



Product Brief

Intel® Server Chassis SR1450

- Support for Dual 64-bit Intel® Xeon™ Processors
- Hot-Swap Redundant Power in a 1U Form Factor
- PCI Riser Support for PCI Express* and PCI-X I/O Interconnect Technologies

Intel® Server Chassis SR1450

Hot-swap redundant power in a 1U rack-optimized chassis for high-performance solutions in high-density clusters



The 64-bit Intel® Xeon™ processor, with up to 2MB L2 Cache, Hyper-Threading Technology, Intel® EM64T¹, and Enhanced Intel SpeedStep® technology², provides an efficient, reliable, and proven server foundation for businesses, departments, and workgroups.

Intel® Server Chassis SR1450

Working in a space-constrained environment presents special challenges to the business, department, or workgroup requiring powerful and reliable server chassis solutions. Performance, reliability, and scalability features are paramount, and so are management, power, storage, and cooling options designed specifically for rack-mount configurations. Combining all these capabilities into a rack-optimized server chassis, Intel offers the Intel® Server Chassis SR1450.



Hot-Swap Redundant Power in a 1U Form Factor

By providing hot-swap redundant power in a 1U form factor, the Intel Server Chassis SR1450 helps organizations to maintain server availability even in highly constrained rack-mount environments. This helps to keep businesses, departments, and workgroups running smoothly as their applications grow in functionality, their user loads increase, and their reliability requirements escalate.

To further support growth, the Intel Server Chassis SR1450 is specifically designed for and validated with the Intel® Server Board SE7520JR2 through rigorous testing in concentrated computing environments. The chassis also supports PCI Express* and PCI-X risers as well as hot-swap SATA and SCSI hard drives, all of which helps to give organizations the backplane flexibility to easily enhance their I/O and storage capabilities.

Management and Maintenance Made Easier

Space-constrained server environments pose challenges in terms of access to the server. For this reason the Intel Server Chassis SR1450 supports management technologies such as Intel® Power Optimization and the optional Intel® Local Control Panel³, and validation with Intel® Server Manager 8.

In addition, the Server Chassis SR1450 helps to simplify maintenance with the help of optional tool-less rack slide rails and cable-management arm and tool-less assembly and replacement parts. These include fans for cooling the processors, hard drives, and add-in cards; the hard-drive backplane; risers; and redundant power modules.

Hot-swap power-supply modules help to increase availability by enabling the installation of redundant power without requiring the server to be taken offline.



To enhance storage flexibility, the Intel® Server Chassis SR1450 supports options for hot-swap SATA or SCSI. The SATA backplane is designed to be SAS ready*.



Intel® Server Chassis SR1450 Features and Benefits

Features	Benefits
Specifically designed for and validated with the Intel® Server Board SE7520JR2	Performance and scalability advantages from an Intel® Xeon™ processor-based server board; enhanced reliability and ease of integration
Redundant 520W PFC 1+1 ⁶ power with two fans and Intel® Server Management 8 monitoring interface	Exceptional power headroom and monitoring ability in a 1U form factor
PCI Express* and PCI-X riser configurations	I/O performance and flexibility
Support for up to three hot-swap SATA or hot-swap Ultra320 SCSI drives ⁵	Storage flexibility, configurability for performance or price sensitivity
Enables tool-less assembly and installation of: <ul style="list-style-type: none"> • Power-supply modules • Replacement fans for the processors, hard drives, and add-in cards • Standard control panel and Intel® Local Control Panel³ • PCI Express and PCI-X risers • PCI assembly and retention • Hot-swap disk drives • Rack slide rails • Cable-management arm 	Simplified maintenance, lower service and support costs
Support for Intel Local Control Panel ³	Ability to monitor server operations and manage server directly from an optional server-attached control panel

Intel® Server Chassis SR1450



Chassis shown with SCSI hot-swap backplane, DVD, standard control panel, and 64-bit Intel® Xeon® processor

Optional Intel® Local Control Panel

Intel® Server Chassis SR1450 – Front View

1. Two riser slots:
 - One low-profile riser supporting PCI-X
 - One full-height/full-length riser with options to support PCI-X and PCI Express*
2. Five tool-less system cooling fans (individually replaceable)
3. Support for up to three hot-swap SATA or SCSI drives
4. Optional tool-less slimline drive bay for CD/DVD or floppy drive
5. Standard control panel – power/sleep, and reset buttons; seven LEDs capturing system activity; USB and video connectors
6. Optional Intel® Local Control Panel³, which simplifies servicing by enabling server administration from an innovative front-panel LCD (Note: the Intel Local Control Panel will occupy the space for the standard control panel and the third hard-drive bay)
7. Hot-swap redundant 520W PFC 1+1⁶ power supply with dual fans
8. Two front-bezel options: one compatible with the standard control panel and one compatible with the Intel Local Control Panel



Optional locking bezel

Intel® Server Chassis SR1450 – Rear View



1. PS/2* keyboard and mouse connectors
2. RJ45 serial port
3. Two Ethernet connectors
4. Video connector
5. Two USB connectors
6. Intel® Light-Guided Diagnostics post-code LEDs
7. Optional Intel® Server Management Module Ethernet connector
8. SCSI connector (SCSI models only)
9. 520W PFC 1+1⁶ power supply (shown with optional APL520WPS power accessory)
10. Optional rack slide rails and cable-management arm



The Intel® Server Chassis SR1450 Supports Technologies That Define Innovation⁷

A number of sophisticated Intel server technologies combine forces in the Intel® Server Chassis SR1450 to meet the needs of organizations requiring high levels of flexibility and performance in a space-constrained server environment. **Intel® Power and Thermal Headroom** enhances performance and provides a flexible path for growth. **Intel® Active Airflow Control** monitors temperatures and adjusts fans accordingly to keep servers cool, which helps to protect performance, and quiet, which is particularly important in space-constrained environments where redundant power is in use. **Intel® Power Optimization** provides a comprehensive way to monitor power usage and capacity so as to help businesses more easily plan, deploy, and manage data centers and reduce their operating costs.

Other Intel server technologies support administration and servicing in the Server Chassis SR1450, making it easier to maintain high levels of performance. These are **Intel® Light-Guided Diagnostics**, which simplifies troubleshooting to enable faster recovery; the optional **Intel® Local Control Panel**, for monitoring and control through an innovative front panel; and **Intel® Drive Power Isolation**, which protects against voltage spikes during hot-swap drive replacement to safeguard data and lower support costs.

Intel server technologies provide powerful capabilities designed to make server systems more reliable, more available, and easier to service. Seamlessly integrated into the latest generation of Intel® Server Products, these technologies work in concert to complement the capabilities of the most current Intel processor and chipset technologies.



Intel® Power and Thermal Headroom



Intel® Active Airflow Control



Intel® Power Optimization



Intel® Light Guided Diagnostics



Intel® Local Control Panel



Intel® Drive Power Isolation

For more information on these technologies, please visit:
<http://developer.intel.com/design/servers/technologies/>

Compatible Products for Comprehensive Solutions

The following table provides a list of key compatible products for the Intel® Server Chassis SR1450. Please see <http://support.intel.com/support/motherboards/server/chassis/sr1450> for the most recent and comprehensive product compatibility list.

Through integration with the Intel® Server Board SE7520JR2, the Intel® Server Chassis SR1450 gives businesses a full system-level solution in their choice of a DDR 266/333 or DDR2 400 configuration.



Intel Building Block	Product Name(s)	Product Order Code(s)
Intel® Server Chassis	Intel® Server Chassis SR1450	SR1450 SR1450NA
Intel® Server Board	Intel® Server Board SE7520JR2	SE7520JR2ATAD1 SE7520JR2ATAD2 SE7520JR2SCSID1 SE7520JR2SCSID2
Intel® PRO Server Adapter	Intel® PRO/1000 MT Server Adapter	PWLA8490MT
Intel® RAID Controllers	Intel® Server RAID Controller SRCU42E Intel® Server RAID Controller SRCU42X Intel® Server RAID Controller SRCZCRX Intel® Server RAID Controller SRCS16	SRCU42E SRCU42X SRCZCRX SRCS16
Intel® Management Modules	Intel® Management Module Professional Edition Intel® Management Module Advanced Edition	AXXIMMPRO AXXIMMADV
Intel® Server Accessories (required)	Drive-Bay Configuration (choose one): • SATA Hot-Swap Backplane and Cables • SCSI Hot-Swap Backplane and Cables Full-Height Riser (choose one): • PCI-X Riser • 1U PCI Express* Riser SR1450 Front Control Panel (choose one): • Standard Control Panel • Intel® Local Control Panel ³	A1450SATAKIT A1450SCSIKIT ADWPCIXR ADWPCIEXP APLFP APLLCP
Intel® Server Accessories (optional)	SR1450 Bezel Supporting Standard Control Panel (compatible with Standard Control Panel, order code APLFP) SR1450 Bezel Supporting Intel Local Control Panel (compatible with Intel Local Control Panel, order code APLLCP) Slimline CD Slimline DVD/CDR Slimline Floppy Hard-Drive-to-Floppy Conversion Kit 520W Power Supply Module (required for full power redundancy) SR1450, SR1400, and SR2400 Tool-less Rail Kit Cable-Management Arm (Rail Kit required, order code AXXHERAIL) Rack Brackets SR1450 Chassis Preventative-Maintenance Kit SR1450 Electrical Preventative-Maintenance Kit	APLBEZBLACK APLLCDBEZEL AXXSCD AXXDVDCDR AXXSFLOPPY AXXFLOPHDDTRAY APL520WPS AXXHERAIL APLCARM AXXBRACKETS APL1UCHSPRKIT APL1UEESPRKIT

For a complete list of spares and accessories, see the Intel Server Configurator tool at www.intel.com/go/serverconfigurator or the Intel® Server Board SE7520JR2 Configuration Guide at <http://support.intel.com/support/motherboards/server/se7520jr2>

Intel® Server Chassis SR1450 Specifications

Form Factor

1U Rack-Mount Server – SSI Thin E-Bay v3.1-compatible

Dimensions and Color

Height 1.7", Width 16.93", Depth 26.46"
(43 mm x 430 mm x 672 mm)

Black (Intel Color Standard GE 701)

Hard-Drive and Peripheral Bay Support

Hard Drives	Up to three hot-swap SATA ⁴ or SCSI
Peripheral Bay	Tool-less slimline bay for a slimline CD, DVD, or floppy drive; option to convert a hard-drive bay into a slimline floppy bay

System Cooling

Four dual-rotor 56mm fans and one single-rotor 28mm fan mounted in tool-less fan module and providing cooling for the processors, hard drives, and add-in cards; two dual-rotor 56mm fans for cooling the power supply; all fans monitored by Intel® Server Management 8 and instrumented to provide RPM data for fan-failure prediction and detection

Power Delivery

DC Power Supply	520W PFC hot-swap power modules with Power Supply Monitoring Interface (PSMI) and the ability to be configured in a 0+1 or a redundant 1+1 ⁶ configuration
AC Voltage	100–127 / 200–240 V~; 6.5 / 3.2A ⁸
+5V	12A maximum
+5V Standby	2A maximum
+12V	35A maximum continuous
+3.3V	16A maximum
–12V	0.5A maximum

Control Panel

Buttons and Switches	Power on/off/ACPI sleep button, system reset button, tool-activated NMI switch
LEDs	Power, hard-drive activity, network activity (two), system ID and general system status
Connectors	USB port
Intel® Local Control Panel ³	For monitoring and control of the server from the front panel

Security

Optional mechanical locking on the front bezel, an intrusion switch that can be monitored by Intel® Server Management 8

Environmental

Ambient Temperature	Operating: +10°C to +35°C; non-operating: –40°C to +70°C
Relative Humidity	Non-operating: 95% @ +30°C non-condensing
Acoustics	7.0 BA
Electrostatic Discharge	15kV air discharge, 8kV direct contact per Intel test specification

Safety and EMC Regulatory Compliance (Class A)

(EMC regulatory compliance is based on integration with a validated Intel server board and configuration as outlined in the Intel® Server Chassis SR1450 subassembly guide.)

Country	Certification Safety and/or EMC	Regulatory Mark Safety and/or EMC
Argentina	IRAM	Not applicable
Australia/ New Zealand	ACA, MED	C-Tick
Belarus	Bellis	Not applicable
Canada	UL / Industry Canada	cULus / ICES
China	CNCA	CCC
Europe	European Directives	CE
Germany	GS	GS
International	CB Report / CISPR	Not applicable
Japan	VCCI	VCCI
Korea	RRL	MIC
Russia	GOST	GOST
Taiwan	BSMI RPC	BSMI
United States	UL / FCC	CULus / FCC



¹ 64-bit Intel® Xeon™ processors with Intel® EM64T require a computer system with a processor, chipset, BIOS, OS, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel EM64T-enabled OS, BIOS, device drivers and applications may not be available. Check with your vendor for more information.

² Enhanced Intel SpeedStep® technology is available on Intel® Xeon™ processors with an 800MHz system bus at operating frequencies of 3.40 GHz and above.

³ The Intel® Local Control Panel requires the purchase and installation of an optional Intel® Management Module upgrade.

⁴ The SATA backplane is designed to be SAS (Serial Attached SCSI) ready; final SAS validation is pending production availability of a third-party SAS component.

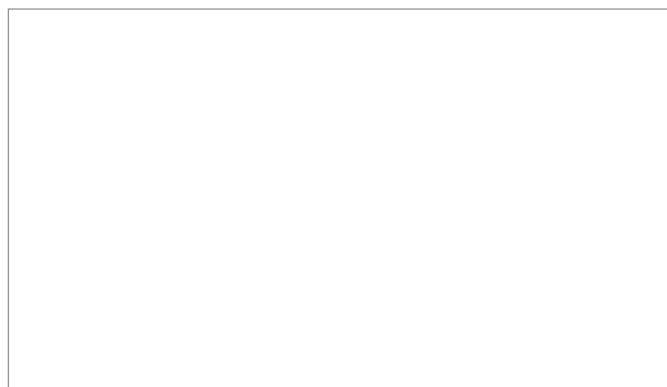
⁵ Each hard-drive configuration requires a separately ordered kit that includes the necessary cables, drive bays, and backplane; select order code A1450SATAKIT (SATA hot-swap drive kit) or order code A1450SCSIKIT (SCSI hot-swap drive kit).

⁶ Full redundancy requires a second 520W power supply (order code APL520WPS).

⁷ Features may vary depending on system configuration and may require the purchase and installation of an optional Intel® Management Module upgrade.

⁸ The maximum amperage represents the value at which the chassis is rated.

For more information on how to make the Intel® Server Chassis SR1450 part of your server environment, please contact an Intel® Channel Membership Programs participant.



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