The PP 300/02x-U is a PC-compatible high performance, high functionality one-slot CompactPCI® single board computer supporting the 1.6 GHz Intel® Pentium® M processor. 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 four 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. The PP 300/02x-U is the RoHS compliant version of the PP 300/02x family.

**APPLICATIONS**

- **1.6 GHz Intel Pentium M processor:**
  - 64 Kbytes L1 cache
  - 1 Mbyte L2 cache
  - no CPU fan needed; low power processor
- **1.8 GHz or 1.4 GHz processor version (2 Mbytes L2 cache) available; see PP 302/02x-U datasheet**
- **Single slot (for all option combinations)**
- **Up to 2 Gbytes of 333 MHz DDR DRAM (with ECC)**
- **High performance EIDE interfaces with optional on-board disk drive or CompactFlash™/Microdrive™ interface (in a single-slot)**
- **Two Serial ATA150 (SATA) channels**
- **Ultra-320 Wide SCSI interface**
- **Four 10/100/1000Mbps Ethernet interfaces**
- **Dual Gigabit Packet Switching Backplane (PICMG 2.16)**
- **PMC module interface (32/64-bit at 33/66 MHz)**
- **1 Mbyte of BIOS Flash EPROM**
- **CompactPCI controller:**
  - operates in system slot or peripheral slot
  - 32/64-bit at 33/66 MHz CompactPCI interface
- **Option to bypass CompactPCI bus (Satellite Mode)**
- **IPMI (Intelligent Platform Management Interface):**
  - PICMG 2.9 (System Management Specification)
- **High resolution graphics interface**
- **PS/2 keyboard and mouse port**
- **3 x USB 2.0 interfaces and 2 x RS232 serial channels**
- **Floppy disk interface**
- **Watchdog timer**
- **Support for VxWorks®, Linux®, Windows NT®, Windows® 2000, Windows® XP, Windows® XP Embedded, Solaris™, LynxOS® and QNX®**
- **Optional Transition Module for rear panel I/O**
Central Processor
- 1.6 GHz Intel® Pentium® M processor
  - uses µP-PGA 478
  - (micro Flip-Chip Pin 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
- 1.0 GHz or 1.4 GHz processor versions available; see PP 302/02x-U datasheet
- utilizes 64-bit Intel® 855GME chipset
  - supports 400 MHz bus frequency
- uses Intel® 6300ESB I/O Controller Hub

DRAM
- supporting up to 2 Gbytes 333 MHz DDR ECC SDRAM:
  - 1 Gbyte soldered onboard
  - up to 1 Gbyte provided via a SODIMM socket
- single bit error correction
- accessible from Pentium or CompactPCI bus

Hard Disk Interfaces
- IDE interface:
  - supports Ultra-DMA 100 for high performance drives
  - two channels (primary and secondary)
  - secondary channel can be used for on-board 2.5 inch disk drive or, support for 1x (on-board socket) or 2x (using AD 200/001) CompactFlash or Microdrive™ Type II interface
  - primary channel is accessible via Transition Module
- Serial ATA150:
  - two channels accessible via J5
  - transfer rate up to 150 Mbytes/s
- Ultra-320 Wide SCSI:
  - accessible via Transition Module
  - implemented by an LSI 53C1020

Ethernet Interfaces
- four channels supporting 10 Base-T, 100 Base-TX, 1000Base-T:
  - front panel RJ45 connectors
  - 82546GB LAN Controller via 64-bit PCI bus
  - 82541PI LAN controllers via 32-bit PCI bus
  - 2 x Ethernet interfaces
- 2 x RS232 serial channels:
  - accessed by 2 x RJ45 connectors on front panel or via Transition Module
  - each channel supports: CTS, RTS, DSR, DTR and DCD via front panel and Transition Module; RI supported via Transition Module
  - 16550 compatible UART

Other Peripheral Interfaces
- keyboard and mouse interfaces via a single PS/2™ type connector on front panel or via Transition Module
- 2 x Serial interface
  - supported for PICMG 2.16 R1.0 - Packet Switched Backplane (PSB)

PMC Interface
- single PMC site:
  - 1/0 via front panel
  - 32/64-bit, 33/66 MHz PCI operation
  - 3.3V PCI signaling levels

Flash EPROM
- 1 Mbyte of BIOS Flash EPROM - 8-bits wide
- Phoenix BIOS™
- comprehensive Power-On Self-Test (POST)
- LAN boot firmware included

Software Support

Graphics Interface
- implemented by the Intel® 855GME GMCH:
  - resolutions up to 2048 x 1536 @75Hz
  - up to 16M colors
  - accessed via a VGA connector on front panel or via J5 (DVI-A)
  - DVI-D interface supported via J3

Serial Interface
- 2 x RS232 serial channels:
  - accessed by 2 x RJ45 connectors on front panel or via 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
- 2 x Serial interface
  - 3 x USB (Universal Serial Bus 2.0) interfaces:
    - one via front panel
    - two via Transition Module
  - watchdog timer
  - system fan monitor; CPU temperature monitor; voltages monitor:
  - all accessible via IPMI

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
  - utilizes a PCI-PCI bridge for off-board accesses
  - PICMG 2.1 R2.0 Hot Swap Specification
  - operates as a System Slot controller or in a Peripheral Slot

ORDERING INFORMATION

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<td>PP 300/022-xyU</td>
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<td>AD PPA/00z-zZU Transition Module</td>
<td>AD PPA/00z-zZU</td>
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<tr>
<td>AD 200/001-01 CompactFlash/Microdrive carrier assembly</td>
<td>AD 200/001-01</td>
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<td>AD CFI/DR1-zz 2.5 inch Disk Drive assembly</td>
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For z options please contact your local sales office.