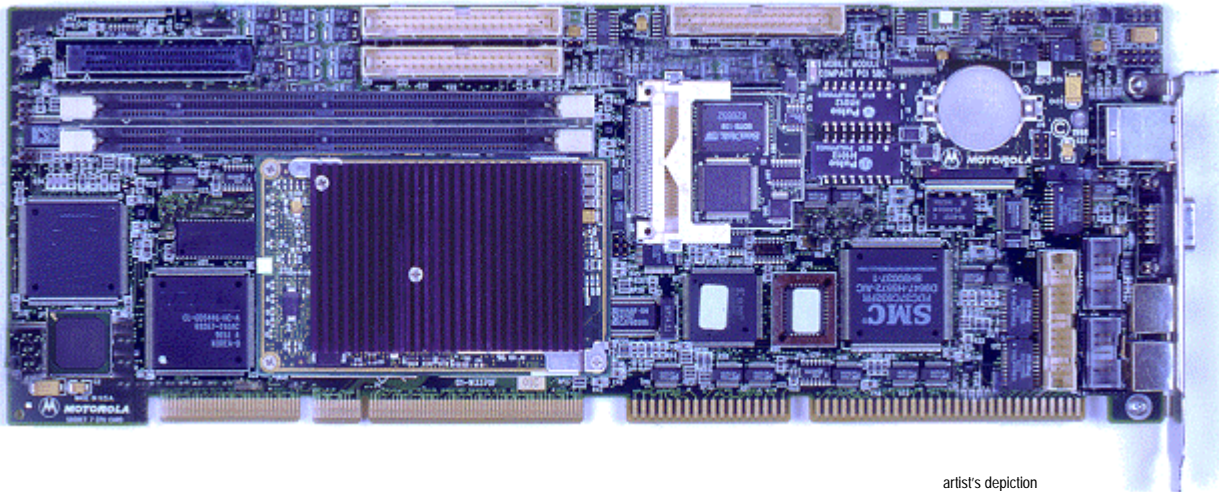


PV5300 PCI/ISA SINGLE BOARD COMPUTER



artist's depiction

Advantages

Motorola's PV5300 industrial single-board computer represents the latest in high-performance embedded computing. Supporting Intel® Pentium II® processor Mobile Modules with speeds starting at 266 and 333 MHz, the PV5300 is a highly integrated computer hosting a robust array of I/O including USB, serials ports, parallel port, dual EIDE, Ultra SCSI, CompactFlash™, AGP graphics with access to flat panel signals, and dual Fast Ethernet controllers. The PV5300 is PICMG® compliant for use in PCI/ISA passive backplanes. Quite simply, Motorola's PV5300 is the high performance leader for embedded application developers addressing high-reliability, high-maintainability, real-time applications such as telecommunications/CTI, medical and scientific systems, industrial control and monitoring, and data acquisition.



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Features

- Pentium II processor Mobile Module
- 66 MHz/100 MHz front-side bus
- Up to 512MB SDRAM memory with ECC support
- USB, serial and parallel ports
- 16MB Flash soldered on board (configured as secondary master IDE) with CompactFlash connector for expandability.
- Ultra SCSI and dual EIDE
- AGP graphics with access to flat panel signals
- Dual 10/100BaseTX Ethernet

PV5300 PCI/ISA Single Board Computer

The PV5300 uses the Intel Pentium II processor Mobile Module (MMC-2) to provide state-of-the-art processor, memory and I/O system throughput. A high-efficiency on-board switching regulator provides 10 amps of 3.3 volt power for the processor while minimizing power consumption and heat. Superior reliability and data integrity are achieved through high-level integration and support for error detection and correction (ECC) using standard 72-bit SDRAM DIMMs.

The PV5300 hosts an extensive array of on-board functions including USB, serial ports, parallel port, dual EIDE, Ultra SCSI, AGP graphics with access to flat panel signals, dual Fast Ethernet controllers, and optional CompactFlash expansion. Two DIMM memory sockets provide up to 512MB SDRAM with ECC support.

The PhoenixBIOS, in bootable Flash EEPROM, supports up to 12 PCI and 20 ISA add-in cards and provides setup utilities for ISA and PCI system configurations and user-definable drive parameters.

Other features include an alarm micro-controller (voltage, temperature, fan), the high bandwidth of the 132MB/second PCI local bus and serial number in EEPROM.

Ordering Information

Part Number	Description
PV5300-266	Single-board computer with 266 MHz MMC-2, SCSI, SVGA, 10/100 Ethernet, w/o memory
PV5300-333	Single-board computer with 333 MHz MMC-2, SCSI, SVGA, 10/100 Ethernet, w/o memory

Memory Options

MEMSD-xxx	Synchronous DRAM DIMM (ECC compliant)
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Note: xxx = capacity in MB

Other On-Board Options

CFLASHxxx	On-board EIDE compliant CompactFlash memory (where xxx = MB)
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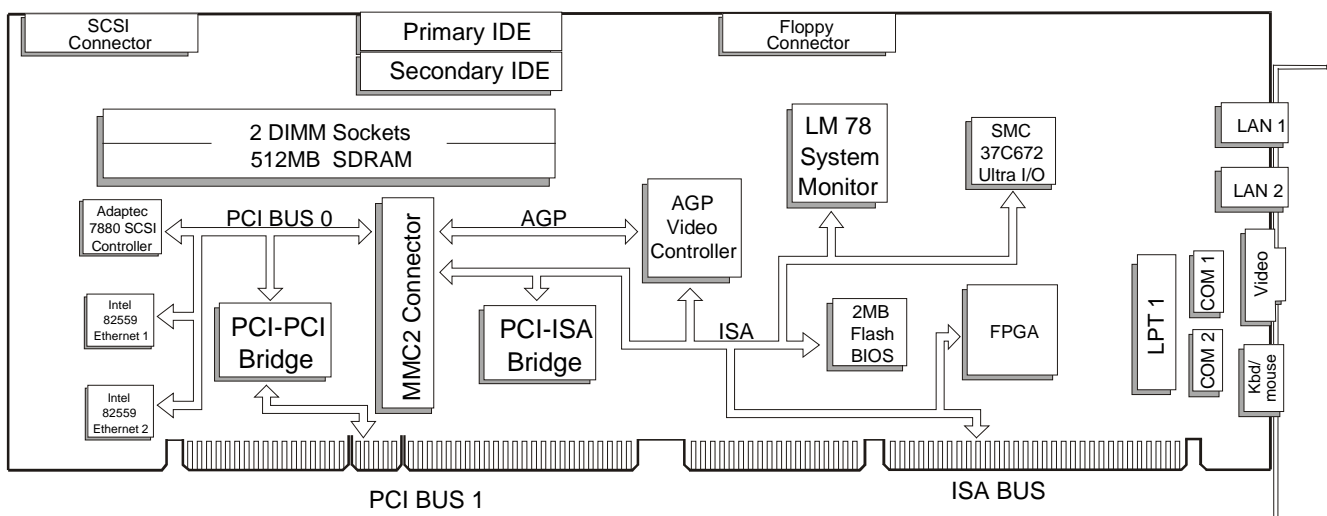
Miscellaneous

CPVCABLE-2	PS/2 "Y" cable for keyboard/mouse
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The Motorola Commitment

Motorola Computer Group is committed to providing best-in-class embedded computing solutions. The PV5300 reinforces this commitment by providing superior hardware, price performance, and faithfulness to the tenets of open computing: modularity, scalability, portability, and interoperability.

The PV5300 is offered with a five-year limited warranty which reduces the cost of ownership and demonstrates our commitment to quality and reliability of products to our OEM partners.



PV5300 Block Diagram

Specifications

PV5300 PCI/ISA Processor Module

Processor

Single 266/333 MHz Pentium II processor Mobile Module

Bus Interface

PCI/ISA or ISA, PICMG and IBM PC/AT compatible

PCI Bus (120-pin), fully buffered (33/30 MHz)

ISA Bus (98-pin), fully buffered (8.33 MHz); up to 20 slots with 24 mA bus drivers

Cache

512KB or 256KB (dependent on processor)

Memory

Sockets: Two 3.3V DIMM sockets

DRAM Option: Up to 512MB SDRAM, 64- or 72-bit, 3.3V

Addressing

Real (20-bit) and protected (16-bit on bus access) supported

Data Paths

CPU Bus: 64-bit

PCI Bus: 32-bit

ISA Bus: 16-bit (ISA bus mastering)

Interrupts

11, edge-sensitive and configurable

Four PCI, level-sensitive

DMA Channels

Four 8-bit, three 16-bit; supports scatter/gather, F-Type DMA

I/O

USB Ports: Two

Serial Ports: Two RS-232 (16550) w/ 16Byte FIFO, as COM1-4 with selectable IRQs and BIOS selectable addressing

Parallel Port: One bi-directional port with all IEEE 1284 protocols supported (compatibility, nibble, byte, EPP, and ECP) with selectable IRQs and BIOS selectable addressing

Floppy Disk: Support for two drives (360K to 2.88MB support)

EIDE: Bus master PCI-EIDE, support for four drives in master/slave configuration with LBA and PIO mode 0-4 support (one channel used for on-board IDE Flash disk)

SCSI: PCI Ultra SCSI (Adaptec 7880, 8-bit fast, 16-bit fast/wide or mixture)

Ethernet: Dual PCI 10/100Mb Ethernet, 10Base-T/100Base-TX (Intel 82559)

Video: AGP graphics with 2MB video SRAM (C&T 690xx); access to flat panel signals provided

Connectors

Rear I/O bracket: PS/2 mouse and keyboard (6-pin Mini-DIN); SVGA (15-pin Dsub), two Ethernet (RJ45 w/ transmit/receive indicators)

Headers: Two USB, two serial ports (10-pin shrouded), parallel port (26-pin shrouded), two Ultra EIDE (40-pin shrouded), SCSI-2 (68-pin micro D, wide receptacle), AT-style keyboard, EIDE and SCSI disk LEDs, and alarm monitor signals

Clock/calendar

Real-time clock with (replaceable) battery backup, includes 256-byte CMOS

BIOS Features

PhoenixBIOS™, in Flash EEPROM

Auto configuration, extended setup, and Plug-and-Play tables

Headless operation extensions

Programmable bus and I/O speeds, and memory wait states

Support for "memory hole" and C000-E000 address blocking

System, video, and SCSI BIOS shadowing

BIOS POST and Setup console redirection to serial port

Supervisory Features

Software programmable, two-level watchdog timer (17.8 ms to 291 sec.) drives interrupts 5, 7, 9, 10, or 11, NMI, or system reset

Monitor micro-controller for backplane voltage, CPU temperature (user-definable threshold alarm in IRQ 11) and fan speed with status interrogated locally through I/O or remotely through a two wire serial port.

Reliability Features

Filtered serial connectors, SCSI terminator and keyboard voltage protected by self-resetting fuses. Board serial number in EPROM.

Mechanical

13.32" x 4.80" (338 mm x 122 mm); conforms to IEEE P996 PC/AT bus, PCI Revision 2.1, and PICMG Revision 2.0 specifications

Demonstrated MTBF

(based on sample testing in accelerated stress environment)

TBD (target is 100,000 hours with 95% confidence)

Power Requirements*

+3.3V: 4.0 A

+5V: 5.5 A

+12V: 0.1 A

-12V: 0.1 A

Input power: 18W (for single 200 MHz without cache or DRAM)

Environmental*

	Operating	Storage/Transit
Temperature:	0° C to 55° C	-20° C to +60° C
Humidity (NC):	10 to 85% @ 40° C	—
Altitude:	15,000 ft. (4,572 m)	50,000 ft. (15,240 m)
Vibration:	1 G RMS 20-2000 Hz random	6 Gs RMS 20-2000 Hz random

Safety

All printed wiring boards (PWBs) are manufactured with a flammability rating of 94V-0 by UL recognized manufacturers.

Electromagnetic Compatibility (EMC)

Intended for use in systems meeting the following regulations:

U.S.: FCC Part 15, Subpart B, Class A (non-residential)

Canada: ICES-003, Class A (non-residential)

Motorola Computer Group board products are tested in a representative system to the following standards (results pending):

CE Mark per European EMC Directive 89/336/EEC with Amendments; Emissions: EN55022 Class B; Immunity: EN50082-1

Warranty

Five-year limited warranty

Year 2000 Readiness

This product is year 2000 ready as defined by Motorola Computer Group. For additional information, reference <http://www.mcg.mot.com/year2000>.

For more information, visit our World Wide Web site at <http://www.mcg.mot.com>

To call us dial 1-800-759-1107 in the U.S. and 512-434-1526 outside of the U.S.

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Data Sheet: PV530-D1

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*verification pending



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