VMIVME-7740
Intel Pentium III Socket 370 Processor-Based VMEbus CPU

- Intel® Pentium® III PGA370 socket -based CPU with operating system support for Windows NT®, Windows® CE, Windows NT - RTX, Linux, VxWorks, QNX, and Solaris
- Special features for embedded applications
  - — Up to 96 Mbyte IDE Compact Flash (optional)
  - — Three programmable 16-bit timers
  - — 32 Kbyte of battery-backed SRAM
  - — Remote Ethernet booting supported
  - — Software-selectable watchdog timer with reset
  - — Supports VMEbus P2 connection to HD/floppy drive
  - — PMC expansion site with VMEbus P2 I/O
  - — VME64 modes supported: A32/A24/D32/D16/D08(EO)/MBLT64/BLT32
  - — VMEbus interrupt handler, interrupter, and system controller
  - — Includes byte-swapping hardware for little-endian and big-endian data interfacing (patent pending)
  - — Enhanced bus error handling
  - — Passive heat sink design (no moving parts)
- Standard features include
  - — PGA370 socket processor
  - — Up to 256 Mbyte SDRAM using one 144-pin SODIMM
  - — 64-bit C&T AGP SVGA controller with 4 Mbyte SGRAM
  - — Two on-board Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
  - — Front panel universal serial bus (USB) connection
  - — On-board Ultra-DMA-33 hard drive and floppy drive controllers with VMEbus P2 I/O
  - — Two high-performance 16550-compatible serial ports
  - — PS/2-style keyboard and mouse port on front panel
  - — Real-time clock and miniature speaker included

MICROPROCESSOR — The VMIVME-7740 brings Intel Pentium III processor with MMX™ to VMEbus, offering processor speeds up to 800 MHz. The Pentium III processor has 32-bit addressing and a 64-bit data bus. Its superscalar architecture allows three instructions to be executed per clock cycle. A dynamic branch prediction unit, separate instruction and data caches, and MMX technology also increase the processor's performance. The Pentium III processor also provides 256 Kbyte of Advanced Transfer Cache (on-die, full speed level 2 cache) using Dual Independent Bus Architecture for high bandwidth and performance. This L2 cache operates at the same clock frequency as the processor, thus improving performance.

DRAM MEMORY — The VMIVME-7740 accepts one 144-pin SDRAM SODIMM for a maximum memory capacity of 256 Mbyte. The on-board DRAM is dual ported to the VMEbus.

BIOS — System and video BIOS are provided in reprogrammable flash memory.

SUPER VGA CONTROLLER — High-resolution graphics and multimedia-quality video are supported on the VMIVME-7740 by a Chips & Technology AGP graphics adapter. The adapter is complemented by 4 Mbyte internal synchronous DRAM with a high-bandwidth 64-bit data interface. Screen resolutions up to 1,600 x 1,200 x 64,000 colors (single view mode) are supported by the graphics adapter.

Ethernet CONTROLLER — The VMIVME-7740 supports Ethernet LANs with dual Intel 82559 Ethernet controllers. 10BaseT and 100BaseTX options are supported via an RJ45 connector. Remote LAN booting is supported.

PRELIMINARY

PHOTO NOT AVAILABLE

Ordering Options								
Dec. 27, 1999 SSS-007740-000		A	B	C	–	D	E	F
VMIVME-7740	–				–			

A = Processor
- 0 = Not Used
- 1 = 500 MHz Pentium III PGA370 Socket Processor
- 2 = Reserved
- 3 = 600 MHz Pentium III PGA370 Socket Processor
- 4 = Reserved
- 5 = 700 MHz Pentium III PGA370 Socket Processor
- 6 = Reserved
- 7 = 800 MHz Pentium III PGA370 Socket Processor

B = SDRAM Memory
- 0 = Reserved
- 1 = Reserved
- 2 = 16 Mbyte
- 3 = 32 Mbyte
- 4 = 64 Mbyte
- 5 = 128 Mbyte
- 6 = 256 Mbyte

C = Compact Flash Drive
- 0 = No Flash
- 1 = 8 Mbyte
- 2 = Reserved
- 3 = Reserved
- 4 = Reserved
- 5 = 64 Mbyte
- 6 = 96 Mbyte

For Ordering Information, Call:
1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859
E-mail: info@vmic.com Web Address: www.vmic.com

SERIAL PORTS — Two 16550-compatible serial ports are featured on the VMIVME-7740 front panel. The serial channel has a 16-byte FIFO to support baud rates up to 56 Kbps. Requires two micro-DB9 to standard DB-9 adapters, VMIC P/N 360-010051-001.

KEYBOARD AND MOUSE PORTS — The VMIVME-7740 has a combined PS/2 keyboard and mouse connector. A **Y**-adapter cable is included.

FLASH MEMORY — The VMIVME-7740 provides up to 96 Mbyte of IDE Compact Flash memory accessible through the secondary IDE port. The VMIVME-7740 BIOS includes an option to allow the board to boot from the Flash memory.

16-bit TIMERS — The VMIVME-7740 provides the user with three 16-bit timers (in addition to system timers) which are 82C54 compatible. These timers are mapped in I/O space, and are completely software programmable.

WATCHDOG TIMER — The VMIVME-7740 provides a software-programmable watchdog timer. The watchdog timer is enabled under software control. Once the watchdog timer is enabled, on-board software must access the timer within the specified timer period, or a timeout will occur. A user jumper allows the timeout to cause a reset. Independent of the jumper, software can enable the watchdog timeout to cause a nonmaskable interrupt (NMI) or a VMEbus SYSFAIL.

BATTERY-BACKED SRAM — The VMIVME-7740 provides 32 Kbyte of battery-backed SRAM. The contents of the SRAM are preserved when +5 V power is interrupted or removed from the unit.

PMC EXPANSION SITE — The VMIVME-7740 supports IEEE P1386 common mezzanine card specification with a 5 V PCI mezzanine card expansion site. The PMC site provides for standard I/O out the VMEbus front panel and I/O connection to the VMEbus P2 connection, as well.

Contact VMIC for more information concerning PMC modules and compatibility.

UNIVERSAL SERIAL BUS (USB) — The VMIVME-7740 provides a front panel single connection hub host controller for the USB. Supported USB features include: isochronous data transfers, asynchronous messaging, self-identification and configuration of peripherals, and dynamic (hot) attachment.

TRADEMARKS