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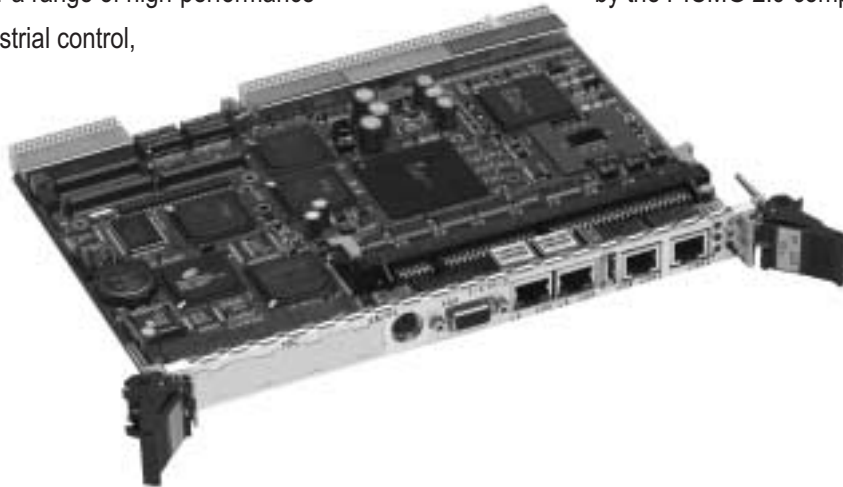
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PP 100/01x

APPLICATIONS

The PP 100/01x is a PC-compatible high performance, high functionality one-slot CompactPCI single board computer. It supports the 1.2GHz Mobile Intel® Pentium III Processor-M or alternatively, for power sensitive applications the 800MHz Low Voltage Intel Pentium III Processor 512K. Featuring a selection of memory options, an optional on-board hard 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, scientific and aerospace applications. Its functionality can be further increased through the use of PMC modules. It is fully compliant with PICMG® 2.16 (Packet Switching Backplane) specification. Additionally, very high-performance networking is provided by two Gigabit Ethernet links. 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

- Low power 1.2GHz or 800MHz Pentium III Processor-M:
 - 32 Kbytes L1 cache
 - 512 Kbytes L2 cache
 - no CPU fan needed
- Single slot
- Up to 2 Gbytes of 133MHz Synchronous DRAM with ECC
- High performance EIDE interfaces with optional on-board disk drive (in a single slot)
- Optional CompactFlash support
- Two 10/100/1000Mbps Ethernet interfaces
- Packet Switching Backplane (PICMG 2.16)
- High resolution graphics interface
- Ultra-2 Wide SCSI
- PMC module interface
- Option to bypass CompactPCI bus (Satellite Mode)
- CompactPCI System Slot controller:
 - 32/64-bit CompactPCI interface
- IPMI (Intelligent Platform Management Interface):
 - PICMG 2.9 (System Management Specification)
 - with BMC (Baseboard Management Controller)
- 512 Kbytes of BIOS Flash EPROM
- PS/2 Keyboard and Mouse port
- Two asynchronous RS232 serial channels
- Parallel Printer Port (ECP, EPP and IEEE1284)
- Floppy disk interface; Watchdog timer
- Optional Transition Module for rear panel I/O
- Extended temperature version available (see PP 100/01x-E datasheet)
- Support for VxWorks®, Linux®, Windows NT®, Windows® 2000, Windows® XP, Windows® XP Embedded, Solaris™, LynxOS® and QNX®



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SPECIFICATION

CENTRAL PROCESSOR

- Pentium III Processor-M operating at 1.2GHz or 800MHz:
 - using a Flip-Chip CPU
 - 32 Kbytes internal (Level 1) on-die cache
 - 512 Kbytes of secondary (Level 2) on-die cache
 - no CPU fan
- utilizes 64-bit ServerWorks' ServerSet™ III LE chipset:
 - supports 133MHz bus frequency
- Pentium III (ITP) debug port

DRAM

- supporting up to 2 Gbytes of 133MHz ECC S-DRAM:
 - 512 Mbytes or 1 Gbyte soldered on the board; and,
 - up to 1 Gbyte provided via a 168-pin DIMM socket
 - single bit error correction; double-bit error detection
- accessible from Pentium III Processor-M, CompactPCI bus

HARD DISK INTERFACES

- EIDE interface:
 - supports Ultra-DMA 33 for high performance drives
 - two 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 or IBM® Microdrive™ Type II drives (within a single slot)
 - primary channel is accessible via Transition Module
- Ultra-2 Wide SCSI:
 - accessible via Transition Module
 - implemented by an LSI Logic® 53C895A

ETHERNET INTERFACES

- two channels supporting 10 Base-T, 100 Base-TX, 1000Base-T
- implemented by 82544EI LAN Controllers via 64-bit PCI bus
- support for PICMG 2.16 - Packet Switching Backplane (PSB)
- channels individually switchable between front panel RJ45 connectors and J3:
 - 1000BaseT available via J3 for the PSB or Transition Module
- optional support for rear panel RJ45's via Transition Module

GRAPHICS INTERFACE

- implemented by an Asiliant Technologies' 69030 providing:
 - 4 Mbytes video memory
 - resolutions up to 1600 x 1200
 - supporting up to 16M colors
- accessed by front panel connector
- flat panel supported via DFP (Digital Flat Panel) interface via J3 connector

PMC (PCI MEZZANINE CARD) INTERFACE

- one PMC slot with I/O via front panel:
 - supports 64-bit PCI bus

SERIAL INTERFACE

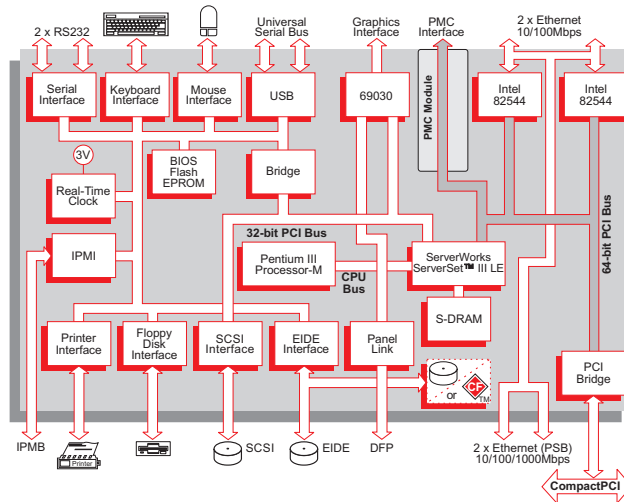
- two RS232 serial channels
- 16550 compatible UART
- accessed by 2 x RJ45 connectors on front panel and via D-type connectors on Transition Module
- each channel supports CTS, RTS, DSR, DTR and DCD via front panel and Transition Module; RI supported via Transition Module

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
- two 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
- system fan monitor; speaker interface; CPU temperature monitor; voltages monitor:
 - all accessible via IPMI

FLASH EPROM

- 512 Kbytes of BIOS Flash EPROM - 8-bits wide



SUPPORT

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

SOFTWARE SUPPORT

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

COMPACTPCI INTERFACE

- compliant with PICMG 2.0 R3.0; 3.3V or 5V signaling levels
- 33MHz; 32/64-bit interface accessed via J1/J2 connectors
- utilizing a PCI-PCI bridge for off-board accesses
- operates as a System Slot controller
- PICMG® 2.1 R2.0 Hot Swap Specification compatible as hot swap controller only
- option to disable CompactPCI interface (Satellite Mode):
 - receives power from CompactPCI bus
 - board can be hot swapped in this mode
- J4 connector not fitted

IPMI (INTELLIGENT PLATFORM MANAGEMENT INTERFACE)

- PICMG 2.9 R1.0 (System Management Specification)
- implements the IPMB0 interface
- on-board BMC (Baseboard Management Controller)
- auxiliary IPMB interface to either J2 (IPMB1) or J5 (IPMB2)
- supports 8 Kbytes of non-volatile memory

ELECTRICAL SPECIFICATION

- +5V@4.5A (typical at 1.2GHz with 1 Gbyte DRAM); +5% / -3%
- +3.3V@4.5A; +5% / -3%
- +12V@0.02A; -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); for extended temperature version see PP 100/010-E
- 10% to 90% Relative Humidity (operating non-condensing)
- -40°C to +70°C (storage)
- 10% to 90% Relative Humidity (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 100/010-xy	800MHz Low Voltage Pentium III Processor CPU
PP 100/012-xy	1.2GHz Pentium III Processor-M CPU
AD PP4/001-xx	Transition Module
AD 200/001-00	CompactFlash/Microdrive carrier assembly
AD CP1/DR1-00	2.5 inch Disk Drive assembly

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

where x =	where y =
1 - Ethernet via rear panel; 5V V(I/O)	0 - 512 Mbytes
2 - Ethernet via PICMG 2.16; 5V V(I/O)	1 - 1 Gbyte
3 - Ethernet via rear panel; 3.3V V(I/O)	2 - 1.5 Gbytes
4 - Ethernet via PICMG 2.16; 3.3V V(I/O)	3 - 2 Gbytes

For extended temperature version, see separate PP 100/010-E datasheet



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