Product Brief

Intel® Storage Server
SSR212MC2 and SSR212MC2-R Storage Servers

Intel® Storage Server SSR212MC2

A High-Performance, Flexible Platform Enabling Enterprise-Class Storage for Small and Medium Businesses

Product Overview

The Intel® Storage Server SSR212MC2 is a flexible hardware platform that can be coupled with one of a number of different industry software solutions to create an application server with internal storage (DAS) or used as a dedicated network storage appliance (NAS or SAN). Built to support Intel® dual-core and quad-core CPU technologies, the SSR212MC2 offers performance and flexibility. The SSR212MC2 is a 2U rackmount storage server that supports 12 enterprise-class Serial Attached SCSI (SAS) or high-capacity Serial ATA (SATA) HDDs. This PCI Express*-based platform supports up to 32 GB of fully buffered DIMMs and up to two high-performance dual-core or quad-core Intel® Xeon® processors. Flexible network connectivity will include quad port Gb Ethernet, 10 Gb Ethernet, Fibre Channel, or Infiniband via add-in cards.

An Increasing Need for Storage

Businesses today are being inundated with digital data, from the growth in existing applications like e-mail and databases to emerging rich-media applications such as digital video. New government regulatory requirements, corporate business continuity, and corporate disaster recovery plans are adding to the explosive growth of storage needs. All of these factors contribute to an ever-increasing need for storage in small and medium business as well as larger enterprises. The Intel Storage Server SSR212MC2 addresses this growing storage demand by supporting up to 12 enterprise-class SAS or high-capacity SATA hard drives. It features hardware support for RAID levels 0, 1, 5,10, and 50, making data more reliable and faster to access.

Lower Storage Costs with Enterprise-Class Reliability

The Intel Storage Server SSR212MC2 features support for high-capacity, 7,200 RPM SATA hard disk drives (HDD), which are less expensive than Fibre Channel or SCSI drives and simplify cabling. Additionally, SATA drives offer software transparency and scalability to help lower upgrade costs.

The SSR212MC2 also supports SAS HDDs, which offer enterprise-class reliability. With spindle speeds of 10,000 RPM and 15,000 RPM, and an architecture that enables a point-to-point connection and full-duplex, or bi-directional, data transfers, SAS HDDs offer performance and reliability similar to SCSI or Fibre Channel HDDs.

Flexible Software Solutions

Intel has engaged with storage software providers to ensure the availability of a variety of software solutions. These include applications that allow the Intel Storage Server SSR212MC2 to be configured as a SAN or a NAS system. To see the growing list of industry software solutions optimized for the Intel Storage Server SSR212MC2, visit *www.intel.com/design/servers/storage/ssr212mc2/index.htm.*

Flexible Connectivity Options

Intel is enabling a robust set of hardware options to provide high bandwidth storage and server connectivity. Dual- and quad-port Intel® PRO server adapters provide an option for increased bandwidth through bonding of ports, or reliability via failover. Additional options will include, 10 Gb Ethernet, 4 Gbps Fibre Channel connectivity, and 20 Gbps Infiniband connectivity.

Environments ranging from high-performance computing to the growing compute, networking, and storage needs of small and medium businesses can all benefit from the flexible network connectivity options available, via add-in cards, with the SSR212MC2. To learn more, visit the SSR212MC2 Website.

Operating Systems Support

- Red Hat Enterprise Linux* 4.0
- Microsoft Windows Storage Server 2003*
- Microsoft Windows Server 2003 Enterprise Edition*[1]
- Microsoft Windows Server 2003 Standard Edition*[1]
- Microsoft Windows Unified Data Storage Server 2003*

See the Intel Storage Server SSR212MC2 Tested Hardware and Operating System List (THOL) for a complete and up-to-date OS list.

1. Windows Server 2003 supported with limited enclosure management.

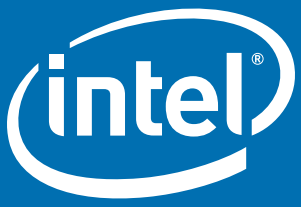
Intel® Storage Server SSR212MC2 Specifications

Features	Benefits
Support for up to 12 hot-swappable SAS or SATA drives in a 2U form factor	Easily add up to 9 TB of raw storage (with 750 GB SATA HDDs) without system downtime for future storage capacity needs. SATA drives currently provide higher capacity at a lower cost than SCSI or Fibre Channel drives. SAS drives provide enterprise-class performance and reliability
Intel® Xeon® processors	Support for one or two 5100 series or 5300 series dual-core or quad-core processors. Processing performance to meet the demanding needs of storage virtualization
Dual 1 Gb Ethernet Network Interface Connections	Provide fast access to iSCSI or network attached data
Intel® RAID Controller SRCSAS144e *(only on the SSR212MC2-R model)*	Hardware support for RAID 0, 1, 5, 10, 50

Product Specifications	
Raw storage capacity	Expandable to 9.0 TB – using twelve 750 GB (7.2k RPM) SATA drives Expandable to 3.6 TB – using twelve 300 GB (15k RPM) SAS drives
Data drive bays	12 Serial Attached SCSI (SAS) or Serial ATA (SATA) Hot Pluggable
Hard disk drive supported	3.5" SAS or SATA for the 12 data drives, or up to two optional 2.5" SAS or SATA boot drives (internally mounted) ***NOTE:*** *For specific drive family and capacities supported, please refer to the SSR212MC2 Tested Hardware and OS List (THOL)*
Processor	Dual-Core Intel® Xeon® processor 5100 series, 1066 MHz FSB with 4 MB of L2 cache Quad-Core Intel® Xeon® processor 5300 series, up to 1333 MHz FSB with 8 MB of L2 cache
Memory capacity	8 slots, expandable to 32 GB maximum
Memory type	Fully buffered DIMM technology (FBDIMM) memory. DDR2-533 and DDR2-677 FBDIMMs
DIMM slots	Eight 240-pin FBDIMM sock
Enclosure controller	On-board Vitesse VSC410* micro-controller
Temperature sensor	Two temperature sensors are located on the backplane and baseboard that allows drive cage temperature monitoring by enclosure management
Client connectivity	Client connectivity via Internet Protocol Small Computer System Interface (iSCSI) Dual GB/s Ethernet

Product Specifications (continued)

Front Panel	
Buttons and LEDs	Power button, Reset button, ID button, Power LED, Fault LED, ID LED
I/O connectors	1 x 5-pin Mini USB
Back Panel	
Buttons	NMI button, ID button
Power receptacle	1 x IEC AC per installed power supply module
Input/Output	
PCI	SSR212MC2R: One PCI Express* (PCIe) x8 slot, two PCIe x4 slots, one PCI-X slot SSR212MC2: Two PCIe x8 slots, two PCIe x4 slots, two PCI-X slots
USB	Four USB 2.0-compatible connectors (rear)
Serial ports	One DB9 9-pin connector (rear)
Video port	One standard VGA-compatible 15-pin connector (rear)
LAN port	Two 10/100/1000 MB RJ-45 (rear)
Other	One stacked PS2 Mouse/Keyboard (rear)
Chassis	
Form factor	2U rackmount chassis , supports low-profile PCI add-in cards only
Height	87.9 mm, 3.46 in.
Width	447 mm, 17.6 in. (across body of chassis)
Depth	707 mm, 27.83 in. (from rack posts to max extremity of chassis)
Weight	As shipped (zero drives): approximately 20 kg, 44 lbs. Fully configured (12 drives): approximately 30 kg, 66 lbs, Shipping container: 3.2 kg, 7 lbs
Color	Black plastic, silver sheet metal
Rack support	Rail mount, compatible with four-post rackmount only
System Cooling	
Fans	Chassis includes ten hot-swappable redundant system fans for cooling the hard drives, baseboard and SAS Host Bus Adapter (HBA) card
Power	
Configuration	850 W continuous, 1+1 redundant power supplies. Intel® Storage Server SSR212MC2 ships with one 850 W power supply
Environment	
Ambient temperature	Operating (system): 10°C to 35°C, with maximum change not to exceed 10°C per hour; non-operating (system): -40°C to 70°C
Relative humidity	Non-operating: 90% at 35°C non-condensing
Acoustics	< 7.0 BA (rackmount) in an idle state in a normal office environment (23°C)
Electrostatic discharge	15 KV per Intel test specification
Safety Compliance	
Argentina	IRAM
Canada	UL60950 – CSA (60950 (UL and cUL)
China	GB4943 – CNCA Certification
Europe, CE Mark	EN60950 (complies with 73/23/EEC)
Germany	GS License
International	IEC60950 (CB Report and Certificate)
Nordic countries	EMKO-TSE (74-SEC) 207/94
Russia	GOST 50377-92
United States	UL– 60950 – CSA 60950 (UL and cUL)
Electromagnetic Compatibility (Class A) (EMC)	
Australia/New Zealand	AS/NZS 3548 (based on CISPR 22)
Canada	ICES-003
China	GB 9254 – CNCA Certification, GB 17625 – (Harmonics) CNCA Certification
Europe, CE Mark	EN55022; EN55024 and EN61000-3-2;-3-3 (complies with 89/336/EEC)
International	CISPR 22
Japan	VCCI
Korea	RRL, MIC 1997-41 and 1997-42
Russia	GOST 29216-91 and 50628-95
Taiwan	CNS13438
United States	FCC, Part 15
RoHS	European Directive 2002/95/EC



www.intel.com

For additional information about Intel® Storage Server SSR212MC2, visit:
www.intel.com/design/servers/storage/ssr212mc2/index.htm

For general storage product information, visit:
www.intel.com/products/server/storage/index.htm

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