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Specification Sheet: PP 312/01x

- 1.8 GHz Intel® Pentium® M Processor 745 based Intelligent Dual PMC Carrier

CENTRAL PROCESSOR

- 1.8 GHz Intel® Pentium® M processor 745:-
  - uses µFC-PGA 478 (micro Flip-Chip Pin Grid Array) package
  - 64 Kbytes of primary (L1) on-die cache
  - 2 Mbytes 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 745 or CompactPCI bus

HARD DISK INTERFACES

- EIDE interface:-
  - supports up to Ultra-DMA 100 for high performance drives
  - two channels (primary and secondary)
  - secondary channel can be used for on-board 2.5 inch hard disk drive (within a single slot); or, support for 1 or 2 CompactFlash modules or IBM®/Hitachi Microdrive Type II drives
  - primary channel is accessible via Transition Module

ETHERNET INTERFACE

- 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 (PCI MEZZANINE CARD) 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 INTERFACE

- up to 3 x RS232 serial channels:-
  - 1 channel via a 26-way high-density connector on front panel

SOFTWARE SUPPORT

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

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

FIRMWARE SUPPORT

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

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 (INTELLIGENT PLATFORM MANAGEMENT INTERFACE)

- 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@3.9A (typical at 1.8 GHz with 512 Mbytes DRAM); +5% / -3%
- +3.3V@6.5A; +5% / -3%
- +12V@0.01A; -12V@0.01A
- +12V and -12V routed to PMC expansion slots

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)

    - either 1 channel via J5 or 2 channels via optional Transition Module
- 16550 compatible UART
- channels support RI, CTS, RTS, DSR, DTR and DCD

FLASH EPROM

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

BATTERY BACKED SDRAM

- 512 Kbytes battery backed SRAM

- -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)

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