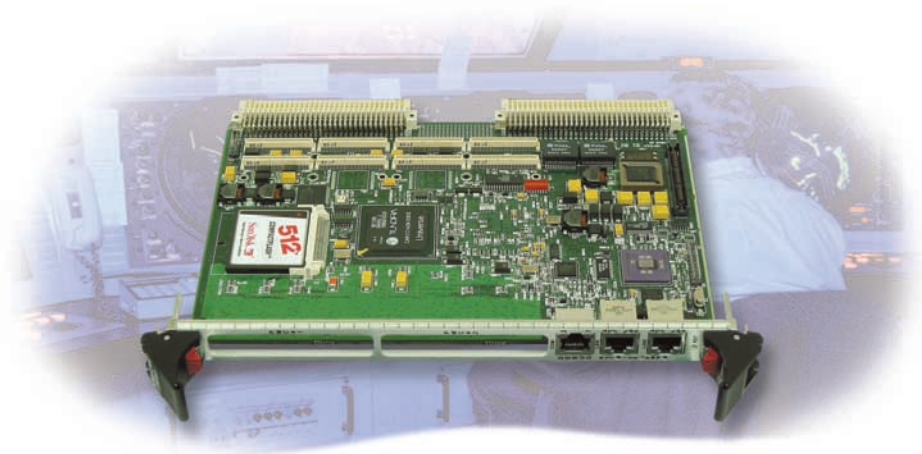




Embedded Systems



VMIVME-7050

IBM® PowerPC® VME Single Board Computer

GE Fanuc's VMIVME-7050 VME PowerPC®-based single board computer (SBC) is highly integrated and versatile providing increased performance for demanding COTS and commercial OEM applications.

Product Features

Offering an IBM® 750FX/GX PowerPC processor with up to 1 Mbyte on-chip L2 cache and processor speeds up to 1.0 GHz, the VMIVME-7050 delivers extremely high performance. The powerful IBM processor is mated with one of the industry's most powerful system controllers (Marvel Discovery II), yielding an impressive SBC design. The bandwidth through the system controller is maximized by using 2 Mbyte of SRAM as a revolutionary "cross-bar fabric switch" to allow "any-to-any" connectivity of up to 100 Gbps of aggregate throughput, with non-blocking concurrent connections among all of the peripheral channels at full bus speeds.

The VMIVME-7050 features high speed, expansion capabilities, upgradability and built-in support for several GE Fanuc products including the PMC237CM1 expander card. The PMC237CM1 adds three PMC sites to this product for a total of five PMC sites using only two VMEbus slots.

Additional VMIVME-7050 specifications:

- Up to 2 Gbyte SDRAM with ECC Support
- 64.5 Mbyte total Bootable Flash
- Dual Gigabit Ethernet
- Two PCI-X capable PMC sites
- Two high performance serial ports
- Ultra DMA IDE controller to CompactFlash socket (Type 1)
- 64-bit PCI board-to-board connector for PMC and feature expansion
- Up to 1 Gbyte CompactFlash
- 32 Kbyte NVRAM
- Real time clock
- Operating system support for VxWorks®, LynxOS® and Linux®



imagination at work

VMIVME-7050 Specifications:

- **CPU**
 - IBM PowerPC 750FX operating at 733 MHz or 750GX operating at 1 GHz
 - On-chip L2 cache
 - ◇ 750FX: 512 Kbyte
 - ◇ 750GX: 1 Mbyte
- **System Controller**
 - Marvell Discovery II (MV64360)
- **Front Panel Status LEDs**
 - Power, IDE Activity, Reset
 - Debug #1, Debug #2: Available via software controlled GPIO
 - Ethernet LAN link and activity status built into front panel RJ45 connectors
- **DRAM**
 - Up to 2 Gbyte of PC2100 DDR memory with ECC support
- **Flash Memory**
 - 64.5 Mbyte Flash
 - ◇ 64 Mbyte soldered onboard
 - ◇ 512 Kbyte via PLCC32 socket
- **Ethernet**
 - Two 10/100/1000BaseT Ethernet ports
 - ◇ 2 front, 2 rear P2, 1 front/rear P2
 - IEEE 802.3/802.3u/802.3x compliant
- **PMC Expansion**
 - Two 133/100/66 MHz PCI-X PMC expansion sites
 - ◇ PMC site #1 via front panel and optional rear P0 connector (high speed I/O - see ordering options)
 - ◇ PMC Site #2 via front panel and rear P2 connector
 - Support for one doublewide PMC module
 - Auto-selects 3.3 V or 5 V I/O via built-in hardware circuitry
 - Supports PMC expansion module, PMC237CM1, for up to 3 additional PMC sites
- **Serial Interfaces**
 - Two RS232/422/485 serial channels
 - ◇ One channel via front panel and P2
 - ◇ One channel via P2 only
 - 16550-compatible
- **CompactFlash**
 - Up to 1 Gbyte of CompactFlash
- **Other Interfaces**
 - IDE support via optional P0 connector
 - Hardware reset via front panel
 - Four 32-bit programmable timers
 - One 32-bit watchdog programmable timer
- **VMEbus Interface**
 - Tundra Universe IID VMEbus interface
 - Built-in-Self-Test (BIST)
- **Operating System Support**
 - VxWorks
 - LynxOS
 - Linux
- **Power Requirements**
 - +5 VDC (±5 %)
 - +12 VDC (±5 %)
 - -12 VDC (±5 %)
- **Environmental Specifications**
 - Operating: 0 to +60 °C
 - Storage: -25 to +80 °C
 - Relative humidity: 10% to 90%, noncondensing
- **Mechanical Specifications**
 - 6U single slot Eurocard form factor
 - Height: 9.2 in. (233.4 mm)
 - Depth: 6.3 in. (160 mm)
 - Thickness: 0.8 in. (20.3 mm)

Ordering Options

August 3, 2004 800-007050-000 G	A	B	C	D	E	F
VMIVME-7050	-					
A = Processor 0 = Reserved 1 = 733 MHz 750FX Processor 2 = 1.0 GHz 750GX Processor B = System DDR SDRAM with ECC 0 = 512 Mbyte 1 = 1 Gbyte 2 = 2 Gbyte C = Loading of VMEbus P0 0 = P0 not populated (No rear IDE or PMC#1 I/O) 1 = *P0 populated for high speed PMC#1 I/O and rear IDE D = CompactFlash/Microdrive 0 = No CompactFlash or Microdrive 1 = 64 Mbyte CompactFlash 2 = 512 Mbyte CompactFlash 3 = 1 Gbyte CompactFlash 4 = 1 Gbyte Microdrive E = 0 (Reserved) F = Special Sales Order 0 = VME standard 1 = 1101.10 front panel NOTE: *Before ordering a P0 populated option, ensure that the VMEbus chassis is P0 compatible.						
VMEbus Rear Transition Utility Boards VMIAAC-7050, -7050A, -7050B and -7050C The VMIAAC-7050 product family installs in the rear transition area of the VMEbus backplane and provides access to two Gigabit Ethernet ports, two serial ports and an optional CompactFlash. These are sold separately.						
Note All VME single board computer products come standard with a VME specification compliant front panel.						
For Ordering Information, Call: 1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859 Email: info.embeddedsystems@gefanuc.com Web Address: www.gefanuc.com/embedded Copyright © 2004 by VMIC Specifications subject to change without notice.						

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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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