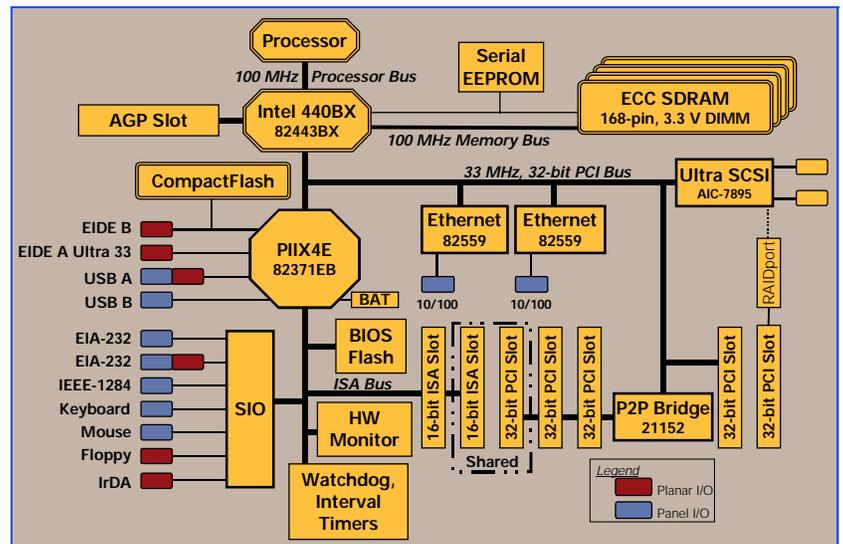


Price-sensitive solution for the full-featured, long-life, embedded ATX motherboard

Motorola's PATX3070 combines the performance of an Intel Pentium III processor and 440BX chipset with a full-featured, long-life, embedded ATX motherboard. The PATX3070 is a PGA370 socket design with 100 MHz processor-side bus performance with support for up to 1GB of SDRAM memory, 32-bit/33 MHz PCI buses, and 2x AGP graphics. For OEMs looking to extend previous investments in ISA cards, the PATX3070 continues to provide legacy ISA support. For OEMs requiring a high degree of integration in a standard ATX board, the PATX3070 offers dual-channel Wide Ultra SCSI and dual 10/100Mbit Ethernet capability. This reserves PCI and ISA slots for OEMs' proprietary or value-added functions. In addition, the PATX3070 provides a Type II CompactFlash socket, watchdog and interval timers, and hardware monitoring features.

The combination of value and functionality allows the PATX3070 to serve embedded applications, such as data communications, telecommunications, industrial automation, and imaging. Operating system support for this value solutions (mid-tier) embedded platform includes Windows® NT and Linux.

- Single Intel Pentium III processor for PGA370 socket
- Intel 440BX chipset with support for 100 MHz processor-side bus
- Four DIMM slots 3.3 V, with support for up to 1GB SDRAM memory
- 10/100Mbit Ethernet interface (single or dual population options)
- Ultra ATA/33 EIDE interface, CompactFlash Type II socket
- Dual-channel Wide Ultra SCSI interface with RAID support (optional)
- Two RS-232 serial ports, parallel, floppy, PS/2 keyboard/ mouse support, and IrDA header
- Watchdog, interval timers, and hardware monitor
- One 2x AGP slot, two 32-bit/33 MHz PCI slots, five 32-bit/33MHz PCI slots if configured with additional PCI-to-PCI bridge (one shared if PCI-to-PCI bridge option used), and two ISA expansion slots (one shared if PCI-to-PCI bridge option used)



PATX3070 DETAILS

Intel Pentium III Processor

For high-end embedded applications, the PATX3070 fully supports the Pentium III processor. This processor is combined with the Intel 440 chipset resulting in exceptional processing capability. The Pentium III supports 100 MHz processor-side bus frequency and contains 256KB of integrated L2 cache. Dynamic execution, dual independent bus architecture, Intel MMX technology, and streaming SIMD extensions are additional performance advantages. For continual Pentium III processor speed enhancement options, consult your Motorola sales representative.

Memory

The PATX3070 provides four 168-pin DIMM sockets on board. Up to 1GB SDRAM memory is supported.

Legacy Support

For OEMs looking to extend previous investments in ISA cards, the PATX3070 continues to provide legacy ISA support with up to two ISA slots.

Expansion Slots

The PATX3070 provides one 2x AGP slot, two 32-bit/33 MHz PCI slots, five 32-bit/33 MHz PCI slots if configured with additional PCI-to-PCI bridge (one shared if PCI-to-PCI bridge option used), and two ISA expansion slots (one shared if PCI-to-PCI bridge option used).

On-Board Integration

For OEMs requiring a high degree of integration in a standard ATX board, the PATX3070 offers a dual-channel Wide Ultra SCSI option and single or dual 10/100Mbit Ethernet capability. This level of integration reserves the PCI and ISA slots for OEMs' proprietary or value-added functions. To meet the needs of embedded applications, the PATX3070 also provides a Type II CompactFlash socket, watchdog and interval timers, and hardware monitoring features.

On-Board I/O

The PATX3070 supports the standard motherboard I/O. On the rear panel are zero, one, or two RJ-45 connectors for Ethernet, two DB-9 serial connectors, parallel port connector, PS/2 mouse/keyboard connectors, and two USB connectors. There are headers on the board for IDE, SCSI (if populated), floppy, and IrDA.

SPECIFICATIONS

Processor

One PGA370 socket; supports a single 700+ MHz Pentium III processor

Cache

Level 2: 256KB

Memory

Type: ECC SDRAM
Connectors: Provides four 168-pin DIMM sockets
Capacity: Up to 1GB memory with 256MB 3.3 V SDRAM

Intel 440 Chipset

66/100 MHz processor-side bus, 82443BX (DRAM controller, processor to PCI bridge, and AGP controller), plus 82371EB (provides PCI to ISA bridge, USB support, Ultra DMA/33 EIDE support and interrupt).

Ultra ATA/66 PCI-to-ISA/EIDE Interface

Controller: Integrated into PIIX4E (82371EB)
EIDE Connectors: Two 40-pin headers

Ethernet Interface

Controller: Intel 82559 (one or two)
Interface Speed: 10/100Mb/s
PCI Local Bus DMA: PCI bus master
Connector: RJ-45 (one or two)

SCSI Interface

Controller: Adaptec AIC-7895 (dual-channel Wide Ultra)
Transfer Rate: Up to 40Mb/s per channel
PCI Local Bus DMA: PCI bus master
Connector: HD-68 for each channel

PCI-to-ISA Bridge

Support for legacy ISA cards with one dedicated ISA slot and one shared PCI/ISA slot (w/PCI option).

Controller: PIIX4E (82371EB)

Connector: Two industry-standard ISA slots (shared)

RTC and CMOS RAM

DS1287 compatibility provided by the PIIX4E; 256 bytes of battery-backed RAM available.

CompactFlash Socket

Type II socket attached to the secondary EIDE interface, 3.3 V implementation; may be configured via on-board jumper as secondary master or slave.

RAIDport

The 60-pin RAIDport connector implementation allows the PATX3070 motherboard to have standard Wide Ultra SCSI channels, while being configurable or upgradeable to RAID compatibility depending on customer requirements.

USB

Dual independent USB channels for 1.5Mb/s and 12Mb/s transfer rates allow for easy, hot plugging of USB peripherals such as a mouse, keyboard, speakers, etc.

Super I/O Device

Controller: National PC97317

Interfaces: Two asynchronous serial ports, parallel port, PS/2 floppy port, PS/2 keyboard/mouse interfaces and an infrared header

Supervisory

Watchdog Timer: Two-level, software programmable; drives interrupt, SMI, system reset, power down, or cycle power

One LM79: Board temperature (user-definable threshold alarm on selectable SMI), CPU voltages with status interrogated via SMI

MAX1617: CPU temperature

Integrated Super I/O Interfaces

Floppy: 34-pin header

Keyboard Port: 6-pin mini DIN, panel I/O

Mouse Port: 6-pin mini DIN, panel I/O

Serial Ports: 9-pin D-sub, panel I/O

Parallel Port: 25-pin D-sub, panel I/O

PCI: 120-pin, 32-bit card edge connector

Power Requirements

(all values are typical)

	700 MHz	850 MHz
+5V:	4.8 A	5.3 A
+3.3 V:	2.4 A	2.1 A
+12 V:	0.2 A	0.2 A
-12 V:	0.04 A	0.04 A

Note: All +3.3 V values include four 256MB DIMM modules.

Demonstrated MTBF

(based on a sample of eight boards in accelerated stress environment)

Mean: 214,322 hours

95% Confidence: 121,141 hours

Environmental

	Operating	Nonoperating
Temperature:	0° C to +55° C	-40° C to +85° C
Humidity (NC):	5% to 95%	5% to 95%
Vibration:	0.5 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)

This product was tested in a representative system to the following standards:

CE Mark per European EMC Directive 89/336/EEC with Amendments; Emissions: EN55022 Class B; Immunity: EN55024

ORDERING INFORMATION

Part Number	Description
PATX3070-104	Single Ethernet interface and five PCI slots
PATX3070-105	Dual Ethernet interfaces and two PCI slots
PATX3070-108	Dual Ethernet interfaces, SCSI, and five PCI slots
Processor Options	
IA-CPU-700-01-F	700 MHz Intel Pentium III processor, 100 MHz processor-side bus, w/ active heatsink
IA-CPU-700-01-K	700 MHz Intel Pentium III processor, 100 MHz processor-side bus, w/ active heatsink
IA-CPU-850-01-K	850 MHz Intel Pentium III processor, 100 MHz processor-side bus, w/ active heatsink
IA-CPU-850-01-K	850 MHz Intel Pentium III processor, 100 MHz processor-side bus, w/ active heatsink
DIMM Memory Options (0-4 DIMMs and same size limit per order)	
MEMSDRM256-F	256MB, PC100, ECC, SDRAM
MEMSDRM256-K	256MB, PC100, ECC, SDRAM
I/O Shield Options (also used on the PATX5000 motherboard)	
ATXIO-101-K	One Ethernet interface I/O shield
ATXIO-102-K	Two Ethernet interfaces I/O shield
Documentation	
PATX3070A/IH	PATX3070 Installation and Use
P3070BOSA/RM	PATX3070 BIOS and Programmer's Reference Guide
Documentation is available for online viewing and ordering at http://www.motorola.com/computer/literature	

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