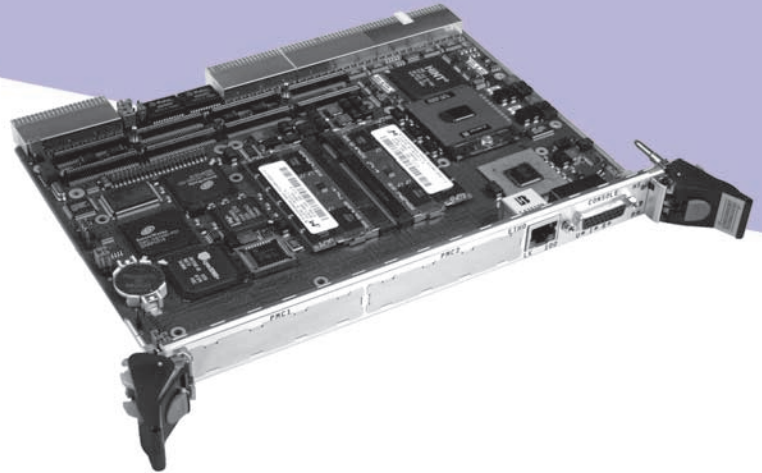


Intel® Pentium® M Processor Intelligent Dual PMC Carrier



APPLICATIONS

The PP 310/011-E is a PC-compatible high performance, high functionality, dual PMC CompactPCI® board supporting the 1.1 GHz Intel® Pentium® M Processor. The PP 310/011-E will operate in a system slot, a peripheral slot or independently from the CompactPCI bus. High-performance networking is provided by two Gigabit Ethernet links, and the board is compliant to the PICMG® 2.16 specification.

Full system monitoring is provided by the PICMG 2.9 compliant IPMI interface. To simplify the board's integration many popular industry standard operating systems are supported. The PP 310/011-E is suitable for a range of high-performance applications within the industrial control, telecomms, telemetry, scientific and aerospace markets. The board is plug compatible with the PP 110/01x family.

HIGHLIGHTS

- Operation over ambient temperature range -25°C to +70°C
- 1.1 GHz Intel Pentium M Processor:
 - 64 Kbytes L1 cache
 - 1 Mbyte L2 cache
 - no CPU fan needed; low power processor
- Single slot (for all option combinations)
- Up to 2 Gbytes of DDR DRAM (with ECC)
- 2 x PMC module interfaces (32/64-bit and 33/66 MHz)
- High performance EIDE interfaces with optional on-board CompactFlash™ interface
- 2 x 10/100/1000Mbps Ethernet interfaces
- Dual 1 Gbps Packet Switching Backplane (PICMG 2.16)
- Graphics interface
- 32 Mbytes of Application Flash EPROM
- Keyboard and Mouse interfaces
- 512 Kbytes of BIOS Flash EPROM
- CompactPCI controller:
 - operates in system slot or peripheral slot
 - 32/64-bit CompactPCI interface
 - 33/66 MHz operation
- Option to bypass CompactPCI bus (Satellite Mode)
- IPMI (Intelligent Platform Management Interface):
 - PICMG 2.9 (System Management Specification)
- Up to 3 x RS232 serial channel interfaces:
 - 1 or 2 on-board
 - 2 on optional Transition Module
- Watchdog timer
- Commercial temperature version available:
 - see PP 310/01x datasheet
- Support for VxWorks®, Windows NT®, Windows® 2000, Windows® XP, Windows® XP Embedded, QNX® and Linux®
- Optional Transition Module for rear panel I/O:
 - 2 x RS232 channels, Parallel Printer Port, 2 x Ethernet, EIDE and Floppy Disk interfaces included

Extended Temperature



Central Processor

- 1.1 GHz Intel® Pentium® M processor:-
 - 1.1 GHz uses µFC-BGA 479 (micro Flip-Chip Ball Grid Array) package
 - 64 Kbytes of primary (L1) on-die cache
 - 1 Mbyte of secondary (L2) on-die cache
 - 400 MHz Front Side Bus (FSB)
 - no CPU fan
- utilizes 64-bit ServerWorks® GC-LE chipset
- provision for ITP debug port

DRAM

- supporting up to 2 Gbytes DDR ECC SDRAM:-
 - up to 2 Gbytes provided via two SODIMM sockets
 - error correction up to 4-bits
- accessible from Intel Pentium M processor or CompactPCI bus

Hard Disk Interfaces

- EIDE interface:-
 - supports up to Ultra-DMA 100 for high performance drives
 - two channels (primary and secondary)
 - primary channel is accessible via Transition Module
 - secondary channel can be used for on-board dual CompactFlash module

Ethernet Interfaces

- implemented by Intel 82546EB LAN Controller via 64-bit PCI bus
- two channels supporting 10 Base-T, 100 Base-TX, 1000 Base-T:-
 - support for PICMG 2.16 R1.0 - Packet Switching Backplane (PSB)
 - optional support for rear panel RJ45's via Transition Module
- one channel switchable to front panel RJ45, supports 10 Base-T, 100Base-Tx and 1000Base-T

Graphics Interface

- implemented by a Silicon Motion SM722 providing:-
 - 8 Mbytes video memory
 - resolutions up to 1280 x 1024; supporting up to 16M colors
- accessed via a 26-way high-density connector on front panel

PMC Interface

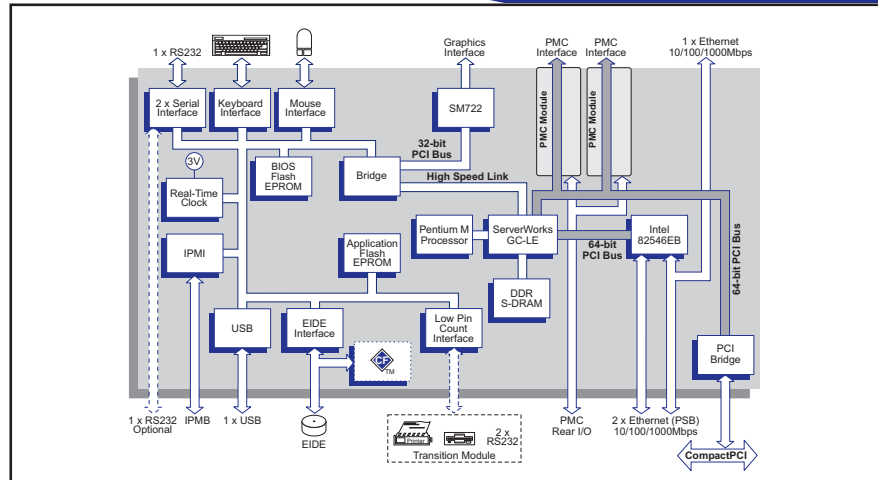
- 2 x PMC sites; for both sites:-
 - I/O via front panel
 - I/O via J3 and J5
 - 32/64-bit, 33/66 MHz PCI operation
 - 3.3V or 5V signaling levels
- Transition Module provides rear I/O for both PMC sites

Serial Interfaces

- up to 3 x RS232 serial channels:-
 - 1 channel via a 26-way high-density connector on front panel
 - either 1 channel via J5 or 2 channels via optional Transition Module
- 16550 compatible UART
- channels support RI, CTS, RTS, DSR, DTR and DCD

Other Peripheral Interfaces

- keyboard and mouse interfaces accessed via a 26-way high-density connector on front panel
- PC-compatible Real Time Clock (Year 2000 compliant)
- watchdog timer



- system fan monitor; CPU temperature monitor; voltages monitor:-
 - all accessible via IPMI
- speaker interface
- 1 x USB (Universal Serial Bus) interface via J5 Transition Module
- 1 x 32-bit Long Duration Timer with processor interrupt capability
- LPC (Low Pin Count) bus via J5 to enable the AD PP5/001 Transition Module support for:-
 - floppy disk interface
 - parallel printer port interface (ECP, EPP and IEEE1284)
 - 2 x RS232 serial channels

Flash EPROMs

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

Firmware Support

- Phoenix ServerBIOS™
- comprehensive Power-On Self-Test (POST)
- LAN boot firmware included

Software Support

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

CompactPCI Interface

- compliant with PICMG 2.0 R3.0; 3.3V or 5V signaling levels:-
 - universal signaling support
- 33/66 MHz; 32/64-bit interface accessed via J1/J2 connectors
- utilizing a PCI-PCI bridge for off-board accesses
- operates as a System Slot controller or in a Peripheral slot
- PICMG 2.1 R2.0 Hot Swap Specification compatible
- 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

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

Electrical Specification

- +5V@2.0A (typical at 1.1 GHz with 512 Mbytes DRAM); +5% / -3%
- +3.3V@6.5A; +5% / -3%
- +12V@0.010A; -12V@0.010A
- +12V and -12V routed to PMC expansion slots

Safety

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

Environmental Specification

- 25°C to +70°C (operating); for commercial temperature see PP 310/01x
- 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: 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 310/011-xyE	1.1 GHz Pentium M Processor
AD PP5/001-xx	Transition Module
AD 200/001-00	CompactFlash carrier assembly
AD HSC/001-02	Board Hot Swap cover (rear mounting)
CB 26D/124-00	26-way HD to VGA, Keyboard, Mouse, RS232 connector cable

For details of combinations available please contact your local sales office

For commercial temperature version see PP 310/01x datasheet