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Data Sheet

August 2, 2026

EMERSON / MOTOROLA

Emerson / Motorola MCP750 CompactPCI Single Board Computer (400 MHz)

Emerson / Motorola MCP750 CompactPCI Single Board Computer (400 MHz) The MCP750 provides a 3U CompactPCI single-board computer designed around the Motorola MPC750 PowerPC processor, with listing-class CPU speed of 400 MHz within an OEM family spanning approximately 233 to 466 MHz and ECC DRAM mezzanine support from 16 to 256 MB.

Embedded industrial and telecom control in CompactPCI chassis; real-time and communications processing on PowerPC 750 architecture; PMC mezzanine expansion for custom I/O; legacy CompactPCI system maintenance and replacement; rack-mounted embedded compute in test and infrastructure equipment. The MCP750 provides a 3U CompactPCI single-board computer designed around the Motorola MPC750 PowerPC processor, with listing-class CPU speed of 400 MHz within an OEM family spanning approximately 233 to 466 MHz and ECC DRAM mezzanine support from 16 to 256 MB. Embedded industrial and telecom control in CompactPCI chassis; real-time and communications processing on PowerPC 750 architecture; PMC mezzanine expansion for custom I/O; legacy CompactPCI system maintenance and replacement; rack-mounted embedded compute in test and infrastructure equipment.



MODEL

**Emerson /
Motorola MCP750**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MCP750

LISTING

[https://aumictechlabs.c
om/products/mcp750-
2/](https://aumictechlabs.com/products/mcp750-2/)

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NAICS 423690 • 811210 • 541380

This unit

The Emerson/Motorola MCP750 is a single-slot CompactPCI single board computer built on the PowerPC 750 32-bit microprocessor architecture. Operating at 400 MHz, it delivers the processing power and I/O integration required for embedded industrial control, communications, and systems. The board combines a 1MB base flash footprint with configurable DRAM up to 256MB, dual Ethernet ports, four serial channels, USB connectivity, and CompactFlash support - all within a standard CompactPCI form factor.

Technical Specifications

Processor: PowerPC 750 32-bit microprocessor, 400 MHz
L1 Cache: 32KB Instruction / 32KB Data
L2 Cache: 1MB
System Memory: 16MB to 256MB ECC DRAM (60ns FPM, 50ns EDO)
Flash Memory: 1MB base (main board) + 5MB to 9MB on-board; optional 4MB or 8MB upgrades
Expansion: Single 32/64-bit PCI Mezzanine Card (PMC) slot
CompactPCI Interface: 64-bit
Ethernet: Intel 21140 controller, 10/100 Mb/s, RJ-45 front panel, DMA with PCI burst
Serial Ports: Two 16550-compatible asynchronous; two configurable async/sync; two synchronous (HD-26)
USB: Two ports
Parallel Port: IEEE 1284 compliant
Storage: EIDE controller, floppy disk controller, CompactFlash socket
NVRAM: 8K x 8 with battery-backed time-of-day clock
Timers: Four 32-bit timers; three watchdog timers with system reset trigger
Debug: On-board monitor and self-test diagnostics
Power Management: Doze, nap, sleep, and dynamic modes
Physical & Environmental Form Factor: Single CompactPCI slot, 19.8mm (0.8 in.) width
Dimensions: 233.4mm H x 80.0mm or 60.0mm D x 261.8mm front panel height
PWB Rating: 94V-0 flammability
Operating Temperature: -5°C to +55°C (forced-air cooling)
Storage Temperature: -40°C to +85°C

Key Features

- Single-slot CompactPCI deployment without secondary expansion overhead
- Quad serial channel configuration supports legacy and modern protocols
- Integrated Ethernet with DMA acceleration for throughput-intensive applications
- Watchdog timers enable autonomous system recovery in unattended deployments
- Dynamic power management reduces thermal load during idle periods

Typical Applications

- Industrial process control and automation
- Telecommunications line cards and network appliances
- Military and avionics embedded computing
- Real-time data acquisition and field monitoring

Features & description

From manufacturer datasheet

Features

- 3U CompactPCI form-factor single-board computer
- Motorola MPC750 PowerPC processor
- CPU speed 400 MHz class (family range approximately 233 to 466 MHz)
- ECC DRAM mezzanine, 16 to 256 MB class
- On-board flash storage
- L2 cache (processor dependent)
- PMC mezzanine expansion option
- Serial, USB, IDE, and floppy-class I/O

MCP750 Characteristics / Specifications

PARAMETER	VALUE
Model	MCP750
Manufacturer	Emerson / Motorola
Instrument Type	CompactPCI Single-Board Computer
Form Factor	3U CompactPCI
Processor	Motorola MPC750 PowerPC
CPU Speed	400 MHz (listing class; OEM family approximately 233 to 466 MHz)
Memory	ECC DRAM mezzanine, 16 to 256 MB class
Storage	On-board flash
Cache	L2 cache (configuration dependent)
Expansion	PMC mezzanine option
I/O	Serial, USB, IDE, floppy-class interfaces
Alias	MCP750 Standard Operating Conditions Install incompatible 3U CompactPCI chassis with adequate cooling airflow. Confirm mezzanine DRAM size and CPU speed from faceplate or BIOS POST before deployment. Observe chassis backplane and power supply ratings for slot load.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Model	MCP750
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Alias	MCP750
Standard Operating Conditions	
Install incompatible 3U CompactPCI chassis with adequate cooling airflow. Confirm mezzanine DRAM size and CPU speed from faceplate or BIOS POST before deployment. Observe chassis backplane and power supply ratings for slot load.	
Operational Notes	
Emerson/Motorola MCP750 listings commonly cite 400 MHz, but the OEM family supports multiple CPU speeds—confirm exact processor frequency and installed ECC DRAM from faceplate or configuration label. Alias MCP750.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.