

- Low voltage Pentium® III processor at 800 MHz
- Standard features include:
  - Up to 512 Mbyte PC133 SDRAM
  - Integrated 2D/3D graphics (16 bpp at 1,600 x 1,200)
  - Fast Ethernet controller supporting 10BaseT and 100BaseTX interfaces
  - Ultra DMA/100 IDE and floppy drive interfaces
  - Two 16-bit and two 32-bit programmable timers
  - Software-selectable watchdog timer with reset
  - 32 Kbyte of nonvolatile SRAM
  - Two high-performance 16550-compatible serial ports
  - Two universal serial bus (USB) ports with two additional USB signals routed to the backplane
  - BIOS support for bootable USB floppy disk drive
  - PS/2-style keyboard and mouse
- Optional features include:
  - Integrated IDE CompactFlash or hard drive
- Operating system support
  - Windows NT®/Windows® 2000
  - VxWorks
  - Linux

**MICROPROCESSOR** — The VMICPCI-7505 incorporates Intel® Pentium III low voltage technology to provide high-end performance in a small package. The Pentium III processor also provides 512 Kbyte of on-die advanced transfer 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 VMICPCI-7505 accepts one 144-pin SODIMM PC133 module for a maximum memory configuration of 512 Mbyte. The on-board DRAM is dual ported to the CompactPCI® bus.

**BIOS** — The VMICPCI-7505 System BIOS, video BIOS and LAN Boot BIOS are provided in reprogrammable memory. The BIOS includes the capability to boot from USB devices such as an external USB floppy disk drive.

**SVGA CONTROLLER** — High-resolution graphics and multimedia-quality video are supported on the VMICPCI-7505 by an integrated 815E graphics accelerator. Full function integrated 2D/3D graphics accelerator provides pixel processing and rendering functions. Display resolutions up to 1,600 x 1,200 are supported. The video output is provided through a standard SVGA connector on the front panel.

**Ethernet CONTROLLER** — The VMICPCI-7505 provides 10BaseT and 100BaseTX Ethernet through an on-board Ethernet controller contained within the 815E chipset. A standard RJ-45 connector is provided on the front panel with two network status indicators.

**HARD DISK DRIVE** — The VMICPCI-7505 offers the option of an integrated 2.5-inch hard disk drive in the two-slot configuration. The VMICPCI-7505 can be ordered with either the CompactFlash drive or the hard disk drive.



**CompactFlash** — The VMICPCI-7505 supports an optional integrated CompactFlash storage in the two-slot configuration. The VMICPCI-7505 can be ordered with either the CompactFlash drive or the hard disk drive.

**TIMERS** — The VMICPCI-7505 provides the user with two 16-bit timers and two 32-bit timers (in addition to system timers). These timers are mapped in memory space, and are completely software programmable.

**WATCHDOG TIMER** — The VMICPCI-7505 provides a software-programmable watchdog timer. The watchdog timer is enabled under software control. Once the

Ordering Options							
April 1, 2003 800-657505-000 D	A	B	C	D	E	-	F
<b>VMICPCI-7505</b>	-			0	0	-	
<b>A = Processor</b> 0 = Reserved 1 = 800 MHz <b>B = SDRAM Memory</b> 0 = Reserved 1 = 32 Mbyte 2 = 64 Mbyte 3 = 128 Mbyte 4 = 256 Mbyte 5 = 512 Mbyte <b>C = Mass Storage</b> 0 = No Mass Storage Device 1 = 32 Mbyte CompactFlash 2 = 64 Mbyte CompactFlash 3 = 128 Mbyte CompactFlash 4 = 192 Mbyte CompactFlash 5 = 256 Mbyte CompactFlash 6 = 512 Mbyte CompactFlash 7 = 20 Gbyte Hard Disk <b>D = 0 (Option reserved for future use)</b> <b>E = 0 (Option reserved for future use)</b>							
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 Copyright © October 2001 by VMIC Specifications subject to change without notice.							

watchdog timer is enabled, on-board software must access the timer within the specified timer period or a timeout will occur. The watchdog timer can be jumper configured to cause a reset. Independent of the jumper, software can enable the watchdog timeout to cause a nonmaskable interrupt (NMI).

**NONVOLATILE SRAM** — The VMICPCI-7505 provides 32 Kbyte of nonvolatile SRAM. The contents of the SRAM are preserved when +5 V power is interrupted or removed from the unit.

**UNIVERSAL SERIAL BUS** — The VMICPCI-7505 provides four USB ports. Supported USB features include: isochronous data transfers, asynchronous messaging, self-identification, configuration of peripherals, and dynamic (hot) attachment. Two USB connections are provided through the front panel and the signals are routed to J2.

**SERIAL PORTS** — The VMICPCI-7505 provides two 16550-compatible serial ports. The serial channels have independent 16-byte FIFOs to support baud rates up to 115 Kbaud. Connectors for the serial ports are provided on the front panel and J2.

**KEYBOARD AND MOUSE PORTS** — The VMICPCI-7505 supports a PS/2 keyboard and mouse using a standard connector on the front panel.

**HARDWARE RESET** — A hardware reset switch is located on the front panel of the VMICPCI-7505.

**ANNUNCIATORS** — In addition to the two indicators associated with the Ethernet port, indicators for the IDE interface activity, board status and +5 V power are provided.

**CompactPCI BUS BRIDGE** — The VMICPCI-7505 provides a 32-bit, 33 MHz interface to the CompactPCI bus which is fully compliant with CompactPCI Rev. 2.1, PCI 2.1 and PCI-to-PCI Bridge Architecture Rev. 1.1.

**OPERATING SYSTEMS AND SOFTWARE SUPPORT** — The VMICPCI-7505 supports a wide variety of PC-compatible operating systems and application software.

**CompactPCI I/O** — The VMICPCI-7505 provides I/O on CompactPCI J2 pins for the secondary IDE and USB 3 and 4.

## SPECIFICATIONS

### 3U Eurocard form factor:

Height	100 mm
Length	160 mm
Width	8 HP (two CompactPCI slots)

**Power Requirements:** +5 VDC ( $\pm 5$  percent), 0.5 A typical, 1.5 A maximum  
+3.3 VDC ( $\pm 5$  percent), 4.5 A typical, 5.0 A maximum  
 $\pm 12$  VDC not used

**Airflow:** 250 LFM required for operation up to 60 °C, operation at higher temperature requires increased airflow

**Altitude:** 0 to 10,000 ft (3,000 m), operating  
0 to 40,000 ft (12,000 m), storage

**Temperature Range:** 0 to +60 °C derated 2 °C per 1,000 ft (300 m) over 6,600 ft (2,000 m), operating  
-40 to +85 °C, storage

**Relative Humidity:** 5 to 95 percent, noncondensing, operating  
5 to 95 percent, noncondensing, storage

**Vibration and Shock:** Bellcore Specs for Vibration GR-63-CORE, Zone 4, operating  
MIL-STD-810E, storage

**Electromagnetic Radiation, Susceptibility and Vulnerability:** Complies with requirements of low voltage Directive 89/336/EEC

**MTBF:** 238,305 hours (Bellcore)

## TRADEMARKS

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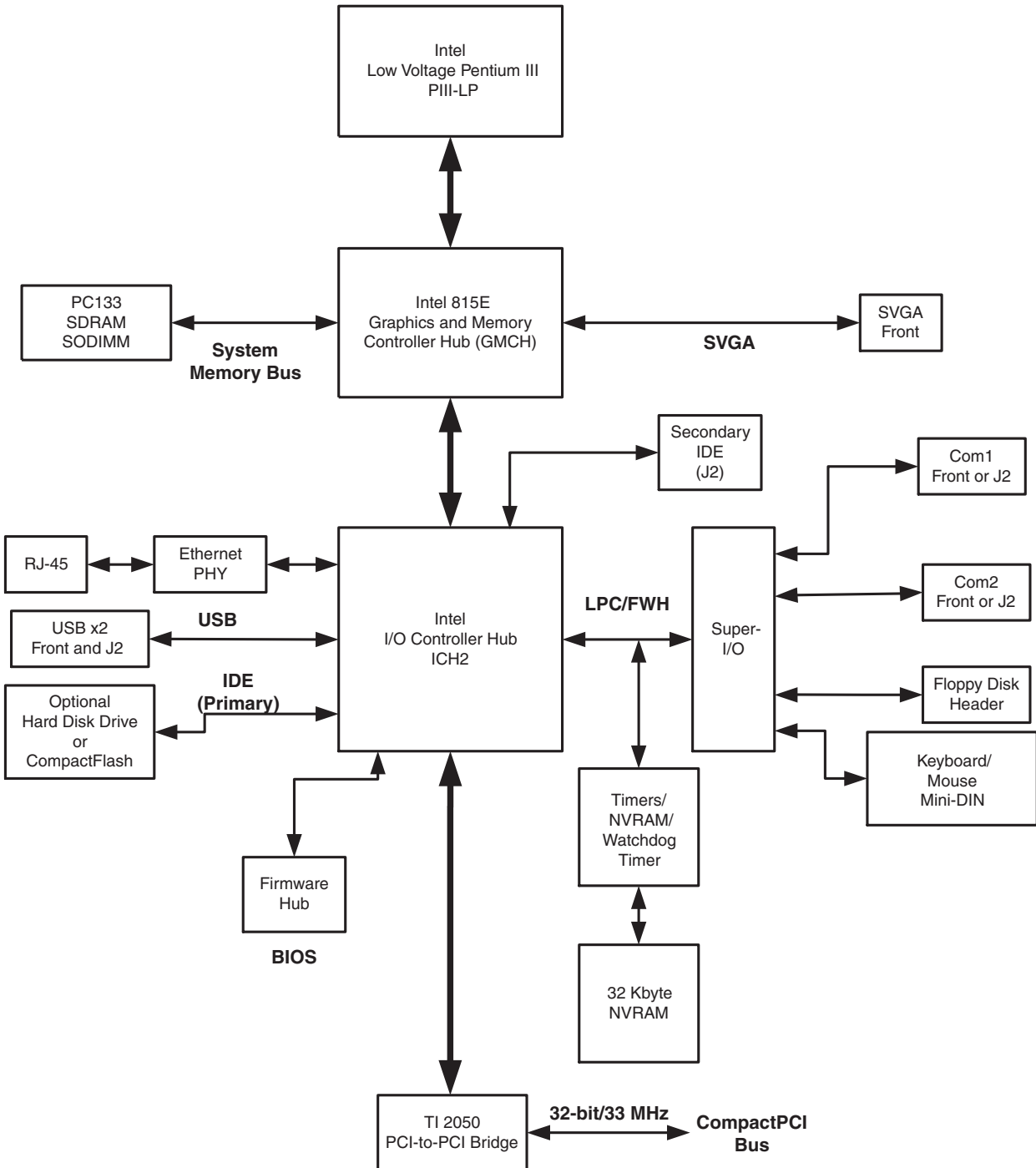


Figure 1. VMICPCI-7505 Low Voltage Pentium III Processor-Based 3U CompactPCI Single-Board Computer