



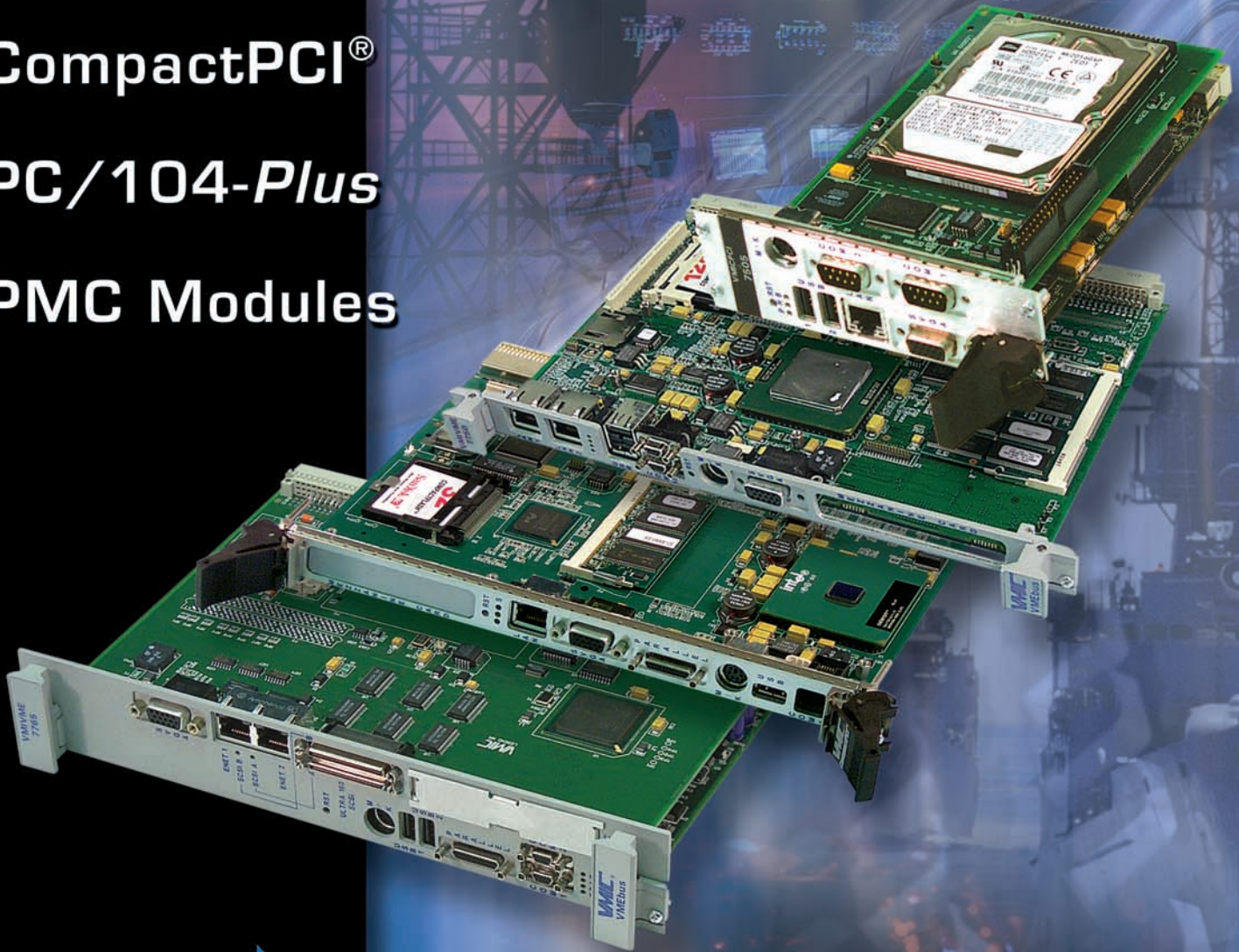
Single-Board Computer Solutions for the embedded market

VME

CompactPCI®

PC/104-Plus

PMC Modules



A GE Fanuc Company



October 2002

VMIC Product Line Expansion

VMIC offers the same standard features found on any PC/AT desktop system.*

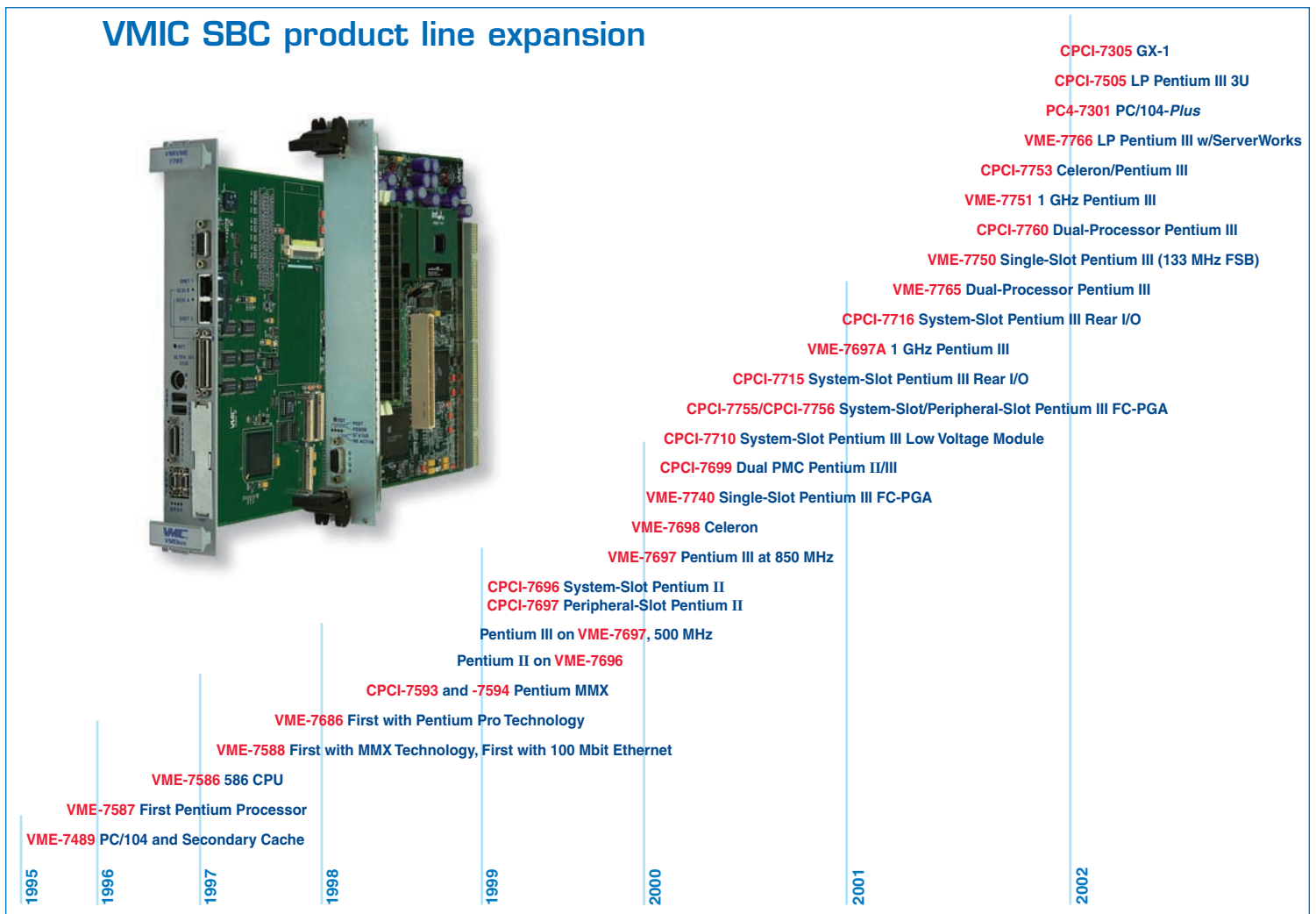
Embedded system applications demand better performance and greater flexibility than ever before. Processors such as the Pentium® III processor and the PC/AT platform are increasingly being selected as the embedded processor of choice due to increased reliability, ease of use, the wide selection of software available, and widespread use in the home, office, and industry. These processors provide the power and development support system designers need and their architecture allows addressing vital project issues, such as upgrade paths, longevity, and software compatibility.

VMIC is continuously expanding and improving its single-board computer (SBC) product line to provide the largest, most versatile selection of SBCs possible.

- Scalable CPU speeds
- Expandable dynamic RAM for programs and data storage
- VGA and Super VGA video controllers
- Serial and enhanced parallel port(s)
- Standard PC keyboard and mouse support
- IDE and enhanced IDE hard drive and floppy drive interfaces
- Real-time clock
- Audio speaker
- Ethernet networking support (10 and 100 Mbit) with remote LAN server booting
- SCSI interface for external hard drives (fast/wide and dual-channel Ultra160)

* All features are not available on all products. All operating systems are not supported on all products.

VMIC SBC product line expansion



Select the Right Embedded Solution

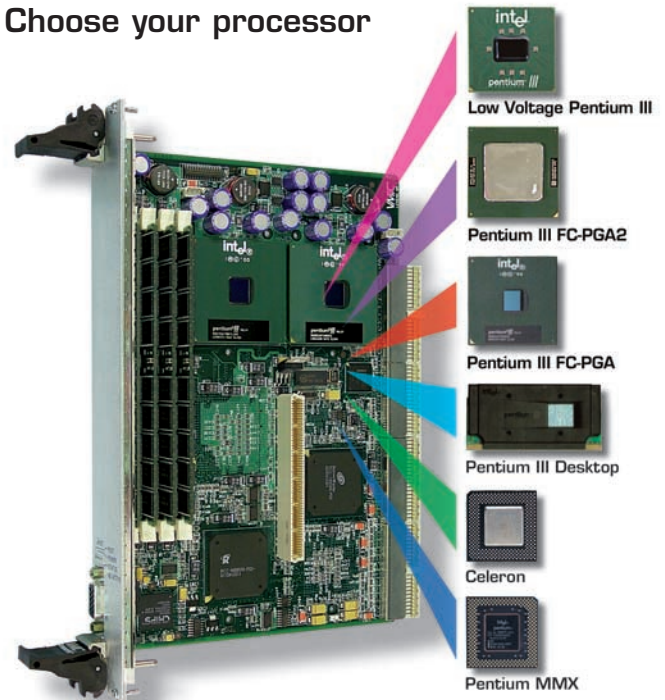
Get the most for your money. Pick and choose your features.

Match performance and features with your budget. VMIC offers you the widest selection of SBCs for VMEbus and CompactPCI® in the industry. We are the embedded computer experts.

VMIC's SBCs provide superior support for the VMEbus. *

- A variety of processor configurations, including dual CPUs
- Single- and multiple-slot width products
- The standard VME64 modes A32/A24/D64/D32/D16/D8 and MBLT64/BLT32 are supported for VMEbus
- Interrupt handler, interrupter, and system controller for VMEbus
- Nonvolatile static RAM for nonvolatile data-sensitive applications
- Four programmable real-time timers
- Universal Serial Bus (USB) support
- Software-selectable watchdog timer with reset
- Bootable on-board nonvolatile flash memory
- Real-time endian conversion hardware for little-endian and big-endian VMEbus data conversions
- System expansion using multiple PMC sites
- System expansion using multiple PC•MIP sites

Choose your processor

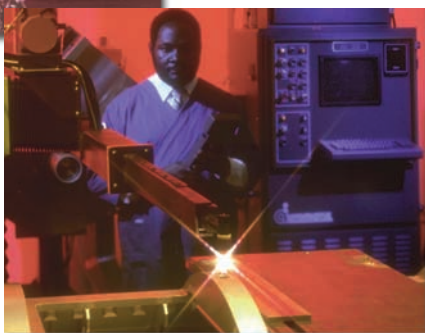
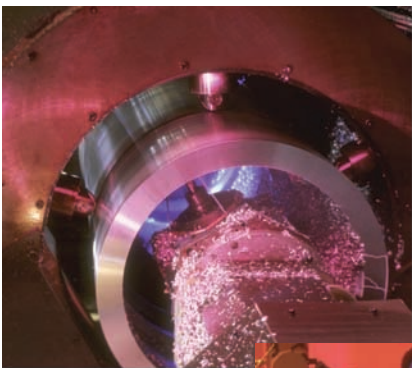


VMIC's SBCs provide superior support for the CompactPCI bus. *

- A variety of processor configurations, including dual CPUs
- System-slot (host) and peripheral-slot (multiprocessor application) SBCs
- Nonvolatile static RAM for nonvolatile data-sensitive applications
- Four programmable real-time timers
- USB support
- System expansion using PMC sites
- 10BaseT/100BaseTX Ethernet with remote LAN server booting
- Software-selectable watchdog timer with reset

VMIC provides other CompactPCI-compatible products to complete your system needs. We also provide data acquisition products and real-time networking interfaces to support other system requirements.

* All features are not available on all products. All operating systems are not supported on all products.



VME Solutions

VMIVME-7698

Single-Slot Celeron® Processor-Based VMEbus SBC

- Up to **366 MHz** Celeron socket 370 processor
- Up to 256 Mbyte SDRAM using one 144-pin SODIMM
- 64-bit Intel® AGP SVGA controller with 2 Mbyte SGRAM
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/33 hard drive and floppy drive controllers with VMEbus P2 I/O
- Up to 512 Mbyte IDE CompactFlash (optional)
- Software-selectable watchdog timer with reset
- Three programmable 16-bit timers
- 32 Kbyte of battery-backed SRAM
- PMC expansion site with VMEbus P2 I/O
- Windows NT®/Windows® 2000, VxWorks, QNX, Solaris, Linux, and LynxOS



VMIVME-7750

Intel Pentium III FC-PGA Processor-Based VMEbus SBC

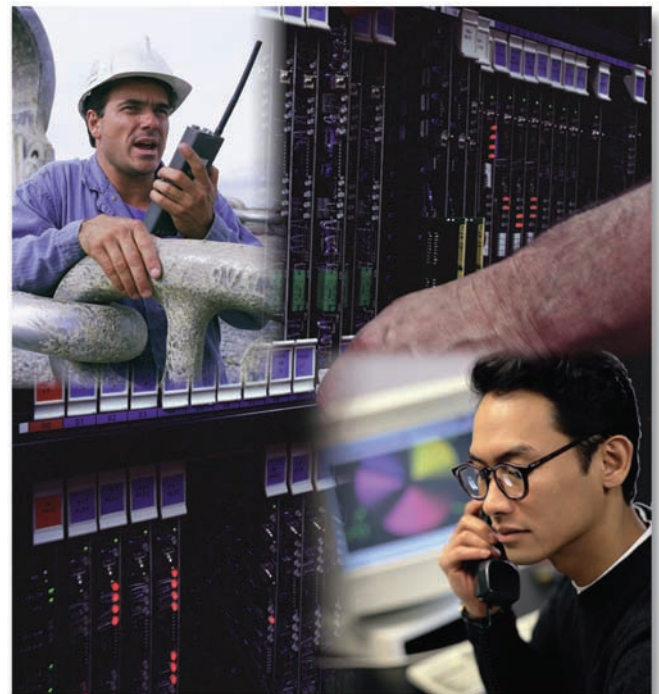
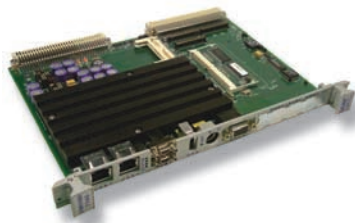
- Up to **1.26 GHz** Pentium III processor with 512 Kbyte cache
- 133 MHz system bus via Intel 815E chipset
- Up to 512 Mbyte PC-133 SDRAM using a single SODIMM
- Internal AGP SVGA controller with 4 Mbyte display cache
- Dual Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 hard drive and floppy drive controllers (uses VMEbus P2 for connection to IDE/floppy)
- Up to 192 Mbyte bootable flash on secondary IDE (optional)
- Software-selectable watchdog timer with reset
- Two 16-bit and two 32-bit programmable timers
- 32 Kbyte of nonvolatile SRAM
- PMC expansion site (IEEE-P1386 common mezzanine card standard, 5 V)
- Windows NT/Windows 2000, VxWorks, Solaris, QNX, LynxOS, and Linux



VMIVME-7740

Intel Pentium III PGA Processor-Based VMEbus SBC

- Up to **850 MHz** Pentium III processor
- Up to 512 Mbyte SDRAM using one 144-pin SODIMM
- 64-bit C&T AGP SVGA controller with 4 Mbyte SDRAM
- Two on-board Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/33 hard drive and floppy drive controllers with VMEbus P2 I/O
- Up to 192 Mbyte IDE CompactFlash (optional)
- Software-selectable watchdog timer with reset
- Three programmable 16-bit timers
- 32 Kbyte of nonvolatile SRAM
- PMC expansion site with VMEbus P2 I/O
- Windows NT/Windows 2000, Windows 98 Second Edition, Linux, VxWorks, QNX, Solaris, and LynxOS



VMIVME-7751

Intel Pentium III FC-PGA Processor-Based VMEbus SBC

- Up to **1.26 GHz** Pentium III processor with 256 Kbyte advanced transfer cache
- 133 MHz system bus via Intel 815E chipset
- Up to 512 Mbyte PC-133 SDRAM using a single SODIMM
- Internal AGP SVGA controller with 4 Mbyte display cache
- Dual Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 hard drive and floppy drive controllers (uses VMEbus P2 for connection to IDE/floppy)
- Optional PCI dual-channel Ultra160 SCSI
- Up to 192 Mbyte bootable flash on secondary IDE (optional)
- Software-selectable watchdog timer with reset
- Two 16-bit and two 32-bit programmable timers
- 32 Kbyte of nonvolatile SRAM
- Up to three PMC expansion sites (IEEE-P1386 common mezzanine card standard, 5 V)
- Windows NT/Windows 2000, VxWorks, Solaris x86, QNX, LynxOS, and Linux



- Software-selectable watchdog timer with reset
- Two programmable 16-bit timers and two programmable 32-bit timers
- 64-bit, 66 MHz PMC expansion site (IEEE-P1386 common mezzanine card standard, 3.3 V)
- Windows NT/Windows 2000, and Linux

VMIVME-7766

Low Voltage Pentium III μ FC-BGA Processor-Based VMEbus SBC

- Up to **933 MHz** low voltage Pentium III processor with 512 Kbyte advanced transfer cache
- Based on ServerWorks LC chipset with 133 MHz system bus
- Up to 1 Gbyte PC-133 registered SDRAM with ECC
- 64-bit PCI SVGA controller with 4 Mbyte internal/SDRAM
- Two on-board Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/66 hard drive and floppy drive controllers (use VMEbus P2 for connection to IDE/floppy)
- Up to 192 Mbyte bootable flash on secondary IDE (optional)
- Software-selectable watchdog timer with reset
- Two programmable 16-bit timers and two programmable 32-bit timers
- 32 Kbyte NVRAM
- 64-bit, 66 MHz PMC expansion site (IEEE-P1386 common mezzanine card standard, 3.3 V)
- Windows NT/Windows 2000, Linux, VxWorks, QNX, and LynxOS



VMIVME-7765

Dual Pentium III FC-PGA/PGA2 Processor-Based VMEbus SBC

- Up to **1.26 GHz** dual Pentium III processors with advanced transfer cache
- Based on ServerWorks LE chipset with 133 MHz system bus
- Up to 2 Gbyte PC-133 registered SDRAM with ECC
- 64-bit PCI SVGA controller with 4 Mbyte internal/SDRAM
- Two on-board Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/66 hard drive and floppy drive controllers (use VMEbus P2 for connection to IDE/floppy)
- PCI dual Ultra160 SCSI
- Up to 192 Mbyte bootable flash on secondary IDE (optional)



CompactPCI Solutions

VMIC recognizes the need for a multiprocessing CompactPCI solution. VMIC supports both system-slot and peripheral-slot CompactPCI single-board computers, allowing up to eight multiple processors to coexist in the same CompactPCI backplane.

VMIC CompactPCI single-board computers

Our system-slot single-board computers bring host platform features to your CompactPCI system, as well as providing the full arbitration and clock generation support you expect from the system-slot SBC. Our peripheral-slot SBCs are designed specifically for multiprocessor applications, and some models support both full and high-availability CompactPCI hot swap. Because they are a single slot wide, our SBCs provide the capability to build eight-processor systems using standard eight-slot CompactPCI backplanes. In addition to providing standard products, we build custom CompactPCI solutions designed to meet your feature-specific, high-volume applications.

Standard features for CompactPCI SBCs

- Pentium II or Pentium III processor with speeds up to 1.26 GHz
- Up to 1 Gbyte SDRAM
- 64-bit AGP SVGA controller with 4 Mbyte SGRAM
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 hard drive and floppy drive controllers with CompactPCI J3 I/O
- Two high-performance 16550-compatible serial ports. One RJ11 connector available at front panel, and both serial ports available through CompactPCI J3 connector.
- Enhanced parallel port with ECP/EPP modes supported available at front panel or through CompactPCI J3 connector
- Two USB ports (one front panel USB port, one CompactPCI J3 connector USB port)
- PS/2-style keyboard and mouse port on front panel
- Real-time clock and miniature speaker included
- Passive heat sink
- Regulatory and NEBS testing
- FCC Part 15 Class A
- CE

Special features for embedded applications*

VMIC's CompactPCI embedded computers are the ideal choice for controlling today's telecommunications equipment. These computers are available in a variety of performance/price levels offering a vast array of user options, including Pentium, Pentium II, and Pentium III processors with on-board Ethernet.

VMIC takes advantage of SMBus technology to bring you an inexpensive, yet powerful method for controlling and getting information from devices on a motherboard. SMBus is used to initialize the battery data, manufacturing date, serial number, electronics trimming, and scaling values during the manufacturing process.

- M-Systems, Inc.'s DiskOnChip Flash or IDE CompactFlash for diskless operation (optional)
- 16 Mbyte bootable flash on secondary IDE
- Four programmable timers (two 16-bit and two 32-bit)
- 32 Kbyte of battery-backed SRAM
- Remote Ethernet booting
- Software-selectable watchdog timer with reset
- SMBus functionality
- PMC expansion site
- System-slot SBC
- Peripheral-slot SBC

* All features are not available on all products.

Custom computers for your applications

VMIC can quickly and economically customize any of its standard SBC products to meet your needs. Listed below are examples of features that VMIC has incorporated into customized SBC solutions.

- I²C control, diagnostic, and power management bus
- Multiple Ethernet ports
- Flat panel display support
- ACPI
- Legacy USB keyboard and mouse support
- SMB on the backplane
- Larger on-board mass storage
- Multiple PMC and/or PC•MIP sites
- Extended operating temperature range
- Conformal coating
- Rear panel I/O
- Ruggedization

VMICPCI-7305

Low Power Pentium Class 3U CompactPCI SBC

- Up to **333 MHz** low power Pentium-class NSC Geode processor
- Up to 256 Mbyte PC-133 SDRAM
- Integrated 2D graphics (16 bpp at 1,280 x 1,024)
- Fast Ethernet controller supporting 10BaseT and 100BaseTX
- Ultra DMA/33 IDE and floppy drive interfaces
- On-board CompactFlash/Micro drive socket (up to 512 Mbyte CompactFlash or up to 1 Gbyte Microdrive)
- Watchdog timer
- Three 16-bit user-programmable timers
- 32 Kbyte of nonvolatile SRAM
- Windows NT/Windows 2000, Linux, and VxWorks

VMICPCI-7505

Low Voltage Pentium III Processor-Based 3U CompactPCI SBC

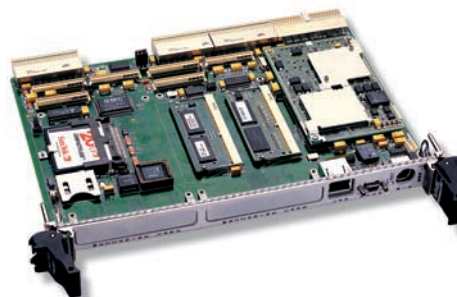
- Up to **800 MHz** low voltage Pentium III processor
- Up to 512 Mbyte PC-133 SDRAM
- Integrated 2D/3D graphics (16 bpp at 1,600 x 900)
- Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- Ultra DMA/100 IDE and floppy drive interfaces
- Up to 512 Mbyte integrated IDE CompactFlash or 20 Gbyte hard drive (optional)
- Software-selectable watchdog timer with reset
- Two 16-bit and two 32-bit programmable timers
- 32 Kbyte of nonvolatile SRAM
- Windows NT/Windows 2000, Linux, and VxWorks



VMICPCI-7699

Pentium II/III CompactPCI SBC with High Availability Hot Swap and Dual PMC

- Up to **500 MHz** Pentium II/III processor-based single-slot embedded module
- Up to 256 Mbyte SDRAM using two 144-pin SODIMM modules
- 64-bit PCI SVGA controller with 2 Mbyte SGRAM
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/33 hard drive and floppy drive controllers with CompactPCI backplane I/O
- Up to 96 Mbyte optional CompactFlash
- Software-selectable watchdog timer with reset
- Three programmable 16-bit timers
- 32 Kbyte of nonvolatile SRAM
- Dual PMC expansion site with rear panel I/O
- Windows NT, VxWorks, Linux, QNX, Lynx OS, and Solaris



VMICPCI-7710

Pentium III Processor CompactPCI SBC

- Up to **500 MHz** Pentium III processor-based single-slot embedded module
- Up to 512 Mbyte SDRAM using 144-pin SODIMM modules
- 64-bit AGP SVGA controller with 2 Mbyte SGRAM
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- Ultra DMA/33 hard drive and floppy drive controllers through CompactPCI J3 connector
- Up to 288 Mbyte optional flash memory with M-Systems, Inc.'s Flash DiskOnChip
- Software-selectable watchdog timer with reset
- PMC expansion site (IEEE-P1386 common mezzanine card standard, 5 V)
- Windows NT, Linux, QNX, and Solaris



CompactPCI Solutions

VMICPCI-7715

Pentium III Processor-Based CompactPCI SBC with Rear I/O

- Up to **850 MHz** Pentium III FC-PGA processor-based single-slot system controller
- Up to 512 Mbyte SDRAM using two socketed 144-pin SODIMM modules
- 64-bit C&T AGP SVGA controller with 4 Mbyte SGRAM with J4 rear I/O
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces with CompactPCI J5 rear I/O
- On-board Ultra DMA/33 IDE hard drive and floppy drive controllers with CompactPCI J5 rear I/O
- Rear I/O-based design
- Up to 288 Mbyte optional flash memory with M-Systems, Inc.'s Flash DiskOnChip
- Software-selectable watchdog timer with reset
- Three programmable 16-bit timers
- 32 Kbyte of nonvolatile SRAM
- PMC expansion site (IEEE-P1386 common mezzanine card standard, 5 V)
- Windows NT/Windows 2000, VxWorks, Solaris, Linux, LynxOS, and QNX



VMICPCI-7716

Pentium III Processor-Based CompactPCI SBC with Rear I/O

- Up to **1 GHz** Pentium III FC-PGA processor-based single-slot system controller
- Up to 1 Gbyte SDRAM
- 64-bit C&T AGP SVGA controller with 4 Mbyte SGRAM with J4 rear I/O
- Two on-board Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces with CompactPCI J5 rear I/O
- On-board Ultra DMA/33 IDE hard drive and floppy drive controllers with CompactPCI J5 rear I/O
- Rear I/O-based design

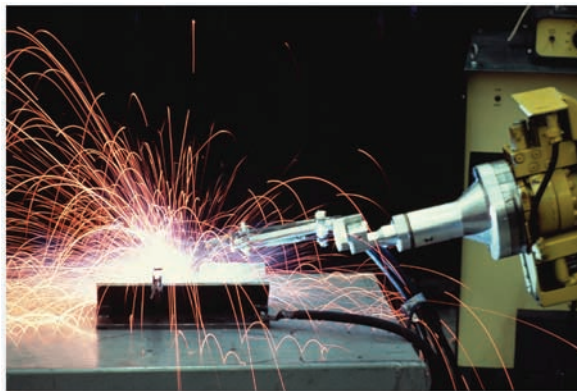


- Software-selectable watchdog timer with reset
- Three programmable 16-bit timers
- 32 Kbyte of nonvolatile SRAM
- PMC expansion site (IEEE-P1386 common mezzanine card standard, 5 V)
- Windows NT/Windows 2000, VxWorks, Solaris, Linux, LynxOS, and QNX

VMICPCI-7753

Intel Celeron/Pentium III CompactPCI SBC System Controller

- Up to **866 MHz** Celeron and Pentium III processors
- Up to 512 Mbyte PC-133 SDRAM using one 144-pin SODIMM module
- Integrated 2D/3D graphics (built-in VGA maximum resolution (8 bpp at 1,600 x 1,200, 16 bpp at 1,600 x 900, and 24 bpp at 1,280 x 1,024))
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 IDE hard drive and floppy drive controllers with CompactPCI rear I/O
- Up to 192 Mbyte IDE CompactFlash (optional)
- Software-selectable watchdog timer with reset
- Four programmable 16-bit timers
- 32 Kbyte of nonvolatile SRAM
- PMC expansion sites
- CompactPCI 2.0 revision 3.0-compliant system-slot controller using Intel 21154 PCI-to-PCI bridge (64 bit/33 MHz)
- Windows NT/Windows 2000, VxWorks, QNX, Solaris, LynxOS, and Linux



VMICPCI-7755

Intel Pentium III Processor-Based CompactPCI SBC System Controller

- Up to **1 GHz** single-slot Pentium III FC-PGA 370 socket processor
- 133 MHz system bus
- Up to 512 Mbyte PC-133 SDRAM using one 144-pin SODIMM module
- Integrated 2D/3D graphics (built-in VGA maximum resolution (8 bpp at 1,600 x 1,200, 16 bpp at 1,600 x 900, and 24 bpp at 1,280 x 1,024))
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 hard drive and floppy drive controllers with CompactPCI backplane I/O
- Up to 512 Mbyte IDE CompactFlash (optional)
- Software-selectable watchdog timer with reset
- Two 16-bit and two 32-bit programmable timers
- 32 Kbyte of nonvolatile SRAM
- Dual PMC expansion sites
- CompactPCI 2.0 revision 3.0-compliant system-slot controller using Intel 2115 PCI-to-PCI bridge (64 bit, 33 MHz)
- Windows 2000, Windows NT Embedded, VxWorks, QNX, Solaris, LynxOS, and Linux



- Two programmable 16-bit timers and two programmable 32-bit timers
- 32 Kbyte of nonvolatile SRAM
- Dual PMC expansion sites
- Windows NT and Windows NT Embedded/Windows 2000/Windows 98SE, VxWorks, Solaris, QNX, LynxOS, and Linux

VMICPCI-7760

Dual Pentium III FC-PGA System-Slot CompactPCI SBC

- Up to **1.26 GHz** dual Pentium III FC-PGA processors
- ServerWorks HE-SL chipset with 133 MHz system bus
- Up to 2 Gbyte PC-133 SDRAM with ECC using four DIMM modules
- PCI graphics using Chips and Technology 69030 with 4 Mbyte internal video DRAM
- Dual Fast Ethernet controllers supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/33 hard drive and floppy drive controllers with CompactPCI back panel card I/O
- Up to 192 Mbyte Type I and Type II CompactFlash (optional via the rear transition board)
- CompactPCI 2.0 revision 3.0-compliant system-slot controller (32/64 bit, 33/66 MHz)
- Dual PMC sites (32/64 bit, 33/66 MHz) (via optional mezzanine)
- Dual-channel Ultra160 SCSI (via optional mezzanine)
- Windows NT/Windows 2000, Solaris x86, and Linux



VMICPCI-7756

Intel Pentium III FC-PGA/PGA2 Processor CompactPCI SBC

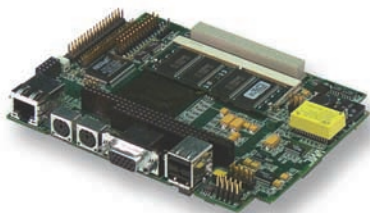
- Up to **1.26 GHz** Pentium III processor
- 133 MHz system bus
- Up to 512 Mbyte PC-133 SDRAM using one 144-pin SODIMM module
- Integrated 2D/3D graphics (Built-in VGA maximum resolution (8 bpp at 1,600 x 1,200, 16 bpp at 1,600 x 900, and 24 bpp at 1,280 x 1,024))
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/100 hard drive and floppy drive controllers with CompactPCI backplane I/O
- Up to 192 Mbyte IDE CompactFlash (optional)
- Software-selectable watchdog timer with reset



VMIPC4-7301

Low Power X86-Based Embedded Controller SBC with PC/104-Plus

- Up to **333 MHz** low voltage Pentium-class NSC Geode processor with PC/104-Plus expansion
- Up to 256 Mbyte PC-100 SDRAM
- Proven 32-bit processor architecture
- Integrated 2D graphics (16 bpp at 1,280 x 1,024)
- On-board Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
- On-board Ultra DMA/33 IDE and floppy drive interfaces
- On-board CompactFlash/Microdrive socket (up to 192 Mbyte CompactFlash or up to 1 Gbyte Microdrive)
- Expansion through PC/104-Plus
- Watchdog timer
- Three 16-bit user-programmable timers
- 32 Kbyte of nonvolatile SRAM
- Windows NT/Windows 2000, Linux, and VxWorks



SBCs without hard drives

Choose Microsoft® Windows NT Embedded, QNX, LynxOS, or VxWorks for real-time OS computing. In addition, several flash storage solutions that eliminate the need for rotating media are available on our VMEbus and CompactPCI SBCs. This approach allows a truly embedded solution. Flash storage devices provide:

- Single-chip/device flash disk capability
- No moving parts for high reliability
- Capacity of up to 288 Mbyte with M-Systems, Inc. DiskOnChip or 192 Mbyte with CompactFlash
- Full boot operability
- Operation as boot disk or secondary disk
- Built-in TrueFFS which provides full hard disk read/write compatibility

Technologies for diskless operation

M-Systems, Inc.'s DiskOnChip and CompactFlash

These devices are available on various VMIC SBCs. They all offer:

- High reliability
- Solid state device
- Full disk function
- Bootable device

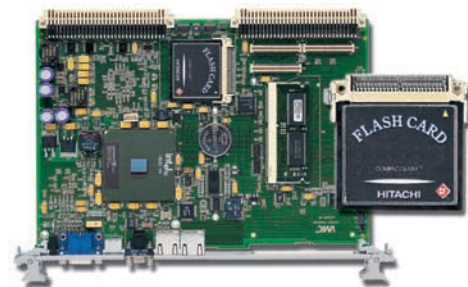
M-Systems, Inc. DiskOnChip is an ISA device which, with a driver, functions like a hard drive and offers capacities up to 288 Mbyte.

Available on:
VMICPCI-7710
VMICPCI-7715



CompactFlash is a removable solid state IDE device that offers capacities up to 192 Mbyte.

Available on:
VMIVME-7698
VMIVME-7740
VMIVME-7750
VMIVME-7751
VMIVME-7765
VMICPCI-7699
VMICPCI-7755
VMICPCI-7756
VMICPCI-7760



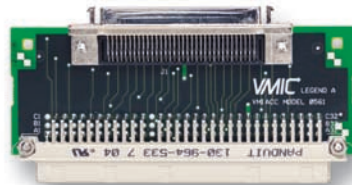
SBC accessories

VMIC has developed a variety of accessories—adapter kits and cables, header adapter boards, and floppy drive and CD-ROM boards—for use with its SBCs.

VMIACC-0561

VMEbus P2 SCSI header adapter board

The VMIACC-0561 provides standard 68-pin ultra/fast/wide SCSI-2 connection to the VMEbus P2/J2 backplane connector. This adapter board allows the user to cable rear-chassis mounted SCSI drives to the appropriate SBC.

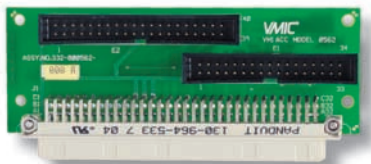


VMIACC-0561

VMIACC-0562

VMEbus P2 IDE/floppy header adapter board

The VMIACC-0562 provides standard 40-pin IDE and 32-pin floppy headers for SBCs that bring out IDE and floppy signals onto the VMEbus P2 connector. This adapter board allows the user to cable rear-chassis mounted IDE/floppy units to the appropriate SBC. VMIC also provides a hard disk drive/floppy drive, the VMIVME-7452, which uses the P2 connector.

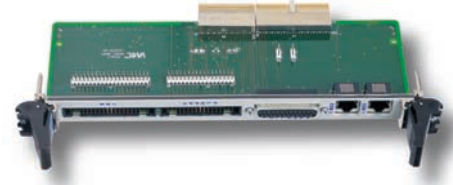


VMIACC-0562

VMIACC-0424/-0425/-0576/-0577

CompactPCI IDE/floppy/serial/parallel header adapter board

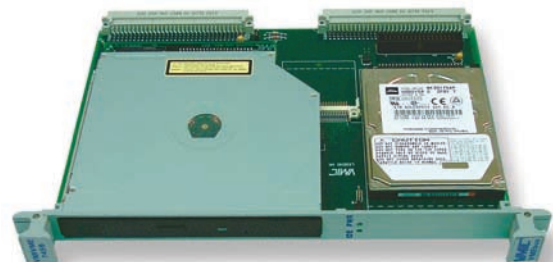
The VMIACC-0576 provides standard header/connector I/O connectivity for VMIC CompactPCI SBCs. The VMIACC-0576 uses a CompactPCI rear panel to provide 40-pin IDE, 34-pin floppy, DB-25 parallel port, and two RJ45 serial port connectors (cable adapters to convert RJ45 to standard DB-9 connectors are supplied). The VMIACC-0424/-0425 (used with the VMICPCI-7715/-7716) also provide video, Ethernet, and keyboard/mouse support. Likewise, the VMIACC-0577 provides rear-panel connectivity for EIDE/floppy/serial/USB and PMC I/O for the VMICPCI-7699/-7755/-7756.



Header adapter board

Floppy/hard drive/CD-ROM/CD-RW disk support products

VMIC has a variety of floppy drives, hard drives, CD-ROM, and CD-RW drives to support the SBCs. (See table on next page.) These drives use the P2 pins on the VMEbus backplane to connect to the VMIC SBCs, eliminating front panel clutter.

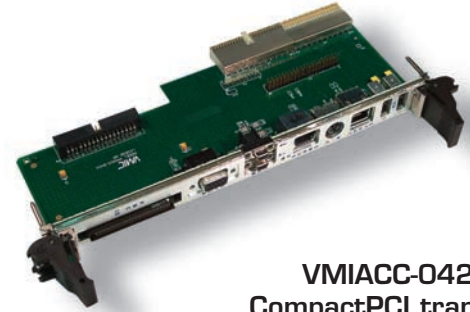


VMIVME-7459
CD-RW/hard drive

Accessories

SBC Accessories (Drives)

	VMIVME-7452 VMEbus Floppy/Hard Drive Up to 30 Gbyte IDE Drive	VMIVME-7455 VMEbus CD-ROM Drive Module	VMIVME-7459 VMEbus CD-RW/Hard Drive Up to 40 Gbyte IDE Drive	VMICPCI-7456 CompactPCI Floppy/Hard Drive Up to 20 Gbyte	VMICPCI-7457 CompactPCI CD-ROM Drive Module
VMIVME-7698	✓	✓	✓		
VMIVME-7740	✓	✓	✓		
VMIVME-7750	✓	✓	✓		
VMIVME-7751	✓	✓	✓		
VMIVME-7765	✓	✓	✓		
VMIVME-7766	✓	✓	✓		
VMICPCI-7699				✓	✓
VMICPCI-7710				✓	✓
VMICPCI-7715				✓	✓
VMICPCI-7716				✓	✓
VMICPCI-7753				✓	✓
VMICPCI-7755				✓	✓
VMICPCI-7756				✓	✓
VMICPCI-7760				✓	✓



VMIACC-0424
CompactPCI transition
module

SBC Accessories (General Support Products)

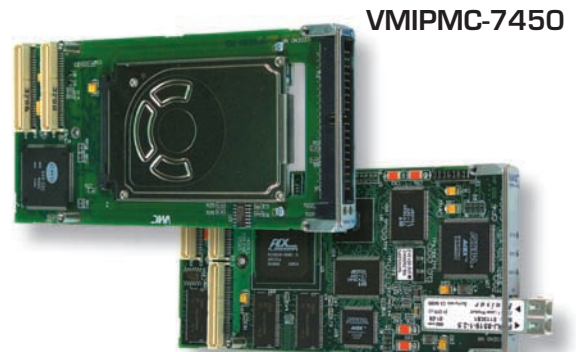
	VMIACC-0561 VMEbus SCSI P2 Transition Module	VMIACC-0562 VMEbus IDE P2 Transition Module	VMIACC-0576 CompactPCI J2 and J3 Transition Module	VMIACC-0577 CompactPCI J2 and J3 Transition Module	VMIACC-0424 CompactPCI Transition Module	VMIACC-0425 CompactPCI Transition Module	VMIACC-0320 CompactPCI J3 and J4 Transition Module
VMIVME-7698		✓					
VMIVME-7740		✓					
VMIVME-7750		✓					
VMIVME-7751	✓	✓					
VMIVME-7765		✓					
VMICPCI-7699				✓			
VMICPCI-7710			✓				
VMICPCI-7715					✓		
VMICPCI-7716						✓	
VMICPCI-7755				✓			
VMICPCI-7756				✓			
VMICPCI-7760							✓

PMC Add-On Boards

PMC Modules		
Gigabit Ethernet		
VMIPMC-6100	Gigabit Ethernet adapter	<ul style="list-style-type: none"> 1000SX interface using a duplex fiber connector
VMIPMC-6101	Gigabit Ethernet adapter	<ul style="list-style-type: none"> 1000T CAT5 copper interface using RJ45 connector
SCSI		
VMIPMC-5790	Dual-channel Ultra160 SCSI adapter	<ul style="list-style-type: none"> 32- or 64-bit, 33 or 66 MHz PMC bus 160 Mbyte/s each channel
VMIPMC-0575	Fast/wide SCSI adapter	<ul style="list-style-type: none"> Byte-wide (20 Mbyte/s) and double byte-wide (40 Mbyte/s) SCSI operation
Fibre Channel Host Bus Adapters (HBA)		
VMIPMC-5661	1 gigabit Fibre Channel HBA	<ul style="list-style-type: none"> 200 Mbyte/s full-duplex communications in all FC topologies
VMIPMC-5664	1 gigabit Fibre Channel HBA with redundant external ports	<ul style="list-style-type: none"> 200 Mbyte/s full-duplex communications in all FC topologies
VMIPMC-5666	2 gigabit Fibre Channel HBA	<ul style="list-style-type: none"> 400 Mbyte/s full-duplex communications in all FC topologies
VMIPMC-5720	2 gigabit dual Fibre Channel HBA	<ul style="list-style-type: none"> 400 Mbyte/s full-duplex communications in all FC topologies
Reflective Memory		
VMIPMC-5565	Ultrahigh-speed fiber-optic Reflective Memory with interrupts	<ul style="list-style-type: none"> 2.12 Gbaud (serial) high-speed fiber-optic network 64 or 128 Mbyte of SDRAM Reflective Memory
VMIPMC-5576XL	Fiber-optic Reflective Memory with interrupts	<ul style="list-style-type: none"> 170 Mbaud (serial) high-speed fiber-optic network Up to 16 Mbyte of Reflective Memory
VMIPMC-5579	Fiber-optic Reflective Memory with interrupts	<ul style="list-style-type: none"> 270 Mbaud (serial) high-speed fiber-optic network 64 Mbyte of Reflective Memory
Hard Disk Adapter		
VMIPMC-7450	IDE hard disk adapter	<ul style="list-style-type: none"> On-board Ultra DMA/66 hard disk drive External Ultra DMA/100 hard disk drive interface via front bezel header
Video and Sound		
VMIPMC-7440	Sound card	<ul style="list-style-type: none"> Single, high-performance, mixed signal, 16-bit stereo Dynamic range (SNR) over 80 dB
VMIPMC-7462	64-bit SVGA video adapter	<ul style="list-style-type: none"> Supports up to 24-bit true color panels (16.7 million colors) Resolutions from 640 x 480 to 1,600 x 1,200

Please see our *PMC Modules* brochure for detailed descriptions.

These PMC modules support most popular operating systems.



VMIPMC-5565

Board Support Packages

CompactPCI board support packages

In general, board support packages are not required for CompactPCI SBC boards; however, VMIC offers a generic device driver for several operating systems to assist customers in developing device-specific drivers.

VMISFT-9421

IOWorks generic device driver

The VMISFT-9421 is designed to provide customers the ability to build device-specific drivers without having to program kernel-level code.

- Plug-n-play functions are available to allow simple, high-level access of PCI, PMC, and CompactPCI devices
- Low-level functions are available to allow easy direct access to ISA bus devices, PC Card (PCMCIA), CompactPCI system board hardware, and CompactPCI peripheral-slot SBCs
- Provides interrupt handling
- Provides both I/O and memory-mapped access
- Supports device-executed DMA
- Supports sharing of RAM among processors (dual-port RAM)
- Allows applications to run in a thread-safe environment
- Create applications that can be used on any PC-compatible hardware regardless of the vendor
- Dynamically access and monitor device features using a straightforward GUI

Supported operating systems

- Windows NT/2000
- QNX
- Linux



VMEbus board support packages

In general, board support packages are required for VMEbus SBC boards. VMIC offers BSPs for the most popular operating systems used in embedded computing applications. Cost-effective run-time licenses are also available.

VMISFT-9420/VMILIC-9420

VMEbus Access™

VMEbus Access software is specifically designed to access the advanced VMEbus architecture of VMIC's PC platforms. Running on Windows NT/2000, VMEbus Access is sophisticated and easy to use.

The function library, VMEbus toolkit, and open architecture that VMEbus Access offers make it one of the most powerful products on the market today. It provides compatibility with existing VMIC VMEbus PC platforms and will be compatible with future VMEbus PC platforms created by VMIC.



VMEbus Access from a VMIC PC provides multiple features

- Supports all of VMIC's VMEbus SBC boards
- Transparently manages the VMEbus interface logic
- Allows creating applications and operator interfaces for use on existing and future VMIC PC products, regardless of CPU type
- Allows creating applications using your choice of popular programming environments, data management programs, and HMI development packages that can use Windows NT/2000 dynamic link libraries (DLLs) or the DDE protocol
- Build multitasking/multithreading applications
- Develop and debug applications with easy-to-use tools
- Run applications in a thread-safe environment
- Dynamically monitor VMEbus activity
- Manually access most VMEbus features using a straightforward GUI
- Configure slave RAM and DMA buffers using a simple dialog box
- Share dual-port RAM to the VMEbus
- Manage byte ordering
- RTX support for Windows NT and Windows 2000

The function library and four utilities that come with VMEbus Access make it easy for programmers to develop Windows NT/2000 applications that access the VMEbus from a VMIC PC.

VMISFT-7418/VMILIC-7418

VxWorks board support package (BSP)



The VMISFT-7418 for VMIC's series of VMEbus Pentium processor-based SBC is a board support package (BSP) which is required to run the VxWorks operating system (OS). With the SBC, VxWorks, the BSP, and other VMEbus equipment from VMIC, implementations can be created for a wide variety of applications, including real-time factory automation, simulation, instrumentation and control, and process control and monitoring. The BSP is linked with VxWorks OS, allowing software applications created with Wind River Systems, Inc.'s development system to load and run on the particular VMIC SBC hardware being used. Serial ports, parallel ports, keyboard, text mode video, and Ethernet transceivers are all supported, as well as floppy and IDE hard disk drives that can be connected to the computer boards. One Target SBC License is included with the BSP and additional Target Licenses can be purchased as needed. When hardware includes single cycle and block transfers using DMA devices, they are supported by the BSP as are interprocessor communications with mailbox registers. VMEbus interrupt handling and error handling are supported. Since the VMEbus environment often contains a mixture of devices from various manufacturers, the byte-swapping feature is provided to allow big-endian and little-endian devices to share data correctly.

- Allows VMIC VMEbus SBCs to operate with VxWorks 5.4 (Tornado 2) from Wind River Systems, Inc.
- Available for VMIC Pentium processor-based SBCs
- Provides support for:
 - VMEbus interface

Board Support Packages

- VMEbus DMA and block DMA options
- Mailbox registers
- Serial and parallel ports
- PMC expansion port option
- Ethernet
- VxWorks system console on serial port or SVGA port in text mode
- Certified BSP by Wind River Systems, Inc.
- Supports optional VMIPMC-7441 Flash/Timer/NVRAM board
- Boot parameter storage in NVRAM
- Flash boot support
- Additional timer hardware supported

VMISFT-7419/VMILIC-7419

LynxOS board support package (BSP)



The VMISFT-7419 board support package (BSP) includes all of the device drivers and configuration tables needed to install the LynxOS x86 Development System (available separately from Lynx Real-Time Systems, Inc.) onto VMIC's VMEbus SBC boards. Using the LynxOS on the VMIC SBCs provides a computing platform suitable for hard real-time applications. LynxOS provides the applications programmer with a stable development environment based on industry-wide standards such as POSIX and Motif. VMIC's VMISFT-7419 is designed to tailor LynxOS x86 Native Development System to the VMIC VME-based SBC product line. This combination provides a self-hosted development environment that runs entirely on VMIC's VME-based SBCs without requiring any external host systems. The BSP contains the device drivers necessary to tailor the LynxOS x86 Development System to VMIC VME SBC products. The BSP is required to install device driver software into the LynxOS product so that the OS will be able to operate these interfaces.

- Allows VMIC VMEbus computers to operate with the Intel x86 version of LynxOS 3.1.0 (requires LynxOS development license, available separately from Lynx Real-Time Systems, Inc.)
- Provides custom device driver for VMEbus access
- Provides support for:
 - VMEbus interface
 - VMEbus DMA operations
 - VMEbus interrupt handling
 - VMEbus bridge allows application programs to read and write selectable regions of VME address spaces
 - Device driver source code included in C language

VMISFT-7417/VMILIC-7417 VMISFT-7435/VMILIC-7435*

QNX board support package (BSP)



The QNX BSP contains the VMEbus manager, user API, and configuration files necessary to tailor the QNX x86 OS to the product. VMIC's SBC products implement the VMEbus interface using technology not supported by the standard QNX product. The BSP is required to install the QNX BSP software into the QNX product so that the QNX user will be able to utilize the VMEbus resources.

- Provides custom VMEbus access for supported SBCs
 - VMEbus bridge provides:
 - VMEbus access including DMA/BLT support
 - VMEbus interrupt generation
 - Mailbox interrupt handling
 - Slave shared memory buffers
 - Raise proxy/signal/ message to user application upon receipt of VMEbus interrupt, VMEbus error, and mailbox interrupt
 - Configurable VMEbus master/slave address space and address mapping
 - VMEbus user client example code included in C and C++
 - Some SBC models support flash and Ethernet booting
- * Select VMISFT-7417 for QNX 4.x and VMISFT-7435 for QNX 6.x.

VMISFT-7416

Solaris board support package (BSP)

The VMISFT-7416 board support package (BSP) includes everything necessary to allow installation of the Solaris Intel edition operating system (available separately from Sun Microsystems, Inc.) onto a VMIC VMEbus SBC board. The BSP allows VMEbus/Intel applications to take advantage of Sun Microsystems, Inc.'s Solaris OS. Solaris provides POSIX-compliant real-time characteristics.



- Allows VMIC VMEbus computers to operate with the Intel edition of Solaris 2.6/2.7/2.8 from Sun Microsystems, Inc.
- Requires Solaris 2.6/2.7/2.8 (Intel edition), available from Sun Microsystems, Inc.
- Provides custom bus nexus driver for VMEbus access
- Provides support for:
 - VMEbus interface
 - VMEbus DMA operations
 - VMEbus interrupt handling

Linux on VMIC VME SBCs

SBC software support products

Run Linux on VMIC's VMEbus SBC boards. This driver supports all the functions necessary for VMEbus access, including both interrupts and DMA transfers. It is compatible with most of VMIC's VMEbus SBC boards and was specifically designed to take advantage of the features offered by the Tundra Universe Bridge. VMIC has tested this driver with Red Hat's 6.2, 7.0, 7.1, and 7.2 distribution and the driver is available at no charge by downloading it from the VMIC Web site (<http://www.vmic.com>). For the latest information about Linux and for free software downloads, go to the Linux resources Web site at <http://www.linuxresources.com>. VMIC also offers Red Hat Linux 7.2 Deluxe for Intel (x86) as our VMISFT-7429 software product. The Red Hat Linux 7.2 distribution is the complete Red Hat Linux solution featuring telephone support and the Getting Started Guide.





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