboard contains 71 calculator-type keys including 10 user-programmable keys; integral joystick

Pricing/Support/Availability ● base price—$299 includes processor, 32K-byte RAM, keyboard, joystick; full system including diskette drives and super expander under $1,500 ● service provided by vendor through 50 service centers and an as yet unnamed independent service organization ● product is marketed by direct mail, general merchandise dealers, office equipment dealers, and to OEM customers ● first delivery March 1983

□ SV-328 Personal Computer

Classification ● single-user/single-tasking personal computer with integral keyboard; CRT display optional ● based on 8-bit processor ● system is compatible with all of Spectravideo's peripheral products

Systems Software ● CP/M 2.2 is bundled with system ● Super Extended Microsoft BASIC programming language bundled ● Super Terminal program for dialing up the Source or CompuServe included with the system

Applications Software ● Spectrawriter word processing program included with the computer ● up to 100 software packages available from vendor including Spectra-File Cabinet, Spectra Diary, Home Economist, Recipe Management, Coupon Manager, Address Book, Spectra Font Editor, and Sprite Editor

Systems Hardware ● basic system includes CPU, memory, keyboard, cartridge slot, I/O ports, and 3.6-MHz clock ● CPU features Zilog Z80 microprocessor ● 80K-byte RAM expandable to 256K bytes; 32K-byte ROM expandable to 64K bytes ● data cassette, video, and audio interfaces standard; optional single- and 7-slot Super Expander; RS-232C and Centronics interfaces; joystick controller ● SV-701 Smart Modem and SV-805 RS-232C modem available

Mass Storage ● no hard disks available ● maximum of 340K bytes of diskette storage using 2 170K-byte 5.25-inch drives ● 1000-bps data cassette also offered by Spectravideo

Printers ● 50-cps, 80-column dot-matrix printer and graphics tablet available

Display/Keyboard ● display is user supplied and can be a monitor or TV set; video output in text mode is 24 lines x 40 characters in upper-/lowercase alphanumerics; in graphics mode displays 32 characters per line; 16 colors with each row possessing a different foreground and background color; bit-addressable and memory-mapped graphics capability of 256x192 pixels ● integral typewriter-style keyboard includes numeric keypad and 10 programmable keys

Pricing/Support/Availability ● base system—$799 includes CPU, 80K-byte RAM, 48K-byte ROM, keyboard, cartridge slot, I/O ports, clock, and software ● 90-day warranty ● mail-/carry-in hardware maintenance and software updates/corrections available from manufacturer and Carterfone ● sales through a direct sales force and office equipment dealers ● first delivery October 1983

■ SOUTHWEST TECHNICAL PRODUCTS CORPORATION

219 West Rhapsody, San Antonio, TX 78216 ● 512-344-0241

□ S/09 & S+

Classification ● single- and multiuser/multitasking component systems supporting up to 5 tasks; S/90 supports up to 12 users; S+ supports up to 18 users ● based on 8-bit microprocessor with some enhanced 16-bit instructions

Systems Software ● TSC (Technical Systems Consultants) FLEX 9.1 single-user and TSC UniFLEX X.09 operating systems softloaded from diskette ● TSC-developed BASIC, COBOL, Pascal, FORTRAN, "C", FORTH, PILOT, and assembler

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

programming languages • UDRI Data Management System • UNI-TERM provides communication to other UniFLEX-based systems and CU terminal emulation/communication program available

Applications Software • APE screen editor, UniScript word processing, and integrated financial accounting packages available

Systems Hardware • basic systems include CPU, memory, disk storage, CRT, and I/O ports • CPU features 8-bit Motorola 6809 with 500-nanosecond major cycle and 125-nanosecond internal cycle • S/09 includes 64K-byte RAM expandable to 256K bytes; S+ includes 128K-byte RAM expandable to 1M bytes • both models include as standard 2 RS-232C serial ports and a parallel port; 5 additional RS-232C serial ports and 1 Centronics-compatible parallel port optional on S/09; 18 additional RS-232C serial ports and 1 Centronics-compatible parallel port optional on S+ • 300- to 1200-baud modem available

Mass Storage • maximum of 184M bytes of hard disk storage using 4 5.25-inch 46M-byte Winchester disk drives available for both S/09 and S+; 20M-byte and 160M-byte Winchesters are also available (only single 160M-byte drive is supported); 20M- and 46M-byte drives have 41.3-millisecond average access with 5M-bps data transfer rate; 160M-byte drive has 62.5-millisecond average access and 2M-byte-per-second data transfer rate • 7.2M-byte maximum diskette storage using 4 5.25-inch 1.8M-byte diskette drives; 1.25M-byte 8-inch diskette drives also available; both have 174-millisecond average access time and 500K-bps data transfer rate • 8000-bpi 4-track streaming tape drive is also available

Printers • 600-lpm 132-column dot-matrix printer, 55-cps 132-column daisywheel letter-quality printer, and 120-cps 132-column dot-matrix printer available

Display/Keyboard • detached 12-inch P39 green phosphor anti-glare screen displays 82 columns x 24 rows, 82 columns x 24 rows plus 25th status line, 82 columns x 48 rows plus 49th status line, or 128 columns x 66 rows; graphics resolution of 246x196 pixels; display tilts and swivels a full 360 degrees • detached sculptured 127-key keyboard with separate cursor control keys, numeric keypad, 16 word processing keys, and 15 programmable function keys

Pricing/Support/Availability • base system S/09—$6,080 includes CPU, 64K-byte RAM, CRT, dual 5.25-inch diskette drives, and one parallel and 2 serial ports; S+$7,745 includes same as S/09 except 256K-byte RAM and 4 serial ports •90-day warranty; software updates/corrections and on-site repair service available from dealers • sales through dealerships • first delivery 1982

■ SPERRY CORPORATION/Computer Systems

P.O. Box 500, Blue Bell, PA 19424 • 215-542-4213

☐ Sperry Personal Computer

Classification • single-user/multitasking desktop system based on 16-bit processor • IBM PC-compatible identical operating system, disk and data format, graphics, and keyboard; accepts board-level add-ons • 7 models available; differences relate to monochrome or color monitor, diskette capacity, and fixed disk options

Systems Software • MS-DOS 1.25 or 2.0 bundled with computer; Concurrent CP/M and UCSD p-System optional • GWBASIC language bundled • dBASE II database management package offered • UNISCOPE, 3780, SNA/SDLC, and 3270 BSC emulation optionally available; CROSSTALK async package also optional

Applications Software • WordStar word processing, MultiPlan electronic spreadsheet, and Peachtree applications software offered by Sperry

Systems Hardware • basic system includes CPU, memory, I/O ports, CRT, keyboard, time-of-day clock • CPU features 16-bit Intel 8088 processor with switch-selectable speeds of 4.77 MHz or 7.16 MHz • 128K-byte RAM expandable to 640K bytes • 20-mA current-loop, asynchronous RS-232C, and Centronics ports standard; 3 to 5 open slots depending on model

Mass Storage • maximum of 10M bytes of hard disk storage using Winchester drive with a data transfer rate of 5M bps and an average access time of 155 milliseconds • maximum of 720K bytes of diskette storage using two 5.25-inch drives with a data transfer rate of 250K bps

Printers • 100-cps dot-matrix and 55-cps daisywheel printers, both utilizing Centronics ports, available from Sperry

Display/Keyboard • detached 12- or 15-inch CRT is packaged with basic system; 3 monitors available—12-inch monochrome displays 25 lines of 80 characters; 15-inch color displays 25 lines of 40 or 80 characters with up to 16 colors displayable and a graphics resolution of 320x200 or 640x200 pixels; high-resolution color display is same as color monitor, but with a graphics capability of 320x200, 320x400, 640x200, or 640x400 pixels, and up to 256 colors displayable • detached IBM-compatible keyboard has 10 program and 10 special function keys

Pricing/Support/Availability • Model 10—$2,643 includes CPU, 128K-byte RAM, I/O ports, 5 free slots, one 320K-byte diskette drive, monochrome CRT, keyboard, time-of-day clock, MS-DOS, and GWBASIC • Model 20—$3,119 same as Model 10, but with two 320K-byte diskette drives • Model 25—$3,338 same as Model 20, but with color CRT • Model 30—$3,773 same as Model 25, but with high-resolution color display and 4 free slots • Model 40—$5,099 same as Model 10, but with one 10M-byte Winchester drive and 4 free slots • Model 45—$5,318 same as Model 40, but with color CRT • Model 50—$5,753 same as Model 45, but with high-resolution color display and 3 free slots •90-day warranty • mail-/carry-in hardware maintenance and on-site repair service contract available from Sperry • sales through a direct sales force • first delivery January 1984

■ STEARNS COMPUTER SYSTEMS

3501 Raleigh Avenue South, Minneapolis, MN 55416 • 612-929-4400

☐ Stearns Desktop Computer

Classification • multiuser/multitasking desktop computer with detached CRT; handles up to 5 users • based on 16-bit processor • available in 2 models with varying disk storage capacities

Systems Software • MS-DOS and Concurrent CP/M-86 with GSX graphics offered as options • COBOL, FORTRAN, Pascal, and BASIC programming languages • optional dBASE II DBMS • asynchronous, 3270 bisynchronous, SDLC protocols supported

Applications Software • WordStar word processing, MultiPlan electronic spreadsheet, integrated business accounting packages available

Systems Hardware • basic system includes CPU, memory, disk storage, CRT, keyboard, I/O ports, and time and date clock •CPU features 8-MHz Intel 8086 microprocessor; 8087 numeric co-processor optional • 128K-byte RAM plus parity, expandable to 896K bytes; 16K-byte ROM • system provides up to 12 DMA channels, 4 free slots for optional function boards, plus 1 IBM slot; 1 RS-232C port also standard; 2 to 4 additional asynchronous or synchronous RS-232C ports optional •Micronet communications network option for handling up to 5 workstations; optional 2-channel communications controller

Mass Storage • maximum 40M-byte hard disk storage using 2 5.25-inch Winchester drives • maximum diskette storage of either 3.8K bytes using 6 640K-byte drives or of 1.3K bytes using 4 320K-byte drives (all diskette drives 5.25-inch slimline)

Printers • 80- and 200-cps dot-matrix and 25- and 40-cps letter-quality printers

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Display/Keyboard ● detached 12-inch B&W CRT displays 26 lines of 80 characters in upper-/lowercase alphanumerics; NEC 7220 graphics chip standard; 15-inch screen and color graphics optional ● detached slimline keyboard has typewriter-style keys of which 10 are programmable and a numeric keypad

Pricing/Support/Availability ● base system with 1 disk drive—$2,945 includes CPU, 128K-byte RAM, 320K-byte diskette drive, CRT, keyboard, and I/O ports; same system but with 2 diskette drives—$3,475 ● 90-day warranty ● on-site hardware maintenance and software service provided by dealer ● sales through office equipment dealers ● first delivery April 1983

■ STM ELECTRONICS CORPORATION

525 Middlefield Road, Suite 250, Menlo Park, CA 94025 ● 415-326-6226

□ Pied Piper I

Classification ● single-user/single-tasking, 15-pound portable computer; 20.2 inches wide x 10.8 inches deep x 4.0 inches high ● based on 8-bit processor

Systems Software ● CP/M and utilities bundled with system ● MBASIC interpreter optional ● Perfect Filer DBMS bundled; dBASE II optional ● terminal emulation to access Datapac, The Source, or Dow Jones

Applications Software ● PerfectWriter word processing with PerfectSpeller and PerfectCalc electronic spreadsheet bundled; WordStar and SuperCalc optional; MailMerge electronic mail bundled; financial planning package optional

Systems Hardware ● basic system includes CPU, memory, disk storage, keyboard, I/O ports ● CPU features Zilog Z80 processor ● 64K-byte RAM, 4K-byte ROM ● STD bus; parallel printer port standard; RS-232C port and modem optional

Mass Storage ● maximum of 1.6 bytes of formatted diskette storage using 2 5.25-inch 800K-byte slim-line diskette drives (1 integral)

Printers ● system can support 1 printer; none are offered by vendor

Display/Keyboard ● system uses separately available CRT or TV set; display output is 80x24 or 40x24 in upper-/lowercase alphanumerics ● integrated typewriter-style keyboard has 34 programmable keys ● cover goes over keyboard for portability

Pricing/Support/Availability ● base system—$1,299 includes CPU, memory, diskette drive, keyboard, 1 parallel port, and software ● 90-day warranty ● software updates/corrections available from STM; mail-/carry-in and on-site hardware maintenance available from Xerox service centers ● sales through computer stores and office equipment dealers ● first delivery 1983

■ STRATEGIC TECHNOLOGIES, INC

7001 Peachtree Industrial Boulevard, Building 3, Norcross, GA 30071 ● 404-441-8070

□ PC Traveler

Classification ● single-user/single-tasking full-function portable computer with integral AC gas plasma display and detached keyboard ● based on dual 16-bit Intel 80186 processors

Systems Software ● MS-DOS 2.11 operating system softloaded from diskette is bundled with the system ● Microsoft GWBASIC programming language is bundled with the system

Applications Software ● none available directly from vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, printer, display, keyboard, and I/O ports ● CPU features dual 16-bit Intel 80186 microprocessor ● 256K-byte RAM

expandable to 1M bytes; 32K-byte ROM ● proprietary bus structure, 5 slots per system with 3 available, an RS-232C serial port, and a Centronics-compatible parallel port ● an internal 300- to 1200-baud modem is optionally available

Mass Storage ● maximum of 6.2M bytes of hard disk storage on ultra-high-density 5.25-inch disk drive with removable cartridge ● maximum diskette storage is 720K bytes using 2 5.25-inch 360K-byte integral diskette drives

Printers ● 80-cps 80- or 132-column dot-matrix printer

Display/Keyboard ● integral 9.25-inch AC gas plasma 2000-character display; 25 lines of 80 characters; upper- and lowercase alphanumerics; graphics resolution of 256x512 pixels ● detached 88-key keyboard has 10 programmable function keys, separate cursor controls, numeric keypad with an additional enter key

Pricing/Support/Availability ● base system PC Traveler—$4,495 includes dual CPUs, 128K-byte RAM, 32K-byte ROM, 360K-byte diskette drive, display, keyboard, I/O ports, and software ● 90-day warranty ● hardware/software maintenance provided by dealers ● sales through direct sales force, OEMs, and dealerships ● scheduled for first delivery April 1984

■ SUMICOM INC/Subsidiary of Sumitomo Corp

17862 East 17th Street, Tustin, CA 92680 ● 714-730-6061

□ System 330 Business Personal Computer

Classification ● single-user/single-tasking desktop computer with detached keyboard; CRT included in all but minimum configuration ● based on 16-bit processor ● 11 models available with monochrome or color CRTs and differing disk storage capacities

Systems Software ● MS-DOS bundled with system (except in the minimum configuration); CP/M-86 optional ● BASIC bundled; FORTRAN, COBOL, Pascal, and enhanced BASIC also available ● CONDOR and MagBASE database management packages optional ● ASKCOM communications software included with optional modem

Applications Software ● Spellbinder word processing, ProfitPlan or MicroPlan electronic spreadsheets, graphics, and accounting packages available ● CP+ System Manager integrates these applications so data from one application can be extracted and inserted into another application

Systems Hardware ● basic system (with the exception of the minimum configuration, which features only CPU, memory, and keyboard) includes CPU, memory, disk storage, CRT, keyboard, and I/O ports ● CPU is based on Intel 8088 microprocessor ● 96K-byte RAM expandable to 224K bytes; 32K-byte video RAM; 16K-byte ROM ● 8-bit parallel interface standard; system includes 3 free I/O slots; optional expansion unit provides for 5 additional open slots; optional RS-232C interface board ● 300- or 1200-baud asynchronous auto-answer, auto-dial modem available

Mass Storage ● maximum of 20M-byte hard disk storage using a 5.25-inch Winchester drive; 10M-byte Winchester also offered ● maximum 2.4M-byte diskette storage on 330E Model using 2 5.25-inch 720K-byte drives and 2 optional 8-inch 1.2M-byte drives

Printers ● Sumicom offers 120-cps dot-matrix or letter-quality printers for the System 330

Display/Keyboard ● detached 12-inch green phosphor CRT is packaged with 5 of the 330 models and displays 20 or 25 lines and 40 or 80 characters in upper-/lowercase alphanumerics; graphics capability of 640x400 pixels; the color terminal is standard on the 5 other 330 models, display output is the same, but it features 8 colors with 64 different variations and a graphics

Personal/Microcomputer Survey

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capability of 380x262 pixels ● detachable typewriter-style ASCII full-function keyboard has a 10-key numeric pad, 14 edit keys, and 8 keys for up to 16 separate functions

Pricing/Support/Availability ● minimum configuration—C300┃$1,755 —includes CPU, 128K-byte RAM, keyboard, and I/O ports ● the remaining 10 models all feature a CPU, 128K-byte RAM, keyboard, parallel port, MS-DOS and BASIC in addition to their monochrome or color CRT and varying disk storage capacities ● 330A—$2,495 includes 160K-byte diskette drive and a monochrome CRT ● 330AC—$2,695 same as 330A, but with color CRT ● 330B—$2,995 same as 330A, but with 2 drives ● 330BC—$3,195 same as 330B, but with color CRT ● 330E—$3,425 includes 2 720K-byte drives and monochrome CRT ● 330EC—$3,625 same as 330E, but with color CRT ● 330G—$5,665 includes 160K-byte diskette drive and 8M-byte Winchester; monochrome CRT ●330GC—$5,865 same as 330G, but with color CRT ● 330J—$6,275 same as 330G, but with 16M-byte disk instead of 8M bytes ● 330JC—$6,475 same as 330J, but with color CRT ● 120-day warranty ● software updates/corrections available through dealers; on-site and mail-/carry-in hardware maintenance through manufacturers and distributors ● sales through dealer/distributor network ● first delivery June 1983

☐ System 830 Business Personal Computer

Classification ● single-user/single-tasking desktop computer with integral color display and attached keyboard ● based on 8-bit processor

Systems Software ● all software is unbundled ● CP/M operating system ● Enhanced BASIC provides link to color, graphics, integrated printer, and function key; also available Pascal M, BASIC-80, FORTRAN-80, COBOL-80, and PL/1-80 ● communications software supporting automatic dialing and receiving capabilities

Applications Software ● several CP/M applications packages have been modified to incorporate the 830's color and function key features including programs for word processing, database management, financial planning, communications, and graphics ● System Manager links applications software so that data from one application can be used on another such as combining graphics with written reports

Systems Hardware ● basic system includes CPU, 2 floppy disk drives, a keyboard, high-resolution monitor, bidirectional printer, and I/O ports ● 8-bit CPU ● 128K-byte RAM expandable to 256K bytes ● single RS-232C interface, light-pen interface, ROM cartridge interface are all standard; 3 additional I/O ports optional for RS-232C, Centronics-compatible, IEEE-488 instrumental interface, analog-to-digital, and digital-to-analog interfaces optional

Mass Storage ● maximum hard disk storage is 16M bytes using a 16M-byte 8-inch Winchester disk drive; 8M-byte Winchester is also available ● maximum of 2M bytes of diskette storage using 2 1M-byte floppy disk drives

Printers ● 40-cps and 80-cps 40-column or 80-column bidirectional dot-matrix printers

Display/Keyboard ● detached 12-inch 8-color CRT is packaged with the system; displays 20 or 25 lines and 40 or 80 characters in upper-/lowercase alphanumerics; graphics capability of 380x262 pixels on the color screen ● attached typewriter-style ASCII full-function keyboard that has 10-key numeric pad, 8 edit keys, and 10 function keys

Pricing/Support/Availability ● base system—$7,495 includes CPU, color terminal, printer, modem, and dual floppy 1M-byte diskette drives ● 120-day warranty ● software updates/ corrections available through dealers; on-site and mail-/carry-in hardware maintenance through manufacturers and distributors ● sales through dealer/distributor network ● first delivery December 1983

■ SYSTEMS GROUP/MEASUREMENT SYSTEMS & CONTROLS
1601 Orangewood Avenue, Orange, CA 92668 ● 714-633-4460

☐ System 2900

Classification ● single- and multiuser/multitasking component system supporting up to 20 users ● based on 8-bit processor ● available in 10 models with differing memory sizes and disk capacities

Systems Software ● CP/M 2.2 (single-user); MP/M, OASIS (multiuser) operating systems, and Business Express multiuser executive, DBMS, and applications processor available from vendor ● Macro-80, COBOL compiler, and runtime module also available

Applications Software ● complete accounting package optionally provided by Systems Group

Systems Hardware ● basic system includes CPU, memory, disk storage, tape, and I/O ports ● CPU features 4-MHz Zilog Z80A microprocessor ● RAM memory sizes range from 64K to 128K bytes expandable to 512K bytes of bank-selectable memory ● S-100 bus; 20 RS-232C ports, 2 to 4 standard; 1 parallel port standard

Mass Storage ● maximum of 164M bytes of formatted hard disk storage on multiuser models using 5.25-inch 32M-byte Winchester drives ● 10M-byte and 16M-byte formatted Winchesters also available ● maximum 2.5M bytes of diskette storage using 2 8-inch 1.26M-byte formatted diskette drives

Printers ● system can support multiple printers; none offered by vendor

Display/Keyboard ● system uses separately available CRT and keyboard; none available from vendor

Pricing/Support/Availability ● base system—2914—$5,785 includes CPU, 64K-byte RAM, 1.26M-byte diskette drives, 2 serial and 1 parallel port ● 2950—$7,725 same as 2914, but with 1.26M-byte diskette drive and 10M-byte Winchester drive ● 2951—$8,150 same as 2950, but with 16M-byte Winchester ● 2924—$6,325 includes CPU, 128K-byte RAM, 2 1.26-byte diskette drives, 4 serial, and 1 parallel port ● 2960—$8,270 same as 2924, but with 1.26M-byte diskette drive and 10M-byte Winchester drive ● 2962—$8,690 same as 2960, but with 16M-byte Winchester ● 2964—$10,945 same as 2962, without diskette drive but with 15M-byte tape backup ● 2966—$12,615 same as 2962 but with 15M-byte tape backup ● 2968—$12,080 same as 2964 but with 32M-byte Winchester ● 2969—$13,750 same as 2966, but with 34M-byte Winchester ● 1-year warranty ● software updates/corrections and mail-/carry-in and on-site repair service available from manufacturer ● sales through dealer/distributor network

■ SYNCO/Division of Shinlee Corporation
2nd Floor, No 372, Lin-Sen North Road, Taipei, Taiwan R.O.C. ● TAIPE (02) 5210282-7

☐ GPC-700A, GPC-700B & GPC-700C

Classification ● single-user/single-tasking desktop computer which requires separately purchased CRT and keyboard ● based on 8-bit microprocessor ● available in 3 configurations, difference being amount of diskette storage

Systems Software ● all software unbundled ● CP/M operating system available ● BASIC, COBOL, Pascal, FORTH, ADA, and FORTRAN programming languages available

Applications Software ● none supplied by vendor

Systems Hardware ● basic system includes CPU, memory, diskette storage, and I/O ports ● CPU features Zilog Z80A microprocessor operating at 4 MHz ● 64K-byte RAM

Personal/Microcomputer Survey

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nonexpandable and 4K-byte ROM ● 2 RS-232C serial ports and a Centronics-compatible parallel port

Mass Storage ● no hard disk available ● maximum diskette storage is 4 diskette drives, 2 built into packaged system and 2 external drives; available in 3 sizes, one of which is standard on each of the models; 4 640K-byte floppy disk drives for 2.56M bytes on GPC-700C, 4 320K-byte floppy disk drives for 1.28M bytes on GPC-700B, and 4 160K-byte floppy disk drives for 560K bytes on GPC-700A

Printers ● none available from the vendor

Display/Keyboard ● separately priced terminal available ● 12-inch diagonal non-glare screen displays 25 lines of 80 characters using 7x9 dot matrix with 9x12 resolution; 96-character ASCII upper-/lowercase alphabet; 15 graphic characters; 32 control characters ● detached typewriter-style 88-key keyboard with separate cursor controls, numeric keypad with an additional enter key

Pricing/Support/Availability ● base system GPC-700A—$1,199 includes CPU, 64K-byte RAM, 4K-byte ROM, 2 160K-byte floppy disks, 2 RS-232C serial ports, and a parallel port ● hardware/software maintenance provided by dealers ● sales through dealers ● first delivery August 1983

■ SYTE INFORMATION TECHNOLOGY INC

11339 Sorrento Valley Road, San Diego, CA 92121 ● 619-457-2270

□ Syte Series 3000 Model 300

Classification ● single-user/multiprocessor multitasking desktop system with integral display and detached keyboard ● based on 32-bit, 16-bit, and 2 8-bit processors

Systems Software ● all software bundled into packaged system price ● proprietary Global Environment Manager (GEM) system software creates a virtual environment that allows a simultaneous use of different programs running on separate operating systems, with multiple windows on the screen; syte/UNX implements the UNIX standard, AT&T System V operating system ● FORTRAN, Pascal, and "C" programming languages available ● GEM also includes Ethernet networking capabilities

Applications Software ● utility software and database management scheduled for first half of 1984 ● word processing, engineering graphics, electronic mail, and spreadsheet software expected by first half of 1984

Systems Hardware ● basic system includes CPU, memory, detached keyboard, and display ● CPU is single board that includes National Semi-conductor NS 16032 16-/32-bit microprocessor for executing code, an Intel 16-bit 80186 microprocessor for direct memory access and network and disk interfacing, and 2 Intel 8-bit 8051 microprocessors, one for communications and another for diagnostic processing ● 1M-byte memory expandable to 15M bytes ● multibus architecture

Mass Storage ● none available from Syte Information Technology Inc

Printers ● none available from Syte Information Technology Inc

Display/Keyboard ● 19-inch monochrome or color monitor; monochrome monitor comes with high-resolution graphics (1024x800 pixels); color monitor has medium-resolution (640x480x4) bit-mapped graphics ● detached IBM-style keyboard

Pricing/Support/Availability ● base system—$21,900 includes CPU, 1M-byte memory, keyboard, and monochrome CRT; $24,900 for base system with color monitor ● both systems include Syte's GEM, syte/UNX operating system, and 3 programming languages ● software maintenance available from manufacturer; hardware maintenance from manufacturer and OEM ● distribution through direct sales force and OEMs ● first delivery expected to be shipped first quarter of 1984

■ TAB PRODUCTS COMPANY, ELECTRONIC OFFICE PRODUCTS

1451 California Avenue, Palo Alto, CA 94304 ● 415-858-2500

□ Tab System 830 & 1630 Workstations

Classification ● single-user/single-tasking desktop computers with integrated CRT displays ● 830 based on 8-bit processor; 1630 based on 16-bit processor

Systems Software ● CP/M 2.2 included in 830 packaged system; CP/M-86 included in 1630 packaged system; MP/M optionally available for both systems ● no programming languages available directly from systems vendor ● Personal Pearl database software available ● VT-52, VT-100, VT-132, and Prime terminal emulation software

Applications Software ● WordStar word processing and SuperCalc financial spreadsheet software available from the vendor

Systems Hardware ● 830 and 1630 base systems include CPU, memory, CRT, keyboard disk storage ● 830 CPU utilizes 8-bit Intel 8085 microprocessor; 1630 CPU utilizes 16-bit Intel 8088 microprocessor ● 830 provides 64K-byte main memory expandable to 128K bytes; 1630 provides 128K-byte main memory expandable to 256K bytes; both systems require 8K bytes for operating system ● single-board systems utilize Multibus architecture; 5-card expansion cage; 2 async RS-232C ports standard and either 1 additional RS-232C or RS-422 port optional on both systems; 1 optional parallel port on both systems

Mass Storage ● maximum hard disk storage is 45M bytes on 1 internal, standard 5M-byte Winchester drive and 4 external optional 10M-byte Winchester drives ● maximum diskette storage is 1.9M bytes on 1 internal, standard 8-inch 630K-byte drive and 2 external optional 8-inch 630K-byte drives

Printers ● up to 2 printers per system ● 120-cps, 80-/132-character-per-line dot-matrix, 136-/224-character-per-line dot-matrix; and 200-cps, 136-/231-character-per-line dot-matrix printers available

Display/Keyboard ● integral CRT has 15-inch monochrome display; provides 132 characters x 24 lines; upper-/lowercase; 512x384 pixels in graphics mode, 1320x390 pixels in alphanumeric mode ● sculptured, moveable keyboard features typewriter format, business graphics characters plus 26 control keys and 14-key numeric pad

Pricing/Support/Availability ● 820 base system price—$7,650 includes CPU, 64K-byte RAM, 5M-byte Winchester disk, 630K-byte diskette drive, CRT, keyboard, 5-card expansion cage, communications capability, and CP/M 2.2 operating system; 1630 base system price—$8,035 includes same except 16-bit processor, 128K-byte RAM, and CP/M-86 operating system ● 90-day warranty, parts and labor ● maintenance available through 25 manufacturer service centers, retailers/dealers, and Indeserv service organization; on-site and depot maintenance ● sales through direct sales force, office equipment dealers, and OEMs ● System 830 and 1630 first delivered July 1982; approximately 110 total systems installed as of March 1983

■ TARBELL ELECTRONICS

950 Dovlen Place, Carson, CA 90746 ● 213-538-4251

□ Tarbell Empire Series

Classification ● single-user/single-tasking and multiuser (up to 8) component systems ● based on 8-bit microprocessor ● various models differ in disk storage capacity

Systems Software ● CP/M 2.2 bundled with single-user systems; MP/M-II bundled with multiuser systems; CP/M 3.0, CP/Net

Personal/Microcomputer Survey

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network operating system optional ● CBASIC-2, Tarbell BASIC bundled; PL/1-80, Digital Research Macro Assembler optional ● Tarbell DB3 Database System bundled

Applications Software ● WordStar word processing optionally available

Systems Hardware ● base system includes CPU, memory, disk storage, I/O ports, full interrupts, memory management, timer ● CPU features 6-MHz Zilog Z80B microprocessor ● 64K-byte RAM (single user), 256K bytes (multiuser), both expandable to 1M bytes; 32K-byte bootstrap ROM ● S-100 bus computer; 8-slot motherboard except for single-user II 19 model, 19-slot motherboard, 2 RS-232C ports (single user), 6 ports (multiuser); 2 parallel ports (multiuser only); 4 serial, 2 parallel I/O interface boards optional

Mass Storage ● maximum of 104M bytes of hard disk storage; up to 4 drives; 5-inch 5M-byte Winchesters, 8-inch 10M-, 16M-, 26M-byte Winchesters available ● maximum of 4.8M-byte diskette storage; up to 4 drives; 8-inch 600K-byte and 1.2M-byte drives available

Printers ● none available from Tarbell

Display/Keyboard ● none available from Tarbell

Pricing/Support/Availability ● base price—single-user systems include 64K-byte RAM, disk storage, 2 serial ports, software—Empire II—$3,995 with 2 1.2M-byte diskette drives; Empire II 19—$4,285 with same as II except 19-slot motherboard; Empire 5-, 10-, 16-, 26M-byte Winchester systems with 1.2M-byte floppy backup—$5,895 to $6,295; multiuser systems include 256K-byte RAM, same hard disk storage as single-user systems, 6 serial, 2 parallel ports, software—$7,595 to $7,995 ● 6-month warranty on parts and labor ● maintenance through Tarbell and dealers ● sales through approximately 60 dealers nationwide ● first delivery 1981

☐ Tarbell Rebel Series

Classification ● single-user/single-tasking and multiuser (up to 4) component systems ● based on 8-bit microprocessor ● various models differ in disk storage capacity

Systems Software ● CP/M 2.2 bundled with single-user systems; MP/M II, CP/M 3.0 bundled with multiuser systems; CP/Net network operating system optional ● Tarbell BASIC bundled; CB-80, CBASIC-2 optional ● Tarbell DB3 Database System bundled

Applications Software ● WordStar, SpellStar, and SuperCalc electronic spreadsheet optional from Tarbell

Systems Hardware ● base system includes CPU, memory, disk storage, I/O ports; CPU features 6-MHz Zilog Z80B microprocessor ● 64K-byte RAM (single user), 256K-byte RAM (multiuser); 32-byte bootstrap ROM ● S-100 bus computer; 2 RS-232C ports (single user); 6 RS-232C ports, 2 parallel ports (multiuser)

Mass Storage ● maximum of 64M bytes of hard disk storage; up to 4 drives; 5-, 10-, 16M-byte Winchesters available ● maximum of 1.5M bytes of diskette storage; up to 4 drives; 5.25-inch 372K-byte drives available

Printers ● none available from Tarbell

Display/Keyboard ● none available from Tarbell

Pricing/Support/Availability ● base price for single-user system includes 64K-byte RAM, disk storage, 2 serial ports, software—Rebel with 2 diskette drives—$3,195; Rebel 5/10/16M-byte Winchester systems with 1 floppy backup—$4,595 to $4,995; base price for multiuser systems includes 256K-byte RAM, 6 serial ports, 2 parallel ports—Rebel with 5/10/16M-byte Winchester, floppy backup—$6,295 to $6,695 ● 6-month warranty, parts and labor ● maintenance through Tarbell and dealers ● sales through approximately 60 dealers nationwide ● first delivery 1983

■ TELCON INDUSTRIES INC

1401 NW 69th Street, Ft. Lauderdale, FL 33309 ● 305-971-2250

☐ Telcon Portable Computers

Classification ● single-user/single-tasking 22-pound portable computers; 17.5 inches wide x 16.5 inches deep x 10 inches high ● based on 8-bit processor ● available in 2 models—Zorba and Nomis-9—with differing screen sizes and diskette capacities

Systems Software ● CP/M 2.2 is bundled with system ● Digital Research CBASIC and Microsoft assembler also bundled ● optional InfoStar DBMS ● MITE telecommunications software (for user with optional modem)

Applications Software ● WordStar word processing, CalcStar electronic spreadsheet, and MailMerge bundled; SpellStar and an accounting package optionally offered by Telcon

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports ● CPU features 4-MHz Zilog Z80A processor ● 64K-byte RAM (6K bytes for CP/M), 16K-byte EPROM ● single-board computer; 2 serial ports (1 async/sync; 1 just async), 1 parallel port, 1 IEEE-488 port ● optional 300-/1200-bps modem

Mass Storage ● maximum 800K-byte diskette storage on Zorba using 2 5.25-inch 400K-byte diskette drives; maximum 1.6M-byte diskette storage on Nomis-9 using 2 5.25-inch 800K-byte diskette drives ● compatible disk formats: Xerox 820, Kaycomp, DEC VT-180, Osborne, and IBM PC

Printers ● system can support 1 printer; 120-cps bidirectional dot-matrix printer available from vendor

Display/Keyboard ● green phosphor CRT is integrally packaged into system unit; 7-inch display on Zorba, 9-inch on Nomis-9; both display 24 lines of 80 characters in upper-/lowercase alphanumerics ● detachable typewriter-style keyboard has 55 programmable keys and numeric keypad; keyboard folds over front of unit for portability

Pricing/Support/Availability ● base system—Zorba—$1,995 includes CPU, 64K-byte RAM, 2 400K-byte diskette drives, 7-inch CRT, keyboard, I/O ports, software ● Nomis-9—$2,395—same as Zorba, but with 2 800K-byte diskette drives and 9-inch CRT ● 90-day warranty ● software updates and hardware maintenance available through manufacturer and dealers ● sales through dealer/distributor network ● first Zorba delivery June 1982; Nomis not yet delivered

■ TELERAM COMMUNICATIONS CORPORATION

2 Corporate Park Drive, White Plains, NY 10604 ● 914-694-9270

☐ Teleram 3000/4000/5000

Classification ● single-user/single-tasking 8.75-pound (3000), 9-pound (4000), and 10-pound (5000) portable computers that can fit into a briefcase; all systems are battery operated ● based on 8-bit micoprocessor ● all available in 2 bubble memory sizes ● models differ in number of LCD lines displayable

Systems Software ● CP/M 2.2 is bundled with packaged systems; UCSD p-System optionally available on 4000 and 5000 ● Microsoft BASIC programming language available from vendor ● utilities available: KEYDEF function key definition utility; DEFAULT allowing modification of keyboard, communications, and IOBYTE parameters; ASSIGN allowing I/O redirection; and FORMAT supports formatting disks in Osborne or IBM PC CP/M-86 formats ● teleTALK terminal emulation and file transfer available

Applications Software ● teleTEXT text editor bundled with the system ● WordStar word processing and SuperCalc electronic spreadsheet optionally available from Teleram

Systems Hardware ● basic system includes CPU, memory, CRT, keyboard, serial port, and real-time clock ● CPU features Zilog 2.5-MHz Z80L processor ● 64K-byte RAM, 4K-byte ROM, 128K-

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

or 256K-byte non-volatile, reloadable magnet bubble memory • 1 asynchronous RS-232C port standard, 2 RS-232C ports, 1 parallel port, RS-170 CRT interface available with optional 3500 Office Station; teleCONNECT high-speed parallel bus standard • 300-baud acoustic coupler available

Mass Storage • maximum of 1.3M bytes of diskette storage using 4 5.25-inch 320K-byte diskette drives available with 3500 Office Station

Printers • system can support 1 printer; none offered by vendor

Display/Keyboard • system uses separately available CRT or TV set; standard adjustable LCD is integrally packaged into system units and displays 4, 8, and 16 lines of 80 characters on 3000, 4000, 5000, respectively, in upper-/lowercase alphanumerics; scrolling window on 24x80 screen; 14 graphic characters • integrated typewriter-style keyboard has 16 programmable keys and programmable numeric keypad

Pricing/Support/Availability • all systems include CPU, 64K-byte RAM, 128K byte bubble memory, LCD display, serial port, battery, real-time clock, and software; 3000—$1,595 includes 4-line LCD display; 4000—$1,995 includes 8-line LCD display; 5000—$2,495 includes 16-line LCD display • 3500 Office Station—$1,995 includes RS-170 video interface, parallel interface, 2 RS-232C ports, 1 5.25-inch 320K-byte diskette drive, and 8 interface slots • 90-day warranty • on-site and mail-/carry-in hardware maintenance available from manufacturer and dealers • sales through direct mail, computer stores, dealers, OEMs, and a direct sales force • first delivery January 1983

■ TELEVIDEO SYSTEMS, INC
1170 Morse Avenue, Sunnyvale, CA 94086 • 408-745-7760

□ TPC I

Classification • single-user/single-tasking 28-pound portable computer, 18 inches wide x 8 inches high x 15 inches deep • based on 8-bit microprocessor • software and media compatible with TeleVideo TS803 desktop

Systems Software • TeleVideo's Mmmost networking operating system • TeleVideo COBOL programming language • TeleDBMS database management • Tele 3780 Remote Batch Emulator, IBM 3270 emulator, TeleAsync, and Remote Workstation Processor packages available from TeleVideo

Applications Software • TeleSolutions II bundled with packaged system includes TeleWrite word processing, TeleCalc financial spreadsheet, and TeleChart graphic charting; office automation, financial modeling, and accounting business graphics

Systems Hardware • basic system includes CPU, memory, disk storage, keyboard, CRT, and I/O ports • CPU features Zilog Z80A processor • 64K-byte RAM, 8K-byte ROM; 32K-byte video RAM • 1 Super Mouse port, 1 parallel port, and 1 RS-232C port standard • optional RS-422 port for networking capability

Mass Storage • maximum of 737.2K bytes of formatted diskette storage using 2 5.25-inch floppies (1 standard) with 84-millisecond average access time and 250K-byte-per-second data transfer rate

Printers • TeleWriter 18-cps letter-quality printer available

Display/Keyboard • system uses integral 9-inch green phosphor CRT that displays 24 lines of 80 characters in upper-/lowercase alphanumerics; graphics capability of 640x240 pixels • detached 83-key keyboard has numeric keypad, 32 programmable keys, and 10 function keys • keyboard folds over the CRT for portability

Pricing/Support/Availability • base system—$1,699 includes CPU, 64K-byte RAM, 32K-byte video RAM, disk storage, keyboard, CRT, I/O ports, CP/M operating system, and application software • 90-day warranty • mail-/carry-in

hardware maintenance and software updates available through distributors and TRW • first delivery November 1983

□ TPC II

Classification • single-user/single-tasking portable system with integrated CRT • based on 16-bit microprocessor • IBM PC compatible

Systems Software • MS-DOS operating system • GWBASIC programming language • TeleAsync DOS provides asynchronous terminal emulation or file-by-file transfer software

Applications Software • TeleDraw graphics design software available from vendor

Systems Hardware • base system includes CPU, memory, CRT, keyboard, diskette storage, and I/O ports • CPU features Intel 8088 microprocessor operating at 4.7 MHz; Intel 8087 arithmetic coprocessor • 128K-byte RAM expandable to 256K bytes; 8K-byte ROM • IBM bus architecture; single RS-232C serial port and single parallel port standard

Mass Storage • vendor indicates hard disks are optional but does not indicate what hard disks are available • maximum of 1M bytes of diskette storage using 2 500K-byte 5.25-inch diskette drives; 84-millisecond average access and 250K-byte-per-second data transfer rate

Printers • letter-quality 18-cps printer; uses serial or parallel interface

Display/Keyboard • integrated CRT displays 80 characters x 24 lines on a 14-inch green screen, 25th status line, upper-/lowercase alphanumerics; graphics resolution of 640x200 pixels • detached IBM-style keyboard with 83 keys, separate cursor control keys, and numeric keypad; 10 programmable keys and 30 special function keys

Pricing/Support/Availability • this is a new system and has not been priced by the vendor • 90-day warranty • service available from manufacturer, third party, and TRW service organization • sales through computer stores, OEMs, and distributors • first delivery was scheduled for November 1983

□ TeleVideo TS 802, TS 802H, TS 803, TS 803H

Classification • single-user/single-tasking desktop systems with integrated CRTs; based on 8-bit microprocessor • can be used as standalone computers or satellite stations in multiuser configurations

Systems Software • CP/M operating system is packaged with computer • TeleVideo COBOL programming language • TeleDBMS database management system • Tele3780 Remote Batch Emulator, IBM 3270 Emulator, TeleAsync, Remote Workstation Processor Communications packages available from TeleVideo

Applications Software • TeleSolutions II bundled with packaged system includes TeleWrite word processing and TeleCalc financial spreadsheet • office automation, financial modeling, accounting, business graphics packages available from TeleVideo

Systems Hardware • base system includes CPU, memory, CRT, keyboard, disk storage, I/O ports • CPU features Zilog Z80A 4-MHz microprocessor • 64K-byte RAM, 4K-byte EPROM on TS 802/TS, 802H, 8K-byte EPROM on TS 803 and TS 803H; 64K-byte RAM expandable to 128K bytes, 32K-byte display memory • 2 RS-232C ports, RS-422 port on 802/802H; 1 RS-232C port for printer, 1 RS-232C modem port, optional RS-422 port on 803 and 803H

Mass Storage • maximum of 15M bytes of formatted hard disk storage on TS 802H using 1 Winchester drive and 10M bytes of formatted hard disk storage on TS 803H using 1 Winchester drive; both drives have 3-millisecond average access and 5M-byte-per-second data transfer rate; no hard disk on other models • maximum of 737K bytes of formatted diskette storage on

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TS 802 and TS 803, using 2 5.25-inch 367K-byte (formatted) floppy disks; 367K bytes of formatted diskette storage on TS 802H and TS 803H using 1 5.25-inch diskette drive; diskettes have 6-millisecond average access and 250K-byte-per-second data transfer rate

Printers ● letter-quality, 18-cps printer available from vendor

Display/Keyboard ● integrated CRT displays 80 characters x 24 lines on a 12-inch (TS 802/TS 802H) or 14-inch (TS 803/TS 803H) green screen, upper-/lowercase alphanumerics; graphics resolution of 640x240 pixels on TS 803 and TS 803H ● detached keyboard with 110 keys and 32 function keys (TS 803/TS 803H) and 101 keys and 11 function keys (TS 802/TS 802H) ● 15 special graphics characters on TS 802/TS 802H

Pricing/Support/Availability ● base system price, TS 802—$3,495 includes CPU, 12-inch CRT, keyboard, 64K-byte RAM, 4K-byte EPROM, 2 floppy disks, I/O ports; TS 802H—$5,995 includes same as TS 802 except 1 floppy disk, 1 Winchester; TS 803—$2,495 includes CPU, 64K-byte RAM, 32K-byte video RAM, 8K-byte EPROM, 14-inch CRT, keyboard, I/O ports, 2 diskette drives; $3,995 includes same as TS 803 except 1 floppy disk and 1 Winchester ● 90-day warranty ● service available from manufacturer and TRW ● sales through OEMs, dealers, distributors ● first delivery 1981, TS 802/TS 802H; 1983, TS 803 and TS 803H

☐ TS 804

Classification ● multiuser desktop system supporting up to 4 users ● based on 8-bit microprocessor

Systems Software ● MP/M-II operating system is packaged with system; CP/M-80 and OASIS operating systems optionally available ● TeleVideo COBOL programming language ● TeleDBMS database management system ● TeleAsync scheduled for near future

Applications Software ● TeleSolutions II which includes TeleWrite word processing, TeleCalc financial spreadsheet, and TeleChart graphics charting; office automation, financial modeling, accounting, and business graphics available from TeleVideo

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, diskette/disk storage, and I/O ports ● CPU features Zilog Z80A microprocessor operating at 4 MHz ● 320K-byte RAM; 8K-byte ROM; and 64K-byte cache memory ● 3 RS-232C serial ports and 1 parallel Centronics-compatible port

Mass Storage ● maximum hard disk storage of 10M bytes using single 10M-byte 5.25-inch Winchester disk drive ● maximum diskette storage of 737K bytes using single 737K-byte 5.25-inch diskette drive

Printers ● letter-quality 18-cps printer; uses parallel or serial interface

Display/Keyboard ● integrated tilt CRT displays 80 characters x 24 lines on a 14-inch green phosphor screen, 25th status line, upper-/lowercase alphanumerics ● detached sculpted-key 90-key keyboard with separate cursor control keys and numeric keypad; 3 special function keys

Pricing/Support/Availability ● this is a new system and has not been priced by the vendor ● 90-day warranty ● service available from manufacturer, third party, and TRW service organization ● sales through computer stores, OEMs, and distributors ● first delivery was scheduled for December 1983

☐ TeleVideo TS 806/20, TS 816/40

Classification ● multiuser desktop systems used as service processor in network environment; up to 6 users on 806/20, up to 16 users on 816/40 ● based on 8-bit microprocessor ● user stations can be any combination of TeleVideo's 8- or 16-bit computers

Systems Software ● CP/M operating system comes packaged with computer; Televideo's MmmOST service operating system handles scheduling and shared file access and comes packaged with system ● TeleVideo COBOL programming language ● TeleDBMS database management system ● Tele 3780 Remote Batch Emulator, IBM 3270 Emulator, TeleAsync, Remote Workstation Processor communications packages available from TeleVideo

Applications Software ● TeleSolutions II bundled with packaged system includes TeleWrite word processing, TeleCalc financial spreadsheet, and TeleChart graphics charting; office automation, financial modeling, accounting, business graphics packages available from TeleVideo

Systems Hardware ● base systems include CPU, memory, mass storage, I/O ports ● CPU features Zilog Z80A 4-MHz microprocessor ● 64K bytes of RAM on TS 806/20, 128K bytes of RAM on TS 816/40; 4K bytes of EPROM ● 1 RS-232C port (printer), 6 RS-422 (SDLC) ports, 1 Centronics parallel port on TS 806/20; 1 RS-232C (modem and printer) port, 16 RS-422 (SDLC) ports, 1 Centronics parallel port on TS 816/40 ● TeleVideo proprietary local network (RS-422 Star Cluster) ties up to 16 personal computers in one network

Mass Storage ● maximum of 15M bytes of formatted hard disk on 806/20 using 1 5.25-inch 15M-byte Winchester; maximum of 33M bytes of formatted disk storage on 816/40 using an 8-inch 33M-byte Winchester ● maximum of 367K bytes of formatted diskette storage for 806/20 using 1 5.25-inch floppy drive ● 14.5M-byte tape cartridge for backup on 816/40; optional auxiliary tape cartridge drive available for 806/20

Printers ● letter-quality, 18-cps printer available from vendor

Display/Keyboard ● utilizes user station CRTs and keyboards

Pricing/Support/Availability ● basic system price—TS 806/20—$6,995 includes CPU, 64K-byte RAM, 4K-byte EPROM, floppy disk, 15M-byte Winchester, I/O ports, operating system; TS 816/40—$12,995 includes same as TS 806/20 except 14.5M-byte tape drive, 33.2M-byte Winchester, no diskettes ● 90-day warranty ● service available from manufacturer, third party, TRW ● sales through direct sales force, OEMs, dealers, distributors ● first delivery TS 806/20, 1981; TS 816/40, 1982

☐ TeleVideo TS 1602G, TS 1602GH

Classification ● single-user/single-tasking desktop computer with integrated CRT ● based on 16-bit microprocessors ● used as standalone system or as user station in multiuser environment

Systems Software ● CP/M-86 operating system packaged with computer, includes 4K graphics driver; supports GKS (Graphical Kernel System) for writing graphics software ● TeleVideo COBOL programming language ● TeleDBMS database management system ● Tele3780 Remote Batch Emulator, IBM 3270 Emulator, TeleAsync, Remote Workstation Processor communications packages available from TeleVideo

Applications Software ● WordStar word processing, office automation, financial modeling, accounting, business graphics packages available from TeleVideo

Systems Hardware ● base systems include CPU, memory, disk storage, I/O ports ● CPU features Intel 8088 5-MHz microprocessor, NEC 7220 graphics co-processor; on-board socket for 8087 Floating Point Processor ● 128K-byte RAM expandable to 256K bytes, 32K-byte bit-map (image) memory, 4K-byte EPROM ● 2 RS-232C ports, 1 RS-422 port (SDLC control link); graphics tablet interface

Mass Storage ● maximum of 7.47M bytes of formatted hard disk storage using 1 Winchester drive (TS 1602GH only) ● maximum of 737.2K bytes of formatted diskette storage using 2 5.25-inch floppy disks (TS 1602G); 1 on 1602GH

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If the entry you seek is not found in its alphabetical sequence, please refer to the cross-reference chart beginning on page II.

Printers ● letter-quality, 35-cps printer and graphics tablet available from vendor

Display/Keyboard ● system unit has integrally packaged CRT; 12-inch green phosphor screen displays 80 characters x 24 lines; graphics display has 576x424 pixels ● detached Selectric-style keyboard has 96 ASCII keys, graphics keys, 32 control characters, cursor control

Pricing/Support/Availability ● basic price—TS 1602G—$4,495 includes CPU, graphics processor, 128K-byte RAM, 4K-byte EPROM, 32K-byte bit-map RAM, 2 floppy disks, I/O ports, operating system; TS 1602GH—$6,995 includes same as TS 1602G except 1 floppy disk, 1 Winchester hard disk ● 90-day warranty ● service available from manufacturer and TRW ● sales through direct sales force, OEMs, dealers, distributors ● first delivery 1982, both models

☐ TeleVideo TS 1603, TS 1603H

Classification ● single-user/single-tasking desktop system with integrated CRT ● based on 16-bit microprocessor ● can be expanded into multiuser network station ● difference between models is in disk capacity

Systems Software ● CP/M-86 operating system packaged with computer; MS/DOS Version 2 and GSX-86 graphics extension offered as options ● TeleVideo COBOL programming language ● TeleDBMS database management system ● Tele3780 Remote Batch Emulator, TeleAsync communications packages available from Redding Group or Phone 1 Software

Applications Software ● TeleSolutions-86 which includes TeleWrite word processing, TeleCalc financial spreadsheet, and TeleChart graphic charting, office automation, financial modeling, accounting, business graphics packages available from TeleVideo

Systems Hardware ● base system includes CPU, memory, diskette storage, I/O ports ● CPU features Intel 8088, 5-MHz microprocessor ● 128K-byte RAM expandable to 256K bytes ● 2 RS-232C ports, 1 RS-422 (SDLC) port standard; RJ11C phone jack connector for Supermouse optional

Mass Storage ● no hard disk storage available ● maximum diskette storage of 2.94M bytes using 2 1.47M-byte 5.25-inch diskette drives; drive has 6-millisecond average access time and 250K-byte-per-second data transfer rate

Printers ● letter-quality, 18-cps printer available from vendor

Display/Keyboard ● integrated CRT displays 80 characters x 24 lines on a 14-inch green screen, 25th status line, upper-/lowercase alphanumerics; 32K-byte optional RAM graphics card mapped into 640x240-pixel addressable display space ● detached Selectric-style keyboard with 112 ASCII keys, 32 control characters, 16 programmable function keys; utilizes 4 languages—English, German, French, Spanish

Pricing/Support/Availability ● basic price, TS 1603—$2,995 includes CPU, 128K-byte RAM, 4K-byte EPROM, floppy disks, I/O ports, operating system ● 90-day warranty ● service available from manufacturer, third party, TRW ● sales through direct sales force, OEMs, dealers, distributors ● first delivery 1983 for TS 1603

☐ TS 1605

Classification ● single-user/single-tasking desktop system with integrated CRT ● based on 16-bit microprocessor ● IBM PC compatible

Systems Software ● MS-DOS operating system ● GWBASIC programming language ● TeleAsync-DOS asynchronous terminal emulation or file-by-file transfer software available

Applications Software ● TeleDraw graphics design software available from vendor

Systems Hardware ● base system includes CPU, Co-CPU,

memory, diskette storage, and I/O ports ● CPU features Intel 8088 microprocessor operating at 4.7 MHz and an Intel 8087 arithmetic coprocessor ● 128K-byte RAM expandable to 256K bytes; 8K-byte ROM ● IBM bus architecture; an RS-232C serial port and a parallel port standard

Mass Storage ● vendor indicates hard disk is optional but does not specify what drives are available ● maximum diskette storage of 1M bytes using 2 500K-byte 5.25-inch diskette drives; 84-millisecond average access and 250K-byte-per-second data transfer rate

Printers ● letter-quality, 18-cps printer; uses parallel or serial interface

Display/Keyboard ● integrated tilt-designed CRT displays 80 characters x 25 lines on a 9-inch screen; upper-/lowercase alphanumerics; graphics resolution of 640x200 pixels ● IBM-style keyboard with 83 keys, separate cursor control keys, and numeric keypad; 30 special function keys and 10 programmable keys

Pricing/Support/Availability ● this is a new system and has not been priced by the vendor ● 90-day warranty ● service available from manufacturer, third party, and TRW service organization ● sales through computer stores, OEMs, and distributors ● first delivery was scheduled for November 1983

■ TEXAS INSTRUMENTS INC/Data Systems Group

P.O. Box 202146, Dallas, TX 75220 ● 512-250-7305

☐ TI Business System 200 Series

Classification ● single-user/single-tasking desktop computer with integrated CRT display ● based on 16-bit processor ● 2 models available; difference is in disk storage capacity

Systems Software ● TI DX10 Micro operating system or UCSD p-System both available as separate charge items ● COBOL and BASIC language processors available as options ● no data management or communications/network software available from the manufacturer

Applications Software ● none available from the manufacturer

Systems Hardware ● basic system includes CPU, memory, CRT, and diskette/hard disk storage ● CPU features 16-bit TMS9900 microprocessor ● 64K-byte main memory ● TI proprietary bus structure; 1 parallel printer port standard; optional 2-channel communications interface provides 2 ports—1 async, 1 async/sync

Mass Storage ● System 250 has maximum hard disk storage of 5M bytes on a single internal 5.25-inch drive; System 251 has maximum hard disk storage of 10M bytes on 2 5.25-inch 5M-byte internal Winchester drives ● maximum diskette storage of 1.2M bytes on a single internal 8-inch diskette drive

Printers ● 150-cps, 132-column dot-matrix printer, and 75-cps bidirectional, 132-column dot-matrix printers available from TI

Display/Keyboard ● integral CRT has 12-inch monochrome screen, provides 80 characters x 24 lines, 128-character ASCII set, upper-/lowercase alphanumerics ● detached keyboard features standard typewriter layout plus 8 programmable function keys, and a numeric keypad

Pricing/Support/Availability ● base price—System 250—$8,495 includes CPU, 64K-byte RAM, CRT, keyboard, 5M-byte Winchester, floppy backup, and printer port; System 251—$9,495 includes same as 250 except 2 Winchester drives ● maintenance through mail-/carry-in depot service and on-site by TI branch offices ● sales through TI sales offices throughout U.S.

☐ TI Business System 300 Series

Classification ● single-user/single-tasking or multiuser desktop computer with integrated CRT display; supports up to 7 users ● based on 16-bit processor

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Systems Software • proprietary multiuser DX10 operating system and UCSD p-System available; priced separately from hardware • COBOL, BASIC, FORTRAN-78, and Pascal programming languages • database management system available • distributed networking communication system (DNCS) available; 3780/2780/3270 terminal emulation available for remote batch and real-time communications with IBM systems

Applications Software • comprehensive business accounting software and word processing programs available through TI dealers

Systems Hardware • basic system includes CPU, memory, CRT, keyboard, and diskette/hard disk storage • CPU features TI 16-bit TMS 99000 microprocessor • 128K-byte main memory expandable to 512K bytes • proprietary bus structure; 1 parallel printer port standard; add-on 2-channel and 4-channel communications boards allow up to 7 users; 18M-byte tape cartridge system available

Mass Storage • maximum hard disk storage of 172M bytes; 1 internal and 3 external drives may be added; 5M-, 10M-, 18M-, and 43M-byte Winchester drives available • maximum internal diskette storage of 1.2M bytes on a single 8-inch diskette drive; 5.25-inch 640K-byte drive also available • 14.5M-byte tape cartridge

Printers • system can attach 1 printer; terminals can each attach 1 printer; 75-cps and 150-cps dot-matrix printers available from TI

Display/Keyboard • integral CRT has 12-inch monochrome screen, 80 characters x 24 lines upper-/lowercase alphanumerics • detached keyboard contains 84 keys; 8 programmable keys and numeric keypad • up to 6 additional terminals may be attached to the system

Pricing/Support/Availability • base system price—System 350—$9,995 includes CPU, 128K-byte RAM, CRT, keyboard, parallel printer port, 5M-byte Winchester 1.2M-byte diskette drive; System 351—$12,495 includes same as 350 except 2 5M-byte Winchester drives plus the diskette drive; System 371—$17,800 includes same as 350 except 18M-byte Winchester drive and 14.5M-byte backup tape cartridge drive; System 372—$21,800 includes same as 350 except 43M-byte Winchester drive and 14.5M-byte backup tape cartridge drive • maintenance available through mail-/carry-in depot service and on-site by TI branch offices; sales through TI sales offices throughout U.S. • first delivery November 1982

□ TI Professional Computer

Classification • single-user/single-tasking desktop or portable computer with built-in CRT on portable and detached CRT on desktop • based on 16-bit microprocessor • reportedly media and data-file compatible with IBM PC

Systems Software • all software comes unbundled • MS-DOS, CP/M-80, Concurrent CP/M-86, UCSD p-System operating systems; Baby Tex CP/M softcard also available • MS-BASIC, MS-FORTRAN, MS-COBOL, MS-Pascal, CBASIC-86, UCSD Pascal programming languages; Natural language programming pack available in near future • TTY emulation, 3780, 3270 SNA, and Ether Series (Ethernet-compatible) Local Area Network (LAN) support standalone communications packages

Applications Software • Multiplan electronic spreadsheet; Easy Writer I, II, and Easy Speller I, II word processing programs; MicroPro's WordStar word processing, MailMerge file merging, SpellStar spelling checker, and Star Index alphabetized index available directly from TI

Systems Hardware • base system includes CPU, memory, CRT, keyboard, disk storage, I/O ports, speaker • CPU features Intel 8088 microprocessor; Z80A available with Baby Tex CP/M softcard; Intel 8087 Arithmetic coprocessor optionally available •

64K-byte RAM expandable to 768K bytes in 64K-, 128K-, 192K-, or 256K-byte increments; 64K bytes on Baby Tex softcard, 8K-byte ROM expandable to 16K bytes; 4K-byte video display memory • 5 expansion card slots, expansion RAM interface, parallel printer port, CRT controller (uses 1 expansion slot) standard; options include async/sync RS-232C port and clock and analog interface (permits use of joystick or light pen) • 2 direct-connect modem options—300-baud and 300-/1200-baud, include sync/async interface; optional voice management system includes TI TM 320 signal processing microcomputer, TM S7000 microcomputer, 32K-byte RAM, 1K-byte ROM, telephone interface circuitry, voice command capability (able to recognize multiple sets of 36 words each)

Mass Storage • maximum of 10M bytes of hard disk storage using a Winchester drive; 5M-byte drive also available • maximum diskette storage is 1.28K bytes; up to 2 integral 320K-byte drives available; 2 external

Printers • new 150-cps dot-matrix printer available from TI in addition to the TI Model 810, 820, 840 printers

Display/Keyboard • 12-inch green phosphor monitor or 13-inch color monitor for desktop and 9-inch monochrome or color display for portable available; 25 lines x 80 characters; 720x300 pixels high resolution; optional roster graphics—single plane and 3 plane • detached low-profile keyboard with numeric pad, 12 function keys, separate cursor control cluster

Pricing/Support/Availability • base price—$2,595 for desktop or $2,395 for portable includes CPU, 64K-byte RAM, keyboard, monochrome CRT, single diskette drive • maintenance provided by TI's nationwide service organization and qualified authorized dealers; both on-site and depot service available • sales through TI directly, authorized dealers including retail computer stores • first delivery January 1983

■ TOSHIBA AMERICA INC

2441 Michelle Drive, Tustin, CA 92680 • 714-730-5000

□ Toshiba T100 Personal Computer

Classification • single-user/single-tasking desktop component with integrated keyboard • 16.5 inches wide x 11 inches deep x 4 inches high • based on 8-bit processor • because of its size, system is also marketed as a portable with Toshiba's optional 8-line LCD, ROM/RAM packs, and audio cassette

Systems Software • CP/M bundled with system • TBASIC resides in ROM and is bundled with system; T-DISK BASIC is included with the disk drive unit • dBASE II DBMS optional • WHIZlink asynchronous communications package available

Applications Software • WordStar word processing, MicroPlan and ProfitPlan electronic spreadsheets, graphics and general office automation programs available from Toshiba

Systems Hardware • basic system includes CPU, memory, keyboard, and I/O ports • CPU features 4-MHz Zilog Z80A microprocessor • 64K-byte RAM, 16K-byte video RAM, 32K-byte ROM; 32K-byte plug-in RAM and ROM packs available, system can support 1 each • 1 RS-232C port, 1 Centronics-type port and 1 audio cassette interface standard

Mass Storage • maximum 1.1M bytes of diskette storage using 2 optional 5.25-inch drives

Printers • system can support 1 printer; 100/125/160-cps dot-matrix and 40-/50-cps daisywheel printers available from vendor

Display/Keyboard • system uses separately available CRT; Toshiba offers 12-inch green phosphor CRT and 14-inch 8-color; both display 24 lines of 80 characters in upper-/lowercase alphanumerics; high-resolution graphics of 640x200 pixels; LCD also available; displays 8 lines of 40 characters in upper-/lowercase alphanumerics; graphics resolution of 320x64 pixels •

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keyboard is integrated into the system unit; contains 8 programmable function keys and numeric keypad

Pricing/Support/Availability ● base system—$675 includes CPU, 64K-byte RAM, 32K-byte ROM, keyboard, and I/O ports; package #1—$1,295 includes same as base system plus keyboard, monochrome display, single floppy, and 2 operating systems; $1,695 includes same as package #1 plus additional floppy ● 90-day warranty ● software updates and on-site/carry-in hardware maintenance available through dealers ● sales through dealer/distributor network ● system first delivered August 1982

☐ Toshiba T300

Classification ● single-user/single-tasking desktop computer with detached CRT ● based on 16-bit microprocessor ● available in 2 models differing by disk capacity

Systems Software ● MS-DOS 2.0 is bundled with system; CP/M-86 is optionally available ● T-BASIC 16 programming language is bundled; CBASIC-86 optionally available

Applications Software ● Softword System's Multi-Mate word processing is bundled with the system ● business graphics, accounting software, and integrated office automation available

Systems Hardware ● basic system includes CPU, memory, diskette storage, CRT, keyboard, and I/O ports ● CPU features Intel 16-bit 8088 operating at 6 MHz; Intel 8087 Arithmetic Coprocessor available ● 192K-byte RAM expandable to 512K bytes ● 7 expansion slots, Centronics-compatible parallel port, and RS-232C serial port are standard

Mass Storage ● maximum of 10M bytes of hard disk storage using single 10M-byte hard disk ● maximum of 1.28M bytes of diskette storage using 2 640K-byte 5.25-inch floppy disk drives

Printers ● 100/125/160/190-cps dot-matrix and 40-/50-cps daisywheel printers available from vendor

Display/Keyboard ● 12-inch green phosphor and 14-inch 8-color CRTs display 24 lines of 80 characters, upper-/lowercase alphanumerics; tilt-and-swivel detached 103-sculptured-key standard typewriter layout keyboard with cursor control keypad, separate numeric pad, edit keys, and 10 programmable function keys

Pricing/Support/Availability ● base T300 word processing system—$5,385 includes CPU, 256K-byte RAM, 12-inch green screen display, 5.25-inch disk drive, printer, I/O ports, and cabling ● software updates and on-site/carry-in hardware maintenance available through dealers ● sales through dealer/distributor network ● first system delivery January 1984

■ TYCOM CORPORATION

8-12 New Bridge Street, London, EC4V GAL, England ● 01-583-2255

☐ Tycom Microframe 6, 12 & 22

Classification ● single-user/single-tasking, single-user/multitasking (50+ tasks), or multiuser (30 users) component system with separate CRT ● based on 16-bit processor ● model designations refer to the number of expansion slots available, 6, 12, or 22

Systems Software ● Microsoft XENIX can be softloaded from diskette or reside in ROM; included with basic system; CP/M 2.2, CP/M-86, and MS-DOS 2.0 also available; Tycom claims that any commercially viable operating system will run on Microframe due to its expansion slot capability ● BASIC, Pascal, COBOL-80, FORTRAN-80 languages available; BASIC is included with packaged system ● dBASE data management software available ● ANSI terminal emulation is standard

Applications Software ● word processing, electronic mail, modeling, electronic spreadsheet available from Tycom

Systems Hardware ● base system includes CPU, memory, bus controller, CRT, and diskette storage ● CPU features 8-MHz 16-bit Intel 8088 processor ● 128K-byte main memory expandable to 576K bytes; 40K-byte ROM for start-up, executive, and supervisor ● proprietary VBC (versatile bus connect) bus structure enables 12-slot chassis to accommodate Z80, 68000, and PDP-11/70 board-level upgrades; no I/O ports provided as standard; 2 optional RS-232C serial ports and 1 Centronics parallel port available per interface board

Mass Storage ● maximum internal hard disk storage of 5M bytes on single 5.25-inch Winchester drive; additional external hard disk storage available on 10M-byte and 20M-byte drives, 2 drives per controller card with number of cards limited by number of available slots e.g., 6, 12, or 22 ● maximum internal diskette storage of 1.4M bytes on 2 700K-byte 5.25-inch diskette drives; additional external diskette storage available on 700K-byte drives, 4 drives per controller card with number of cards limited by number of available slots e.g., 6, 12, or 22

Printers ● none supplied by Tycom; any printer using RS-232C or Centronics parallel interfaces may be attached

Display/Keyboard ● detached CRT has 12-inch color screen; provides 80 characters x 24 lines, upper-/lowercase alphanumerics; maximum of 8 colors per screen; graphics charcter set, 1000x350 pixels; bit-addressable graphics optional ● Hall-effect keyboard provides 90 keys; 18-key numeric pad, cursor control pad, 9 programmable function keys, and status lamps

Pricing/Support/Availability ● base system price—$4,600 includes CPU, 128K-byte RAM, 8K-byte ROM, CRT, keyboard, 2 700M-byte internal diskette drives, bus controller, operating system, and BASIC language ● maintenance will be available at manufacturer service centers and dealers ● sales through dealer network ● first delivered in U.S. February 1983; 1 system installed in U.S.

■ UNIVERSAL RESEARCH

150 North Hill Drive, Brisbane, CA 94005 ● 415-468-5320

☐ PortaBrain

Classification ● single-user/single-tasking 6-pound portable component system that uses separately available CRT and keyboard; 7 inches wide x 11 inches deep x 3.8 inches high based on 8-bit processor

Systems Software ● CP/M operating system resides in ROM and is bundled with computer ● also included with system is a set of utilities that allow the PortaBrain to function as a buffer between a host computer and a terminal; allows the user to choose a baud rate to the host, manipulate the buffer, select different floppy disk formats and configure the PortaBrain to any ASCII terminal

Applications Software ● none offered by vendor

Systems Hardware ● basic system includes CPU, memory, disk storage, and I/O ports ● CPU features 4-MHz Zilog Z80 microprocessor ● 64K-byte RAM; 16K-byte ROM ● 1 parallel and 2 serial ports standard

Mass Storage ● maximum 576K-byte diskette storage using 3 drives (1 standard); 192K-byte virtual RAM disk also included with system

Printers ● none provided by Universal Research

Display/Keyboard ● system uses separately available ASCII CRT display and keyboard; none offered by vendor

Pricing/Support/Availability ● base system—$995 includes CPU, 64K-byte RAM, disk storage, I/O ports, and CP/M operating system ● 90-day warranty ● support information not yet determined as of this date ● sales through distributors, dealers, and OEMs ● first delivery August 1983

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

■ VECTOR GRAPHIC INCORPORATED
500 North Ventu Park Road, Thousand Oaks, CA 91320 ●
805-499-5931

☐ Vector 4 Series

Classification ● single-user/multitasking desktop computers with integrated CRTs and disk storage ● based on 8- and 16-bit microprocessors ● Models 4/10, 4/20, 4/30, 4/40, and 4/60 available; difference is amount of hard disk storage capacities

Systems Software ● all software except operating systems and GSX Graphics unbundled ● CP/M, CP/M-86, Extended CP/M-86, and MS-DOS softloaded from 5.25-inch diskette ● supports Microsoft BASIC-80 Compiler, Microsoft FORTRAN, Digital Research CBASIC-86, Digital Research CB-86 Compiler, Digital Research Pascal/MT+86, Digital Research Pascal-Z, Digital Research Personal BASIC, Digital Research PL/1-86, Microfocus CIS COBOL-86, and Microfocus CIS COBOL-86 Level II ● Datamanager data management, CONECT asynchronous communications, LINC local area network management, and BIS-3780/3786 emulation software available

Applications Software ● Memorite III word processing and mail list manager, Execu Plan II financial planning, Forecasting Execu Modeler spreadsheet, Accuchart graphics, and MAILINC electronic mail system; Peachtree General Accounting software available from Vector Graphic

Systems Hardware ● basic system includes dual processors, memory, mass storage, CRT, and detached keyboard ● single-board processor with 8-bit 5.1-MHz Zilog Z80B and 16-bit 5.1-MHz Intel 8088 ● 128K-byte RAM standard with 128K-byte RAM optional ● video controller and memory all reside on the same board; utilizes modified S-100 bus architecture; I/O includes serial keyboard interface, 1 parallel printer interface, 1 serial printer interface, and 1 RS-232C serial interface for communications ● local area networking available

Mass Storage ● maximum hard disk of 36M bytes; 5M-byte fixed Winchester disk drive available on 4/30 only; 10M-byte fixed Winchester disk drive available on 4/40 only; 36M-byte fixed Winchester drive available on 4/60 only ● maximum diskette storage of 1.2M bytes; 5.25-inch 630K-byte diskette drive; 2 standard on 4/20 and 1 standard on all other models ● 13.4M-byte cartridge tape drive

Printers ● system supports up to 2 printers; 33-cps, 136- or 163-character-per-line, thimble, letter-quality; 55-cps, 136- or 163-character-per-line, thimble, letter quality; 340-cps bidirectional, 132-character-per-line, dot-matrix printers available from Vector Graphic

Display/Keyboard ● integral CRT has 12-inch high-resolution green phosphor monochrome screen, 80 characters x 24 lines, upper-/lowercase alphanumerics; memory-mapped graphics 640 horizontal x 312 vertical pixels ● detached keyboard, 91 keys including 15 user-programmable function keys, and numeric keypad

Pricing/Support/Availability ● 4/10—$3,295; 4/20—$3,995; 4/30—$4,995; 4/40—$5,995; 4/60—$9,995; all systems include desktop cabinet and integrated processors, memory, CRT, display, and mass storage; also detached keyboard, operating systems, and GSX-86 graphics software; 4/10 has 1 diskette drive; 4/20 has 2 diskette drives; 4/30, 4/40, and 4/60 each have diskette drive and single 5M/10M/36M-byte Winchester disk drive, respectively ● service is available through retail/dealer and TRW by service contract; software updates/corrections available from dealer ● products are marketed through Sears computer stores, office equipment dealers, system houses, and other OEM accounts ● first delivery September 1982; over 4,400 installed

☐ Vector 4-S Series

Classification ● single-user/multitasking desktop computers with integrated CRTs and disk storage ● based on 8- and 16-bit microprocessors ● Models 4/10-S, 4/20-S, 4/30-S, 4/40-S, and 4/60-S available; difference is amount of hard disk storage capacities

Systems Software ● all software except operating systems and GSX Graphics unbundled ● CP/M, CP/M-86, Extended CP/M-86, and MS-DOS softloaded from 5.25-inch diskette ● supports Microsoft BASIC-80 Compiler, Microsoft FORTRAN, Digital Research CBASIC-86, Digital Research CB-86 Compiler, Digital Research Pascal/MT+86, Digital Research Pascal-Z, Digital Research Personal BASIC, Digital Research PL/1-86, Microfocus CIS COBOL-86, and Microfocus CIS COBOL-86 Level II ● Datamanager data management, CONECT asynchronous communications, and BIS-3780/3786 emulation software available

Applications Software ● Memorite III word processing and mail list manager, Execu Plan II financial planning, Forecasting Execu Modeler spreadsheet, and Accuchart graphics; Peachtree General Accounting software available from Vector Graphic

Systems Hardware ● basic system includes dual processors, memory, mass storage, CRT, and detached keyboard ● single-board processor with 8-bit 5.1-MHz Zilog Z80B and 16-bit 5.1-MHz Intel 8088 ● 128K-byte RAM standard with 128K-byte RAM optional ● video controller and memory all reside on the same board; utilizes modified S-100 bus architecture; I/O includes serial keyboard interface, 1 parallel printer interface, 1 serial printer interface, and 1 RS-232C serial interface for communications

Mass Storage ● maximum hard disk 36M bytes; 5M-byte Winchester disk drive available on 4/30-S only; 10M-byte fixed Winchester disk drive available on 4/40-S only; 36M-byte fixed Winchester drive available on 4/60-S only ● maximum diskette storage of 1.47M bytes; 5.25-inch 737K-byte diskette drive; 2 standard on 4/20-S and 1 standard on all other models ● 13.4M-byte cartridge tape drive

Printers ● system supports up to 2 printers; 33-cps, 136- or 163-character-per-line, thimble, letter-quality; 55-cps, 136- or 163-character-per-line, thimble, letter-quality; 340-cps bidirectional, 132-character-per-line, dot-matrix printers available from Vector Graphic

Display/Keyboard ● integral CRT has 12-inch high-resolution green phosphor monochrome screen, 80 characters x 24 lines, upper-/lowercase alphanumerics; memory-mapped graphics, 640 horizontal x 312 vertical pixels ● detached keyboard, 91 keys including 15 user-programmable function keys and numeric keypad

Pricing/Support/Availability ● 4/10-S—$3,295; 4/20-S—$3,995; 4/30-S—$4,995; 4/40-S—$5,995; 4/60-S—$9,995; all systems include desktop cabinet and integrated processors, memory, CRT, display, and mass storage; also detached keyboard, operating systems, and GSX-86 graphics software; 4/10-S has 1 diskette drive; 4/20-S has 2 diskette drives; 4/30-S, 4/40-S, and 4/60-S each have diskette drive and single 5M/10M/36M-byte Winchester disk drive, respectively ● service is available through retail/dealer and TRW by service contract; software updates/corrections available from dealer ● products are marketed through Sears computer stores, office equipment dealers, system houses, and other OEM accounts ● first delivery November 1, 1983 ● approximately 1,625 installed

☐ Vector 5E Series

Classification ● multiuser desktop computers with integrated CRT display; up to 3 users per system ● based on 8-bit microprocessor ● Mdels 5005E, 5010E, 5032E available; difference is in disk storage capacities

Systems Software ● all software except operating system unbundled ● Extended CP/M softloaded from 5.25-inch diskette drive ● supports MicroFocus CIS COBOL, Microsoft FORTRAN, BASIC compiler, and Digital Research Pascal-Z ● Vector Graphic

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Personal/Microcomputer Survey

Datamanager ● Vector Graphic Conect async communications software

Applications Software ● Memorite III word processing package and mail list manager, ExecuPlan II financial planning package, Forecasting Execu Modeler spreadsheet, Accuchart graphics, Milestone project planning package, Peachtree General Accounting software available from Vector Graphic

Systems Hardware ● basic system includes processor, memory, mass storage, CRT, keyboard, I/O ports ● single-board processor with 8-bit 6-MHz Zilog Z80B ● 128K-byte RAM standard with 128K bytes optional in 64K-byte increments; each user is allocated 56K-byte memory and S-100 bus architecture; 18 slots are provided for attaching S-100-type devices; 2 RS-232 ports and 2 parallel ports are standard

Mass Storage ● maximum hard disk 32M bytes; 5.25-inch Winchester fixed disk offering 5M or 10M bytes; 8-inch Winchester fixed disk offering 32M bytes ● 5005E comes with 5M-byte Winchester; 5010E comes with 10M-byte Winchester; 5032E comes with 32M-byte Winchester ● maximum diskette storage is 1 630K-byte drive on all models ● 13.4M-byte cartridge tape available for backup

Printers ● system supports up to 2 printers; 33-cps, 136- or 163-character-per-line, thimble, letter-quality; 55-cps, 136- or 163-character-per-line, thimble, letter-quality; 340-cps bidirectional, 132-character-per-line, dot-matrix printers available

Display/Keyboard ● integral CRT has 12-inch monochrome screen, 80 characters x 24 lines upper-/lowercase alphanumerics; memory-mapped graphics, 312x640 pixels ● detached keyboard, 91 keys including 15 user-programmable keys, and numeric keypad ● up to 2 additional terminals per system

Pricing/Support/Availability ● 5005E—$6,250; 5010E—$6,750; 5032E—$11,995 ● all models include desktop cabinet and integrated processor memory, CRT display, diskette drive; also detached keyboard, Winchester disk drive, operating system, and BASIC ● additional terminal and 64K-byte RAM—$1,685 ● service is available through retailer/dealer and TRW by service contract; software updates/corrections available from dealer ● products are marketed through Sears computer stores, office equipment dealers, systems houses, and other OEM accounts ● first U.S. delivery for 5005E, May 1981; 5010E, January 1983; 5032, February 1982; over 1,100 systems installed

■ VICTOR TECHNOLOGIES

380 El Pueblo Road, Scotts Valley, CA 95066 ● 408-438-6680

□ Victor 9000

Classification ● single-user/multitasking desktop computer with detached CRT ● based on 16-bit processor ● 2 versions available with differing disk storage capacities

Systems Software ● MS-DOS included with system; UNIX operating system optional ● MS-BASIC 86, MS-Pascal, FORTRAN, COBOL, Micro Focus Level II COBOL, and Digital Research CBASIC 86 optional ● dBASE II and T.I.M. III DBMS ● 3270 emulator and IBM PC protocols

Applications Software ● VictorWriter and WordStar word processing, SuperCalc and VictorCalc electronic spreadsheets, accounting, banking/finance, management, medical, payroll/personnel, and sales programs offered by Victor

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, power frequency clock interrupt, and digital voice output ● CPU features 4.7-MHz Intel 8088 microprocessor; optional Z80 card ● 128K-byte RAM expandable to 896K bytes in 128- or 384-byte increments; 8K-byte ROM ● 8088-like proprietary bus; 2 async or sync serial ports and 1 parallel port, which can support either an IEEE-488 or Centronics-type interface; 4 free slots ● optional Omninet local area network and 56K-bps modem

Mass Storage ● maximum of 20M bytes of hard disk storage using 2 Winchester drives ● maximum 2.4M bytes of diskette storage using 2 5.25-inch diskette drives

Printers ● system can support up to 3 printers; 80-cps dot-matrix and 40-cps daisywheel printers available from Victor

Display/Keyboard ● 12-inch green phosphor CRT displays 25 lines of 80 characters (50x132 also available) in upper-/lowercase alphanumerics; bit-mapped graphics capability, 800x400 pixels ● detached typewriter-style keyboard has 8 programmable keys and numeric keypad; optional fully programmable and word processing keyboards also available

Pricing/Support/Availability ● base system—$3,995 includes CPU, 128K-byte RAM, 2 diskettes, CRT, keyboard, interrupt clock, voice outputs, CP/M-86, and MS-DOS; $5,995 for version with 1 diskette drive and a 10M-byte Winchester ● 90-day warranty ● software updates and hardware maintenance available from dealer and 50 Victor service centers ● sales through computer stores, dealers, OEMs, and a direct sales force ● over 20,000 systems delivered since March 1982

■ VICTORY COMPUTER SYSTEMS, INC

1610 Berryessa Road, San Jose, CA 95133 ● 408-259-7370

□ Factor & Micro Factor

Classification ● multiuser component systems; Factor available in 3 models: 40, 80, and 120 with differences being amount of hard disk storage available; all Factor models support up to 24 users; Micro Factor available in 2 models: MF and MF/MTU with difference being floppy disk backup or streaming tape backup; both Micro models support up to 4 users ● all models based on 16-bit microprocessor and 8-bit coprocessors

Systems Software ● UNIX System III operating system; UNIX System V scheduled to be available 2nd quarter of 1984; VRTX executive real-time kernel in EPROM; CP/M-80 operating system used by coprocessors ● "C" programming language bundled with UNIX; RM/COBOL, SVS FORTRAN-77, SVS Pascal, SVS BASIC-PLUS, SMC BASIC, and SOFTBOL-83 DEC DIBOL-83-compatible programming languages available ● Idol database management system

Applications Software ● LEX word processing; View Comp advanced UNIX spreadsheet; and Ultra Calc financial planning and modeling spreadsheet available from vendor

Systems Hardware ● basic system includes CPU, CPU for I/O, memory, disk storage, diskette storage, memory management unit, and I/O ports ● CPU features 16-bit Motorola MC68000 microprocessor; CPU for I/O is 8-bit Zilog Z80A microprocessor (1 per 8-user bank); additional Z80A microprocessors for coprocessing optionally available on Factor models ● 256K-byte RAM standard on Factor models expandable to 4M bytes; 512K-byte RAM standard on Micro Factor models non-expandable ● VME bus architecture; 8 RS-232C serial ports standard on Factor expandable to 24 in 8-user increments; 4 RS-232C serial ports on Micro Factor non-expandable; all models include a Centronics-compatible parallel port; 2 RS-422 serial ports optional on Factor models

Mass Storage ● maximum hard disk storage of 129M bytes using 3 43M-byte 5.25-inch Winchester disk drives on Factor, 43M bytes maximum on Micro Factor using 1 43M-byte 8-inch Winchester disk drive; 40M-byte drive also available for Factor models; 40M-byte drive has 45-millisecond average access, while 43M-byte drive has 55- to 60-millisecond average access; both have 5M-bps data transfer rates ● maximum diskette storage of 800K bytes on Factor models using 1 800K-byte 8-inch floppy drive, and 1M bytes on Micro Factor using 1 1M-byte 5.25-inch floppy drive; 800K-byte drive has 55- to 60-millisecond average access time, while the 1M-byte drive is 30 to 40 milliseconds; both have 500K-bps data transfer rates ● 5M-byte removable Winchester cartridge drive and streaming tape drive also available

Personal/Microcomputer Survey

If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

Printers ● none available from vendor

Display/Keyboard ● none available from vendor

Pricing/Support/Availability ● base system—Factor Model 40—$12,990 includes Motorola 68000 CPU, Zilog Z80A I/O processor, 256K-byte RAM, 43M-byte disk storage, 800K-byte diskette storage, 6 RS-232C serial ports, 2 RS-422 serial ports, and a parallel port; Factor Model 80—$16,990 includes same as Model 40 except includes 2 43M-byte disk drives for 96M-byte hard disk storage; Model 120—$20,990 includes same as Model 40 except includes 3 43M-byte disk drives for 129M-byte hard disk storage; Micro Factor Model MF—$9,990 includes Motorola 68000 CPU, Zilog Z80A I/O processor, 512K-byte RAM, 43M-byte disk storage, 1M-byte diskette storage, and 4 RS-232C serial ports; Model MF/MTU—$11,990 includes same as Model MF except includes a streaming tape drive instead of diskette storage ● 90-day warranty ● mail-/carry-in hardware maintenance and on-site repair service contracts available from manufacturers and certain dealers/distributors ● sales through computer stores, OEMs, and distributor sales force ● first delivery July 1983; 24 installed systems as of December 16, 1983

■ VIDEO TECHNOLOGY
2633 Greenleaf Avenue, Elk Grove Village, IL 60007 ● 312-640-1776

□ Laser 2001 & Laser 3000

Classification ● single-user/single-tasking desktop system with detached optional CRT display ● based on 8-bit processors

Systems Software ● system monitor resides in ROM and is bundled with the system; CP/M optionally available ● Microsoft BASIC bundled

Applications Software ● word processing, educational, entertainment, and accounting software available from Video Technology

Systems Hardware ● basic system includes CPU, memory, cassette interface, keyboard, display, parallel interface, 4-channel sound generator, and game joystick connector ● CPU features 6502A microprocessor operating at 2 MHz; 3000 provides 8048 as I/O processor ● 64K-byte RAM with 16K-byte display RAM on 2001; 64K-byte RAM standard expandable to 192K bytes on 3000; 16K-/24K-byte ROM on 2001/3000, respectively ● 300-baud audio cassette interface, Centronics-compatible interface (all models), joystick connectors, and game cartridge connector built-in 2001; floppy disk controller both models; RS-232C interface, joystick, and interface module, and CP/M cartridge optional on 3000

Mass Storage ● no hard disk available ● maximum diskette storage of 164K to 328K bytes on 2001 and 3000, respectively, using 1 and 2 164K-byte floppy disk drives ● data cassette recorder optionally available on both models

Printers ● 10-cps 26- to 40- or 80-character-per-line printer; provides 4 color graphics; uses Centronics parallel interface

Display/Keyboard ● 2001 supports 36-character x 24-line display of upper-/lowercase characters; 256x192 resolution color graphics ● detached keyboard is standard pitch rubber keyboard with 48 keys ● 3000 supports 40-column x 24-row or 80-column x 24-row display; 5x7 dot matrix in 7x8 matrix; upper-/lowercase characters; graphics capabilities ● 81-key sculptured typewriter keyboard with numeric keypad and 8 user-defined function keys

Pricing/Support/Availability ● base system—Laser 3000—$695 includes CPU, 64K-byte RAM, 24K-byte ROM, display, keyboard, I/O ports, and BASIC software ● Laser 2000—pricing not available ● 1-year warranty ● mail-/carry-in hardware maintenance available from manufacturer and dealers ● sales through computer stores ● first delivery December 1983

□ VZ200 Color Personal Computer

Classification ● single-user/single-tasking desktop component system with integrated keyboard ● based on 8-bit processor

Systems Software ● system monitor resides in ROM and is bundled with the system ● Microsoft BASIC bundled

Applications Software ● word processing, educational, entertainment, and accounting software available from Video Technology

Systems Hardware ● basic system includes CPU, memory, cassette interface, keyboard, parallel port, sound output ● CPU features Zilog Z80A 3.58-MHz microprocessor ● 4K-byte RAM expandable to 64K bytes, 12K-byte ROM ● RF modulator, video interface, memory expansion bus, and peripheral expansion bus standard; optional printer interface, light pen, joystick, and bar code reader

Mass Storage ● no disk storage ● 600-cps cassette interface connects to any standard cassette recorder

Printers ● system can support 1 printer; dot-matrix printer available from vendor

Display/Keyboard ● system uses separately available CRT or TV set; 9-color display output is 16 lines x 32 characters in uppercase alphanumerics with graphics capability of 128x64 pixels ● integrated full-size rubber keyboard with calculator-style keys, has predefined graphics keys

Pricing/Support/Availability ● base system—$70 includes CPU, 4K-byte RAM, keyboard, sound output, I/O, system monitor, and Microsoft BASIC ● 1-year warranty ● mail-/carry-in hardware maintenance available from manufacturer and dealer ● sales through computer stores ● first delivery April 1983

■ VISUAL TECHNOLOGY INC
540 Main Street, Tewksbury, MA 01876 ● 617-851-5000

□ VISUAL 1050

Classification ● single-user/single-tasking desktop system with detached CRT display ● based on 8-bit processors

Systems Software ● CP/M Plus with GSX Graphics is bundled with the system ● CBASIC bundled; Pascal, COBOL, PL/1, FORTRAN, and Compiler BASIC optional ● VT100 Terminal Emulator program standard

Applications Software ● WordStar word processing, Multiplan electronic spreadsheet, MailMerge, GSS Graphics, and Utility Manager programs included with system ● Visual Technology offers many CP/M packages including accounting, spelling checker, and project management programs

Systems Hardware ● basic system includes CPU, memory, disk storage, CRT, keyboard, and I/O ports ● CPU features a Z80A system processor plus a 6502 display processor ● 128K-byte RAM expandable to 256K bytes (bank switched); 32K-byte video RAM ● 1 RS-232C port, 2 parallel ports, and a Winchester disk port standard ● synchronous/asynchronous communications card optional

Mass Storage ● maximum of 5M-byte hard disk storage using Winchester drive ● maximum of 800K-byte diskette storage using 2 integral 5.25-inch drives

Printers ● none available from Visual

Display/Keyboard ● detached 12-inch green phosphor CRT displays 25 lines of 80 characters in upper-/lowercase alphanumerics; 640x300 bit-mapped graphics ● detached typewriter-style 93-key keyboard is completely programmable and has a numeric pad, 1 Help key, and 17 function keys

Pricing/Support/Availability ● base system—$2,695 includes CPU, 128K-byte RAM, 32K-byte video RAM, 2 diskette drives, CRT, keyboard, I/O ports, CP/M Plus, CBASIC, and applications software ● 90-day warranty ● mail-/carry-in and on-site hardware

Personal/Microcomputer Survey

maintenance available from manufacturer; software updates/corrections from dealer • the VISUAL 1050 will be available October 1983 from dealers and OEMs

☐ Visual Commuter

Classification • single-user/single-tasking portable desktop system with Flat Panel LCD Display • based on 16-bit processor • 16-pound system in a 15x18x3-inch briefcase-size unit

Systems Software • MS-DOS 2.1 operating system is bundled with base system • IBM PC compatible allowing any programming languages and applications written for IBM PC to be available

Applications Software • all programs/systems written for IBM PC are available

Systems Hardware • basic system includes CPU, memory, Flat Panel LCD Display, keyboard, diskette, and I/O ports • CPU features 16-bit Intel 8088 microprocessor • 128K-byte RAM expandable to 512K bytes • an RS-232C serial port and a parallel printer port standard; asynchronous/synchronous port optional

Mass Storage • currently no hard disk is supported • maximum diskette storage of 720K bytes using 2 360K-byte 5.25-inch diskette drives

Printers • none available from Visual

Display/Keyboard • Flat Panel LCD Display 80 characters x 16 lines; detached 12-inch green phosphor CRT displays 25 lines of 80 characters in upper-/lowercase alphanumerics 640x200 bit-mapped graphics • detached typewriter-style 83-key keyboard includes numeric keypad and 10 function keys

Pricing/Support/Availability • base system—$1,995 includes CPU, 128K-byte RAM, a diskette drive, keyboard, I/O ports, and MS-DOS • 90-day warranty • mail-/carry-in and on-site hardware maintenance available from manufacturer; software updates/corrections from dealer • volume shipments are scheduled to start in February 1984

■ WANG LABORATORIES, INC

One Industrial Avenue, Lowell, MA 01851 • 617-459-5000

☐ Wang Professional Computer

Classification • single-user/single-tasking desktop system with separately available CRT • based on 16-bit microprocessor

Systems Software • MS-DOS with integrated BASIC interpreter menu mode, command mode, and file management; CP/M-80 emulation • optional BASIC compiler, FORTRAN, Pascal, COBOL, assembler • local communications with Wang VS, OIS, Alliance; remote communications emulation of IBM 2780/3780; asynchronous and remote Wangnet dial-up communications

Applications Software • word processing Multiplan spreadsheet analysis

Systems Hardware • basic system unit includes CPU, memory, diskette, keyboard • CPU is a 16-bit, 8-MHz Intel 8086 microprocessor with associated programmable clock, parity checking, diagnostics, power • memory ranges from 128K to 640K bytes; 200-nanosecond memory access • I/O includes 5 internal expansion slots, 1 RS-232C asynchronous port, 1 parallel printer port, and 4-channel DMA port; option boards for local network attachment and remote communications

Mass Storage • maximum capacity of 10M bytes on 5.25-inch Winchester disk housed in system unit in place of optional second diskette drive; 5M-byte-per-second transfer rate • maximum diskette storage is 720K bytes without hard disk (1 standard, 1 optional 5.25-inch drive) or 360K bytes on 1 standard drive, if hard disk is added; 250-millisecond average access time, 250K-byte-per-second transfer rate

Printers • 80-cps dot-matrix graphics printer, 20-cps bidirectional daisywheel printer available; both use RS-232C interface

Display/Keyboard • 12-inch, optional green phosphor character or graphics display; both can display 24 lines of 80 data characters plus 25th status line; automatic scrolling; bit-mapping of 800x300 pixels on graphics display; character display field upgradeable to graphics • 101-key movable typewriter keyboard standard; includes numeric keypad, programmable function keys; 3-tone audio standard

Pricing/Support/Availability • base price—$2,595 includes CPU, 128K-byte RAM, single diskette drive, detachable keyboard, 4-channel DMA, 1 serial port, 1 parallel port, MS-DOS and BASIC software • on-site maintenance contracts for hardware; sold directly by Wang sales representatives through systems houses, value-added sales organizations, OEMs, office equipment dealers, and retailers • first delivered January 1983

■ WAVE MATE INC

14009 South Crenshaw Boulevard, Hawthorne, CA 90250 • 213-978-8600

☐ Bullet IV, Bullet 510 & Bullet 515

Classification • single-user/multiuser, multitasking desktop component system; supports 16 tasks and up to 4 users • based on 8-bit microprocessor • systems differ by amount of disk storage

Systems Software • proprietary Wave Net OS operating system; CP/M-80 and MP/M-80 operating systems also available • no languages, data management, or communications software available from vendor

Applications Software • none available from vendor

Systems Hardware • basic system unit includes CPU, memory, diskette/disk storage, and I/O ports • CPU is 8-bit Z80H microprocessor operating at 8 MHz • 128K-byte RAM expandable to 256K bytes; 16K-byte ROM optionally available • external DMA expansion bus architecture; 4 RS-232C serial ports and 2 parallel ports, one of which is Centronics compatible, are standard • Wave Net Local Area Network (LAN)

Mass Storage • maximum hard disk storage of 15M bytes (Bullet 515), 10M bytes (Bullet 510) using single 15M-byte and 10M-byte 5.25-inch Winchester disk drives; 49-millisecond average access time and 5M-byte-per-second data transfer rate • maximum diskette storage of 1.6M bytes (Bullet IV) and 800K bytes (Bullet 510 and 515) using dual and single 800K-byte diskette drives; 3-millisecond track-to-track access time and 250K-byte-per-second data transfer rates

Printers • none available from vendor

Display/Keyboard • system uses separately available CRT display or TV set

Pricing/Support/Availability • base prices—Bullet IV—$1,995 includes CPU, 128K-byte RAM, 2 800K-byte diskette drives, 4 RS-232C serial ports, and 2 parallel ports; Bullet 510—$3,695 includes same as Bullet IV except includes 10M-byte hard disk drive in place of second diskette drive; Bullet 515—$3,995 includes same as Bullet IV except includes 15M-byte hard disk drive in place of second diskette drive • 1-year warranty • service available from manufacturer • sold through 24 OEMs and system integrators and 12 international distributors • Bullet IV first delivery in April 1982; Bullet 510 and Bullet 515 first delivery February 1983; as of December 1983 over 4,000 systems have been installed

■ WICAT SYSTEMS INC

1875 South State Street, Orem, UT 84057 • 801-224-6400

☐ Wicat System 140, System 150, System 155, System 160, System 200, System 220

Classification • single-/multiuser systems; System 140 and System 150-X are desktop computers with integrated CRT displays; System 155, System 160, System 200, and System 220 are standalone rackmount component systems with separate CRT displays; System 140 and System 150-IWS are single-user

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If the entry you seek is not found in its alphabetic sequence, please refer to the cross-reference chart beginning on page II.

systems; System 150-3WS 3 users; System 150-6 6 users; System 155 and System 160 12 users; System 200 32 users; and System 220 64 users ● all models based on Motorola 68000L8 microprocessor which is a 16-bit processor with 32-bit data operations

Systems Software ● all software except proprietary operating system unbundled ● Wicat Multiuser Control System (MCS), Unisoft UniPlus+ softloaded from 5.25-inch Winchester disk, UniPlus+ includes UNIX V7 and Berkeley enhancements ● supports R/M COBOL, SMC Systems Technology BASIC, Coherent BASIC, APL.68000, CIS COBOL, Johnson C language, Pascal, FORTRAN 77, and assembler; MCS specifically supports a version of BASIC and COBOL, APL, C, Pascal, and FORTRAN 77 ● 3275 and 2780/3780 emulation packages

Applications Software ● office automation including word processor, spelling dictionary, database (file) management, office manager; UltraCalc electronic spreadsheet; WISE computer-assisted instruction authoring system; educational courseware

Systems Hardware ● basic systems include CPU, memory, mass storage, intelligent disk controller, ports, CRT, keyboard, interval timers programmable clock calendar; System 140 and System 150-X include desktop enclosure; System 155, System 160, System 200, and System 220 include standalone rackmount enclosure ● all models employ the 16-bit 8-MHz Motorola MC68000L8 microprocessor (32-bit internal data operations) with memory management and 7 vectored interrupt levels ● System 140 has 512K-byte memory standard non-expandable; System 150 has 256K-byte memory standard expandable to 1.5M bytes; System 155 and System 160 have 512K-byte memory expandable to 4.5M bytes; System 200 has 512K-byte memory expandable to 5M bytes; and System 220 has 1M-byte memory expandable to 16M bytes ● Systems 140, 150, 155, and 160 have Intel IEEE-796 (Extended Multibus) architecture; System 200 and System 220 have a proprietary bus architecture; System 140 has 1 RS-232C port standard; System 150 has 5 RS-232C ports standard; System 155 has up to 2 RS-232C serial ports (async or sync) and up to 12 RS-232C serial ports (async only); System 160 has up to 16 RS-232C serial ports; and System 200 and System 220 have up to 32 asynchronous intelligent ports and up to 8 synchronous intelligent ports; all models have 16-bit general-purpose parallel ports; Systems 155, 160, 200, and 220 can have up to 2 ● System 150 supports an optional video-disk controller and Systems 155, 160, 200, and 220 support an optional hardware floating point

Mass Storage ● maximum formatted hard disk capacity for System 140, 15M bytes; 60M bytes on System 150 and System 155; and 1.684G-byte disk storage on System 160, System 200, and System 220 ● maximum formatted diskette storage of 616K bytes on a 5.25-inch drive

Printers ● 55 cps, bidirectional, 163 characters per line, letter quality; 100 cps or 3300 dots per second, 80, 96, or 132 characters per line, dot matrix

Display/Keyboard ● T7000, 2000-character display 25 lines x 80 characters; 7x9 dot-matrix characters in a 10x12 cell ● supports 128 ASCII characters with an additional user-definable set available from an on-board EPROM; optional touch panel with 768 touch points ● MG 8000 has same basic specifications and provides 400x300-pixel resolution; also has 2 independent graphics planes for animation and commands to draw lines, arcs, circles, and text ● keyboard essentially the same on all units; detached with 82 keys including numeric keypad

Pricing/Support/Availability ● System 140—$8,000 to $9,000; System 150—$9,50 to $20,000; System 155—$15,000 to $25,000; System 160—$25,000 to $43,000; System 200—$27,000 to $80,000; and System 220—$32,000 to $110,000; prices are dependent on system options and software (complexity of the configuration) ● service through vendor or independent; vendor provides full-contract master support plan including hardware engineering changes, and software and documentation updates; depot support plan and time-and-

material support plan ● systems are marketed by direct sales force and to OEM customers ● first delivery January 1984 for 140; October 1981 for System 150; May 1983 for System 155; October 1982 for System 160; October 1982 for System 200; and May 1983 for System 220

■ WORDPLEX CORPORATION

141 Triunfo Canyon Road, Westlake Village, CA 91361 ● 213-889-4455

□ Wordplex Desktop PC & Wordplex Portable PC

Classification ● single-user/single-tasking desktop or portable computer (weighs 28 pounds) with integral CRT ● based on 16-bit microprocessor

Systems Software ● MS-DOS operating system bundled with both packaged systems ● GWBASIC programming language available from vendor

Applications Software ● PC TUTOR self-teaching applications program bundled with systems ● Multi-Mate word processing optionally available from vendor

Systems Hardware ● base systems include CPU, memory, diskette storage, CRT, keyboard, and I/O slots ● CPU features 16-bit Intel 8088 microprocessor ● 128K-byte RAM expandable to 512K bytes ● 4 expansion slots available for adding IBM PC-compatible expansion boards, 1 RS-232C serial port, and an IBM PC-compatible parallel port

Mass Storage ● maximum of 10M bytes of hard disk storage (external on portable model, internal on desktop) using single 10M-byte Winchester disk drive ● maximum of 640K bytes of diskette storage using 2 320K-byte floppy disk drives

Printers ● none available from vendor

Display/Keyboard ● 12-inch diagonal (desktop), 9-inch diagonal (portable) green phosphor displays 80 columns x 25 rows upper-/lowercase alphanumerics; 16x13 dots character fonts; graphic resolution of 640x325 pixels ● detached IBM PC-type 83-key keyboard

Pricing/Support/Availability ● pricing and support information not yet available

■ WYSE TECHNOLOGY

3040 North First Street, San Jose, CA 95134 ● 408-946-3075

□ WY-1000

Classification ● single-user/single-tasking desktop computer with separate CRT ● based on 16-bit microprocessor

Systems Software ● MS-DOS operating system with Digital Research GSX graphic extension bundled with basic system ● Tri-State drivers support local area network

Applications Software ● WyseWord firmware package simplifies word processing using WordStar

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, diskette storage, and I/O ports ● CPU features 16-bit Intel 80186 microprocessor operating at 8 MHz ● 128K-byte RAM expandable to 768K bytes; 16K-byte PROM bootstrap and self-test ● an RS-232C serial port, an RS-232C/RS-422 serial interface, and Centronics-compatible port standard

Mass Storage ● maximum hard disk storage of 10M bytes using single 10M-byte low-profile Winchester disk drive ● maximum diskette storage of 724K bytes using 2 362K-byte low-profile, double-sided, double-density 5.25-inch diskette drives

Printers ● none offered by Wyse

Display/Keyboard ● 14-inch diagonal non-glare green phosphor, tilting/rotating display ● 24 rows x 80 or 132 columns (user selectable) plus 2 rows for terminal status and function key identification; 7x13 matrix in 10x13 cell, 128 ASCII upper-/lowercase with 32 control codes and line drawing

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graphics; graphic option provides 800x327 pixels two planes, 800x286 color with 4 simultaneous colors, or 400x286 with 8 simultaneous colors ● detached keyboard with 2-position tilt; 101 keys arranged in typewriter, numeric pad, and function key sections; 16 user-programmable function keys

Pricing/Support/Availability ● base system—$2,695 includes CPU, 128K-byte RAM, CRT, keyboard, 2 5.25-inch diskette drives, and 3 I/O ports ● 90-day warranty ● hardware maintenance through mail-in/carry-in Wyse factory repair service or distributors and dealers ● sales through OEMs, distributors, and dealers ● first delivery November 1983

■ XEROX CORPORATION/Office Products Division

1341 West Mockingbird Lane, Dallas, TX 75247 ● 214-960-3000

□ Xerox 16/8 System

Classification ● multiuser/multitasking desktop computer with integral CRT ● includes both 8- and 16-bit microprocessors

Systems Software ● all software is unbundled CP/M-80 (2.2), CP/M-86, and MS-DOS 2.0 operating systems available ● any language and other system software capable of running under above operating systems are available

Applications Software ● SuperCalc and Multiplan for accounting and spreadsheets, Xerox Business Graphics for plotting charts and graphs, Select and WordStar for letters and reports available from Xerox

Systems Hardware ● base system includes 2 CPUs, memory, CRT, keyboard, diskette storage, and I/O ports ● CPUs include 8-bit Zilog Z80A microprocessor operating at 4 MHz and Intel 8086 microprocessor operating at 4.772 MHz ● 64K-byte RAM and 8K-byte ROM available to Z80A; 128K-byte RAM expandable to 256K bytes; 2K-byte RAM shared by both processors ● 2 RS-232C serial interfaces, 2 parallel ports, and 1 system bus port direct access to Ethernet local area network

Mass Storage ● maximum hard disk storage of 8.1M bytes on single 8-inch disk drive ● maximum of 1.96M bytes of diskette storage on 2 8-inch double-sided floppy disks; 241K- and 482K-byte floppy disks also available

Printers ● 20-cps and 40-cps daisywheel printers available from Xerox

Display/Keyboard ● 12-inch display, 80 characters x 24 lines, upper-/lowercase, 7x10 dot matrix, and graphics with 4x4-pixel resolution ● detached typewriter-style 96-key keyboard, 10-key numeric pad, 4-key cursor control, erasing backspace key, and 12 programmable function keys

Pricing/Support/Availability ● base system—$3,395 includes Zilog Z80A and Intel 8086 microprocessors, 64K-byte (Z80) and 128K-byte (8086) RAM, CRT, keyboard, 2 serial and 2 parallel ports ● hardware maintenance provided by sellers; systems purchased directly from Xerox are handled by repair depot ● sales through direct sales, Xerox stores, dealers, and retail outlets ● first delivery 1983

□ Xerox 820-II

Classification ● single-user/single-tasking desktop computer with integral CRT ● based on 8-bit microprocessor ● Xerox 820-II is an upgrade of the Xerox 820; it has a faster processor and more storage capacity

Systems Software ● all software comes unbundled CP/M operating system (version created exclusively for the 820-II) ● BASIC-80, CBASIC II, Z-80 assembler ● TTY emulation, Bisync 80/3270, Bisync 80/3780 emulation packages available

Applications Software ● SuperCalc electronic spreadsheet, A.T.I. Power, a CP/M enhancer, word processing, business graphics packages available from Xerox

Systems Hardware ● base system includes CPU, memory, CRT, keyboard, disk storage, I/O ports ● CPU features a Zilog Z80A

microprocessor ● 64K-byte RAM; 4K-byte ROM ● single-board computer with 2 RS-232C interfaces, 2 parallel ports, 1 system bus port direct access to Ethernet local area network via the Shared Interface Unit (SIU); SIU option uses 2 RS-232C ports

Mass Storage ● maximum hard disk storage of 8.1M bytes of usable rigid disk storage on 1 drive ● maximum of 1.96M bytes of usable diskette storage; up to 2 external 8-inch 980K-byte or 482K-byte drives or up to 2 external 5.25-inch 155K-byte or 322K-byte drives available

Printers ● Xerox offers 2 daisywheel printers, 40 cps and 20 cps; both use RS-232C interfaces

Display/Keyboard ● integral display has 12-inch screen displaying 80 characters x 24 lines, upper-/lowercase ● detached typewriter-style keyboard has main alpha keybank, 15-key numeric pad, 4 cursor keys, 2 function keys

Pricing/Support/Availability ● base system—$3,395 includes CPU, 64K-byte RAM, CRT, keyboard, 2 serial, and 2 parallel ports, 2 5.25-inch diskette drives ● hardware maintenance provided by sellers; systems purchased directly from Xerox are handled by a repair depot ● sales through direct sales, Xerox stores, dealers, retail outlets ● first delivered July 1982

■ ZENITH DATA SYSTEMS

1000 Milwaukee Avenue, Glenview Avenue, Glenview, IL 60025 ● 312-391-8860

□ Zenith Z-100 Series

Classification ● single-user/single-tasking desktop computers ● based on dual 8-bit and 16-bit microprocessors ● available in 5 configurations with differences being in amount of disk capacity and if all-in-one or low-profile cabinets

Systems Software ● Z-DOS (Microsoft's MS-DOS) 16-bit operating system bundled with system; CP/M-85 8-bit operating system separately priced ● BASIC-80 Interpreter, Z-BASIC, Z-CHART, Microsoft BASIC, Microsoft FORTRAN 86, Microsoft COBOL, Microsoft Pascal programming languages available from vendor ● Condor File Management available

Applications Software ● WordStar word processing, MailMerge, SpellStar, SuperSort are available from vendor ● Lotus 1-2-3, MultiPlan, and various Peachtree accounting packages available ● there are over 230 16-bit programs available from outside sources which the vendor keeps a directory of for the users

Systems Hardware ● basic system includes CPU, memory, diskette storage, and I/O ports (all-in-one cabinet models include CRT and keyboard) ● dual CPUs feature Intel 16-bit 8088 microprocessor operating at 5 MHz and on Intel 8-bit 8085 microprocessor operating at 5 MHz; Intel 8087 arithmetic coprocessor optionally available ● 128K-byte RAM with parity checking expandable up to 768K bytes (192K bytes can be internal) ● 2 RS-232C serial ports, Centronics-compatible parallel printer port, and 5-slot IEEE-696 S-100 bus

Mass Storage ● maximum of 11.3M bytes of hard disk storage using single 11.3M-byte 5.25-inch Winchester disk drive ● maximum diskette storage of 640K bytes using 2 320K-byte 5.25-inch floppy disk drives

Printers ● MPI 99- and 150-cps dot-matrix printers, Epson dot-matrix printer, and Diablo 25-cps letter-quality daisywheel printer are available

Display/Keyboard ● all-in-one cabinet models include 12-inch diagonal green phosphor display, 24 lines x 80 characters, 25th line is status line; 225 lines of 640 dots 144K individually controlled dots for graphics execution ● attached 77 alphanumeric keyboard; includes 13 function keys and an 18-key numeric keypad which includes cursor control keys

Pricing/Support/Availability ● base system—ZF-101-21—$2,899 includes low-profile cabinet, 2 CPUs, 128K-byte RAM, a 320K-byte floppy diskette, I/O ports, and Z-DOS

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operating system; ZF-111-22—$3,499 same as ZF-100-21 except includes 2 320K-byte floppy diskettes and 8-color graphics capability; ZF-121-122—$3,599 includes all-in-one cabinet, CRT, display, CPU, 192K-byte RAM, 2 320K-byte floppy drives, I/O ports, and Z-DOS; ZW-111-32—$5,499 includes low-profile cabinet, 2 CPUs, 192K-byte RAM, 11.3M-byte Winchester disk drive, 320K-byte floppy disk drive, color graphics capabilities, I/O ports, and Z-DOS; ZWG-121-32—$5,599 includes all-in-one cabinet, 2 CPUs, 192K-byte RAM, display, keyboard, 11.3M-byte Winchester disk drive, 320K-byte floppy disk drive, I/O ports, and Z-DOS • 90-day warranty • service available from retailer/dealer and third party; service plans available for on-site repair and mail-/carry-in hardware maintenance; software updates/corrections free for first year • sales through distributors, system integrators, computer retail stores, Heathkit Electronics Center • first delivery 1982

■ ZENTEC CORPORATION

2400 Walsh Avenue, Santa Clara, CA 95050 • 408-727-7662

☐ Series 2000 Model 10, 20, 24 & 30

Classification • multiuser (up to 6)/multitasking desktop computer with integrated CRT • based on 16-bit processor • available in 4 models with differing memory sizes

Systems Software • XENIX operating system is softloaded from diskette and is bundled with packaged system • C language bundled with XENIX; Microsoft BASIC, FORTRAN, Pascal, COBOL, Microfocus Level II COBOL, and SMC Business BASIC • Informix and IDOL database management systems • Mail-UUCP electronic mail

Applications Software • Word Concept One word processing package; CPA, Medical, Attorney, Wholesaler, Retailer, General Accounting, Protime Billing, and Dentist Office software packages available

Systems Hardware • base system includes CPU, memory, CRT, keyboard, and I/O ports • CPU features Intel 8086 microprocessor operating at 8 MHz; Intel 8087 arithmetic coprocessor operating at 8 MHz is optionally available • 256K-byte RAM expandable to 1M bytes • multibus architecture or optional proprietary high-speed Arbitralicon bus architecture; 2 serial RS-232C or RS-449/-422 port standard

Mass Storage • disk controller includes 8X305 microprocessor • maximum 160M bytes of hard disk storage using up to 4 optional Winchester drives; 20- and 40M-byte drives available; 20M-byte drive has 85-millisecond average access time while the 40M-byte drive has 54-millisecond average access time; both have 625K-byte-per-second data transfer rates • maximum of 1.47M bytes of diskette storage using 2 optional 738K-byte drives, 90-millisecond average access time and 31.2K-byte-per-second data transfer rate

Printers • system can support multiple printers; dot-matrix 200-cps 132-column serial printer, letter-quality 40- and 55-cps 132-column printers available • all use RS-232C serial interface

Display/Keyboard • workstation controller includes 4-MHz Z80A microprocessor • 12-inch or optional 14-inch detached CRT packaged into system unit; displays 25 lines of 80 characters, upper-/lowercase alphanumerics • detached 103-key keyboard has 16 firmware-programmable function keys and numeric keypad • up to 5 additional terminals can be added

Pricing/Support/Availability • base system—Model 10—$4,250 includes CPU, 256K-byte RAM, CRT, keyboard, I/O ports • Model 20—$5,750—same as Model 10, but with 512K-byte RAM • Model 24—$6,500—same as Model 10, but with 768K-byte RAM • Model 30—$7,250—same as Model 10, but with 1M-byte RAM • 90-day warranty • mail-/carry-in, on-site, and depot maintenance available from manufacturer and third-party organization • first delivery June 1983; over 100 systems installed

■ ZILOG INC

1315 Dell Avenue, Campbell, CA 95008 • 408-370-8000

☐ System 8000 Model 11, Model 11 PLUS, Model 21, Model 31

Classification • multiuser/multitasking standalone component systems with separate CRT display; Model 11 and Model 11 PLUS up to 8 users; Model 21 up to 24 users; Model 31 up to 24 users • based on 16-bit Zilog Z8000 microprocessor

Systems Software • UNIX System III and System V and "C" language bundled with system • optional RM/COBOL, FORTRAN 77, SMC BASIC, SOFTBOL (DEC DIBOL compatible), ACE COBOL (Data General ICOS COBOL compatible), COBOL, and Pascal languages; MIMIX (CP/M emulation) optionally available • remote communications emulation of 2780/3780; X.25 support

Applications Software • VI, EX, and ED word processing packages

Systems Hardware • basic system unit includes CPU, memory, disk, and cartridge tape drive • CPU is Zilog Z8000 16-bit microprocessor that includes peripheral support circuits for memory management units, a first-in/first-out buffer, combined counter/timer and parallel I/O unit, serial communications controller, and universal peripheral controller • memory ranges from 512K bytes to 4M bytes; maximum of 1M bytes on Model 11 and Model 11 PLUS, and 4M bytes on Model 21 and Model 31 • includes 6 expansion slots on Model 11 and Model 11 PLUS, and 10 expansion slots on Model 21 and Model 31; 8 RS-232C serial ports on Model 11 and Model 11 PLUS, 24 RS-232C serial ports on Model 21 and Model 31; all models include 1 parallel printer port • options supported on Model 21 and Model 31 are an industry-standard 800-/1600-bpi 9-track tape, a floating-point processor board, and an Intelligent Communications Processor

Mass Storage • maximum capacity is 38M bytes on Model 11, 66M bytes on Model 11 PLUS, 128M bytes on Model 21, and 320M bytes on Model 31 • 4 drives available: 19M-byte 5.25-inch Winchester with 75-millisecond average access and 5M-byte-per-second transfer rate; 33M-byte 5.25-inch Winchester with 30-millisecond average access and 5M-byte-per-second transfer rate; 32M-byte 8-inch Winchester with 45-millisecond average access and 801K-byte-per-second transfer rate; and 80M-byte 8-inch Winchester with a 20-millisecond average access time and 801K-byte-per-second transfer rate • all models include 0.25-inch, 1600-bpi, 4-track cartridge tape drive; Model 21 and Model 31 optionally support 0.5-inch, 1600-bpi, 9-track industry-standard tape drive

Printers • 150-lpm dot-matrix printer; 300-lpm and 600-lpm line printers available • all printers use Centronics-compatible parallel interface

Display/Keyboard • 11-inch, 1920-character 80-character x 24-line display • 88-key keyboard with separate cursor keys, numeric keypad, 18 programmable keys, and 4 function keys

Pricing/Support/Availability • base price—$14,950 Model 11, $18,950 Model 11 PLUS, $22,950 Model 21, and $31,950 Model 31 • Model 11 includes CPU, 512K-byte memory, 19M-byte Winchester drive, and cartridge tape drive; Model 11 PLUS includes CPU, 512K-byte memory, 33M-byte Winchester drive, and cartridge tape drive; Models 21 and 31 both include CPU, 1M-byte memory, and cartridge tape drive with Model 21 including a 32M-byte Winchester drive and the Model 31 including an 80M-byte Winchester drive • distributed through direct company sales force and OEMs; 90-day warranty; maintenance service contracts available from Zilog and Exxon Office Systems service organizations; service plans available include mail-/carry-in hardware maintenance; on-site repair service, and an annual subscription service for software updates/corrections • first delivery August 1981; over 2,000 installations

• END

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IBM PC COMPATIBILITY SURVEY

The micro marketplace is presently inundated with many systems whose vendors claim IBM PC compatibility. Since there are various levels of compatibility, it could be a time-consuming search to weed through all of these products. In order to assist our subscribers with this task, Data Decisions has designed a chart to help with the first round of elimination.

This chart presents an easy-to-read overview of the most popular systems in the market today and their degree of compatibility as well as the operating system, CPU, memory, ports, and configuration included in each system's base price. Systems not included are those that are MS-DOS compatible and use a disk media other than the standard 5.25-inch drive (for example, the HP 150 and the ACT Apricot use 3.5-inch drives) or have a different disk format (for example, the Victor 9000). Also not included are several MS-DOS systems that either make no claim to PC compatibility, that are not very prevalent in the marketplace, or that utilize MS-DOS through the addition of an optional processor board.

In-depth information on the most compatible products can be found in the Microcomputer Systems By Vendor section (900) of Volume 3. Capsule information on many of the other products is in the Personal/Microcomputer Survey which follows. For in-depth technology information on the IBM PC compatibility issue, refer to the Technology Reports section in Volume 1. See the report entitled IBM PC Compatibility, filing sequence number 415.

When referring to the following chart, please keep in mind that many of the mentioned systems have not yet been fully tested because of their recent introduction into the marketplace. Therefore, their level of compatibility is based solely on vendor claims and/or specifications of the system. In any case, anyone planning to purchase a PC-compatible product should test the system for themselves before making their final decision.

IBM PC COMPATIBILITY FEATURES

LEVELS OF COMPATIBILITY

In looking at the levels of PC compatibility, the micro industry has adapted, for the most part, the guidelines set down by Future Computing, Inc, a market research firm in Richardson, Texas. They have defined 4 levels of compatibility: Operationally Compatible, Functionally Compatible, Data Compatible, and MS-DOS Compatible.

Operationally Compatible • These systems are the closest to true IBM PC compatibility. They run most IBM PC software packages, use the Intel 8088 microprocessor, accept IBM peripheral cards, can read/write IBM disks, and have the same user interfaces for the display, keyboard, and sound. This group can be subdivided into the highest degree of operationally compatible systems, which includes machines that run 98 percent of IBM PC software, and lower levels of operational compatibility, which include systems that have problems running some of the programs, mostly in the graphics area. These lower level systems also may accept most, but not all, of the PC expansion boards.

Functionally Compatible • This level reflects systems that run their own versions of major IBM programs, use the Intel 8088/8086/80186 microprocessor, and can read/write IBM disks. However, they cannot use IBM expansion cards and have a different user interface. These systems can run some IBM software, usually those programs that do not rely on graphics, that do not use the special keys on the IBM PC keyboard, or do not rely on special circuitry or address the IBM PC ROM. They have their own large software base and a sufficient amount of peripherals and expansion cards to fit their system. Because they are not operationally compatible with the PC, these systems can offer significant improvements over the IBM PC.

Data Compatible • These systems usually do not run major IBM programs, cannot use IBM expansion cards, and have different user interfaces. What they can do is either read or read/write IBM data files. These systems are upgradeable to the functionally compatible level if they have major software programs converted for them.

MS-DOS Compatible • As mentioned previously, this chart does not cover systems that are strictly MS-DOS compatible. Systems in this group cannot even swap data disks without converting the disk media.

HARDWARE COMPATIBILITY

PC-Compatible Expansion Slots • If a system accepts PC expansion cards, the number of PC-compatible slots is shown. A zero (0) indicates that either the system is not board compatible but has noncompatible slots, or the system does not have any expansion slots in the unit but can attach a PC-compatible expansion chassis. The Comments section will indicate which is the case.

Keyboard • Shows which systems employ the same keyboard layout as the IBM PC and which systems use a functionally identical keyboard. Functionally identical keyboards offer the same keys as the IBM system but might place them in different positions. They might also offer additional keys which would not impact compatibility.

Graphics Compatible • Shows what systems utilize the same graphics capability as the IBM PC, either as a standard feature or as a system option.

SYSTEM CONFIGURATIONS

Operating Systems • Shows what versions of PC-DOS/MS-DOS a system supports. Also shows whether a system runs other operating systems such as CP/M-86, Concurrent CP/M-86, the UCSD p-System, or a proprietary operating system.

Processors • Indicates what CPU a system runs under—Intel 8088, Intel 8086, or Intel 80186/80188; what systems use an 8-bit co-processor for running CP/M applications; and if a system has an 8087 socket for implementing an Intel 8087 microprocessor for faster numeric processing.

Memory • Shows the amount of memory a system comes with in its base configuration; how much memory can be placed on the motherboard before having to use expansion slots; and what maximum amount of memory a system can handle.

Ports • Shows what systems provide a serial and/or parallel port as part of their base configuration.

Diskette Drives • Presents different formatted disk capacities. The 320K- or 360K-byte drives refer to the IBM/MS-DOS recording standard of 48 tpi (tracks per inch). The 720K-byte capacity refers to drives with 96 tpi. These drives can also read from and sometimes write to 48-tpi disks. The 800K-byte capacity drives also refer to a 96-tpi mode.

Hard Disk • Shows what systems include a hard disk in their base configuration.

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Bundled Software ● Indicates what type of software is included in the system price.

Base Configuration ● Shows what components are included in a system's entry-level model.

Price Range ● Indicates a system's base price range.

Comments ● Any relevant information about a system that is not presented in the chart is shown here.

Survey Page ● If a system is covered in the Personal/Microcomputer Survey, its survey page number is given. If a dash appears, no survey entry exists.

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Personal/Microcomputer Survey

IBM PC COMPATIBILITY OUTLINE

Column headers (diagonal):
Operationally Compatible · Functionally Compatible · Read/Write Data Compatible · Read Only Data Compatible · PC-Compatible Expansion Slots · Exact PC Keyboard Layout · Functionally Identical Keyboard · Graphics Compatible · PC-DOS 1.1/MS-DOS 1.25 · PC-DOS 2.0/MS-DOS 2.0 · PC-DOS 2.1/MS-DOS 2.1 · Other O/S · 8088 · 8086 · 80186/88 · Z80 or 8085 Co-processor · 8087 Socket · MINIMUM MEMORY: 64K, 128K, 256K · MAX MEMORY ON MOTHERBOARD: 128K, 256K, 512K · SYSTEM MAX MEM: 256K, 512K, 640K, More

COMPANY/PRODUCT	PC-Compatible Expansion Slots
IBM PC 1	5
IBM PC/XT	8
IBM Portable PC	2
AKA PC, PC Plus	5
Bytec-Comterm Hyperion Portable	0
Colby PC 3 Portable	4
Columbia MPC 1600-1, 1600-4	8
Columbia VP Portable	1
Compaq Portable, Plus	3
Corona PC, PC-HD	4
Corona Portable, Portable XT	4
Data Gen'l Desktop Gen Mod 10	0
Docutel/Olivetti PC, Portable PC	4
Eagle PC Plus, PC Plus XL	4
Eagle PC Spirit, Spirit XL Portables	4
GRiD Compass 1100 Lap Computer	0
ITT XTRA	5
Ivy 3001, 3002 Portables	0
Leading Edge PC	7
Logical LX-T	5
Mad Computer MAD-1	1
Mindset	0
Monroe System 2000	0
NCR Personal Computer	0
OSM PC, XPC, VIPC	5
Otrona Attache 8:16 Portable	0
Panasonic Senior Partner Portable	1
Polo Microsystems	0
Pronto Computers	0
Sanyo MBC 555	0
Seequa Chameleon Plus Portable	0
Seequa XT Portable	5
Sharp PC-5000 Lap Computer	0
Stearns Desktop	1
Sperry PC	7
Strategic Technologies PC Traveler	0
Tandy/Radio Shack Model 2000, 2000 HD	0
Tava PC	5
TeleVideo Tele-PC, Tele-XT	1
TeleVideo TPC II Portable	1
TI Professional Computer, Portable	0
Vector Graphic SX	0
Visual Commuter Portable	0
Wang Professional Computer	0
Wordplex PC & Portable	4
Wyse WY-1000	0
Zenith Z-100	0
Zenith Z-150 & Z-160 Portable	4

Personal/Microcomputer Survey

Column headers (rotated): Serial Ports Standard · Parallel Port Standard · 320K-/360K-Byte Diskette Drives · 720K-Byte Diskette Drives · 800K-Byte Diskette Drives · Hard Disk Drive Standard · BUNDLED SOFTWARE (Operating System · Languages · Word Processor · Spreadsheet · Other) · BASE CONFIGURATION (Display · Keyboard · Disk Drives) · PRICE RANGE (Under $2,500 · $2,500 to $3,500 · $3,500 to $4,500 · $4,500 to $5,500 · Over $5,500) · COMMENTS · SURVEY PAGE

COMMENTS	SURVEY PAGE
Graphics capability, hard disk opt	34
Graphics capability opt	34
4 half-size slots not PC compat; can't run some PC S/W	-
Hard disk std on Plus mdl; has room for 4 add'l slots	-
Expan unit for PC-compat slots; incompat video contrl	8
Highest level oper compat; graphics, hard disk opt	-
Highest level oper compat; graphics opt; HD std 1600-4	13
Highest level of operationally compatible	13
Highest level oper compat; hard disk std on Plus mdl	15
XT has 256K min mem, HD std; graphics is higher res	18
Hard disk std on PC-HD; graphics is higher res	18
Also runs DG mini S/W; higher res graphics; hard disk opt	19
Private label of Corona PC	-
To 640K on motherboard; graphics opt; hard disk std on XL	25
Hard disk std on XL	25
Contains bubble mem for storage; prop OS; LCD screen	30
Graphics capability opt	-
Higher graphics res opt; hard disk std - 3002	-
Add'l mode high res graphics std; switch select clock speed	38
Minimum memory of 192KB	39
Lower level oper compat; higher res graphics; hard disk opt	40
Runs approx 80% PC S/W; has 2 graphics co-processors	-
Higher res graphics; 5 expan slots, not PC compat	43
HD std on some mdls; 7 expan slots, not PC compat	46
Graphics opt; XPC and VIPC-HD std; VIPC tape backup	-
Hard disk opt	52
Includes built-in thermal printer	-
Includes built-in modem & printer, 1 expan slot	-
Graphics & HD on some mdls; 4 expan slots, not PC compat	56
Uses SS 160KB drives; hard disk opt; price - $995	62
Needs expansion unit for PC-compatible slots	62
	63
Uses bubble memory & ROM cartridges; opt external drives	64
Won't run hardware depend prog; 4 expan slots, not PC compat	68
Add'l mode high res graphics std; switch select clock speed	68
Includes integral printer, plasma display	69
Higher graphics res; hard disk std on 2000 HD	59
Graphics card, video controller opt	-
Hard disk std on XT model	73
	73
Higher graphics res; 6 expan slots, not PC compat	76
HD std on some mdls; 3 expan slots, not PC compat	-
Needs PC expan unit for add'l slots	81
Higher graphics res; 5/8 expan slots, not PC compat	81
Private label of Corona PC	82
Higher graphics res	-
To 192K on motherboard; 5 expan slots, not PC compat	83
To 320K on motherboard; graphics opt	-