Product Brief

Intel® Server Systems SR2520SAF, SR2520SAS, and SR2520SASX

The Intel® Server Systems SR2520SAF, SR2520SAS, and SR2520SASX

A Family of Rack-Optimized Server Systems Delivering Highly Integrated Solutions for Cost-Sensitive Customers

Product Overview

The Intel® Server Systems SR2520SAF, SR2520SAS, and SR2520SASX represent the latest generation of enterprise-level, rack-optimized system solutions from Intel. Providing higher flexibility in data storage and security, these scalable, affordable systems are ideal for growing companies running high transaction database applications.

Compatible with the latest multi-core Intel® Xeon® processors[1] with a 667 MHz, 1066 MHz, or 1333 MHz front side bus, this family of systems supports five I/O slots. Designed for a variety of configurations, customers can choose the memory and storage solution that meets their needs best.

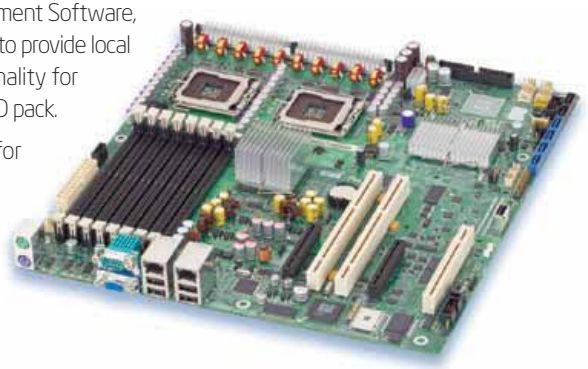
The rack-optimized systems from Intel provide flexible storage solutions including 3.5" SATA or SAS drives, as well as support for both fixed drives and hot-swap drives. The SR2520SAF features four fully buffered DIMM sockets and up to six fixed SATA drives. The SR2520SAX / SR2520SAXS deliver both hot-swap and redundant power, with eight fully buffered DIMM sockets and up to six hot-swap SAS / SATA drives.

These systems, designed for space-constrained environments, are optimized in either a 2U with redundant power and hot-swap drives or a 2U with fixed power and fixed drives.

- The 2U fixed systems are designed for organizations running front-end Internet, Web-hosting, and HPC applications.
- The 2U hot-swap systems handle more demanding departmental database, datacenter, and other high-transaction applications.

All three systems include the Intel® Server Essentials CD pack, a suite of software applications designed to help reduce the complexity of deploying and managing Intel Server Systems. Intel® Deployment Assistant, a graphical tool aimed at simplifying the process of deploying an Intel server, is included in the Intel Server Essentials CD pack. Intel® System Management Software, a comprehensive software suite designed to provide local and remote server management functionality for businesses of all sizes, is also part of the CD pack.

These integrated systems are designed for increased uptime and serviceability. Over 10,000 hours of testing and validation using other building blocks from Intel, in addition to third party peripherals and memory, assures compatibility and reliability.



System Specifications

System	Intel® Server System SR2520SAF	Intel® Server System SR2520SAX	Intel® Server System SR2520SAXS
Components Included	▪ Intel® Server Board S5000VSA4DIMM ▪ Intel® Server Chassis SR2520 ▪ Five low-profile PCI Express*, PCI-X, PCI full-height/full-length slots ▪ Standard control panel ▪ One 600-watt fixed power supply ▪ System cables ▪ System fans ▪ Air duct and baffle ▪ Rack handles ▪ System rail ▪ Documentation ▪ CDs	▪ Intel® Server Board S5000VSASATA ▪ Intel® Server Chassis SR2520 ▪ Five low-profile PCI Express*, PCI-X, PCI full-height/full-length slots ▪ Standard control panel ▪ One 600-watt 1+0 hot-swap power supply ▪ One active SATA backplane ▪ Four 3.5" hard drive carriers ▪ System fans ▪ Air duct and baffle ▪ Rack handles ▪ System rail ▪ Documentation ▪ CDs	▪ Intel® Server Board S5000VSASAS ▪ Intel® Server Chassis SR2520 ▪ Five low-profile PCI Express*, PCI-X, PCI full-height/full-length slots ▪ Standard control panel ▪ One 600-watt hot-swap 1+0 power supply ▪ One active SAS backplane ▪ Four 3.5" hard drive carriers ▪ System fans ▪ Air duct and baffle ▪ Rack handles ▪ System rail ▪ Documentation ▪ CDs
HDD Interface	Support up to six cabled SATA HDDs	Support up to six hot-swap SATA HDDs Four drive carriers offered as standard with the chassis. Optional spare drive carrier available (FXX10DVCARBLK)	Support up to six hot-swap SAS/SATA HDDs Four drive carriers offered as standard with the chassis. Optional spare drive carrier available (FXX10DVCARBLK)
Number of Processor sockets	2	2	2
Processor Support[1]	Multi-core Intel® Xeon® processor	Multi-core Intel® Xeon® processor	Multi-core Intel® Xeon® processor
System Bus Speed	667 MHz, 1066 MHz, and 1333 MHz[3]	667 MHz, 1066 MHz, and 1333 MHz[3]	667 MHz, 1066 MHz, and 1333 MHz[3]
Chipset	Intel® Chipset 5000V	Intel® Chipset 5000V	Intel® Chipset 5000V
PCI Buses	4	4	4
Total Slots	5	5	5
Slot Types	1 x PCI 32bit/33 MHz 5V PCI slot, 1 x PCI-X 64bit/133 MHz, 1 x PCI-X 64-bit/100 MHz slot, 2 x PCI Express x4 slots	1 x PCI 32bit/33 MHz 5V PCI slot, 1 x PCI-X 64bit/133 MHz, 1 x PCI-X 64-bit/100 MHz slot, 2 x PCI Express x4 slots	1 x PCI 32bit/33 MHz 5V PCI slot, 1 x PCI-X 64bit/133 MHz, 1 x PCI-X 64-bit/100 MHz slot, 2 x PCI Express x4 slots
Memory Capacity	8GB ECC Fully Buffered DDR2 (4 DIMMs)	16GB ECC Fully Buffered DDR2 (8 DIMMs)	16GB ECC Fully Buffered DDR2 (8 DIMMs)
Integrated LAN	2 x Intel® PRO/1000 EB Ethernet connections with Intel® I/O Acceleration Technology (Intel® I/OAT)	2 x Intel® PRO/1000 EB Ethernet connections with Intel® I/O Acceleration Technology (Intel® I/OAT)	2 x Intel® PRO/1000 EB Ethernet connections with Intel® I/O Acceleration Technology (Intel® I/OAT)
Integrated Graphics	ATI* ES1000 with 16MB memory	ATI* ES1000 with 16MB memory	ATI* ES1000 with 16MB memory
Server Management Support	Intel® System Management Software	Intel® System Management Software	Intel® System Management Software
Form Factor	2U Rack	2U Rack	2U Rack
Drive Bays	▪ 6 x 3.5" Fixed SATA ▪ Optional Full-Height Optical Drive ▪ Slim-line Optical Drive/USB-Floppy	▪ 6 x 3.5" Hot-Swap SATA ▪ Optional Full-Height Optical Drive ▪ Slim-line Optical Drive/USB-Floppy	▪ 6 x 3.5" Hot-Swap SAS/SATA ▪ Optional Full-Height Optical Drive ▪ Slim-line Optical Drive/USB-Floppy
System Cooling	Support for three system fans and two power supply module fans	Support for three system fans and two power supply module fans	Support for three system fans and two power supply module fans
Power Supply	600-watt, non-redundant PFC	600-watt, dual-line cord 1+0 PFC (fully redundant configuration requires second power module, order code TLIACPSU003)	600-watt, dual-line cord 1+0 PFC (Fully redundant configuration requires a second power module, order code TLIACPSU003)
Dimensions (H x W x D)	3.44" x 16.93" x 25.55"	3.44" x 16.93" x 25.55"	3.44" x 16.93" x 25.55"

Features and Benefits

Balanced server platforms based on dual-core Intel® Xeon® processors offer the following:

- **Dual-core processing** multiplies server performance by doubling processing ability on a single chip, without increasing power consumption.
- **Dual independent bus architecture** enables dedicated data flow to each processor, maximizing system performance.
- **Fully buffered DIMM memory** increases capacity and memory bandwidth to keep pace with the processor and I/O performance enhancements.
- **Intel® 64**[2] extends the amount of available server memory.
- **Intel® I/O Acceleration Technology (Intel® I/OAT)** is a platform innovation that helps get network data to and from server applications faster, while consuming far fewer CPU cycles.
- **Intel® Virtualization Technology**[3] turns a physical server into multiple systems (virtual machines) allowing multiple operating systems and applications to run inside a single platform.
- **Intel® Execute Disable Bit**[4] reduces exposure to viruses and prevents harmful software from executing on the server or network.
- **Enhanced Intel SpeedStep® Technology** allows processors to adjust their operating speeds to meet varying performance needs, while balancing power consumption.

Optional Accessories and Spare Parts:

Intel Building Block	Product Name(s)	Order Code(s)
SR2520 Bezel Option	SR2520–Black bezel	ADRBEZBLACK
SR2520 Power Supply Option	SR2520–Second 600W redundant power supply	TLIACPSU003
SR2520 Drive Carrier	SR2520–Black 3.5" hot-swap drive carrier	FXX10DVCARBLK
Intel® RAID Options[5]	Intel® RAID Controller 8-Port SATA 3.0 Gbps Intel® RAID Controller 6-Port SATA Intel® RAID Controller 8-Port SAS/SATA Intel® RAID Activation Key for embedded RAID 52	SRCS28X SRCS16 SRCSAS18E AXXRAKSW5

Technical Specifications

System Memory

Capacity

Four to eight Fully Buffered DIMM sockets for up to 16GB of registered ECC DDR2 533 or 667 memory

Reliability Features

Corrects single-bit errors, detects double-bit errors (using ECC memory), and supports Intel® x4 Single Device Data Correction (Intel® x4 SDDC), memory mirroring, memory sparing

Intel® Server Management

Integrated Management Type

IPMI 2.0-compliant onboard platform instrumentation

Software Support

Intel® System Management Software

Supported Operating Systems

Microsoft* Windows* Server 2003 Enterprise Edition, Microsoft Windows 2000 Advanced Server, Red Hat* Linux* Enterprise 4.0, SuSE Linux* Enterprise Server, and Novell* NetWare* 6.5

System BIOS

Type

4MB Flash EEPROM with EFI* BIOS, Multiboot BBS (BIOS Boot Specification) 1.4-compliant

Special Features

Plug and play, IDE drive autoconfigure, SMBIOS 2.3, ECC/parity support, multilingual support, enabled for rolling/online BIOS updates

Jumpers

CMOS clear, password clear, BIOS bank select, BMC boot block write protect, serial port B select

Front-Panel Features

SR2520 systems: Hard-drive activity LED, system status LED, power/sleep switch, 2 server network connection LEDs, System ID LED, and a bootable USB 2.0 connection

SR1550 system: Power LED, system status LED, power/sleep switch, NMI switch, System ID LED and a bootable USB 2.0 connection

Mechanical

Board Style

SSI EEB

Board Size

12" x 13" (305 mm x 330 mm)

Environment

Ambient Temperature

Operating (system): +10°C to +35°C;
Non-operating/storage (system): -40°C to +70°C ambient

Relative Humidity

Non-operating: 95%, non-condensing at +30°C

Safety and EMC Regulatory Compliance (Class A)

(EMC Regulatory Compliance is based on a board configured in an Intel host system in which Intel tested the board and found it compliant.) RoHS (Restriction of Hazardous Substances) compliant with server exemption.

Region	Certification Safety and/or EMC	Regulatory Mark Safety and/or EMC
Australia/ New Zealand	ACA, MED	C-Tick
Canada	UL/Industry Canada	cURus/ICES
Europe	European Directives	CE
Germany	GS	GS
International	CB Report / CISPR	No legal requirements
Japan	VCCI (Verification only)	No legal requirements
Korea	RRL	MIC
Taiwan	BSMI DOC	BSMI
United States	UL / FCC (Verification only)	cURus

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CANADA ICES-003 CLASS A

To build your system and get more details on Intel server configurations visit: www.intel.com/go/serverconfigurator

For more details on the Intel® Server Systems SR2520SAF, SR2520SAX, and SR2520SAXS please see: support.intel.com/support/motherboards/server/s5000vsa

For more information on how to make the Intel® Server Systems SR2520SAF, SR2520SAX, and SR2520SAXS part of your server environment, please contact an Intel® Channel Partner Program participant.

[1] Refer to http://support.intel.com/support/motherboards/server for up-to-date details on processors supported by each server board.

[2] Intel® 64 requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64. Processor will not operate (including 32-bit operation) without an Intel® 64-enabled BIOS. Performance will vary depending on your hardware and software configurations. See www.intel.com/info/em64t for more information including details on which processors support Intel® 64 or consult with your system vendor for more information.

[3] Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM), and for some uses, certain platform software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations. Intel Virtualization Technology-enabled BIOS and VMM applications are currently in development.

[4] Enabling Execute Disable Bit functionality requires a PC with a processor with Execute Disable Bit capability and a supporting operating system. Check with your PC manufacturer on whether your system delivers Execute Disable Bit functionality.

[5] RAID 5 available by adding the AXXRAKSW5 activation key.

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