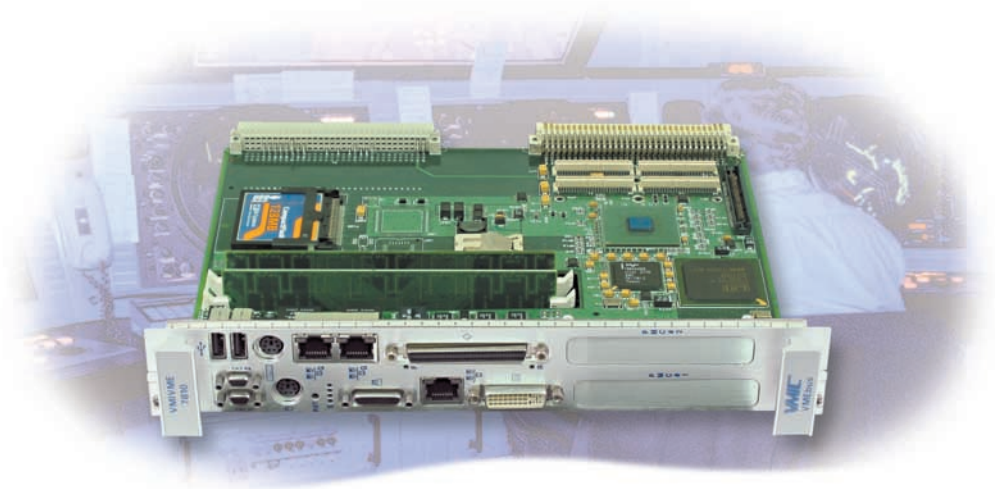# VMIVME-7810

Intel® Pentium® M VME Dual Slot Single Board Computer

GE Fanuc's VMIVME-7810 brings together the power of Intel®'s Pentium® M processor at speeds up to 1.8 GHz integrated with up to 4 Gbyte Dual Data Rate (DDR) SDRAM, Dual Gigabit Ethernet and a 133 MHz PCI-X internal bus to provide the highest level of data processing and handling capabilities in a VME form factor. Operating at 1.8 GHz, the VMIVME-7810 offers increased performance over a 2.2 GHz Pentium 4 Processor - M yet requires approximately 30% less power. This VME single board computer (SBC) is ideal for various purposes including communications and military/defense applications.

Product Features

GE Fanuc's VMIVME-7810 is a high performance, dual slot, Intel Pentium M SBC with 2 Mbyte L2 Advanced Transfer Cache, a 400 MHz system bus, Micro-ops fusion, dedicated stack manager capabilities, and advanced instruction prediction capability. These features are incorporated specifically to increase performance and throughput while reducing power demands. The two PMC expansion sites utilize the PCI-X bus to provide higher I/O bandwidth than previously available in a VMEbus SBC. The PCI-X bus provides up to 1 Gbyte/s bandwidth to support high speed I/O devices such as Fibre Channel, Gigabit Ethernet, SCSI, Reflective Memory and InfiniBand™.

Additional VMIVME-7810 features:
- Up to 4 Gbyte SDRAM memory
- Two 10/100/1000BaseT Ethernet ports
- 10/100BaseTX Ethernet port
- Dual channel SCSI support
- SVGA/DVI-I with up to 1600 x 1200 resolution
- Two high performance serial ports
- Enhanced parallel port
- Two USB ports
- Ultra DMA/100 IDE support
- Up to 1 Gbyte CompactFlash
- PS/2 style keyboard and mouse ports
- Real time clock and miniature speaker
- 32 Kbyte NVRAM
- Operating system support for Windows NT®, Windows® 2000, Windows XP, Linux®, QNX®, and VxWorks®

imagination at work

VMIVME-7810 Specifications:

- **CPU**
  - Intel Pentium M processor with either 1.1 GHz, 1.6 GHz, or 1.8 GHz
  - Advanced L2 cache
    - ◊ 2 Mbyte (1.8 GHz)
    - ◊ 1 Mbyte (1.1 GHz, 1.6 GHz)
  - 400 MHz system bus
  - Works with Intel E7501 memory controller hub

- **SDRAM**
  - Up to 4 Gbyte SDRAM via 2 DIMMs

- **CompactFlash**
  - Up to 1 Gbyte of CompactFlash

- **Ethernet**
  - Two 10/100/1000BaseT Ethernet ports on front panel
  - One 10/100BaseTX Ethernet port on front panel
  - Ethernet LAN link and activity status LEDs built into RJ45 connectors
  - IEEE 802.3/802.3u/802.3x compliant

- **Graphics**
  - ATI Mobility Radeon 3D super VGA (SVGA) controller
  - 16 Mbyte SGRAM
  - 264 Mbyte/s maximum data transfer rate
  - Up to 1600 x 1200 resolution
  - DVI-I via front panel

- **PMC Expansion**
  - Two 133/100/66 MHz PCI-X PMC expansion sites
  - Backward compatible with legacy 32-bit/ 33 MHz and 64-bit/66 MHz PMCs with 5 V/ 3 V signaling

- **Serial Interfaces**
  - Two 16550-compatible RS232 serial ports on front panel (two micro DB9 connectors)

- **SCSI Interface**
  - Dual channel SCSI
    - ◊ Ultra320 support via front panel
    - ◊ SCSI-2 support via P2 connector

- **Other Interfaces**
  - Two USB 1.1 ports via front panel
  - Two PS/2 ports for keyboard and mouse on front panel
  - Ultra DMA/100 IDE support via P2 connector
  - One IEEE-1294 parallel port on front panel (micro DB25 connector)
  - Floppy disk support via P2 connector
  - Hardware reset on front panel
  - Programmable watchdog timer
  - Two 16-bit timers and two 32-bit timers (all programmable)

- **Front Panel Status LEDs**
  - Power/Reset
  - IDE activity
  - Board status
  - Attention
  - Ethernet LAN link and activity status built into front panel RJ45 connectors

- **Operating System Support**
  - Windows NT
  - Windows 2000
  - Windows XP
  - QNX
  - Linux
  - VxWorks

- **Power Requirements**
  - +5 VDC (±5%)
  - +12 VDC (±5%)
  - -12 VDC (±5%)

- **Environmental Specifications**
  - Operating: 0 to +50 °C
  - Storage: - 40 to +80 °C
  - Relative humidity: 10% to 90%, noncondensing

- **Mechanical Specifications**
  - 6U double slot Eurocard format
  - Height: 9.2 in. (233.4 mm)
  - Depth: 6.3 in. (160 mm)
  - Thickness: 1.6 in. (40.6 mm)

Ordering Options

October 7, 2004 800-007810-000 F	A	B	C	D	E	F
VMIVME-7810	–			0	0	

A = Processor
0 = Reserved
1 = 1.1 GHz Pentium M Processor
2 = 1.6 GHz Pentium M Processor
3 = 1.8 GHz Pentium M Processor

B = SDRAM Memory
0 = Reserved
1 = 512 Mbyte
2 = 1 Gbyte
3 = 2 Gbyte
4 = 4 Gbyte

C = CompactFlash
0 = No CompactFlash
1 = 128 Mbyte CompactFlash
2 = 256 Mbyte CompactFlash
3 = 512 Mbyte CompactFlash
4 = 1 Gbyte CompactFlash

D = 0 (Reserved for future use.)

E = 0 (Reserved for future use.)

F = Special Sales Order
0 = VME standard
1 = 1101.10 front panel

Connector Adapters		
Adapter	**Length**	**Part Number**
Micro DB9 to Standard DB9	4 inches	360-010050-001
Micro DB25 to Standard DB25	4 inches	360-010051-000

VMIACC-0045 Cable Kit contains:
Qty. 2 – Micro DB9 to Standard DB9, 4 inches
Qty. 1 – Micro DB25 to Standard DB25, 4 inches

VMEbus Rear Transition Utility Board
VMIACC-0562
The VMIACC-0562 installs in the rear transition area of the VMEbus backplane. The VMIACC-0562 is sold separately.

Note
All VME single board computer products come standard with a VME specification compliant front panel.

GE Fanuc Embedded Systems Information Centers

USA and the Americas:
Huntsville, AL   1 (800) 322-3616
                              1 (256) 880-0444

Europe, Middle East and Africa:
Edinburgh, UK   44 (131) 561-3520
Paris, France   33 (1) 4324 6007

Additional Resources

For detailed technical specifications and product ordering information, please visit the GE Fanuc Embedded Systems web site at:

www.gefanuc.com/embedded

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