

Intel® Pentium® III Processor Intelligent PMC Host Board



APPLICATIONS

The VP PMC/P3x is a single slot, PC compatible, intelligent PMC Carrier Board which is ideally suited to I/O intensive embedded applications. The board features the Intel® Pentium® III processor and two PMC sites which are capable of supporting an extensive range

of commercially available and custom PMC modules. An optional expansion board with 2 additional PMC sites can be fitted to add further I/O capacity if required. The VP PMC/P3x supports a wide range of industry standard operating systems.

HIGHLIGHTS

- 850 MHz or 700 MHz Intel Pentium III processor:
 - using PGA370 socket based Flip-Chip
 - no CPU fan needed
- Up to 320 Mbytes of Synchronous DRAM
- Ethernet 10 Mbps (10Base-T) or 100 Mbps (100Base-Tx) via an RJ45 connector
- Two 32-bit PMC interfaces on board with I/O via front panel or P0 and P2 connectors
- Expansion interface to optional PMC Carrier Board in second VME bus slot - supporting 4 x PMC Modules
- 16 Mbytes Flash EPROM for application program storage
- 512 Kbytes of BIOS Flash EPROM
- 1 asynchronous RS232 serial channel
- Keyboard and mouse interfaces via header (requires splitter cable)
- Watchdog timer
- Support for VxWorks®, LynxOS®, Solaris™, Linux®, QNX®, RTX®, MS-DOS®, Windows® 2000, Windows NT®, and Windows® XP Embedded
- VME-64 Interface supporting A32/A24/A16/D64/D32/D16/D8(E0), MBLT64 with hardware byte-swapping
- Optional P0 connector (VME64x compliant) (required for full PMC rear I/O capability)
- Single slot

Central Processor

- Intel® Pentium® III processor operating at 850 MHz or 700 MHz:-
 - using a 370-pin FC-PGA (Flip-Chip Pin Grid Array) CPU
 - 32 Kbytes internal (Level 1) CPU cache
 - 256 Kbytes of internal secondary (Level 2) cache
 - 100 MHz system bus frequency
 - utilizes Intel® 82440BX chipset
 - no CPU fan

DRAM

- supporting up to 320 Mbytes S-DRAM:-
 - 64 Mbytes of DRAM soldered to board
 - one 144-pin SODIMM socket
 - socket will accept 64 Mbytes or 256 Mbytes S-DRAM modules
- 64-bits wide using 3.3 Volt S-DRAMs
- accessible from CPU, PCI bus and VME

EIDE Interface (see note)

- accessed via P2 connector
- supports Ultra DMA 33 for high performance drives
- supports up to 2 drives

Ethernet Interface

- supports 10Base-T and 100Base-Tx for UTP CAT-5
- implemented by an Intel® 82559ER LAN Controller
- accessed by an RJ45 front panel connector
- programmable station ID

PMC Expansion Interface

- 2 x PMC sites with I/O via front panel or P0/P2 connectors within a single VME slot
- provides connection to a PMC Carrier Board (which provides 2 extra PMC sites in addition to the 2 on-board PMC sites)

Serial Interface

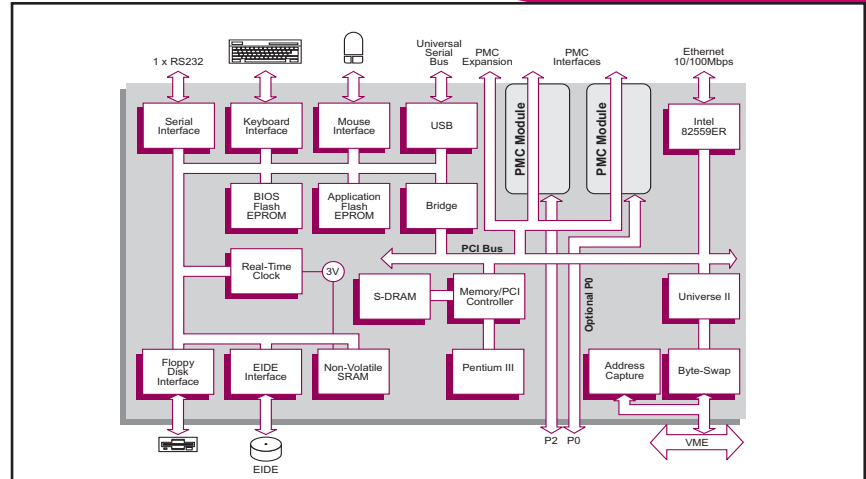
- 1 x RS232 serial channel
- 16550 compatible UART
- accessed by 9-pin D-type connector on front panel

Other Peripheral Interfaces

- PC-compatible Real Time Clock
- watchdog timer
- keyboard interface (requires splitter cable)
- mouse interface (requires splitter cable)
- floppy disk interface via P2 connector (see note)
- Universal Serial Bus (USB) interface via P2 connector (see note)
- 32-bit long duration timer/periodic interrupt timer (LDT/PIT)

VME Interface

- implemented using Tundra® Universe II® device
- VME Master/Slave
- A32/A24/A16/D64/D32/D16/D8(E0)/MBLT64
- fast hardware byte-swapping
- auto system controller detect
- full interrupter / interrupt handler support
- 4 x 32-bit mailbox registers
- location monitor
- VME bus error interrupt hardware



Battery-Backed SRAM

- 512 Kbytes of low-power SRAM (option for 2 Mbytes)
- contents maintained by on-board battery
- battery life >2 years at normal room temperature

Flash EPROM

- 512 Kbytes of BIOS Flash EPROM
- 16 Mbytes of application program Flash EPROM

Firmware Support

- PhoenixPICO™ BIOS
- comprehensive Power-On Self-Test (POST)
- boot from floppy disk, EIDE hard disk, Flash EPROM or over network

Software Support

- support for Support for VxWorks, LynxOS, Solaris, Linux, QNX, RTX, MS-DOS, Windows 2000, Windows NT, and Windows XP Embedded

Electrical Specification

- all voltages to be within ±5%
- +5V@5.2A (typical with 64 Mbyte DRAM and 700 MHz Intel Pentium III processor)
- +12V@0.0A; -12V@0.0A
- +12V and -12V routed to PMC Expansion from VME bus

Environmental Specification

- 0°C to +55°C (operating)
- 10% to 90% Relative Humidity, non-condensing (operating)
- 40°C to +70°C (storage)
- 10% to 90% Relative Humidity, non-condensing (storage)

Mechanical Specification

- 6U form-factor
- single VME slot - front panel width 0.8inch (20.3mm)
- standard 160-way DIN connectors for P1 and P2
 - optional 95-way P0 connector for PMC I/O

NOTE: 5-row backplane is required to provide access to EIDE, floppy disk and USB interfaces

ORDERING INFORMATION

Order Number Product Description (Hardware)

VP PMC/P33-xy	700 MHz Pentium III processor
VP PMC/P34-xy	850 MHz Pentium III processor
AD CR2/PMC-xx	PMC carrier board for 2 PMC modules

Replace the order number suffix (-xy) with selections from the following:

Where x =	Where y =
1 - 3-row, PMC1 I/O, PMC2 I/O	1 - 64 Mbytes
2 - 5-row, P2 + P0, PMC1 I/O, PMC2 I/O EIDE, floppy, 1 x USB	2 - 128 Mbytes
3 - 3-row, P2, PMC1 I/O	3 - 320 Mbytes