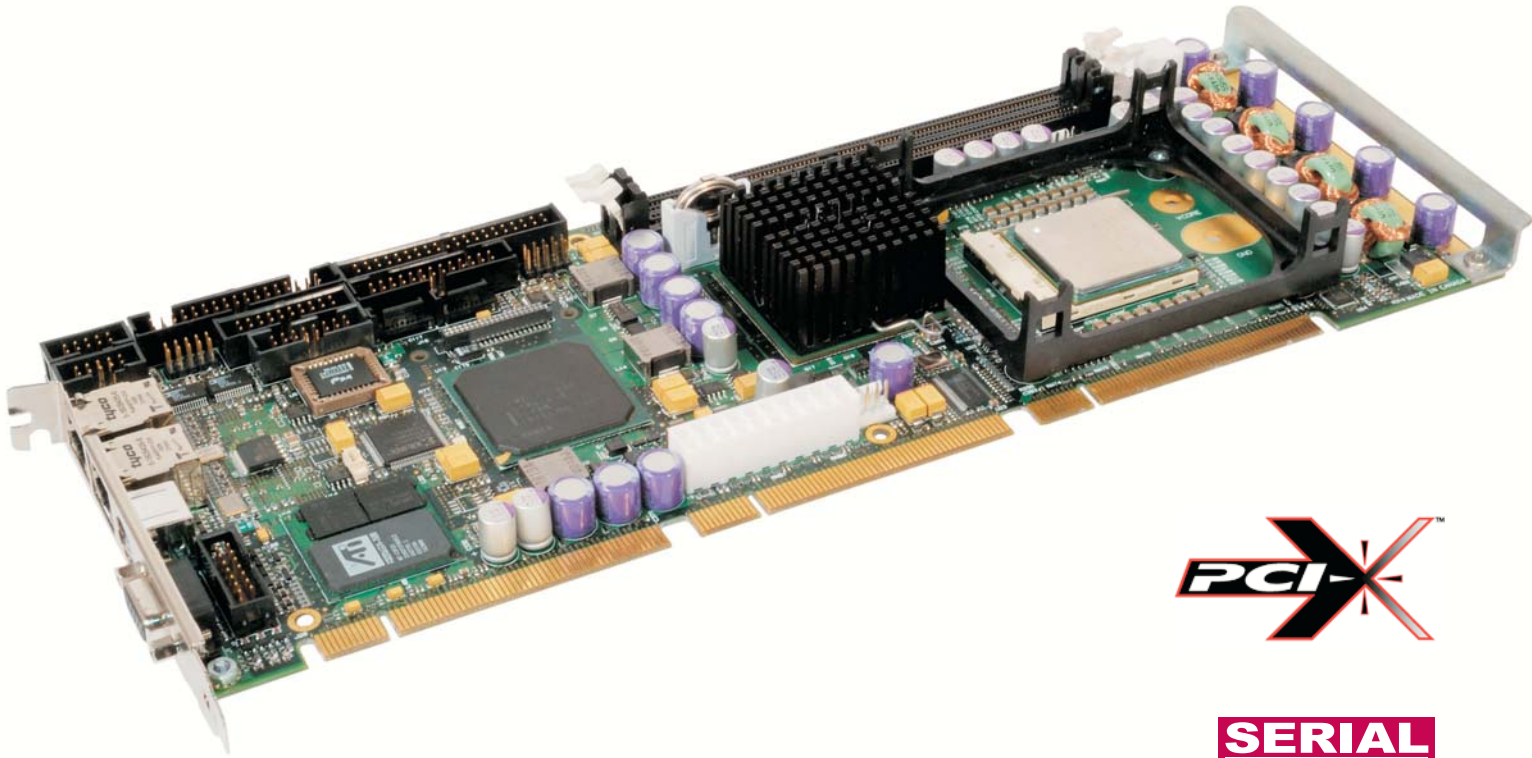


# ePCI-201

**Intel® Pentium® 4**

**Intel 875 Chipset**

**PICMG 1.2 Single Host Board**



The ePCI-201 is a generic processing engine board designed to support a broad range of applications requiring PCI bus support with high-performance processing, such as those found in automation, communications, medical and military environments. Combining high value, fast time-to-market and long life support, the ePCI-201 offers a host of design and integration possibilities for developers. It is especially suited for applications requiring high memory bandwidth combined with CPU intensive tasks such as image processing, VoIP, and HLR/SCP.

The ePCI-201 includes a rich set of standard features including the latest generation Intel® Pentium® 4 processor at up to 3.0GHz 800MHz FSB, dual channel memory DDR, 2-channel serial ATA, an onboard ATI MOBILITY™ RADEON™ M7 dual-screen video controller, dual gigabit Ethernet and 64-bit at 66MHz bus support. Additional onboard features include one EIDE hard disk interface, two Serial ATA disk interface, Compact Flash module support, four USB 2.0 ports, two serial ports, floppy disk controller, and board monitoring controller. The ePCI-201 supports various operating systems including Windows 2000, Windows XP, Windows 2003 and Linux.

- Intel® Pentium 4® Desktop up to 3.0GHz
- 533/800 MHz Front Side Bus speed
- Dual 10/100/1000 Base-T(X) Gigabit Ethernet Controller
- ATI® Mobility™ Radeon™ M7 with 32 MB
- Dual Serial ATA channel
- Bus A: PCI 32-bit @ 33MHz
- Bus B: PCI-X 64-bit @ 66MHz

# Specifications

## ... learn about the tremendous feature set

### Processor

- Supports mPGA478 socket Intel® Pentium® 4 processor up to 3.0GHz
- Prescott FMB 1.5
- 512KB to 1MB Advanced Transfer Cache depending on the CPU

### BUS Interfaces

- CPU Front Side Bus at 533/800MHz
- Bus A: PCI 32-bit @ 33MHz (3.3V & 5V)
- Bus B: PCI-X 64-bit @ 66MHz (3.3V only)

### Memory

- Up to 2GB on 2 x 184-pin latching DIMM sockets of unbuffered PC2700/333MHz and PC3200/400MHz DDR SDRAM (2.5V, ECC support)

### I/O

I/O controller	Winbond Super I/O controller
USB Ports	Four (USB 2.0 compliant)
Serial Ports	One RS-232 ports; One RS-232/422/485
Serial ATA	Two Serial ATA Hard Disk Connectors
ATA/IDE	Ultra DMA/100, support for two IDE drives (in master/ slave configuration); PIO Mode 4, Bus Master IDE or synchronous DMA mode transfer up to 100MB/s
Floppy Disk	Support for one drive
Ethernet	One 10/100/1000 Base-T (82547GI) (High bandwidth) One 10/100/1000 Base-T (82541ER) (Low bandwidth)
CompactFlash	Supports CompactFlash disk module (on dedicated ATA channel)

### Video

- ATI Mobility Radeon M7
- 32MByte of internal memory on the video controller
- Standard VGA output on bracket
- Secondary video connector and TV-out on Video mezzanine

### Connectors

- Faceplate
  - CRT (female DB-15)
  - Ethernet (two RJ-45 with link/activity indicators)
  - Keyboard / Mouse (6-pin female minidin)
- Headers
 

3-pin locking: CPU fan (1)	3-pin locking: MCH fan (1)
4-pin locking: POST Code (1)	4-pin ATX type : CPU power (1)
7-pin vertical: Serial-ATA (2)	10-pin : Dual USB 2.0 (2)
10-pin shrouded : Serial ports (2)	14-pin shrouded : Sec. Video & TV (1)
16-pin shrouded : Multifunction (1)	20-pin shrouded : Hardware monitor(1)
20-pin : ATX power supply (1)	26-pin shrouded : Parallel port (1)
34-pin shrouded : Floppy (1)	40-pin shrouded : ATA/IDE (1)
40-pin :CFlash connector for T069(1)	

### BIOS

- HDD S.M.A.R.T. support and Ultra DMA /100 support.
- Boot from LAN and USB capability.
- DMI support.
- PnP 1.0a and PCI 2.2 support.
- Battery less operation available with CMOS copy in flash BIOS device.
- VRM temperature monitoring to throttle the CPU when overheating.
- Ethernet software disabled/enabled.
- Auto retry of the Boot Sequence until a Boot device is found.
- Serial port 2 can be RS232/RS422/RS485 configured in CMOS setup.
- Console redirection to serial port using VT100 protocol that allows CMOS Setup access
- Capability of upgrading code for onboard Programmable Logic Devices. (FPGA Only).
- Quiet POST / Full screen logo support at POST.
- Support for CPU Northwood and Prescott, desktop and mobile (Speedstep).

### Supervisory

- Dual stage software programmable watchdog timer, time out from 1 msec to 10 min
- Temperature sensor included in processor
- PCB temperature monitoring
- External fans monitoring

### OS Compatibility

- Windows® XP, Windows® 2000, Windows® 2003, Linux Red Hat 9

### Mechanical

- 338 x 130 x 67 mm at CPU / fan (13.33 x 4.80 x 2.6 in. at CPU / fan)
- Conforms to PICMG 1.2 (ePCI-X) r1.0

### Power Requirements

- Supply Voltage Vcc =+3.3V ±5%, +5V ±5%, +12V ±5%

- ICC typ.\* +5V: 4.7A
- ICC typ.\* +3.3V: 4.4A
- ICC typ.\* +12V: 7.42A
- ICC typ.\* +12V: <100mA (monitoring only)

\* Measured with 2GB of PC3200 and a Prescott 3.0GHz Pentium 4 processor

### Environmental

	Operating	Storage and Transit
Temperature :	0 to 55°C / 32 to 131°F	-40 to +70°C/-40 to 158°F
Humidity:	5% to 90% @ 40°C/104°F non-condensing	5% to 95% @ 40°C/104°F non-condensing
Altitude:*	4,000 m / 13,123 ft	15,000 m / 49,212 ft
Shock:*	5G each axis	Bellcore GR-63-CORE Section 4.3
Vibration:*	5-500Hz, 1G, each axis	5-50Hz, 2G; 50-500Hz, 3G each axis

\* Designed to meet or exceed

### Reliability

- MTBF: > 120 000 hours @ 30°C / 86°F (Telcordia SR-332, Issue 1)
- USB and mouse / keyboard voltage protected by self-resetting fuses
- 2-year limited warranty

Meet or exceed:

Safety : UL 60950; CSA C22.2 No 60950-00; EN 60950; IEC 60950  
EMI/EMC: FCC 47 CFR Part 15/CISPR22, Class B; CE Mark to EN55022/EN55024



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