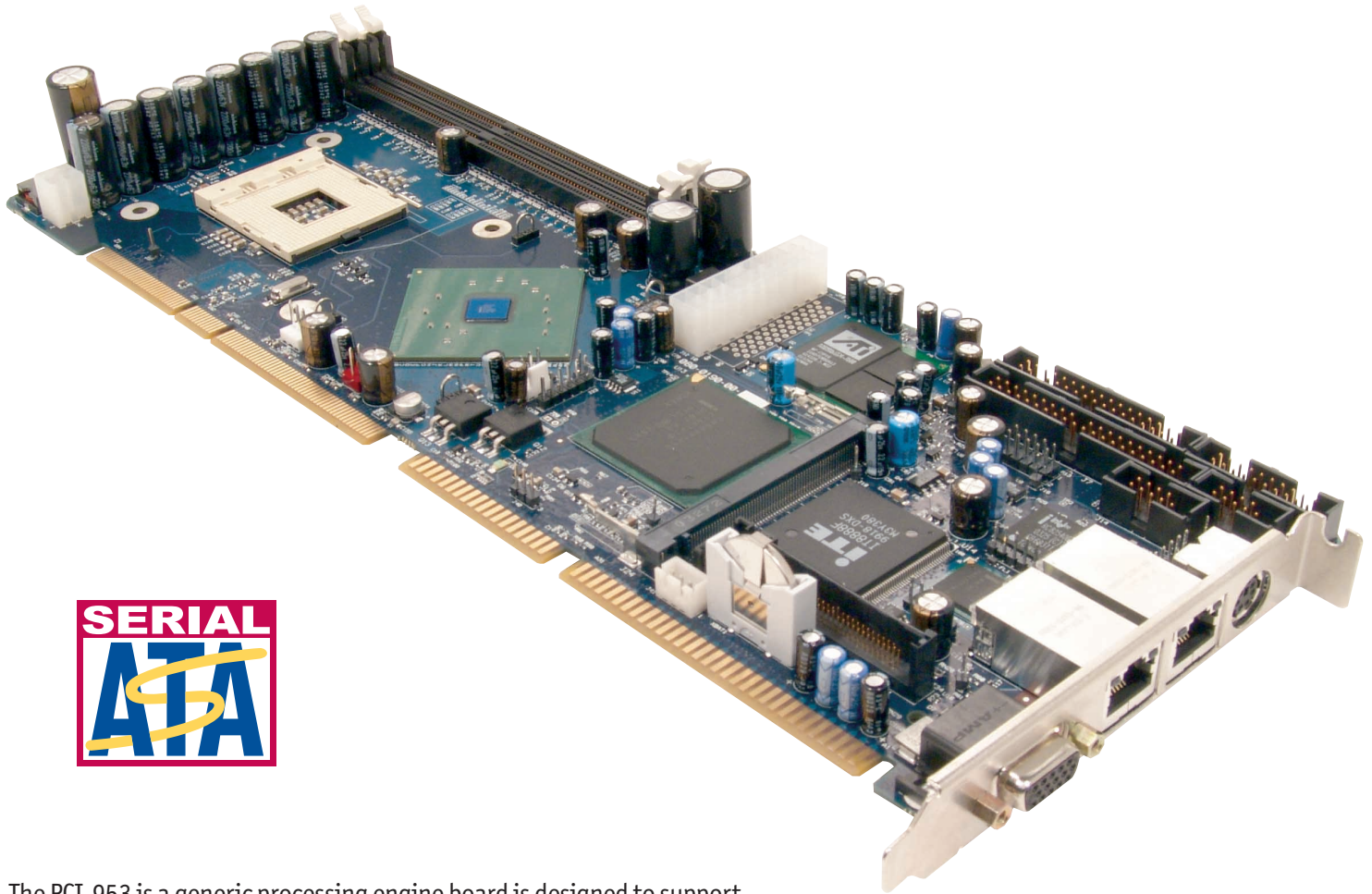# PCI-953

Intel® Pentium® 4
Intel 875 Chipset
PICMG 1.0 Single Board Computer

The PCI-953 is a generic processing engine board is designed to support a broad range of applications requiring ISA 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 PCI-953 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 PCI-953 includes a rich set of standard features including the latest generation Intel® Pentium® 4 processor at up to 3.2GHz 800MHz FSB, dual channel memory DDR, 2-channel serial ATA, an onboard ATI MOBILITY™ RADEON™ 7500 dual-screen video controller, dual gigabit Ethernet and 64-bit at 66MHz bus support. Additional onboard features include a Mini-PCI card interface, one EIDE hard disk interface, Compact Flash module support, four USB 2.0 ports, two serial ports, floppy disk controller, and board monitoring controller. The PCI-953 supports various operating systems including Windows 2000, Windows XP and Linux.

➤ Intel® Pentium 4® Desktop up to 3.2GHz

➤ 400/533/800 MHz Front Side Bus speed

➤ Dual 10/100/1000 Base-T(X) Gigabit Ethernet Controller

➤ ATI® Mobility™ Radeon™ 7500 with 32 MB

➤ Dual Serial ATA channel

➤ PCI 64-bit @ 66MHz

SERIAL ATA

Specifications
... learn about the tremendous feature set

Processor

- Supports mPGA478 socket Intel® Pentium® 4 processor up to 3.2GHz
- 512KB Advanced Transfer Cache (on-die, full speed L2 cache with ECC)

•BUS Interfaces

- CPU Front Side Bus at 400/533/800MHz
- Bus ISA: 16-bit 8MHz
- Bus PCI: 64-bit PCI up to 66MHz

Memory

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

Flash Memory

- 4Mb Flash BIOS

I/O

I/O controller	Winbond Super I/O controller
USB Ports	Four (USB 2.0 compliant)
Serial Ports	Two RS-232 ports
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 (82547EI) One 10/100/1000 Base-T (82540EM)
CompactFlash	Supports CompactFlash disk module (on dedicates ATA channel)
Mini PCI	For Plug-In options e.g. Dual 10/100, Dual firewire, etc.

Video

ATI Mobility Radeon M7-CSP32
- 32MByte of internal memory
- Standard VGA output on bracket
- LVDS panel output on header

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: Chasis fan (1)
  4-pin ATX type : CPU power   7-pin header: PS/2 Mouse/Keyboard (1)
  7-pin vertical: serial-ATA (2)   10-pin shrouded : Serial ports (2)
  10-pin : Dual USB 2.0 (1)   20-pin : ATX power supply (1)
  5-pin : Dual USB 2.0 (2)   34-pin shrouded : Floppy (1)
  40-pin :CFlash socket (1)   40-pin shrouded : ATA/IDE (1)
  SODIMM socket: MiniPCI (1)

BIOS

- AMI BIOS

Supervisory

- Single stage software programmable watchdog timer, time out from 1 msec to 10 min
- Hardware system monitor (voltages, temperature), CPU temperature monitor / alarm; power failure / low battery detector, and two end-user defined open-drain general purpose I/Os; SMBus

OS Compatibility

- Windows® XP, Windows ® 2000, Linux

Mechanical

- 338 x 122 x 40 mm at CPU / fan (13.32 x 4.80 x 1.6 in. at CPU / fan)
- Conforms to IEEE P996 PC/AT bus, PCI r2.1 and PICMG 1.0 r2.0 Specifications

Power Requirements

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

- ICC typ.* +5V: TBD   ICC max.* TBD
- ICC typ.* +3.3V: TBD   ICC max.* TBD
- ICC typ.* +12V: TBD   ICC max.* TBD

* Measured with TBD

Environmental

	Operating	Storage and Transit
Temperature :	0 to 45°C / 32 to 113°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: > TBD @ 30°C / 86°F (Telcordia SR-232, Issue 1)
- USB and mouse / keyboard voltage protected by self-resetting fuses
- 2-year limited warranty

Designed to 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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