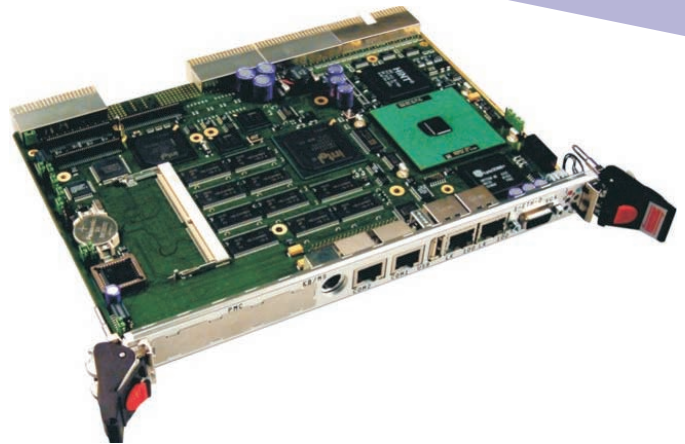


Intel® Pentium® III Processor System Controller



APPLICATIONS

The PP CP2/P3x is a PC-compatible high performance, high functionality one-slot CompactPCI® single board computer based on the Intel® Pentium® III processor in an FC-PGA 370 pin package. Featuring a selection of memory options together with an on-board disk drive or CompactFlash™ drive and a variety of interfaces, the board is suitable for a range of high-performance applications in industrial control, telecomms, telemetry,

medical, scientific and aerospace applications. Its functionality can be further increased through the use of PMC modules. The board is compliant with the PICMG® 2.16 (Packet Switching Backplane) specification. To simplify the board's integration many popular industry standard operating systems are supported. Full system monitoring is provided by the PICMG 2.9 compliant IPMI interface.

HIGHLIGHTS

- 1 GHz or 850 MHz Intel® Pentium® III processor:
 - 32 Kbytes L1 cache
 - 256 Kbytes L2 cache
 - no CPU fan needed
- Single slot
- Up to 512 Mbytes of SDRAM (with ECC)
- High performance EIDE interfaces with optional on-board disk drive (in a single slot)
- Optional dual CompactFlash/MicroDrive™ carrier support
- 2 x 10/100Mbps Ethernet interfaces:-
 - Packet Switching Backplane (PICMG 2.16)
- AGP graphics interface
- PMC module interface
- CompactPCI System Slot controller:
 - 32/64-bit CompactPCI interface
- Option to bypass CompactPCI bus (Satellite Mode)
- Supports IPMI (Intelligent Platform Management Interface)
- 8 Mbytes of Flash EPROM; 512 Kbytes of BIOS Flash EPROM
- PS/2 Keyboard and mouse port
- 2 asynchronous RS232 serial channels
- Parallel Printer Port (ECP, EPP and IEEE1284)
- Floppy disk interface; Watchdog timer
- Support for VxWorks®, Windows NT®, Windows® 2000, Windows® XP Embedded and Linux®
- Optional Transition Module for rear panel I/O

Central Processor

- 1 GHz or 850 MHz Intel® Pentium® III processor :-
 - using a socket 370 FC-PGA (Flip-Chip Pin Grid Array) CPU
 - 32 Kbytes internal (L1) CPU cache
 - 256 Kbytes of secondary (L2) cache
 - no CPU fan
- utilizes the Intel® AGP 82440BX chipset:-
 - supports 100 MHz bus frequency
- Intel Pentium III processor (ITP) debug port

DRAM

- supporting up to 512 Mbytes of 100 MHz ECC SDRAM:-
 - 256 Mbytes soldered on the board; and,
 - 256 Mbytes provided via SODIMM socket
- 64-bits wide using 3.3 Volt S-DRAMs
- accessible from Intel Pentium III processor or CompactPCI bus

Hard Disk Interfaces

- EIDE interface:-
 - 2 channels (primary and secondary)
- secondary channel can be used for on-board 2.5 inch disk drive (within a single slot) or support for 1 or 2 CompactFlash modules or MicroDrive Type 3 drives
- primary channel is accessible via Transition Module

Ethernet Interfaces

- 2 channels supporting 10 Base-T and 100 Base-TX for UTP CAT-5
- implemented by 82559ER LAN Controllers
- channels individually switchable between front panel RJ45 connectors and J3/J5 connectors
- support for PICMG 2.16 R1.0 - Packet Switching Backplane
- optional support for rear panel RJ45s via Transition Module

Graphics Interface

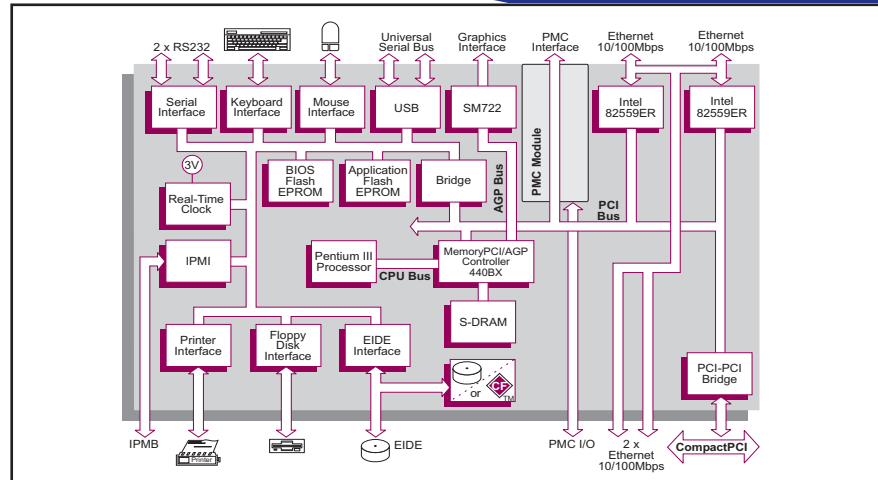
- implemented by a Silicon Motion® SM722 providing:-
 - AGP support
 - 8 Mbytes video memory
 - resolutions up to 1280 x 1024
 - up to 16M colors
- accessed by front panel connector

PMC Interface

- single PMC site:-
 - I/O via front panel or via J3 connector
 - 32-bit, 33 MHz PCI operation
 - 5V signaling levels

Serial Interface

- 2 x RS232 serial channels
- 16550 compatible UART
- accessed by 2 x RJ45 connectors on front panel and via D-type connectors on Transition Module
- each channel supports CTS, RTS, DSR, DTR and DCD via front panel and Transition Module; RI supported via Transition Module



Flash EPROMs

- 512 Kbytes of BIOS Flash EPROM - 8-bits wide
- 8 Mbytes of 16-bit Application Flash EPROM

Software Support

- support for Windows NT, Windows 2000, Windows XP Embedded, VxWorks and Linux

Firmware Support

- PhoenixPICO® BIOS
- comprehensive Power-On Self-Test (POST)
- LAN boot firmware included

Other Peripheral Interfaces

- keyboard and mouse interfaces via a single PS/2™ type connector on front panel or via Transition Module
- PC-compatible Real Time Clock (Year-2000 compliant)
- floppy disk interface via Transition Module
- 2 USB (Universal Serial Bus) interfaces; one via front panel, both via Transition Module
- parallel printer port interface (ECP, EPP and IEEE1284) via Transition Module
- watchdog timer
- speaker interface
- system fan and CPU temperature monitors:-
 - all accessible via IPMI

CompactPCI Interface

- compliant with PICMG 2.0 R3.0; 3.3V or 5V signaling levels
- 33 MHz; 32/64-bit interface accessed via J1/J2 connectors
- utilizing a PCI-PCI bridge for off-board accesses
- operates as a System Slot board
- PICMG 2.1 R1.0 Hot Swap Specification Compatible as hot swap controller only
- option to disable CompactPCI interface (Satellite Mode):-
 - receives power from CompactPCI bus
 - does not communicate using CompactPCI bus
 - board can be hot swapped in this mode
- J4 connector not fitted

IPMI

- PICMG 2.9 R1.0 (System Management Bus) implements the IPMB0 interface
- on-board BMC (Baseboard Management Controller)
- supports 8 Kbytes of non-volatile memory

Electrical Specification

- +5V@6.2A (typical at 1 GHz with 512 Mbytes DRAM); +5% / -3%
- +3.3V@2.5A; +5% / -3%
- +12V@0.0A; -12V@0.0A
- +12V and -12V routed to PMC expansion slot

Safety

- PCB (PWB) manufactured with flammability rating of 94V-0

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) non-condensing

Mechanical Specification

- 6U form-factor: 9.2inches x 6.3inches (233mm x 160mm)
- single-slot: 0.8inches (20.3mm)
- connectors: IEC-1076-4-101 for J1-J5
- shock: 20g, 11ms, ½ sine (operating); 30g, 11ms, ½ sine (non-operating)
- vibration: 5Hz-2000Hz at 2g, 0.38mm peak displacement (operating); 5Hz-2000Hz at 5g, 0.76mm peak displacement (non-operating)

ORDERING INFORMATION

Order Number Product Description (Hardware)

PP CP2/P34-xy	850 MHz Pentium III processor
PP CP2/P35-xy	1 GHz Pentium III processor
AD PP3/001-00	Transition Module
AD CP1/DR1-20	2.5 inch Disk Drive assembly
AD CP1/CF1-00	CompactFlash/MicroDrive carrier assembly

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

where x =

- 1 - Ethernet via rear panel; 5V V(I/O)
- 2 - Ethernet via PICMG 2.16; 5V V(I/O)
- 3 - Ethernet via rear panel; 3.3V V(I/O)
- 4 - Ethernet via PICMG 2.16; 3.3V V(I/O)

where y =

- 1 - 256 Mbytes
- 2 - 512 Mbytes