Series I
Models SI604-112-1 and SI604-112-2

Thumbnail of a system. A photograph of the system in GIF (151K) or JPEG (33K).

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 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 I Servers

The Series I is a highly scalable, high performance Symmetric Multiprocessing (SMP) server. The Series I is Motorola's entry level PowerPC-based SMP server. The Series I server broadens Motorola's SMP server family, adding a new dimension of performance and scalability.

The modular packaging design of the Series I provides a robust and cost effective symmetric multiprocessing solution with many options for ongoing expansion.

The compact Series I Server, configured as a network server provides users friendly access to data on large systems. Users can integrate leading LAN and PC workgroups in a heterogeneous environment with network management solutions.

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

All Series I servers are built for tomorrow - ready to evolve with future generations of the PowerPC technology. Protect your current investment through easy, in-field upgrades. Enhancing the Series I server performance is as easy as adding an additional processor card.

With Motorola's commitment to PowerPC technology leadership, many years of experience in delivery of high quality solutions, and a leader in open systems, an investment in the Series I is an investment in success.

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 one to four processors
- Easy, in-field microprocessor upgrades
- Internal memory and disk expansion capabilities
- Up to four storage expansion cabinets
- Six MCA I/O slots

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

RAS (Reliability, Availability, Serviceability)

- External RAID cabinets for high reliability storage
- Tape subsystems for automated and secure backup/restore operations
- AIX enhanced RAS features including C2 security level
- 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
- Power outage management via software and Uninterruptible Power Systems (UPS) solutions

Connectivity and Interoperability

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

- Communications adapters: 8, 16, 128 ports asynchronous, 4 ports 2Mbps X.25, 6 and 8 ports V35, Token Ring, Ethernet (10BaseT, 10Base5), FDDI
- RS-232 (three), parallel ports, SCSI-2 Fast/Wide SE/DE (20MB/s) 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

Memory

- 32MB, 64MB, 128MB, 256MB and 512MB memory cards

Internal Storage

- SCSI-2 disk drives - 1, 2, 4GB
- Internal 3.5" diskette 1.44MB
- Tape Drives - 8 mm VDAT - 7/14GB, 4 mm DAT - 4/8GB, QIC 1/4" cartridge - 2.5/5GB
- High speed CD-ROM drive

Other Peripherals

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

Graphics

- GXT150M (3770Kv/sec) graphics adapter
- Line of graphics color monitors

Warranty

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

System Configurations

MODELS	**SI604-112-1**	**SI604-112-2**
Architecture		
Processor	PowerPC 604	PowerPC 604
Number of Processors (std/max)	1/4	2/4
Clock Rate	112 MHz	112 MHz
Data/Instruction Cache	32KB	32KB
Level-2 Cache (standard)	1MB	1MB
MCA Bus Transfer Rate	160MB/s	160MB/s
Expandability		
MCA Expansion Slots (max/open)	6/5	6/5

3.5" Disk Bays (max/open)	4/3**	4/3**
5.25" Media Bays (max/open) (Floppy is standard in one Bay)	2/1	2/1
Disk Expansion Cabinets	option (max 4)	option (max 4)
SCSI Devices in Disk Cabinet (4 disk, 2 media)	6	6
SCSI-2/Ethernet	standard	standard
Graphics, keyboard, mouse	option	option
Upgrade to next PowerPC generation (604, 620)	option	option
System Memory		
Internal ECC Memory (std/max)	32/512MB	64/512MB
Memory Slots (max/open)	1/0	1/0
Disks and Media		
Internal Disk Capacity (std/max)	1/14GB	2/14GB
Maximum Disk Capacity (Base + ext)	98GB	98GB
Maximum Disk Capacity with RAID	686GB - option	686GB - option
Internal 3.5" 1.44MB Diskette	standard	standard
Internal Hi-Speed 4X CD-ROM	standard	standard
Tape back-up	option	option
Performance*		
SPECint'92/SPECfp'92	148-142	148-142
SPECint'95/SPECfp'95	4.18-3.53	4.18-3.53
SPECrate_int'92 (2/4 CPU)		6600-12500
SPECint_rate'95 (2/4 CPU)		84.7-164
Transactions per minute (1/2/4 CPU)	820	1500/2500

* Estimated performance
**If more than one CPU board, then only two bays can be used for disk. One bay has the standard disk and there is one open bay for an additional disk.

General Specifications
Series I

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
SCSI adapter
Ethernet adapter

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:
700 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 base 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 base configuration as listed:
1032 Kcal/hr
Altitude:
Operating: 8500 Feet ASL

Mechanical Specifications

One base cabinet standard for all configurations. The Series I packaging is designed for high modularity and low space consumption. Basic cabinet and expansion disk cabinet:

Physical Dimensions:
Height: 18.5 in. (470 mm)
Width : 6.8 in. (173 mm)
Depth : 24.2 in. (614 mm)
Weight : 42.2 - 48.9 lbs. (19-22 Kg)

Safety Specifications

Safety:

Meets UL 1950
Meets CSA 950
Meets VDE Safety EN 60 950
Meets IEC 950

Emissions:

Meets FCC, Class A
BZT, Class A

Service & Support | Educatior | Computer Group Up Close

Motorola Home | Search | How To Buy | FAQ | Feedback | Main

Last Modified: 01 September 1996