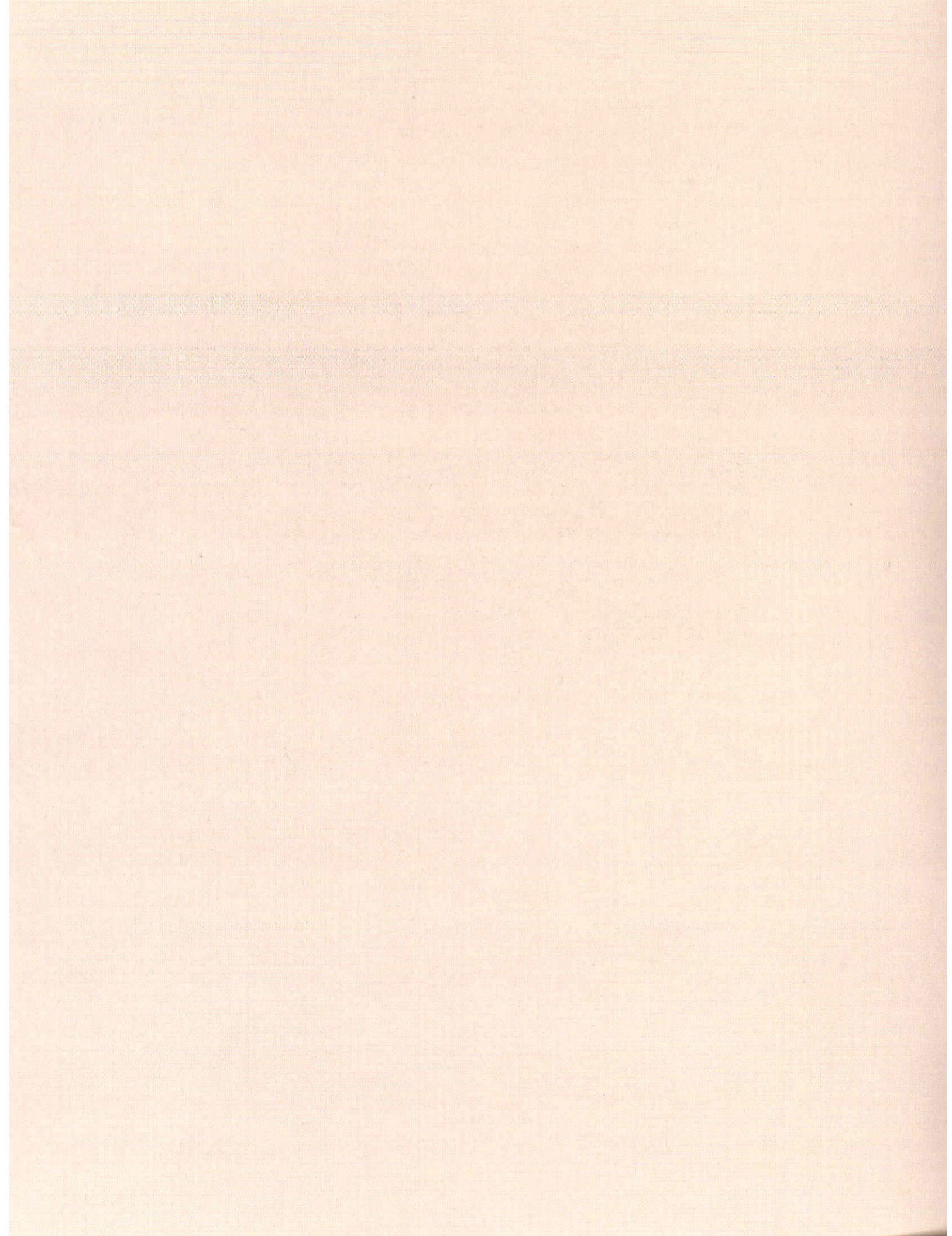


POWERFRAME™ FAMILY OF ENTERPRISE SERVERS



DELIVERING
THE FUTURE
OF ENTERPRISE
NETWORKING
TODAY





...ER IS A "TRUE" ENTERPRISE SERVER!

TRICORD SYSTEMS, INC., ...ity, performance, scalability, and upgradability are the essential characteristics of an enterprise server must have. To serve large numbers of users, support communications, client/server applications, and other business applications, the family of enterprise servers combines these design elements to satisfy your current needs and accommodate future network services for information and resource sharing to department and enterprise level networks of personal computers.

RECOGNIZED AS THE LEADER IN THE SUPERSERVER MARKET, THE POWERFRAME FAMILY TRANSFORMS THE PC NETWORK INTO A TRUE DISTRIBUTED COMPUTING NETWORK BY COMBINING THE BEST CHARACTERISTICS OF THE PERSONAL COMPUTER...COMPATIBILITY AND PRICE/PERFORMANCE, WITH THE BEST CHARACTERISTICS OF THE MAINFRAME AND MINICOMPUTER... COMPUTE AND I/O PERFORMANCE, SCALABILITY AND AVAILABILITY.

AVAILABLE IN A VARIETY OF CONFIGURATIONS, THE POWERFRAME FAMILY OFFERS SYSTEMS TO SATISFY THE PRICE/PERFORMANCE, SCALABILITY AND AVAILABILITY REQUIREMENTS FOR SIMPLE FILE SERVING LANs, LAN CONSOLIDATION, LOCAL AND WIDE AREA COMMUNICATIONS, MAINFRAME CONNECTIVITY, CLIENT/SERVER DATABASES, AS WELL AS MISSION-CRITICAL APPLICATIONS.

ent'er'prise serv'er, n.
a superserver that combines the performance, availability, scalability, and upgradability characteristic of mainframes and minicomputers with the compatibility of personal computers

...t satisfy current and future requirements... you the flexibility to choose from the... networking products... both hard-... that the server provide compatibility

the
the
re

com'pat'i'bil'ity, n.
providing compliance with PC industry standards for network operating systems, network-ready applications and third-party network hardware

hardware products... based on this... the best and... network.

leading... The... es you... gy.

**NETWORKS ARE
OUTPACING THE
TRADITIONAL
PC-BASED SERVER**

Satisfying the requirements of today's networks demand a server capable of handling larger numbers of users, expanded communications, client/server databases and mission-critical applications moving from the mainframe and minicomputer to the network server.

The average number of users attached to a LAN is increasing significantly and the number of new LANs installed annually is growing even faster.

The high cost of multiple software licenses, multiple servers, duplicate networking hardware and network administration is driving a trend toward LAN consolidation.

Client/server databases for the network are demanding much higher server performance, scalability and reliability.

Network servers are supplementing the mainframe and minicomputer as the computing platform for critical, enterprise-wide business applications. More robust network operating systems and greater availability of network-ready applications and development tools are enabling this trend.

And, as these enterprise-wide business applications reach the network, the need to provide expanded communications through the server becomes more important.

These trends are outpacing the traditional PC-based server's ability to provide the performance, scalability and the fault tolerance necessary for this new network environment. What is needed is a new class of server.

Tricord's PowerFrame family is the best of this new class!

**THE POWERFRAME SUPERSERVER IS A "TRUE"
ENTERPRISE SERVER!**

THE POWERFRAME SUPERSERVER IS A "TRUE" ENTERPRISE SERVER!

Compatibility, performance, scalability, availability and upgradability are the essential design elements an enterprise server must have to support large numbers of users, expanded communications, client/server databases and critical business applications. Only the PowerFrame family of enterprise servers combines all of these design elements in a system balanced to satisfy your current network needs and to accommodate future network growth.

Selecting network components that satisfy current and future requirements demand that the server allows you the flexibility to choose from the broadest range of current and future networking products... both hardware and software. This requires that the server provide compatibility with networking standards.

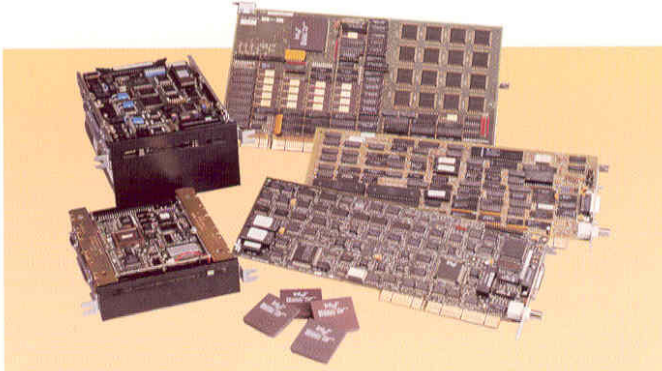
Unlike other servers in its class, the PowerFrame provides compatibility with the EISA (Extended Industry Architecture Standard), SCSI (Small Computer Systems Interface) and Intel standards assuring you flexibility in choosing and integrating the best networking solutions.

EISA compatibility gives you access to the largest array of hardware products for LAN connections, communications, and other products based on this high performance standard. SCSI compatibility assures you the best and broadest range of disk storage and backup solutions for the network.

And, Intel compatibility allows you to choose from industry leading network operating systems and network ready applications. The PowerFrame's commitment to the Intel processor standard also assures you access to the full range of Intel's current and future processor technology.

ent'er'prise serv'er, n.
a superserver that combines the performance, availability, scalability, and upgradability characteristic of mainframes and minicomputers with the compatibility of personal computers

com'pat'i'bil'ity, n.
providing compliance with PC industry standards for network operating systems, network-ready applications and third-party network hardware



SCALABILITY

Through the independent scaling of PowerFrame subsystems, PowerFrame ensures sustained performance as the number of users, network application demands and network complexity increases.

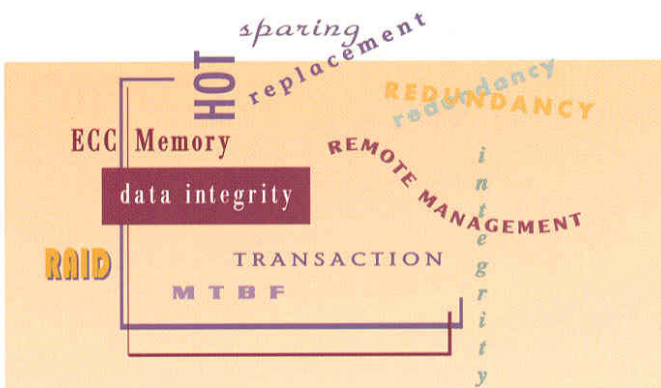
Banyan V

OS/
Nov
Net

UNIVEL U

COMPATIBILITY

PowerFrame supports the widest as Novell NetWare, OS/2, SCO VINES and VINES for SCO. PowerFrame also supports such as Intel, EISA and SCSI, as the best networking solutions.



AVAILABILITY

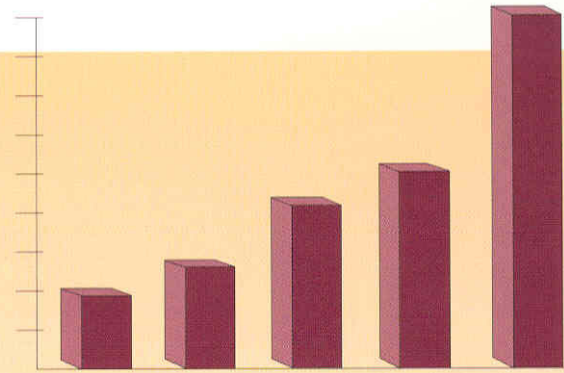
System availability, reliability and fault tolerance are essential in today's larger and more complex networks. PowerFrame provides all three with redundancy of key components, data integrity checks on all data paths and RAID support for disk systems.



INES Open

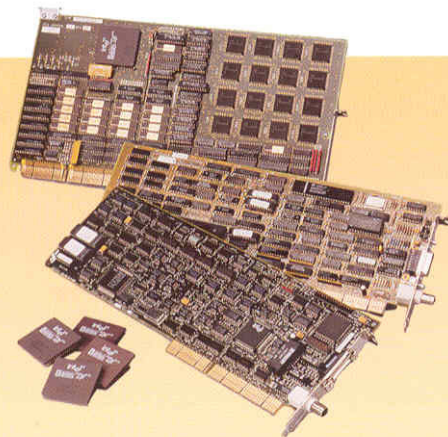
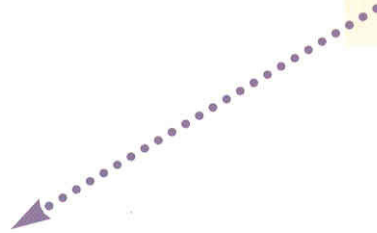
SCO UNIX/UNIX
Novell SFT III
UnixWare
UNIX
MPX

st choice of network operating systems, such
UNIX/UNIX MPX, Univel UnixWare, Banyan
erFrame's support of common PC standards,
ssures flexibility in choosing and integrating



PERFORMANCE

Increasingly larger numbers of users, expanded communication requirements and more demanding network applications require higher server performance levels. PowerFrame's multiprocessor design and market leading I/O processing capabilities provide a performance match for even the most demanding networks.



UPGRADABILITY

Compatibility with the Intel, EISA, and SCSI standards allows current and new network technology to easily migrate to the PowerFrame systems. Tricord's on-going upgrade programs allow you to add higher performance CPUs, higher capacity memory and disks, new and updated network operating systems and applications, and new EISA-based products.



UNPARALLED COMPATIBILITY WITH LEADING NETWORK OPERATING SYSTEMS

No other enterprise server offers the range of network operating systems available with the PowerFrame family. The list includes Novell NetWare, Univel UnixWare, SCO UNIX/UNIX MPX, OS/2, LAN Manager, Banyan VINES and VINES for SCO. And, because the PowerFrame design does not require Tricord to modify operating system source code, current and future releases of these and other operating systems run right off-the-shelf.

As new operating systems emerge, you are assured that they will also run on the PowerFrame.

The PowerFrame's extensive range of network operating system support allows you to use a wide variety of network-ready applications and application development tools, such as relational databases from Oracle, Informix, Sybase and Gupta. And, with PowerFrame's full PC compatibility, including DOS compatibility at the BIOS level, the applications you select will run without modification.

SUSTAINED PERFORMANCE THROUGH BALANCED SYSTEM DESIGN

**per'for'mance, n. providing
compute, I/O and communications
capabilities rivaled only by
mainframes and high-end
minicomputers**

The PowerFrame family is consistently ranked the performance leader in each of the leading operating system environments. Offering performance levels rivaled only by mainframes and high-end minicomputers, PowerFrame achieves this level of performance through a balanced system design that eliminates the frequent I/O and processing bottlenecks that occur in other server designs.

Clustered around a high performance system bus are independent subsystems configured to provide both symmetrical and asymmetrical processing to ensure high performance and scalability. Each subsystem, including EISA I/O, central processing unit(s), main memory, and Tricord's intelligent I/O processors, operate independently, using the system bus only when necessary.

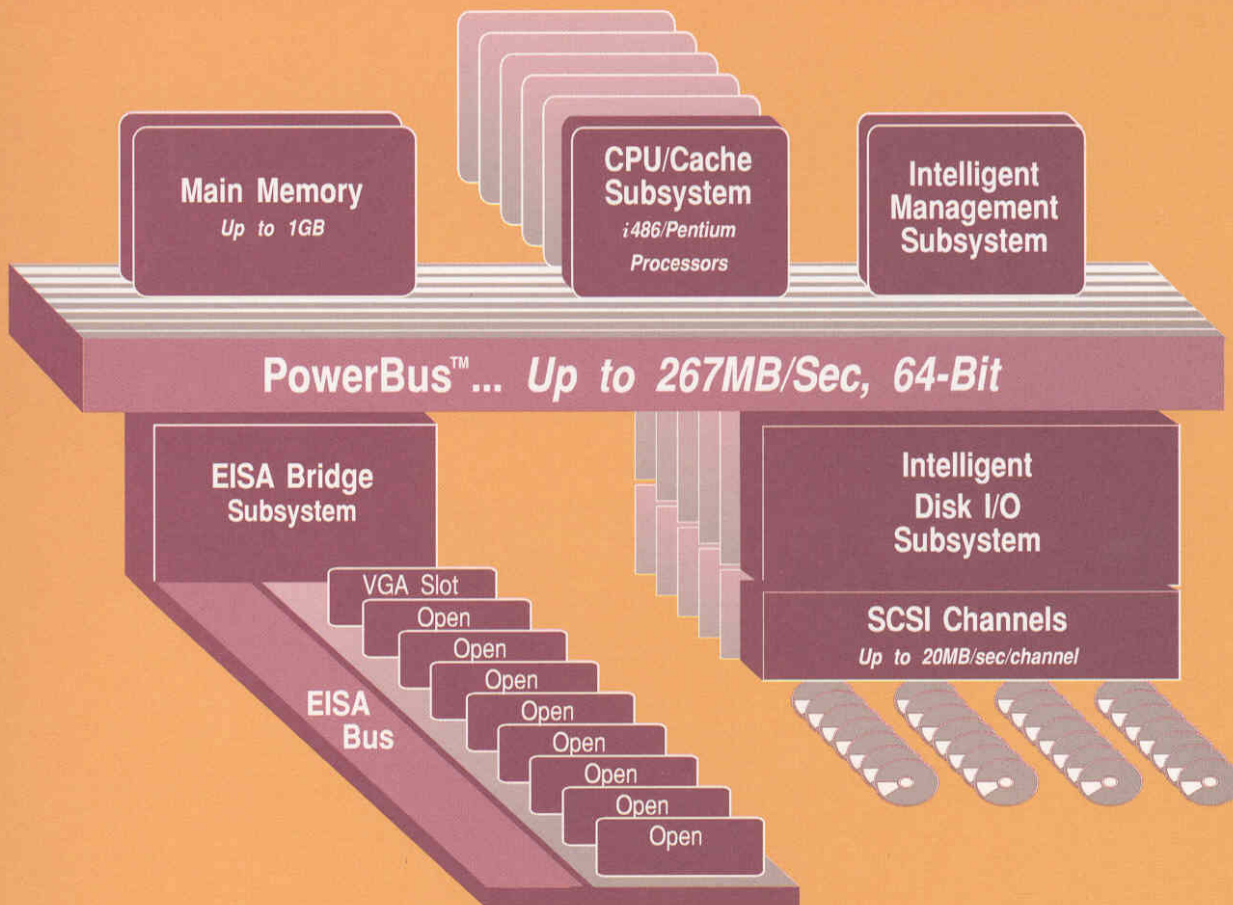
This independence ensures the maximum performance of each subsystem and minimizes the frequent bottlenecks experienced with other server designs featuring single subsystems performing multiple functions.

I/O PERFORMANCE MATCHED TO EVEN THE MOST DEMANDING NETWORKS

PowerFrame's intelligent I/O processors provide optimized disk I/O performance for even the most demanding networks. Unlike other server designs that support disk arrays through an EISA bus, PowerFrame's Intel i386-based I/O processors attach directly to the system bus.

Free of EISA bus contention bottlenecks and designed to handle only I/O transactions, the I/O processors move data across the high-bandwidth system bus without delay and without degradation even when the volume of I/O transactions increases. In fact, I/O performance actually improves linearly as you add drives to the PowerFrame.

And PowerRAID enables even higher levels of disk I/O performance.



POWERRAID ENHANCES DISK I/O PERFORMANCE AND INCREASES POWERFRAME FAULT TOLERANCE

PowerRAID brings the performance and fault tolerant benefits of RAID technology to the PowerFrame, completely independent of the network operating system. Offering a choice of data striping (RAID 0) for improved performance, disk mirroring (RAID 1) for performance and fault tolerance, or both striping and mirroring (RAID 0/1) plus hot sparing, PowerRAID enhances disk I/O performance and fault tolerance to accommodate the most demanding of I/O intensive applications, such as multimedia and imaging.

In addition to RAID technology support, the PowerFrame provides other fault tolerant features to ensure maximum network availability. Included in this feature list are redundant cooling fans to extend the overall system MTBF, redundant power supplies to ensure continued system operation, hot replacement for ease of service, plus ECC memory and parity checking on all data paths and subsystems to ensure data integrity.

PowerFrame also supports archival tape systems for centralized backup of network data files and applications, and external uninterruptible power supply (UPS) for added system availability.

avail'a'bil'ity, n. ensuring reliability, fault tolerance, data integrity and recoverability for high performance networks and mission-critical applications

UNMATCHED SCALABILITY PROTECTS YOUR POWERFRAME INVESTMENT

Your investment in a PowerFrame enterprise server is protected by a design that allows independent scalability of each PowerFrame subsystem. As you add new users, downsize applications to the network or add connections to LANs and other computing resources, you can selectively increase the PowerFrame's performance and capacity.

Add just what you need to keep pace with network changes...more memory, a higher performance CPU or additional CPUs, more disk capacity, or add EISA cards to handle new LAN and communication connections. Add what you need, when you need it with the assurance of continued high performance.

scal'a'bil'ity, n. sustaining performance; providing independent subsystem growth in response to increasing numbers of users, network application demands and network complexity

up'grad'a'bil'ity, n. accommodating
upgrades to current and emerging
EISA, SCSI and Intel-based products
to improve network performance,
capacity and services

The PowerFrame's modular design and commitment to standards allow you to upgrade PowerFrame systems with current and new networking software and hardware products based on the EISA, SCSI and Intel standards, often with little or no change to the current network makeup.

And, with Tricord's on-going upgrade programs you can extend the PowerFrame's useful life with new operating systems, network-ready applications, higher performance CPUs and higher performance memory chips and disk systems as these products become available.

POWERFRAME... THE BEST CHOICE FOR YOUR NETWORK

The network environment is changing. And these changes are placing higher demands on the network server.

Only Tricord's PowerFrame family can meet these demands with the promise of mainframe performance, scalability, availability and upgradability with the openness and compatibility of a personal computer.

Microsoft



PowerFrame, PowerRaid and PowerBus are trademarks of Tricord Systems, Inc.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies. Intel Inside is a registered trademark of Intel Corporation.

1993 Tricord Systems, Inc. All rights reserved.

Specifications subject to change.

070001-04

TRICORD SYSTEMS, INC.

3750 ANNAPOLIS LANE

PLYMOUTH, MN 55447

612 ▲ 557-9005

612 ▲ 557-8403 FAX

800 ▲ 729-5055