



## Product Brief

### Intel® Server System S7000FC4UR

Support for four Quad-Core Intel® Xeon® Processors 7300 Series or Dual-Core Intel Xeon Processors 7200 Series

Scalable Enterprise Performance

Expansive Capacity

Proven Dependability

Greater Value for Enterprise Computing

# Intel® 4-Processor Server System S7000FC4UR

## Maximum performance, reliability and scalability

Businesses of all sizes can maintain a competitive advantage through an ongoing commitment to increase IT productivity, flexibility, and systems manageability. Intel® Server System S7000FC4UR delivers scalable performance you can rely on with support for up to four Quad-Core Intel® Xeon® processors 7300 series or Dual-Core Intel Xeon processors 7200 series to provide headroom for maximum growth. There is no need to scale out your infrastructure when you want to increase workload capacity— with Intel Server System S7000FC4UR you have more capacity in each server, minimizing your IT management overhead while increasing savings and return on investment (ROI) across your IT infrastructure.



For virtualization, Intel Server System S7000FC4UR offers expansive capacity and bandwidth with up to 16 independently interconnected processor cores, up to one-quarter of a terabyte (TB) of scalable system memory, a broad range of expandability features including PCI Express\* (PCIe) and up to 1.2 TB of internal storage.

Combine these performance and capacity benefits with proven enterprise-class reliability and Intel Server System S7000FC4UR provides you with the ideal foundation for standardized server consolidation. With its tenth-generation, multi-processor (MP) technology supporting new Quad-Core Intel Xeon processors 7300 and Dual-Core Intel Xeon processors 7200 series, Intel delivers a robust and rock-solid server system you can count on now and in the future.



# Intel® Server System S7000FC4UR

## Server Growing Pains

Data centers are frequently designed around these key principles:








- Agility and capacity to handle growth, unforeseen peak workloads, and unidentified future business needs
- Infrastructure reliability to withstand the unexpected, including power outages and natural disasters
- Total cost of ownership (TCO) and ROI, focused on servers' peak performance, utilization, and efficiency

These principles may have led you to 2-way servers in the past—and you may now find that your data center is filled with servers that require a growing army of technicians to deploy, tune, and maintain. You may also be encountering performance, memory, and I/O limitations coupled with the pressure to reduce power and cooling costs for hundreds or thousands of machines.

## The New Way is 4-Way

In response to these challenges, consider scaling up and cutting back by consolidating your fleet of 1- and 2-way servers to fewer high-performance 4-way servers that provide a more cost-effective and reliable solution today and in the future.

## Why Customers Buy 4-processor Intel Server Systems

Usage Model:	Industry Support:	Features and Benefits:
Large-Scale Server Consolidation	  	Greater application performance <ul style="list-style-type: none"> <li>▪ More threads</li> <li>▪ Larger cache</li> <li>▪ Headroom for growth</li> </ul>
Enterprise Database	 	Greater capacity <ul style="list-style-type: none"> <li>▪ Increased storage</li> <li>▪ Integrated I/O expansion</li> <li>▪ Scalable system memory</li> </ul>
Enterprise Resource Planning (ERP)		Headroom for virtualization <ul style="list-style-type: none"> <li>▪ Minimize number of servers</li> <li>▪ Maximize utilization</li> </ul>
e-Commerce	 ThinkLiquid.	Increased enterprise uptime <ul style="list-style-type: none"> <li>▪ Robust server reliability, availability, and serviceability (RAS)</li> </ul>

4-processor Intel® Server Systems with the power of Quad-Core Intel® Xeon processor 7300 series are the ideal choice when considering performance, reliability, and scalability—today and tomorrow.

## Scalable Performance

Supporting exceptional performance gains, Intel® Server System S7000FC4UR with Quad-Core Intel Xeon processor 7300 and Dual-Core Intel® Xeon® processor 7200 series provides an outstanding 4-processor rack server solution for database and enterprise-class computing. By providing scalability in processing, I/O, and system memory while improving energy efficiency through decreased power requirements, these servers increase IT's agility for data-intensive applications and infrastructure. With fewer servers to manage and maintain along with increased capacity within the server itself, you can scale your infrastructure and increase ROI while decreasing TCO.

## Expansive Capacity and Bandwidth

Perfect for high-performance in large dataset computations, the 4-processor Intel Server System S7000FC4UR offers support for up to 16 processor cores per server and an increased processor cache, available on Quad-Core Intel Xeon processor 7300 series, to give you the headroom and reliability your applications demand. Broad capacity combined with the ability to run simultaneous processes with more cores and multi-threading capabilities provides a rock-solid foundation for server consolidation, virtualization, and enterprise IT infrastructures.

## Proven Dependability

Designed from the ground up with 10 generations of 4-processor server product know-how, Intel Server System S7000FC4UR helps ensure robust server reliability, availability, and serviceability (RAS). Features such as hot-swap SAS/SATA drives for internal storage needs, redundant cooling and power, integrated I/O expansion, server management, and RAID provide you the peace of mind to meet the Quality of Service your customers have come to expect—anytime, all the time.



# Streamlining Infrastructure While Improving Flexibility

Intel® Server System S7000FC4UR provides space-efficient rack-mount server technologies that pack enormous processing power in a 4U form factor. These servers are ideal for consolidating and virtualizing applications into a cost-effective, easily managed, and density-friendly environment.



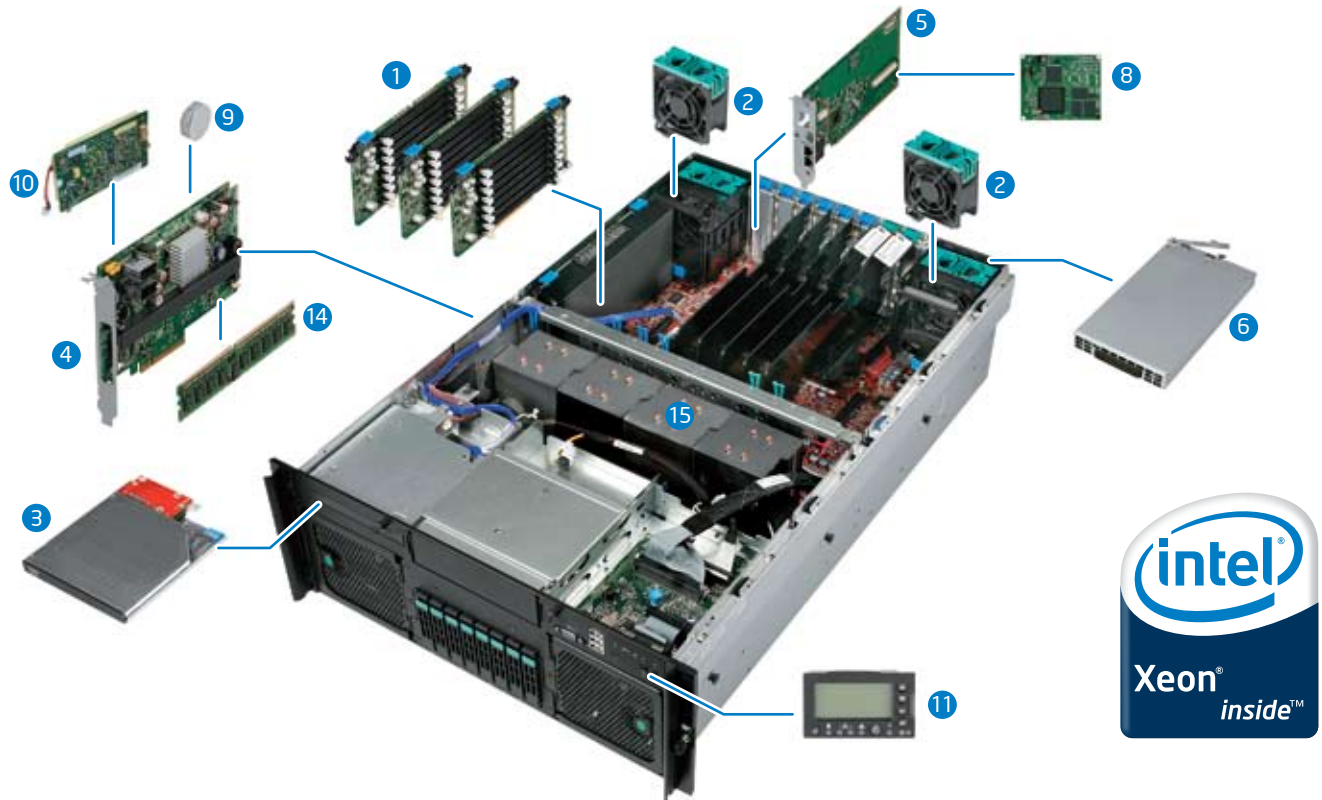
## Features

## Benefits

Support for up to four Quad-Core Intel® Xeon® processors 7300 series or Dual-Core Intel Xeon processors 7200 series	Provides performance and scalability for your most demanding server applications
32 dual inline memory module (DIMM) sockets compatible with error correcting code (ECC) fully buffered double data rate 2 (DDR2) 533/667 Synchronous Dynamic Random Access Memory (SDRAM), providing up to one-quarter of a terabyte of system memory capacity	Meets high-end enterprise computing demands for large system memory, data-intensive computing, and back-end business applications
Advanced data protection with RAID and memory sparing and mirroring	Provides redundancy in system memory, increasing server uptime and assuring data integrity and availability in large memory workloads
Redundant hot-swap 1570 watt 1+1 power supplies and redundant balanced front and rear cooling	Offers high availability with no downtime required for replacement while reducing energy and cooling costs and maximizing power efficiency
Support for hot-plug PCI Express* (PCIe) plus seven total PCIe slots—four PCIe x8 (two hot-plug slots), three PCIe x4	Reduces server downtime required for adding or removing many components and minimizes data I/O bottlenecks, provides high bandwidth, and scalability
Intel® System Management Software 2.0	Provides a powerful set of applications to help you build, deploy, and manage servers through a single unified server or desktop console
Intel® Remote Management Module 2	Provides keyboard, video, and mouse (KVM) redirection via dedicated network interface card (NIC), security—secure socket layer (SSL), lightweight directory access protocol (LDAP), secure shell (SSH), RADIUS support, email alerting, simple network management protocol (SNMP), embedded Web user-interface (UI), remote power on/off, system health, system info, firmware update tool, event logging
Four to eight 2.5-inch hot-swap SATA/SAS hard drives with support for 15K revolutions per minute (RPM) technology	Delivers performance and reliable storage for demanding data needs
4U rack-optimized form factor	Provides high-density format for maximum power in minimum space
Intel® Virtualization Technology (Intel® VT)	Improves the reliability and supportability of virtualization solutions, enabling improved consolidation and fail-over for servers
Intel® I/O Acceleration Technology (Intel® I/OAT) with Intel® QuickData Technology	Moves data more efficiently through Dual-Core and Quad-Core Intel® Xeon® processor-based servers for fast, scalable, and reliable network performance

# Intel® Server System S7000FC4UR - Value SKU (SFC4UR)

Greater Value for Customizable Enterprise Computing



## Standard Build:

- Support for up to four Quad-Core Intel® Xeon® processors 7300 series or Dual-Core Intel Xeon processors 7200 series
- Support for up to 32 Fully Buffered DIMM sockets DDR2 533/667; support for memory sparing and mirroring
- Support for hot-plug PCI Express\* (PCIe) plus seven total PCIe slots—four PCIe x8 (two hot-plug slots), three PCIe x4
- Up to four hot-swap hard-drive bays that support up to four 2.5-inch SATA hard drives with software RAID 0, 1 support
- Two front hot-swap variable-speed fan modules
- Two rear hot-swap variable-speed fan modules
- 5.25-inch peripheral bay for internal backup and archive
- Dual Onboard Gigabit (Gb) Ethernet ports

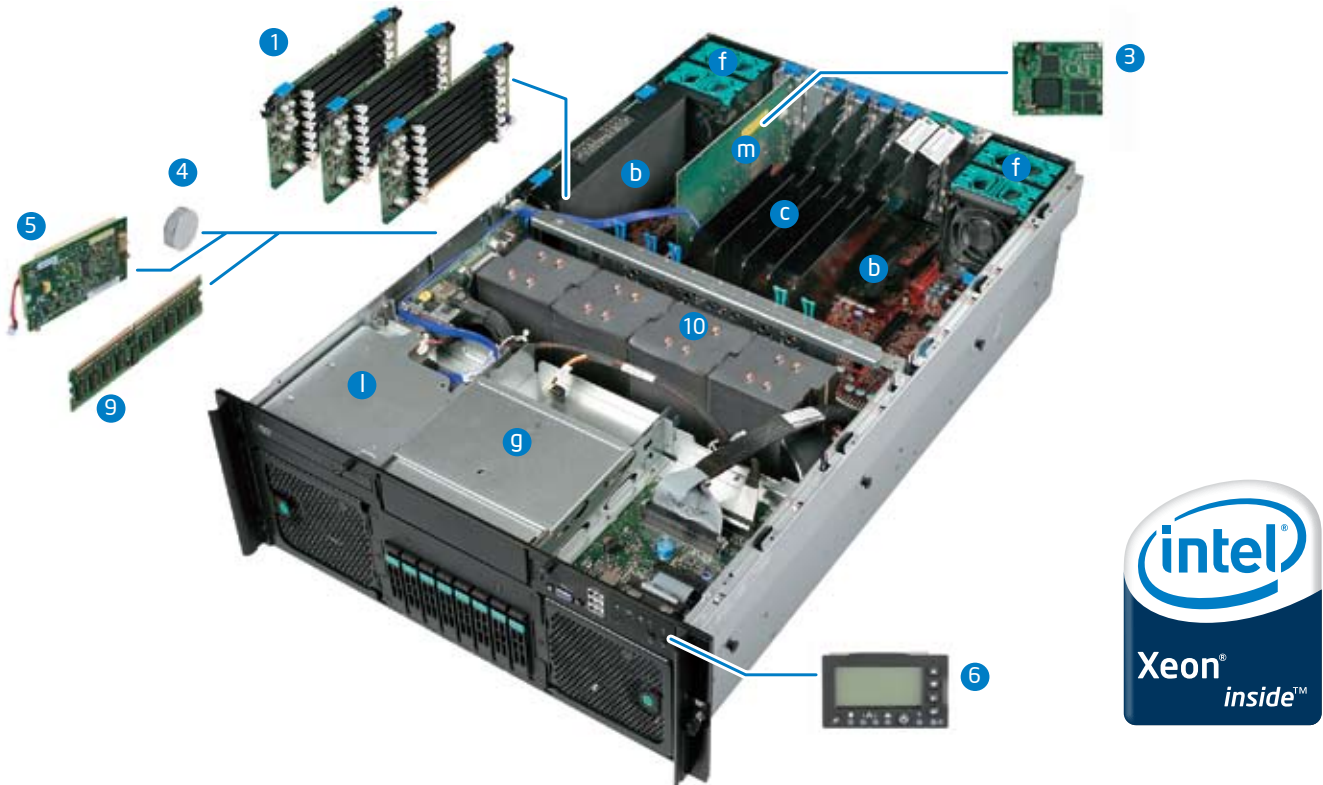
## Accessories and Upgrades:

- Support for up to four 8 DIMM memory boards (BFCMEM)
- Two rear hot-swap variable-speed fan modules for 1+1 redundancy (FFC4UBKFAN)
- DVD-ROM/CD-ROM for removable media (AFCDVD)
- SAS riser module for support of up to eight SAS/SATA 2.5-inch hot-swap hard disk drives, and Intel® Integrated RAID support (AFCSASRISER)
- Integrated network I/O expansion module (FFCIORISER) provides additional dual Gb NIC ports, and support for Intel® Remote Management Module 2
- Hot-swap 110V/240V, 1570 W power supply module, for 1+1 redundant power (AFC4UPWR)
- Black front bezel (AHW4URBEZEL)
- Intel Remote Management Module 2 (AXXRMM2)—requires Intel® I/O remote management module
- Intel® Integrated RAID activation key HW RAID support for 0, 1, 1A, 5, 6, 10, 50, 60 (AXXRAKSAS2)
- Intel® integrated RAID backup battery 4, for persistent RAID settings during full power loss (AXXRSBBU4)
- Intel® Local Control Panel Display, replaces button control panel (AXXLCPMOD2)
- Rack cable management arm (AXXCMA3U7U)
- Rack rails—tool-less J-hook design (AXXRAIL3U7U)
- RAID DDR2 667 DIMM memory
- Processor heat sinks (AFCPROCHS)



# Intel® Server System S7000FC4UR - Enterprise SKU (SFC4URE)

Peak Performance for Enterprise Computing and Complex Transactions Out of the Box



## Standard Build:

- a. Support for up to four Quad-Core Intel® Xeon® processors 7300 series or Dual-Core Intel Xeon processors 7200 series
- b. Support for up to 32 dual inline memory module (DIMM) sockets 533/667; support for memory sparing and mirroring
- c. Support for hot-plug PCI Express\* (PCIe) plus seven total PCIe slots—four PCIe x8 (two hot-plug slots), three PCIe x4
- d. Up to eight SAS/SATA 2.5-inch hot-swap hard disk drives, and Intel Integrated RAID support
- e. Two front redundant hot-swap variable-speed fan modules
- f. Four rear redundant hot-swap variable-speed fan modules
- g. 5.25-inch peripheral bay for internal backup and archive
- h. Dual Onboard Gigabit (Gb) Ethernet ports
- i. Dual embedded Gb network ports (via Integrated Network I/O Expansion Module)
- j. Redundant 1+1 cooling front and rear
- k. Redundant 1+1 110V/240V power supply modules
- l. DVD-ROM/CD-ROM for removable media
- m. Integrated Network I/O Expansion Module (provides support for Intel® Remote Management Module)

## Accessories and Upgrades:

1. Support for up to four 8 DIMM Memory Boards (BFCMEM)
2. Black front bezel (AHW4URBEZEL)
3. Intel® Remote Management Module 2 (AXXRMM2)
4. Intel® Integrated RAID activation key HW RAID support for 0, 1, 1A, 5, 6, 10, 50, 60 (AXXRAKSAS2)
5. Intel® Integrated RAID Backup Battery 4, for persistent RAID settings during full power loss (AXXRSBBU4)
6. Intel® Local Control Panel Display, replaces button control panel (AXXLCPMOD2)
7. Rack cable management arm (AXXCMA3U7U)
8. Rack rails: tool-free J-hook design (AXXRAIL3U7U)
9. RAID DDR2 667 DIMM memory
10. Processor heat sinks (AFCPROCHS)

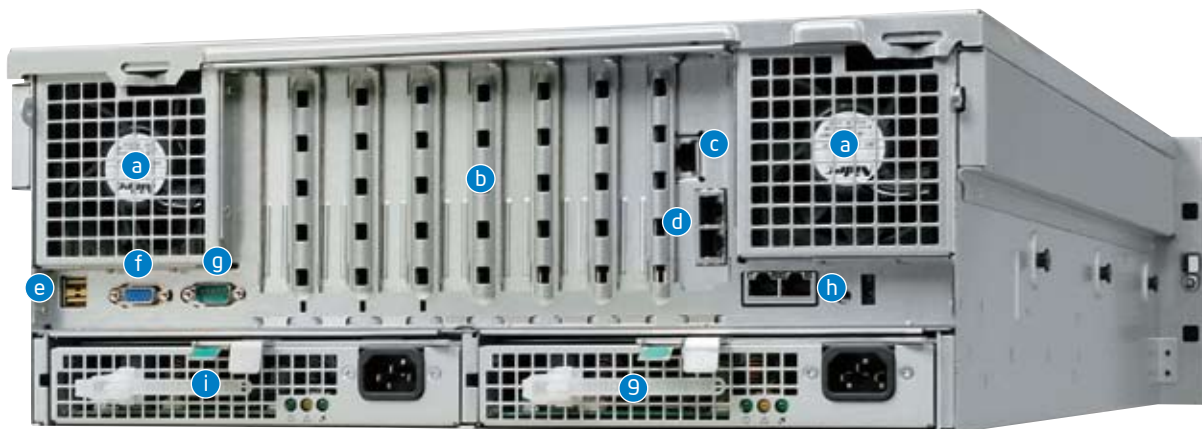
# Intel® Server System S7000FC4UR – Front and Rear Views

## Front view - Intel® Server System S7000FC4UR



1. Control-panel options: included Button Control Panel (shown) or optional Local Control Panel (AXXLCPMOD2)
2. Three USB connectors
3. Video connector
4. One 5.25-inch peripheral device bay
5. DVD/CD-RW optical removable media drive, shown; optional with value SKU SFC4UR
6. Two front hot-swap variable-speed fan modules
7. Support for up to eight 2.5-inch SAS/SATA hot-swap hard disk drives

## Back view - Intel Server System S7000FC4UR



- a. Four rear hot-swap variable-speed fans with redundant fans; optional with value SKU SFC4UR
- b. Seven PCI Express\* I/O slots
- c. Optional Intel® Remote Management Module 2, shown
- d. Additional embedded dual onboard Gb network ports, shown; optional with value SKU SFC4UR
- e. Two USB connectors
- f. Video connector
- g. DB9 serial port connector
- h. Two Ethernet connectors
- i. Hot-swap 110V/240V, 1570 W power supply modules, redundant option shown

# Intel® Server System: Robust Data Protection and Management Simplified

Maintaining the integrity of critical business data is essential—the Intel® Server System S7000FC4UR provides reliability, availability, and serviceability (RAS) with system memory mirroring and sparing, hot-plug PCI Express\* (PCIe) capabilities, hot-swap SATA/SAS hard drives, and redundant hot-swap power supplies and fans. And with support for Intel® Integrated RAID, I/O expansion, and remote management leaving PCIe slots available, you'll have the headroom you need for intensive I/O throughput.

## Technology that Defines Innovation

Intel continues to design technology that delivers revolutionary, progressive, and valuable server products. The following technologies help you create integrated, competitive solutions that differentiate your company and increase customer satisfaction through high reliability and serviceability.

- **Intel® I/O Expansion Module** extends server versatility by adding additional I/O capacity without using valuable PCIe slots.
- **Intel® Integrated Server RAID** provides a full-featured RAID controller, freeing up system resources while reducing cabling and server cooling needs.
- **Intel SpeedStep® Technology** dynamically ramps processor speed and voltages to minimize power consumption and reduce operating costs for improved data center planning, deployment, and monitoring.
- **Intel® Validation Stress Test Suite** assures rigorous and extensive testing of Intel server systems to maximize data integrity and minimize support costs.



- **Intel® Power and Thermal Headroom** provides power supply and thermal protection to maintain performance levels in current and next-generation enterprise servers.
- **Intel® Active Airflow Control** works in concert with Intel Power and Thermal Headroom to monitor temperatures and adjust fans to keep servers cool and quiet.
- **Intel® Light-Guided Diagnostics** simplifies troubleshooting to enable easier servicing and faster recovery.
- **Intel® Virtualization Technology (Intel® VT)** improves the reliability and supportability of virtualization solutions, enabling improved consolidation and fail-over for servers.
- **Intel® I/O Acceleration Technology (Intel® IOAT) with Intel® Quad-Core Quick Data Technology**, moves data more efficiently through Dual-Core and Quad-Core Intel® Xeon® processor-based servers for fast, scalable, and reliable network performance.

**For more information on these technologies, visit [www.intel.com/go/servertechnologies](http://www.intel.com/go/servertechnologies).**



# Intel® Server System S700FC4UR Specifications

## Processors Supported

Up to four Quad-Core Intel® Xeon® processors 7300 series or Dual-Core Intel Xeon processors 7200 series

For the latest information on processor support, visit [www.intel.com/support/processors](http://www.intel.com/support/processors).

## System Memory

Capacity	Support for up to 256 GB with up to 32 DIMM sockets
Type	Registered ECC Fully Buffered DDR2 533/667 SDRAM 72-bit, 240-pin gold-plated DIMMs
DIMM Sizes	512 MB, 1 GB, 2 GB, 4 GB, 8 GB
Memory Voltage	1.8 volt only
Reliability Features	ECC memory support to correct single-bit errors and detect multiple-bit errors; supports memory sparing and mirroring

## Integrated Onboard/Optional Modules

Chipset	Intel® 7300 Chipset
Intel® Server Network Connections	Quad Gigabit Ethernet* connections and support for Remote Management Module 2 (included in SFC4URE) Dual Gigabit Ethernet connections (SFC4URE)
Graphics	ATI ES1000* PCI graphics controller, 1600x1200 maximum resolution
Trusted Platform Module (TPM)	Trusted Computing Group™ TPM Specification 1.2 compliant
SAS Controller (Riser)	Intel® Integrated RAID Module (AFCSASRISER)
RMM2 (Riser + Module)	RMM2 KVM and Media connectivity One 10/100 MB RJ-45

## Input/Output

PCI	Seven total PCI Express* slots: Four x8 (two slots hot-plug) Three x4
USB	Five USB 2.0-compatible connectors (two rear, three front access)
Serial Ports	One rear DB9 9-pin connector
Video Port	One rear and one front standard VGA-compatible 15-pin connector
LAN Port	Dual Gigabit Ethernet connections (Quad included in SFC4URE)

## Dimensions

Form Factor	Rack
Height	4U, 6.8 inches (173 mm)
Width	17.6 inches (447 mm)
Depth	27.8 inches (706 mm)
Weight (maximum configuration)	90 pounds (40 kg)

## Storage and Cooling

	SFC4UR (Value SKU)	SFC4URE (Enterprise SKU)
SAS/SATA Channels	Six SATA	Six SATA/eight SAS
Supported Hard Drives	Up to four hot-swap SATA hard disk drives, 2.5" wide, 7.2 K RPM	Up to eight hot-swap SAS/SATA hard disk drives, 2.5" wide, 15 K RPM
Additional Drive Bays	Two total: one half-height 5.25-inch empty, one DVD-ROM/CD-ROM empty	Two total: one half-height 5.25-inch empty, one DVD-ROM/CD-ROM filled
System Cooling Front	Two fan module configuration for cooling all system components	Two fan module configuration for redundant cooling all system components
System Cooling Rear	Two fan configuration for cooling all system components	Four fan configuration for redundant cooling all system components

## Front Panel Buttons

Reset	Resets system
NMI	Initiates a non-maskable interrupt
Power	Toggles system power
Chassis ID	Activates the blue chassis ID LED on both the front control panel and the baseboard at the rear panel of the chassis

## LEDs

Chassis (blue)	Turn on using the front control panel or Intel® Server Management; the chassis ID LED is visible from the front and rear of the chassis to ease identification when servicing the system in a rack
Power (green)	LED goes out when power is turned off or the power source is disrupted; a flashing power LED indicates the system is in advanced configuration and power interface (ACPI) sleep mode.
HDD (green)	Indicates system hard-drive activity
LAN 1 (green)	Indicates 10/100/1000 MB Ethernet port activity
LAN 2 (green)	Indicates 10/100/1000 MB Ethernet port activity
System Fault (yellow)	Indicates a system-fault condition

## Intel® Server Management

Integrated Management Type	Onboard platform instrumentation
Software Support	Intel® System Management Software 2.0 Microsoft System Center Essentials (SCE) 2007* Intel® Deployment Assistant v1.4
Remote Management	Intel® Remote Management Module 2
System Monitoring and Auto-Recovery	System health indicators and corrective actions including automated power cycling, OS watchdog timer, and fault-resilient booting
Server Troubleshooting	Intel® Light-Guided Diagnostics, continuous health monitoring, text console redirection, and error logs
Intelligent Platform Management	Intelligent Platform Management Interface (IPMI) 2.0

## Supported Operating Systems

Microsoft Windows Server 2003 Enterprise Edition\*  
Microsoft Windows Server 2003 Enterprise Edition for 64-bit Extended Systems\*  
Red Hat Enterprise Linux 4\* (32-bit)  
Red Hat Enterprise Linux 4 (Intel® Extended Memory 64 Technology [Intel® EM64T])  
Red Hat Enterprise Linux 5\* (32-bit)  
Red Hat Enterprise Linux 5 (Intel EM64T)  
SuSE Linux Enterprise Server 9\* (32-bit)  
SuSE Linux Enterprise Server 9 (Intel EM64T)  
SuSE Linux Enterprise Server 10\* (32-bit)  
SuSE Linux Enterprise Server 10 (Intel EM64T)

## Environmental

Ambient Temperature	Operating (system): 10° C to 35° C; non-operating/storage (system): -40° C to 70° C
Relative Humidity	Non-operating: 95%, non-condensing at 25° C to 30° C
Acoustics	Sound pressure: < 55dBA at ambient temperatures < 23° C measured at bystander positions operating mode; sound power: < 7.0dBA at ambient temperatures < 23° C measured using Dome Method in operating mode
Electrostatic Discharge	Tested up to 15 kV air discharge and up to 8 kV contact discharge without physical damage per Intel test specification

## Safety and Regulatory Compliance (Class A)

EMC regulatory compliance is based on configuration as outlined in the Intel® Server Systems S700FC4UR subassembly guides.

Country	Certification Safety or EMC	Regulatory Mark Safety or EMC
Argentina	IRAM	IRAM
Australia/New Zealand	ACA, MED	C-Tick
Belarus	Bellis	Not applicable
Canada	UL/Industry Canada	cULus/CES
China	CNCA	CCC/China RoHS
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/WEEE
United States	UL/FCC	cULus/FCC

Helping You Win Business With Intel Server Products. For more information visit [www.intel.com/go/serverproducts](http://www.intel.com/go/serverproducts)

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. 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 products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice. Intel may make changes to specifications and product descriptions at any time, without notice. Availability in different channels may vary. Intel, the Intel logo, Intel. Leap ahead, and Intel. Leap ahead. logo, Xeon, and Xeon Inside 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 © 2007 Intel Corporation. All rights reserved. Intel Literature Center: 1-800-548-4725 0607/KGI/MESH/PDF 317392-002US

