



Product Brief

Intel® Server Board S5520HC
Intel® Server Board S5500HCV
Intel® Server System SC5650HCBRP
Intel® Server Chassis SC5600
Intel® Server Chassis SC5650

Intel® Server Board S5520HC, S5500HCV Intel® Server System SC5650HCBRP Intel® Server Chassis SC5600, SC5650

A pedestal-optimized server product family designed with world-class performance, scalable management, and maximum expandability for small & medium business applications

Key Features

- Supports up to two Intel® Xeon® Processor 5600 series on Intel® Microarchitecture, codenamed Nehalem
- Highly scalable DDR3 memory (12 or 9 DIMMs)
- High-speed PCI Express* 2.0 I/O (up to 4 slots)
- Highly-flexible storage configurations

Target Applications: *File and print servers, e-mail servers, storage servers and vertical-specific business applications*



Features and Benefits

- **Supports up to two Intel® Xeon® Processor 5500 or 5600 series on Intel® Microarchitecture**, Increase server performance with no increase in power consumption
- **Fast, scalable, energy-efficient memory** 12 or 9 DIMMs of registered or unbuffered DDR3 ensure ample capacity and energy-efficient performance for any application
- **High-performance expandability** 6 total expansion slots, including four PCI Express* 2.0 x8 slots, provide high-speed I/O flexibility for the most demanding, bandwidth-intensive server applications
- **Flexible, scalable storage architecture** Up to 6 hot-swap SATA or SAS hard drives¹ plus an optional four-port SAS expansion module provide versatile storage configurations. Chassis options range from 6 fixed SATA drives to your choice of four, six or ten hot-swap SATA or SAS devices
- **Intel® Enabled Server Acceleration Alliance (Intel® ESAA) Certified** Pre-tested and certified configuration guides (“recipes”) over a range of applications
- **Intel® System Management Software** Get your Intel® servers up and running with Intel® Deployment Toolkit and manage them with the provided Intel® Active System Console, a lightweight management solution for small business or with the optional full IT management solution using Intel® Management Packs with Microsoft* System Center Essentials



Intel® Server System and Chassis Information

Intel® Server System SC5650HCBRP	
<i>A highly flexible pedestal server with maximum expandability and performance</i>	
Order Code	SC5650HCBRP
Form Factor	5.2U pedestal, convertible to 6U rack ²
Drive Bays	Up to 6 hot 3.5" SATA or SAS hard drives ³ Support 2.5" hot-swap SATA, SAS or Solid State Drive with optional 2.5" hard drive carrier accessory
Peripheral bay	Two 5.25" peripheral bays One 3.5" peripheral bay
System Cooling	Three non-redundant cooling fans: <ul style="list-style-type: none"> • One 120-mm chassis fan • One 120-mm PCI fan • One 92-mm drive bay fan
Processor Heat Sink	Not Included
Power Supply	600-watt hot-swap (1+0) high-efficiency power supply upgradeable to 1+ 1 full redundancy, PMBus compliant
Add-in Card Support	Six full-length, full-height PCI cards
Pedestal Dimensions (H x W x D)	17.8" (45.2 cm) x 9.256" (23.5 cm) x 19" (48.3 cm)
Rack Dimensions (H x W x D)	9.256" (23.5 cm) x 17.6" (44.7 cm) x 19" (48.3 cm)

Intel® Server Chassis SC5600 & Intel Server Chassis SC5650					
<i>Maximum reliability, scalability, and manageability in a highly versatile pedestal chassis</i>					
Chassis Order Code	SC5600BASE SC5600BASENA	SC5600BRP SC5600BRPNA	SC5600LX SC5600LXNA	SC5650DP SC5650DPNA	SC5650BRP SC5650BRPNA
Form Factor	Pedestal, convertible to 5U Rack ⁴			Pedestal, convertible to 6U Rack ²	
Drive Bays	Support for up to a total of six 3.5" fixed or hot swap SAS/SATA drives	Support for up to a total of ten 3.5" fixed or hot swap SAS/SATA drives		Support for up to a total of six 3.5" fixed or hot swap SAS/SATA drives	
Peripheral Bay(s)	Media Bays (3 x 5.25")			Media Bays (2 x 5.25") & (1 x 3.5")	
System Cooling	Three fixed, non-redundant fans: <ul style="list-style-type: none"> • Two 120 mm chassis fans • One 92 mm chassis fan 	Four tool-less, hot swappable and redundant fans: two 120 mm chassis fans and two 92 mm chassis fans.		Three non-redundant fans: <ul style="list-style-type: none"> • One 120-mm chassis fan • One 120-mm PCI fan, • One 92-mm drive bay fan 	
Heat Sink	Not Included			Not Included	
Power Supply	670-watt non-redundant power supply	750-watt high efficiency, 1+1 redundant power supply		600-watt non-redundant power supply	600-watt high efficiency, 1+0 redundant power supply
Pedestal Dimensions (H x W x D)	17" (43.2 cm) x 8.6" (21.8 cm) x 28.4" (70.9 cm)			17.8" (45.2 cm) x 9.256" (23.5 cm) x 19" (48.3 cm)	

Intel® Server Board S5520HC Technical Specifications

Form Factor	SSI EEB (12" x 13")
Processors	Supports one or two Intel® Xeon® Processor 5500 or 5600 series ⁵
Chipset	S5520HC: Intel® 5520 chipset with Intel® ICH10R S5500HCV: Intel® 5500 chipset with Intel ICH10
Memory Capacity	S5520HC: Twelve DDR3 DIMM sockets (Registered or Unbuffered) <ul style="list-style-type: none"> • Six channel native (800/1066/1333MHz) S5500HCV: Nine DDR3 DIMM sockets (Registered or Unbuffered) <ul style="list-style-type: none"> • Six channel native (800/1066/1333MHz)
Memory RAS Features	Channel-Independent Mode Channel-Mirroring Mode Demand Scrubbing Mode Patrol Scrubbing Mode
Storage	<ul style="list-style-type: none"> • Six SATA ports (3 Gbps) via ICH10R with Intel® Embedded Server RAID Technology II • Modular SAS RAID solution via Intel® I/O Expansion Module Options
Intel® RAID Support	<p>Integrated</p> <ul style="list-style-type: none"> • Intel® Embedded Server RAID Technology II with host-based SW RAID levels 0/1/10 • Optional SW RAID 5 with activation key <p>Optional</p> <ul style="list-style-type: none"> • Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SROMBSASMR with RAID 0, 1, 5, 6 and striping capability for spans 10, 50, 60 offering value above a traditional add-in card • Validated Intel® RAID Controllers⁶
Expansion Slots	<p>S5520HC:</p> <ul style="list-style-type: none"> • 4 PCI Express 2.0 x8 slot (x8 mechanical) • 1 PCI Express 1.0 x4 slot (x8 mechanical shared with optional SAS module) • 1 PCI 32/33 5V slot <p>S5500HCV:</p> <ul style="list-style-type: none"> • 2 PCI Express 2.0 x8 slot (x8 mechanical) • 1 PCI Express 1.0 x4 slot (x8 mechanical shared with optional SAS module) • 1 PCI 32/33 5V slot
Integrated LAN	Embedded Intel Dual Gigabit Controller 82575EB with Intel® Virtualization Technology ⁷
Integrated Graphics	Server Engine* LLC Pilot II* Controller with 64 MB DDR2 memory, 8MB allocated to graphics

Management Hardware

Integrated IPMI 2.0 baseboard management controller

- Fan speed control
- Diagnostic LED's
- Temperature monitoring and recovery
- SMASH CLP (command line interface)
- Email alerting
- Power management with Intel® Intelligent Power Node Manager

Optional Intel® Remote Management Module (RMM3)

- KVM & Virtual Media redirection
- Dedicated 3rd NIC
- Remote Power on/off
- Embedded Web UI
- Event log and configuration

Management Software

Intel® Deployment Assistant 3.X

- Wizard based UI to deploy, configure and update server
- BIOS, BMC and RAID array configuration
- Unattended OS install
- Online patch updates

Intel® Server Management Software 3.X

- View critical or warning events
- Power on/off/reset
- View sensor (fan speeds, temperature, power)
- Full IPMI 2.0 interface
- Chassis Intrusion detection
- Serial Over LAN (Text Console Redirection)

Safety and EMC Regulatory Compliance

Regulatory compliance for an Intel host system is based on the use of an Intel server base board that was tested in the host chassis and found compliant. Intel server base boards and host chassis are tested to Class A EMC requirements. Intel server products comply with RoHS (Restriction of Hazardous Substances).

Region (Compliance Obtained)	Board Markings	Host Chassis Markings
Argentina (IRAM)	Regulation N/A	
Australia (ACA) / New Zealand (MED)		
Belarus	Regulation N/A	
Canada		
	ICES-003	
China	Regulation N/A	
Europe (EU Directives) - LVD & EMC require CE mark; No mark required for RoHS; WEEE marking added voluntarily for end integrator convenience)		
Germany GS for Chassis Only; German Green Dot (Duales System Deutschland) for Board Packaging Only		
International Compliance (CB Report & CISPR Emission & Immunity)	Marking Not Required	
Japan (VCCI for chassis only) & Japan Recycling Marks on Board Retail Packaging Only	Regulation N/A	
		Marking Not Required
Korea (KCC)		
Russia (GOSSTANDART)	Regulation N/A	
Taiwan (BSMI)		
	請認明商標：這是本廠的註冊商標，在設定的環境中使用時，可能會造成他廠產品不靈，亦可能損壞以下：標榜商標的商標或產品。請認明商標。	
Ukraine (UKRTEST)	Regulation N/A	Marking Not Required
United States NRTL & FCC (For Board Products FCC Notation May Be in Documentation)		
	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation	

To build your system and get more details on server configurations from Intel visit:

www.intel.com/go/serverconfigurator

For more information on Intel® Server Products, visit:

www.intel.com/go/serverproducts

Build an Eco-Smart IT Environment with Intel® Server Products

¹ Requires SAS add-in card for SAS module card for using hard drives

² Requires rack conversion kit APP3RACKIT

³ Requires SAS add-in card for SAS module card for using hard drives

⁴ Requires rack conversion kit ARIGRACK

⁵ When installing two processors, both processors must be from the same processor series; either two Intel® Xeon® processor 5500 series or two Intel® Xeon® processor 5600 series. Out of the box support for the Intel Xeon 5600 series processors will be indicated by the addition of the letter "R" at the end of the Product Order Code. For boards and systems currently supporting the Intel Xeon 5500 series, a BIOS update is required before installing the 5600 series processor(s). Refer to <http://support.intel.com> for more information.

⁶ For tested Intel® RAID Controller options go to http://support.intel.com/support/motherboards/server/compat_matrix.htm

⁷ Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY RELATING TO SALE AND/OR USE OF INTEL PRODUCTS, INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT, OR OTHER INTELLECTUAL PROPERTY RIGHT.

Intel, the Intel logo, and Xeon are trademarks of Intel Corporation in the U.S. and other countries.

*Other names and brands may be claimed as the property of others.

Copyright © 2010 Intel Corporation. All rights reserved. 1110/JH/MD/PDF 320936-004US

