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Series MP

Models MP604-112-2 and MP604-112-4

Thumbnail of a system. A photograph of the system in [GIF \(136K\)](#) or [JPEG \(25K\)](#).

The PowerPC™ Family

The Motorola® PowerPC family of servers offers a full range of multi-user, multitasking open architecture computers based on the Motorola PowerPC RISC architecture. Models of the PowerPC computer family will support a range of server requirements from the smallest servers to servers supporting entire enterprises.

Servers based on the PowerPC family are available from Motorola with AIX®, the most scalable and robust UNIX® operating system for commercial environments. AIX provides you access to over 10,000 applications. Software and application investments are fully protected through binary compatibility within the PowerPC family--from desktop to enterprise servers. As other widely accepted operating systems are ported to the PowerPC, they will be available from their respective vendors for use on Motorola PowerPC servers.

Series MP Servers

The Series MP is a highly scalable, high performance Symmetric Multi-Processing (SMP) server. The Series MP is the first Motorola SMP system based on the PowerPC providing industry leading price/performance and expansion capabilities. The flexibility, power and configurability inherent in the Series MP affords a choice from among a variety of application servers. The Series MP can be configured as a transaction server, combining powerful on-line transaction processing and migration solutions. As a database server, Series MP can be configured with high availability options and database solutions. This provides real time access to large amounts of business-critical data. Configured as a systems management server, the Series MP provides a global view of the IT infrastructure with full administration of heterogeneous systems and networks, in a distributed environment, while maximizing productivity and performance.

The Series MP is a perfect system for companies in manufacturing, retail, wholesale, banking and across many other industries requiring a flexible, scalable, multi-user commercial server.

All Series MP servers are built for tomorrow--ready to evolve with future generations of the PowerPC technology. Protect your current investment through easy, in-field upgrades. Either replace existing processors with higher performance processors or simply increase the number of processors in your system.

Compliance with major available standards ensures investment protection and portability of applications to and from other open systems.

The Series MP models are the high end range of the Motorola PowerPC servers.

Features

Architecture

Design ensures coherency and data integrity for business critical computing as well as investment protection today and into the future

- Built in support for PowerPC 601®, PowerPC 604™, and PowerPC 620™ generations
- SMP-based architecture transparent to applications
- Improved efficiency and performance between I/O, memory and processors
- Design ready for 64-bit microprocessors

Scalability and Upgradeability

Clear path forward with full performance range

- From two to eight processors
- Easy, in-field microprocessor upgrades
- Large internal memory and disk expansion capabilities
- Up to four storage expansion cabinets
- MP604-112-2 has seven MCA I/O slots
- MP604-112-4 has 15 MCA I/O slots

RAS (Reliability, Availability, Serviceability)

Reliable, available and timely information improving business efficiency

- Clustering for highly available server solutions
- Disk Array Subsystems - Raid cabinets for high reliability storage
- AIX's enhanced RAS features including C2 security level and B1 optional
- Intelligent power outage management via software and Uninterruptible Power Systems (UPS) solutions
- High Serviceability features: CRU concepts (hot pluggable Customer Replaceable Units)
- Service maintenance processor designed to protect business critical operations:
 - Error checking and correction (ECC) for memory tolerance, dynamic reconfiguration, software and system monitoring, routine service operations--power on/off, diagnostics
 - Remote Service Facility (RSF) - hardware and software remote maintenance services
- Cableless design

Investment Protection

Standards compliance and system compatibility, portability of applications across platforms

- Binary compatible with other Motorola PowerPC Systems; same AIX application catalog
- X/ Open XPG4, POSIX™, FIPS, "Unified Unix", COSE CDE

Connectivity and Interoperability

Manage and connect multiple sites and workgroups assuring homogeneity throughout the enterprise

- Communications adapters: 8, 16, 128 ports asynchronous, X.25, Token Ring, Ethernet (10BaseT, 10Base5), FDDI
- RS232 (three) serial ports, parallel ports, SCSI-2 Fast/Wide SE/DE (20MB/sec) drives
- OSI, SNA, TCP/IP

- Internet ready

Operating System

Full binary compatibility across entire PowerPC family and providing high scalability

- AIX 4.1 MP

Middleware and Solutions

- Oracle™, Informix™, Sybase™
- Communications products, development tools, office products
- AIX catalog of over 10,000 applications

Disks and Media:

Customer Replaceable Units (CRUs) and Hot Pluggable Units

Low service interruption and reduced cost maintenance and service, reuse high value peripherals, modular design allows maximum accessibility

- CRU SCSI-2 3.5" disk drives 2/4GB
- Internal 3.5" diskette 1.44MB
- CRU Streamer tape drive, QIC 1/4" cartridge 2.5/5GB
- CRU 8mm VDAT tape drive - 7/14GB
- CRU 4mm DAT tape drive - 4/8GB
- CRU High speed CD-ROM drive - standard
- External Disk Array Subsystems (RAID) devices

Other Peripherals

An extensive line of Terminal Servers, X Terminals, Character Terminals and Uninterruptible Power Systems are available from Motorola.

Warranty

The Series MP is backed by a five year limited warranty from Motorola.

System Configurations

MODELS	MP604-112-2	MP604-112-4
Architecture		
Processor	PowerPC 604	PowerPC 604
Number of processors(std/max)	2/8	4/8
Clock rate	112 MHz	112 MHz
Level-2 cache (standard)	1MB	1MB
MCA Bus (up to 2)	160MB/s	2 x 160MB/s
Expandability		

MCA expansion slots(max/open)	7/6	15/14
3.5" disk bays (total)	7	19
5.25" media bays	3	5
Disk expansion cabinets	option (max 4)	option (max 4)
MCA expansion cabinet	option (max 1)	standard
SCSI-2/Ethernet	standard	standard
Upgrade to PowerPC 604/620	option	option

System Memory

Internal ECC memory (std/max)	64/2048MB	256/2048MB
Memory slots (max/open)		

Disks, Media and CRUs (Customer Replaceable Units)

Internal Disk capacity std/max)	2.1/33.6GB	4.2/92.4GB
Maximum disk capacity (base + ext)	327GB	327GB
Maximum disk capacity with DAS RAID	2.2TB option (max 20)	2.2TB option (max 20)
Internal 3.5" 1.44MB diskette	standard	standard
Internal Hi-Speed 4X CD-ROM	standard	standard
Tape back-up	option	option

Performance*

Int'92/SPECfp'92	152/149	152/149
SPECrate_int'92 (4/8 CPU)	12500/25000	12500/25000
SPECint_rate'95 (4/8 CPU)	143/281	143/281
Transactions per minute (2/4/8 CPU)	1500	3000/4500

*Performance Estimates

General Specifications

Series MP

Base Configuration

In the specifications which follow, a base configuration is considered to consist of:

- One dual CPU module
- 64MB memory
- Floppy disk drive
- CD-ROM drive
- One 2GB hard disk drive

Operating Environment**Electrical Service Requirements**

AC input voltage ranges:

- 90 to 132 VAC
- 180 to 264 VAC

AC input frequency range:

49 to 62 Hz

AC Power Ratings

Power factor of 0.98 (use for derating UPS)

Power source loading with typical configuration as listed:

1200 VA

Enclosure Rating:

12 amps @ 100 VAC, 50/60 Hz

6 amps @ 200 VAC, 50/60 Hz

DC Output Power Rating

Power supply maximum continuous output:

780 watts

Power supply load with typical configuration as listed

375 watts

Temperature/Humidity/Altitude

Temperature:

Operating 10° C to 32° C, 50° F to 90° F

Relative humidity:

Operating 20% to 80% (noncondensing)

Non-operating 5% to 95% (noncondensing)

Thermal output of typical configuration as listed:

1032 Kcal/hr

Altitude:

Operating: 8,500 feet ASL

Mechanical Specifications

The Series MP packaging is a modular industrial design which fits easily under a table. One cabinet is standard for all packaging options--basic cabinet, MCA expansion cabinet, external disk cabinet:

Physical dimensions:

Height: 24 in. (610 mm)

Width: 14.2 in. (360 mm)

Depth: 29.5 in. (750 mm)

Weight: 149-187 lbs (67-84 Kg)

Safety Specifications

Safety:

Meets UL 1950

Meets CSA 950

Meets VDE Safety EN 60 950

Meets IEC 950

Emissions:

Meets FCC, Class A

FTZ, Class A

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