

INTEL® SATA SOLID-STATE DRIVES  
Intel® SATA Solid-State Drives

#### SERVER

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# Intel® Server Product Quick Reference Matrix

2H 2013 NON-NDA

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.



# Intel® SATA Solid-State Drives



## INTEL® SOLID-STATE DRIVES FOR CLIENT APPLICATIONS

INTEL® SOLID-STATE DRIVE	INTEL® SSD 525 SERIES	INTEL® SSD 520 SERIES	INTEL® SSD 335 SERIES	INTEL® SSD 320 SERIES
Position vs. other Intel® SSDs	Optimized for small form factors clients	Overall client performance	Mainstream client value	Mainstream client value, quality of service
Interface	SATA 6.0 Gb/s	SATA 6.0 Gb/s	SATA 6.0 Gb/s	SATA 3.0 Gb/s
Form Factor	mSATA, full size	2.5" drive	2.5" drive	2.5" / 1.8" drive
Capacities	240 GB / 180 GB / 120 GB / 90 GB / 60 GB / 30 GB	480 GB / 240 GB / 180 GB / 120 GB / 60 GB	240 GB / 180 GB / 80 GB	600 GB / 300 GB / 160 GB / 120 GB / 80 GB / 40 GB
Maximum Random Performance <sup>1</sup>	Reads: up to 50K IOPs Writes: up to 80K IOPs <sup>2</sup>	Reads: up to 60K IOPs Writes: up to 80K IOPs <sup>2</sup>	Reads: up to 22.5K IOPs Writes: up to 33K IOPs <sup>2</sup>	Reads: up to 39.5K IOPs Writes: up to 23K IOPs
Maximum Sequential Performance	Reads: up to 550 MB/s Writes: up to 520 MB/s	Reads: up to 550 MB/s Writes: up to 520 MB/s	Reads: up to 500 MB/s Writes: up to 450 MB/s	Reads: up to 270 MB/s Writes: up to 220 MB/s
AES Encryption	Yes	256 bit	No	128 bit
Data Reliability	End-to-end data protection	Surplus NAND array, end-to-end data protection	Surplus NAND array	Surplus NAND array
Endurance <sup>1</sup> (Minimum Useful Life)	Up to 20 GB written per day for 5 years	5 years, up to 20 GB written per day	3 years, up to 20 GB written per day	5 years, up to 20 GB written per day
Warranty	5 years (3 year warranty for 30 GB capacity)	5 years <sup>3</sup>	3 years	5 years <sup>3</sup>

### INTEL® DATA MIGRATION SOFTWARE

- Transfer operating system, applications, and files from an old HDD or SSD to a new Intel® Solid-State Drive<sup>4</sup>
- Easy to use
- Free

Download now at [www.intel.com/go/ssdinstallation](http://www.intel.com/go/ssdinstallation)

### INTEL® SSD TOOLBOX v3.1

- Update Intel® SSD firmware and Intel drivers on host PC
- Optimize PC configuration for Intel SSDs, run drive diagnostics, and secure erase
- View SMART attributes, such as host writes and media wear out
- Supported in multiple languages

Download now at [www.intel.com/go/ssdtoolbox](http://www.intel.com/go/ssdtoolbox)

## INTEL® SOLID-STATE DRIVES FOR ENTERPRISE AND DATA CENTER APPLICATIONS

INTEL® SOLID-STATE DRIVE	INTEL® SSD 910 SERIES	INTEL® SSD DC S3700 SERIES	INTEL® SSD DC S3500 SERIES <span style="background-color: #FFC107; padding: 2px;">NEW</span>	INTEL® SSD 710 SERIES	INTEL® SSD 320 SERIES
Position vs. other Intel® SSDs	PCI Express* SSDs optimized for highest performance and endurance	SATA SSD with fast, consistent performance and endurance for write-intensive applications	SATA SSD with fast, consistent performance for read-intensive applications	SATA SSDs optimized for high endurance	Mainstream SSDs optimized for performance and capacity
Interface	PCI Express gen 2 x8	SATA 6.0 Gb/s, ATA8-ACS2	SATA 6.0 Gb/s, ATA8-ACS2	SATA 3.0 Gb/s ATA8	SATA 3.0 Gb/s ATA8
Form Factor	Half-height, half-length	2.5" / 1.8" drive	2.5" / 1.8" drive	2.5" drive	2.5" / 1.8" drive
Capacities	800 GB / 400 GB	800 GB / 400 GB / 200 GB / 100 GB (2.5") 400 GB / 200 GB (1.8")	480 GB / 300 GB / 240 GB / 160 GB / 120 GB (2.5") 80 GB (1.8")	300 GB / 200 GB / 100 GB	600 GB / 300 GB / 160 GB / 120 GB / 80 GB / 40 GB
Maximum Random Performance <sup>1</sup> (4KB files)	Reads: up to 180K IOPs Writes: up to 75K IOPs	Reads: up to 75K IOPs Writes: up to 36K IOPs	Reads: up to 75K IOPs Writes: up to 11.5K IOPs	Reads: up to 38.5K IOPs Writes: up to 2.7K IOPs	Reads: up to 39.5K IOPs <sup>3</sup> Writes: up to 600 IOPs <sup>3</sup>
Maximum Sequential Performance	Reads: up to 2 GB/s Writes: up to 1 GB/s	Reads: up to 500 MB/s Writes: up to 460 MB/s	Reads: up to 500 MB/s Writes: up to 450 MB/s	Reads: up to 270 MB/s Writes: up to 210 MB/s	Reads: up to 270 MB/s <sup>4</sup> Writes: up to 200 MB/s <sup>4</sup>
Power	25 W max. / 8 W standby	Up to 6 W active / 650 mW typical	Up to 5 W active / 650 mW typical	3.7 W active / 700 mW standby	4 W active / 95 mW standby
Latency	Reads: <65µs Writes: <65µs	Reads: 50µs (typical) Writes: 65µs (typical)	Reads: 50µs (average)	Reads: 75µs Writes: 85µs	Reads: 75µs Writes: 95µs
Endurance <sup>1</sup>	10 drive writes per day for 5 years	10 drive writes per day for 5 years	Up to 450 TB (4 KB random writes)	Up to 1.8 PB	Up to 60 TB
Data Path Protection	Yes	Yes	Yes	LBA tag checking	LBA tag checking
Power Safe Write Cache	Yes	Yes, enhanced	Yes, enhanced	Yes	Yes
Temperature Sensor	Yes	Yes, with thermal throttling	Yes, with thermal throttling	Yes	No
Current In-Rush Limiter	Yes	Yes	Yes	Yes	Yes
Security	No	AES 128-bit encryption End-to-end data protection Power loss data protection	AES 256-bit encryption End-to-end data protection Power loss data protection	AES 128-bit encryption	AES 128-bit encryption
Warranty	10 drive writes / day 5 years	5 years	5 years or E9=1 wear out indicator	3 years or E9=1 wear out indicator	5 years or E9=1 wear out indicator

**NEW**

### INTEL® CACHE ACCELERATION SOFTWARE (INTEL® CAS)

- Server software that caches the most active data on Intel® Data Center SSDs
- Multi-level cache integrates with system DRAM to deliver optimal performance
- Accelerates applications or files on physical or virtual machines

Download 30-day trial at [www.intel.com/content/www/us/en/software/intel-cache-acceleration-software.html](http://www.intel.com/content/www/us/en/software/intel-cache-acceleration-software.html)

NEW	PRODUCT NAME	CAPACITY	PRODUCT CODE	PRODUCT DESCRIPTION	PACKAGE TYPE	PACKAGE CONTENTS	QUANTITY PER BOX
	<b>Intel® SSD DC S3700 Series</b>	800 GB	<b>SSDSC2BA800G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		400 GB	<b>SSDSC2BA400G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		200 GB	<b>SSDSC2BA200G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		100 GB	<b>SSDSC2BA100G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		400 GB	<b>SSDSC1NA400G301</b>	25nm HET MLC / 1.8" / 5mm	OEM box	SSD only	1
		200 GB	<b>SSDSC1NA200G301</b>	25nm HET MLC / 1.8" / 5mm	OEM box	SSD only	1
✓	<b>Intel® SSD DC S3500 Series</b>	800 GB	<b>SSDSC2BB800G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		600 GB	<b>SSDSC2BB600G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		480 GB	<b>SSDSC2BB480G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		300 GB	<b>SSDSC2BB300G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		240 GB	<b>SSDSC2BB240G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		160 GB	<b>SSDSC2BB160G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		120 GB	<b>SSDSC2BB120G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		80 GB	<b>SSDSC2BB080G401</b>	20nm MLC / 2.5" / 7mm	OEM box	SSD only	1
✓		800 GB	<b>SSDSC1NB800G401</b>	20nm MLC / 1.8" / 5mm	OEM box	SSD only	1
✓		400 GB	<b>SSDSC1NB400G401</b>	20nm MLC / 1.8" / 5mm	OEM box	SSD only	1
✓		240 GB	<b>SSDSC1NB240G401</b>	20nm MLC / 1.8" / 5mm	OEM box	SSD only	1
✓		80 GB	<b>SSDSC1NB080G401</b>	20nm MLC / 1.8" / 5mm	OEM box	SSD only	1
		<b>Intel® SSD 910 Series</b>	800 GB	<b>SSDPEDPX800G301</b>	25nm HET MLC / PCI Express*	OEM box	SSD only
	400 GB		<b>SSDPEDOX400G301</b>	25nm HET MLC / PCI Express	OEM box	SSD only	1
	<b>Intel® SSD 710 Series</b>	300 GB	<b>SSDSA2BZ300G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		200 GB	<b>SSDSA2BZ200G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1
		100 GB	<b>SSDSA2BZ100G301</b>	25nm HET MLC / 2.5" / 7mm	OEM box	SSD only	1

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NEW	PRODUCT NAME	CAPACITY	PRODUCT CODE	PRODUCT DESCRIPTION	PACKAGE TYPE	PACKAGE CONTENTS	QUANTITY PER BOX
	<b>Intel® SSD 525 Series</b>	240 GB	<b>SSDMCEAC240B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
		180 GB	<b>SSDMCEAC180B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
		120 GB	<b>SSDMCEAC120B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
		90 GB	<b>SSDMCEAC090B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
		60 GB	<b>SSDMCEAC060B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
		30 GB	<b>SSDMCEAC030B301</b>	25nm MLC / mSATA	OEM box	SSD only	1
	<b>Intel® SSD 520 Series</b>	480 GB	<b>SSDSC2CW480A310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSC2CW480A3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		240 GB	<b>SSDSC2CW240A310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSC2CW240A3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		180 GB	<b>SSDSC2CW180A310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSC2CW180A3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		120 GB	<b>SSDSC2CW120A310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSC2CW120A3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
	<b>Intel® SSD 335 Series</b>	60 GB	<b>SSDSC2CW060A310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSC2CW060A3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		240 GB	<b>SSDSC2CT240A4K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		180 GB	<b>SSDSC2CT180A4K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		80 GB	<b>SSDSC2CT080A4K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1

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NEW	PRODUCT NAME	CAPACITY	PRODUCT CODE	PRODUCT DESCRIPTION	PACKAGE TYPE	PACKAGE CONTENTS	QUANTITY PER BOX
	<b>Intel® SSD 320 Series</b>	600 GB	<b>SSDSA2CW600G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSA2CW600G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
			<b>SSDSA2CW600G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1
		300 GB	<b>SSDSA2CW300G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSA2CW300G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
			<b>SSDSA2CW300G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1
		160 GB	<b>SSDSA1NW300G301</b>	25nm MLC / 1.8" / 5mm	OEM box	SSD only	1
			<b>SSDSA2CW160G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSA2CW160G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
		120 GB	<b>SSDSA2CW160G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1
			<b>SSDSA1NW160G301</b>	25nm MLC / 1.8" / 5mm	OEM box	SSD only	1
			<b>SSDSA2CW120G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
		80 GB	<b>SSDSA2CW120G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
			<b>SSDSA2CW120G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1
			<b>SSDSA2CW080G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
		40 GB	<b>SSDSA2CW080G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
			<b>SSDSA2CW080G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1
			<b>SSDSA1NW080G301</b>	25nm MLC / 1.8" / 5mm	OEM box	SSD only	1
			<b>SSDSA2CT040G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1
			<b>SSDSA2CT040G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1
			<b>SSDSA2CT040G3B5</b>	25nm MLC / 2.5" / 9.5mm	Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1

For more information, visit the Intel Reseller Center Web site at [www.intel.com/go/channelssd](http://www.intel.com/go/channelssd)

<sup>1</sup> IOPS and endurance specifications are for client-based workloads.

<sup>2</sup> Random 4 KB write performance measured using out-of-box SSD. Performance varies by capacity and form factor. Performance specifications apply to both compressible and non-compressible data.

<sup>3</sup> Warranties for OEM box versions of 520 Series and 320 Series are subject to E9 attribute wear indication.

<sup>4</sup> Designed to work with any Intel® Solid-State Drive as the target drive for cloning. Other brands of SSDs are not supported as target drives. Extra cables or other hardware items are required for complete data migration solution.

<sup>5</sup> Desktop installation kit contents: SATA power and signal cables, 3.5-inch desktop drive bay to 2.5-inch SSD adapter bracket, screws, installation guide, and warranty documentation.

<sup>6</sup> See footnote above for desktop installation kit contents. Notebook installation kit contents: USB to SATA adapter cable, protective drive sleeve, and screwdriver.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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## NEW SERVER PROCESSOR PRODUCT FAMILY

### INTEL® XEON® PROCESSOR E3-1200 V3 PRODUCT FAMILY<sup>1</sup>

The Intel® Xeon® processor E3-1200 v3 product family supports a range of business needs. Platforms based on the Intel Xeon processor E3-1200 v3 product family can be used as an entry server for small business applications or as an entry workstation for CAD and financial services. New low-power SKUs are uniquely suited to support scale-out workloads in microserver platforms and graphics-enabled SKUs support remote/virtual graphics capabilities and media transcode usages in the data center.

## GET REAL SERVER POWER WITH A NEW FAMILY OF ENTRY-LEVEL SERVER BOARDS AND SYSTEMS

Intel has a new line of server products optimized for the Intel Xeon processor E3-1200 v3 product family. Four server boards customized for rack or pedestal systems provide the flexibility required to meet your customers small business needs.

**Intel® Server Board S1200V3RPS:** lowest-cost pedestal solution with basic server features

**Intel® Server Board S1200V3RPL:** pedestal solution with optional management

**Intel® Server Board S1200V3RPO:** rack optimized with I/O expansion

**Intel® Server Board S1200V3RPM:** rack optimized with I/O expansion and enhanced processor graphics support

See the Server Board and Server System sections of this matrix for product specific information or go online to [www.intel.com/go/serverproducts](http://www.intel.com/go/serverproducts)

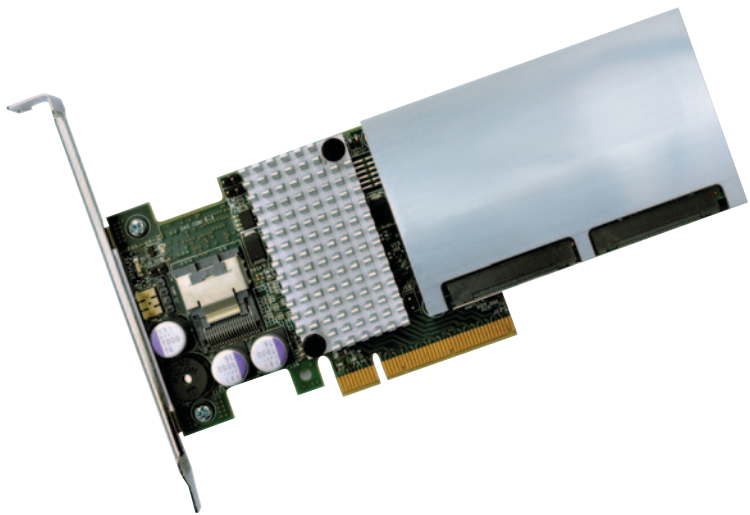
## INTEL® SERVER PRODUCTS: STOCKED, FOCUSED, AND READY TO SELL

Intel is taking action in 2013 to streamline their server products roadmap and improve availability of high-demand SKUs by creating new Focus SKUs targeted at SMB, storage, cloud / datacenter, and HPC segments.

For more information, contact your Intel Sales Representative or visit [www.IntelServerEdge.com/promo](http://www.IntelServerEdge.com/promo)







**INTEL® RAID AND INTEGRATED SOLID-STATE DRIVES: BETTER TOGETHER**

The Intel® RAID SSD Cache Controller RCS25ZB040 delivers up to 1 TB of onboard Flash-based cache and two 800 MHz RAID-On-Chip processor cores to help accelerate business applications. The Intel® RCS25ZB040, powered by LSI\* Nytro MegaRAID technology, unleashes the IOPS and throughput potential afforded by solid-state memory without requiring a full array of SSD drives.

With SSDs built right into the RAID controller, the Intel RCS25ZB040 utilizes intelligent caching algorithms to help identify frequently accessed data or “hot spots” and to promote them to the fast on-board Flash. This greatly increases performance of most applications—especially applications that rely on small-size transfers where the latency inherent in hard disk drives becomes a bottleneck.

For product specifications see the RAID section of this Matrix or [www.intelraid.com](http://www.intelraid.com)

**EXPLORE EVEN GREATER PERFORMANCE FROM INTEL® XEON PHI™ COPROCESSORS WITH INTEL® SERVER BOARDS AND SYSTEMS**

Intel® Server Boards and Systems, an ideal platform for Intel® Xeon Phi™ coprocessor deployments.

**Featuring:**

- Full board support, including half-width options
- System support for up to 4 Intel® Xeon Phi™ coprocessors
- 1U, 2U, and 4U configurations
- 1, 2, and 4 socket solutions

Intel Xeon Phi coprocessors, combined with a broad range of Infiniband\* solutions, make Intel® systems the foundation for performance hungry clusters.

CONFIGURATION	INTEL® SERVER SYSTEM	MAX NUMBER OF INTEL® XEON PHI™ COPROCESSORS SUPPORTED
1U	R1000JP	1 (passive)
2U	R2000GZ	2 (active or passive)
	R2000BB	2 (active)
	R2000LH	2 (active)
4U	P4000IP	4 (active)
	P4000CR	4 (active)



## BIG DATA. BIG BUNDLE. BIG SAVINGS.

### INTEL IS MAKING BIG DATA MORE AFFORDABLE FOR YOU AND YOUR CUSTOMERS

Receive a discount of 30 percent or more when you purchase select high-performance computing SKUs from Intel's Server Boards and Systems Group together with the recently released Intel® Manager and Distribution for Apache Hadoop\* Software.<sup>3</sup>

#### How the Bundle Works:

Purchase the recommended Intel® Server Products together with a four-node license (1 year) of Intel Manager and Distribution for Apache Hadoop to receive special pricing. Optional Professional Services offered in affordable, smaller-sized packages.

For a current list of products offered or for more information, go to

[intelservedge.com/big-data](http://intelservedge.com/big-data)

## NEXT-GENERATION SERVER CONFIGURATOR TOOL

### NEW TOOL. NEW CAPABILITIES. NEW EXPERIENCE.

Intel has launched a completely revitalized Server Configurator Tool with features such as save and share, integrated technical documents, THOL reporting, and more.

Come check it out at <http://serverconfigurator.intel.com>

## PASS-THROUGH CERTIFICATIONS AVAILABLE

Pass-Through-Certifications for Microsoft\*, Red Hat\*, VMware\*, Suse\* and Intel® Cluster Ready are still available for existing Intel® Server Products. Support for Oracle\*, Citrix\* and EMC Certification are also available through the end of 2013.

Open access at [www.esaa-members.com](http://www.esaa-members.com)

For more information, visit [www.intel.com/xeon](http://www.intel.com/xeon) and [www.intel.com/go/serverproducts](http://www.intel.com/go/serverproducts)

<sup>1</sup> Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See [www.intel.com/products/processor\\_number](http://www.intel.com/products/processor_number) for details.

<sup>2</sup> Memory transfer rate of 1600 MHz is the full capacity of the Intel® Xeon® processor E5-4600.

<sup>3</sup> 30% savings is based on comparison of components being purchased separately. Promotion requires products be purchased together.

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## BETTER TOGETHER: RECOMMEND THE BEST INTEL® XEON® PROCESSOR AND INTEL® CHIPSET

SEGMENT	POSITIONING	RECOMMENDED PROCESSOR SERIES <sup>1</sup>	MAX. SOCKETS PER SYSTEM	NO. OF CORES	MAX. FREQ. <sup>2</sup>	POWER	INTEL® QPI (GT/S) <sup>3</sup>	CACHE	RECOMMENDED INTEL® CHIPSET
<b>EXPANDABLE</b> <b>Leading performance, reliability, and scalability</b>  <b>Target usage:</b> Optimized for large enterprises, data centers, and server consolidation  <b>Recommended configuration:</b> 4+ processors	Best	Intel® Xeon® processor E7 product family	Up to 8	Up to 10	2.66 GHz	95-130 W	Up to 6.40 GT/s	Up to 30 MB L3	Intel® 7500 Chipset
	Better	Intel® Xeon® processor E5-4600 product family	4	Up to 8	2.90 GHz	95-130 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
<b>EFFICIENT PERFORMANCE</b> <b>Energy efficient, cost effective</b>  <b>Target usage:</b> Optimized for general purpose servers (e-mail, Web, file, business applications), IT infrastructure virtualization, and cloud computing  <b>Recommended configuration:</b> 2 processors	Best	Intel® Xeon® processor E5-2600 product family	2	Up to 8	3.10 GHz	60-150 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
	Better	Intel® Xeon® processor E5-2400 product family	2	Up to 8	2.30 GHz	60-95 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
	Good	Intel® Xeon® processor 5600 series	2	Up to 6	3.46 GHz	40-130 W	Up to 6.40 GT/s	Up to 12 MB L3 shared	Intel® 5520 Chipset
<b>ENTRY</b> <b>Cost optimized</b>  <b>Target usage:</b> Small businesses with fewer than 100 employees, basic needs (e-mail, network, file / print)  <b>Recommended configuration:</b> 1-2 processors	Best	Intel® Xeon® processor E5-2400 product family	2	Up to 8	2.30 GHz	60-95 W	Up to 5.86 GT/s	Up to 12 MB L3 shared	Intel® C600 Chipset
	Better	Intel® Xeon® processor E3-1200 v3 product family	1	4	3.70 GHz	16-95 W	N/A	Up to 8 MB Intel® Smart Cache	Intel® C222, C224, or C226 Chipset
	Good	Intel® Xeon® processor E3-1200 v2 product family	1	4	3.50 GHz	17-95 W	N/A	Up to 8 MB Intel® Smart Cache	Intel® C202, C204, or C206 Chipset

## BETTER TOGETHER: RECOMMEND THE BEST INTEL® XEON® PROCESSOR AND INTEL® CHIPSET

SEGMENT	POSITIONING	RECOMMENDED PROCESSOR SERIES <sup>1</sup>	MAX. SOCKETS PER SYSTEM	NO. OF CORES	MAX. FREQ. <sup>2</sup>	POWER	INTEL® QPI (GT/S) <sup>3</sup> / MAX. BUS (MHZ)	CACHE	RECOMMENDED INTEL® CHIPSET
<b>HPC</b> <b>Optimized for high-performance analytics</b>  <b>Target usage:</b> Bandwidth-intensive applications, high-performance clusters, and complex computation	Best	Intel® Xeon® processor E7 product family	Up to 8	Up to 10	2.66 GHz	95-130 W	1066 MHz	Up to 30 MB L3	Intel® 7500 Chipset
	Better	Intel® Xeon® processor E5-2600 product family	2	Up to 8	3.10 GHz	60-150 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
	Good	Intel® Xeon® processor E5-2400 product family	2	Up to 8	2.30 GHz	60-95 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
<b>WORKSTATION</b> <b>Optimized for complex analysis / visualization</b>  <b>Target usage:</b> Graphics rendering, multimedia content development, engineering applications (CAD / CAM), software development	Best	Intel® Xeon® processor E5-2600 product family	2	Up to 8	3.10 GHz	60-150 W	Up to 8 GT/s	Up to 20 MB L3 shared	Intel® C600 Chipset
	Better	Intel® Xeon® processor E5-1600 product family	1	Up to 6	3.30 GHz	130 W	N/A	Up to 15 MB L3 shared	Intel® C600 Chipset
	Good	Intel® Xeon® processor E3-1200 v3 product family	1	4	3.70 GHz	95 W	N/A	Up to 8 MB Intel® Smart Cache	Intel® C226 Chipset

For more information, visit [www.intel.com/xeon](http://www.intel.com/xeon)

<sup>1</sup> Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See [www.intel.com/products/processor\\_number/](http://www.intel.com/products/processor_number/) for details.

<sup>2</sup> Processor frequency as shown represents maximum frequency specification for the respective processor number family.

<sup>3</sup> Intel® QPI-Intel® QuickPath Interconnect; GT/s-Gigatransfers per second.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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# Intel® Server / Workstation Processors



Intel® Xeon® processors are the preferred choice for demanding server and workstation applications. Intel® server processors deliver enhanced, energy-efficient performance for data-intensive business applications and enable users to optimize and scale computing environments that maximize server utilization to workload, while providing headroom for growth. Workstation users can design, model, create, and visualize faster on innovation platforms powered by Intel Xeon processors.

## INTEL® XEON® PROCESSOR E3-1200 v3 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1150 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
✓	Intel® Xeon® processor E3-1280 v3	CM8064601467001 (tray only)	3.60 GHz	4 GHz	8 MB	1600 MHz	4 / 8		✓	✓	80 W	N/A
✓	Intel Xeon processor E3-1270 v3	BX80646E31270V3 (box) CM8064601467101 (tray)	3.50 GHz	3.90 GHz	8 MB	1600 MHz	4 / 8		✓	✓	80 W	7 35858 25952 1
✓	Intel Xeon processor E3-1240 v3	BX80646E31240V3 (box) CM8064601467102 (tray)	3.40 GHz	3.80 GHz	8 MB	1600 MHz	4 / 8		✓	✓	80 W	7 35858 25958 3
✓	Intel Xeon processor E3-1230 v3	BX80646E31230V3 (box) CM8064601467202 (tray)	3.30 GHz	3.70 GHz	8 MB	1600 MHz	4 / 8		✓	✓	80 W	7 35858 25970 5
✓	Intel Xeon processor E3-1220 v3	BX80646E31220V3 (box) CM8064601467204 (tray)	3.10 GHz	3.50 GHz	8 MB	1600 MHz	4 / 4			✓	80 W	7 35858 25976 7
✓	Intel Xeon processor E3-1275 v3	BX80646E31275V3 (box) CM8064601466508 (tray)	3.50 GHz	3.90 GHz	8 MB	1600 MHz	4 / 8	Intel® HD graphics P4600	✓	✓	95 W	7 35858 25934 7
✓	Intel Xeon processor E3-1245 v3	BX80646E31245V3 (box) CM8064601466509 (tray)	3.40 GHz	3.80 GHz	8 MB	1600 MHz	4 / 8	Intel HD graphics P4600	✓	✓	95 W	7 35858 25940 8

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INTEL® XEON® PROCESSOR E3-1200 v3 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1150 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
✓	Intel® Xeon® processor E3-1225 v3	<b>BX80646E31225V3</b> (box) <b>CM8064601466507</b> (tray)	3.20 GHz	3.60 GHz	8 MB	1600 MHz	4 / 4	Intel® HD graphics P4600		✓	95 W	7 35858 25946 0
✓	Intel Xeon processor E3-1265L v3	<b>CM8064601467406</b> (tray only)	2.50 GHz	3.70 GHz	8 MB	1600 MHz	4 / 8	Intel® HD graphics	✓	✓	45 W	N/A
✓	Intel Xeon processor E3-1230L v3	<b>CM8064601467601</b> (tray only)	1.80 GHz	2.80 GHz	8 MB	1600 MHz	2 / 4		✓	✓	25 W	N/A
✓	Intel Xeon processor E3-1285 v3	<b>CM8064601466703</b> (tray only)	3.60 GHz	4 GHz	8 MB	1600 MHz	4 / 8	Intel® HD graphics P4700	✓	✓	95 W	N/A
✓	Intel Xeon processor E3-1285L v3	<b>CM8064601466804</b> (tray only)	3.10 GHz	3.90 GHz	8 MB	1600 MHz	4 / 8	Intel HD graphics P4700	✓	✓	65 W	N/A

INTEL® XEON® PROCESSOR E3-1200 v2 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	Intel® Xeon® processor E3-1290 v2	<b>CM8063701099102</b> (tray only)	3.70 GHz	4.10 GHz	8 MB	1600 MHz	4 / 8		✓	✓	87 W	N/A
	Intel Xeon processor E3-1280 v2	<b>BX80637E31280V2</b> (box) <b>CM8063701098404</b> (tray)	3.60 GHz	4 GHz	8 MB	1600 MHz	4 / 8		✓	✓	69 W	7 35858 24236 3
	Intel Xeon processor E3-1270 v2	<b>BX80637E31270V2</b> (box) <b>CM8063701098301</b> (tray)	3.50 GHz	3.90 GHz	8 MB	1600 MHz	4 / 8		✓	✓	69 W	7 35858 24242 4
	Intel Xeon processor E3-1240 v2	<b>BX80637E31240V2</b> (box) <b>CM8063701098201</b> (tray)	3.40 GHz	3.80 GHz	8 MB	1600 MHz	4 / 8		✓	✓	69 W	7 35858 24249 3

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INTEL® XEON® PROCESSOR E3-1200 v2 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E3-1230 v2</b>	<b>BX80637E31230V2</b> (box) <b>CM8063701098101</b> (tray)	3.30 GHz	3.70 GHz	8 MB	1600 MHz	4 / 8		✓	✓	69 W	7 35858 24255 4
	<b>Intel Xeon processor E3-1220 v2</b>	<b>BX80637E31220V2</b> (box) <b>CM8063701160503</b> (tray)	3.10 GHz	3.50 GHz	8 MB	1600 MHz	4 / 4			✓	17 W	7 35858 24261 5
	<b>Intel Xeon processor E3-1275 v2</b>	<b>BX80637E31275V2</b> (box) <b>CM8063701098702</b> (tray)	3.50 GHz	3.90 GHz	8 MB	1600 MHz	4 / 8	Intel® HD graphics P4000	✓	✓	77 W	7 35858 24212 7
	<b>Intel Xeon processor E3-1265L v2</b>	<b>BX80637E31265L2</b> (box) <b>CM8063701098602</b> (tray)	2.50 GHz	3.50 GHz	8 MB	1600 MHz	4 / 8	Intel® HD graphics	✓	✓	45 W	7 35858 24218 9
	<b>Intel Xeon processor E3-1245 v2</b>	<b>BX80637E31245V2</b> (box) <b>CM8063701098602</b> (tray)	3.40 GHz	3.80 GHz	8 MB	1600 MHz	4 / 8	Intel HD graphics P4000	✓	✓	77 W	7 35858 24224 0
	<b>Intel Xeon processor E3-1225 v2</b>	<b>BX80637E31225V2</b> (box) <b>CM8063701160603</b> (tray)	3.20 GHz	3.60 GHz	8 MB	1600 MHz	4 / 4	Intel HD graphics P4000		✓	77 W	7 35858 24230 1
	<b>Intel Xeon processor E3-1220L v2</b>	<b>CM8063701099001</b> (tray only)	2.30 GHz	3.50 GHz	3 MB	1600 MHz	2 / 4		✓	✓	20 W	N/A

INTEL® SERVER / WORKSTATION PROCESSORS

INTEL® XEON® PROCESSOR E3-1200 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E3-1290</b>	<b>CM8062301071705</b> (tray only)	3.60 GHz	4 GHz	8 MB	1333 MHz	4 / 8		✓	✓	95 W (thermal solution not included)	N/A
	<b>Intel Xeon processor E3-1280</b>	<b>BX80623E31280</b> (box) <b>CM8062307261903</b> (tray)	3.50 GHz	3.90 GHz	8 MB	1333 MHz	4 / 8		✓	✓	95 W	7 35858 21763 7
	<b>Intel Xeon processor E3-1270</b>	<b>BX80623E31270</b> (box) <b>CM8062307262403</b> (tray)	3.40 GHz	3.80 GHz	8 MB	1333 MHz	4 / 8		✓	✓	80 W	7 35858 21764 4
	<b>Intel Xeon processor E3-1240</b>	<b>BX80623E31240</b> (box) <b>CM8062307262503</b> (tray)	3.30 GHz	3.70 GHz	8 MB	1333 MHz	4 / 8		✓	✓	80 W	7 35858 21765 1
	<b>Intel Xeon processor E3-1230</b>	<b>BX80623E31230</b> (box) <b>CM8062307262610</b> (tray)	3.20 GHz	3.60 GHz	8 MB	1333 MHz	4 / 8		✓	✓	80 W	7 35858 21766 8
	<b>Intel Xeon processor E3-1220</b>	<b>BX80623E31220</b> (box) <b>CM8062300921702</b> (tray)	3.10 GHz	3.40 GHz	8 MB	1333 MHz	4 / 4			✓	80 W	7 35858 21767 5
	<b>Intel Xeon processor E3-1275</b>	<b>BX80623E31275</b> (box) <b>CM8062307262003</b> (tray)	3.40 GHz	3.80 GHz	8 MB	1333 MHz	4 / 8	Intel® HD graphics P3000	✓	✓	95 W	7 35858 21763 7
	<b>Intel Xeon processor E3-1245</b>	<b>BX80623E31245</b> (box) <b>CM8062307262103</b> (tray)	3.30 GHz	3.70 GHz	8 MB	1333 MHz	4 / 8	Intel HD graphics P3000	✓	✓	95 W	7 35858 21764 4
	<b>Intel Xeon processor E3-1235</b>	<b>BX80623E31235</b> (box) <b>CM8062307262206</b> (tray)	3.20 GHz	3.60 GHz	8 MB	1333 MHz	4 / 8	Intel HD graphics P3000	✓	✓	95 W	7 35858 21769 9

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INTEL® XEON® PROCESSOR E3-1200 PRODUCT FAMILY FOR SERVER AND WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	INTEL® SMART CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® GRAPHICS ENGINE	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E3-1225</b>	<b>BX80623E31225</b> (box) <b>CM8062307262304</b> (tray)	3.10 GHz	3.40 GHz	8 MB	1333 MHz	4 / 4	Intel® HD graphics P3000		✓	95 W	7 35858 21765 1
	<b>Intel Xeon processor E3-1260L</b>	<b>CM8062301061800</b> (tray only)	2.40 GHz	3.30 GHz	8 MB	1333 MHz	4 / 8	Intel® HD graphics 2000	✓	✓	45 W	N/A
	<b>Intel Xeon processor E3-1220L</b>	<b>CM8062307262828</b> (tray only)	2.20 GHz	3.40 GHz	3 MB	1333 MHz	2 / 4		✓	✓	20 W	N/A

INTEL® THERMAL SOLUTION FOR SERVER / WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET

PRODUCT NAME	BOXED PRODUCT CODE	DESCRIPTION	RECOMMENDED USAGE <sup>3</sup>	MAX. THERMAL DESIGN POWER
<b>Intel® Thermal Solution XTS100H</b>	<b>BXXTS100H</b>	Active thermal solution with fixed fan	High-end Intel® Thermal Solution supporting processors up to 95 W in pedestal chassis; for use with the Intel® Xeon® processor E3-1290.	95 W

INTEL® XEON® PROCESSOR W3600 SERIES FOR WORKSTATION SYSTEMS FEATURING ONE LGA1366 SOCKET (THERMAL SOLUTION INCLUDED)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor W3690</b>	<b>BX80613W3690</b> (box) <b>AT80613005931AB</b> (tray)	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	130 W	7 35858 21786 6
	<b>Intel Xeon processor W3680</b>	<b>BX80613W3680</b> (box) <b>AT80613003543AF</b> (tray)	3.33 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	130 W	7 35858 21408 7
	<b>Intel Xeon processor W3670</b>	<b>BX80613W3670</b> (box) <b>AT80613005490AC</b> (tray)	3.20 GHz	4.80 GT/s	12 MB	1066 MHz	6 / 12	✓	✓	130 W	7 35858 21409 4



INTEL® XEON® PROCESSOR W3500 SERIES FOR WORKSTATION SYSTEMS FEATURING ONE LGA1366 SOCKET (THERMAL SOLUTION INCLUDED WITH BOX SKUS)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor W3580</b>	<b>BX80601W3580</b> (box) <b>AT80601002274AB</b> (tray)	3.33 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	✓	✓	130 W	7 35858 21004 1
	<b>Intel Xeon processor W3570</b>	<b>BX80601W3570</b> (box) <b>AT80601000918AB</b> (tray)	3.20 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	✓	✓	130 W	7 35858 20633 4
	<b>Intel Xeon processor W3565</b>	<b>BX80601W3565</b> (box) <b>AT80601002727AB</b> (tray)	3.20 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	✓	✓	130 W	7 35858 21200 7
	<b>Intel Xeon processor W3550</b>	<b>BX80601W3550</b> (box) <b>AT80601002112AB</b> (tray)	3.06 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	✓	✓	130 W	7 35858 21005 8
	<b>Intel Xeon processor W3540</b>	<b>BX80601W3540</b> (box) <b>AT80601000921AB</b> (tray)	2.93 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	✓	✓	130 W	7 35858 20634 1
	<b>Intel Xeon processor W3530</b>	<b>BX80601W3530</b> (box) <b>AT80601000897AB</b> (tray)	2.80 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	✓	✓	130 W	7 35858 21384 4
	<b>Intel Xeon processor W3520</b>	<b>BX80601W3520</b> (box) <b>AT80601000741AB</b> (tray)	2.66 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	✓	✓	130 W	7 35858 20635 8

INTEL® XEON® PROCESSOR E5-2600 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5-2687W</b>	<b>BX80621E52687W</b> (box) <b>CM8062107184308</b> (tray)	3.10 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	150 W	7 35858 22396 6
	<b>Intel Xeon processor E5-2690</b>	<b>BX80621E52690</b> (box) <b>CM8062101122501</b> (tray)	2.90 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	135 W	7 35858 24086 4
	<b>Intel Xeon processor E5-2680</b>	<b>BX80621E52680</b> (box) <b>CM8062107184424</b> (tray)	2.70 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	130 W	7 35858 22397 3
	<b>Intel Xeon processor E5-2670</b>	<b>BX80621E52670</b> (box) <b>CM8062101082713</b> (tray)	2.60 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	115 W	7 35858 22398 0
	<b>Intel Xeon processor E5-2667</b>	<b>CM8062100854802</b> (tray only)	2.90 GHz	7.20 GT/s	15 MB	1600 MHz	6 / 12	✓	✓	130 W	N/A
	<b>Intel Xeon processor E5-2665</b>	<b>BX80621E52665</b> (box) <b>CM8062101143101</b> (tray)	2.40 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	155 W	7 35858 22400 0
	<b>Intel Xeon processor E5-2660</b>	<b>BX80621E52660</b> (box) <b>CM8062107184801</b> (tray)	2.20 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	95 W	7 35858 22401 7

INTEL® XEON® PROCESSOR E5-2600 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	Intel® Xeon® processor E5-2658	CM8062101042805 (tray only)	2.10 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	95 W	N/A
	Intel Xeon processor E5-2650	BX80621E52650 (box) CM8062100856218 (tray)	2 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	95 W	7 35858 22402 4
	Intel Xeon processor E5-2643	CM8062107185605 (tray only)	3.30 GHz	6.40 GT/s	10 MB	1600 MHz	4 / 8	✓	✓	130 W	N/A
	Intel Xeon processor E5-2640	BX80621E52640 (box) CM8062100856401 (tray)	2.50 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 22403 1
	Intel Xeon processor E5-2630	BX80621E52630 (box) CM8062101038801 (tray)	2.30 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 22404 8
	Intel Xeon processor E5-2620	BX80621E52620 (box) CM8062101048401 (tray)	2 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 22405 5
	Intel Xeon processor E5-2609	BX80621E52609 (box) CM8062107186604 (tray)	2.40 GHz	6.40 GT/s	10 MB	1066 MHz	4 / 4			80 W	7 35858 23265 4
	Intel Xeon processor E5-2603	BX80621E52603 (box) CM8062100856501 (tray)	1.80 GHz	6.40 GT/s	10 MB	1066 MHz	4 / 4			80 W	7 35858 23270 8
	Intel Xeon processor E5-2650L	CM8062107185309 (tray only)	1.80 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	70 W	N/A
	Intel Xeon processor E5-2648L	CM8062100854905 (tray only)	1.80 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	70 W	N/A
	Intel Xeon processor E5-2630L	CM8062107185405 (tray only)	2 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	65 W	N/A

INTEL® XEON® PROCESSOR E5-1600 PRODUCT FAMILY FOR WORKSTATION SYSTEMS FEATURING ONE LGA2011 SOCKET (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5-1660</b>	<b>BX80621E51660</b> (box) <b>CM8062107284111</b> (tray)	3.30 GHz	15 MB	1600 MHz	6 / 12	✓	✓	130 W	7 35858 22440 6
	<b>Intel Xeon processor E5-1650</b>	<b>CM8062101102002</b> (tray only)	3.20 GHz	12 MB	1600 MHz	6 / 12	✓	✓	150 W	N/A
	<b>Intel Xeon processor E5-1620</b>	<b>CM8062101038606</b> (tray only)	3.60 GHz	10 MB	1600 MHz	4 / 8	✓	✓	130 W	N/A

INTEL® XEON® PROCESSOR E5-2400 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5-2470</b>	<b>BX80621E52470</b> (box) <b>CM8062007187242</b> (tray)	2.30 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	95 W	7 35858 23023 9
	<b>Intel Xeon processor E5-2450</b>	<b>BX80621E52450</b> (box) <b>CM8062000862501</b> (tray)	2.10 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	95 W	7 35858 23003 1
	<b>Intel Xeon processor E5-2440</b>	<b>BX80621E52440</b> (box) <b>CM8062000862604</b> (tray)	2.40 GHz	7.20 GT/s	15 MB	1333 MHz	8 / 16	✓	✓	95 W	7 35858 23008 6
	<b>Intel Xeon processor E5-2430</b>	<b>BX80621E52430</b> (box) <b>CM8062001122601</b> (tray)	2.20 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 23013 0
	<b>Intel Xeon processor E5-2420</b>	<b>BX80621E52420</b> (box) <b>CM8062001183000</b> (tray)	1.90 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	80 W	7 35858 23018 5

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INTEL® XEON® PROCESSOR E5-2400 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	Intel® Xeon® processor E5-2407	<b>BX80621E52407</b> (box) <b>CM8062001048200</b> (tray)	2.20 GHz	6.40 GT/s	10 MB	1066 MHz	4 / 4			70 W	7 35858 23029 1
	Intel Xeon processor E5-2403	<b>BX80621E52403</b> (box) <b>CM8062001048300</b> (tray)	1.80 GHz	6.40 GT/s	10 MB	1066 MHz	4 / 4			70 W	7 35858 23041 3
	Intel Xeon processor E5-2450L	<b>CM8062007283711</b> (tray only)	1.80 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	70 W	N/A
	Intel Xeon processor E5-2430L	<b>CM8062000862912</b> (tray only)	2 GHz	7.20 GT/s	15 MB	1600 MHz	6 / 12	✓	✓	60 W	N/A

INTEL® THERMAL SOLUTION STS200 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA2011 SOCKETS

NEW	PRODUCT NAME	BOXED PRODUCT CODE	DESCRIPTION	TDP SUPPORT	UPC CODE
	Intel® Thermal Solution STS200P	<b>BXSTS200P</b>	Passive	Up to 130 W	7 35858 22179 5
	Intel Thermal Solution STS200PNRW	<b>BXSTS200PNRW</b>	Passive narrow	Up to 130 W	7 35858 22180 1
	Intel Thermal Solution STS200C	<b>BXSTS200C</b>	Combo with removable fan	Up to 150 W	7 35858 22181 8



INTEL® XEON® PROCESSOR 5600 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	Intel® Xeon® processor X5690	<b>BX80614X5690</b> (box) <b>AT80614005913AB</b> (tray)	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	130 W	7 35858 21629 6
	Intel Xeon processor X5680	<b>BX80614X5680</b> (box) <b>AT80614005124AA</b> (tray)	3.33 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	130 W	7 35858 21412 4
	Intel Xeon processor X5675	<b>BX80614X5675</b> (box) <b>AT80614006696AA</b> (tray)	3.06 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 21630 2
	Intel Xeon processor X5670	<b>BX80614X5670</b> (box) <b>AT80614005130AA</b> (tray)	2.93 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 21413 1
	Intel Xeon processor X5660	<b>BX80614X5660</b> (box) <b>AT80614005127AA</b> (tray)	2.80 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 21414 8
	Intel Xeon processor X5650	<b>BX80614X5650</b> (box) <b>AT80614004320AD</b> (tray)	2.66 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 21415 5
	Intel Xeon processor E5649	<b>BX80614E5649</b> (box) <b>AT80614006783AB</b> (tray)	2.53 GHz	5.86 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	80 W	7 35858 21631 9
	Intel Xeon processor E5645	<b>BX80614E5645</b> (box) <b>AT80614003597AC</b> (tray)	2.40 GHz	5.86 GT/s	12 MB	1333 MHz	6 / 12	✓	✓	80 W	7 35858 21632 6
	Intel Xeon processor E5640	<b>BX80614E5640</b> (box) <b>AT80614005466AA</b> (tray)	2.66 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	✓	✓	80 W	7 35858 21416 2
	Intel Xeon processor E5630	<b>BX80614E5630</b> (box) <b>AT80614005463AA</b> (tray)	2.53 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	✓	✓	80 W	7 35858 21417 9
	Intel Xeon processor E5620	<b>BX80614E5620</b> (box) <b>AT80614005073AB</b> (tray)	2.40 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	✓	✓	80 W	7 35858 21418 6

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INTEL® XEON® PROCESSOR 5600 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5607</b>	<b>BX80614E5607</b> (box) <b>AT80614006789AA</b> (tray)	2.26 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 4			80 W	7 35858 21633 3
	<b>Intel Xeon processor E5606</b>	<b>BX80614E5606</b> (box) <b>AT80614007290AE</b> (tray)	2.13 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 4			80 W	7 35858 21634 0
	<b>Intel Xeon processor E5603</b>	<b>BX80614E5603</b> (box) <b>AT80614006954AA</b> (tray)	1.60 GHz	4.80 GT/s	4 MB	1066 MHz	4 / 4			80 W	7 35858 21635 7
	<b>Intel Xeon processor X5687</b>	<b>AT80614005919AB</b> (tray only)	3.60 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	✓	✓	130 W	N/A
	<b>Intel Xeon processor X5677</b>	<b>AT80614005145AB</b> (tray only)	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	✓	✓	130 W	N/A
	<b>Intel Xeon processor X5672</b>	<b>AT80614005922AA</b> (tray only)	3.20 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	✓	✓	95 W	N/A
	<b>Intel Xeon processor X5667</b>	<b>AT80614005154AB</b> (tray only)	3.06 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	✓	✓	95 W	N/A
	<b>Intel Xeon processor X5647</b>	<b>AT80614006780AA</b> (tray only)	2.93 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	✓	✓	130 W	N/A
	<b>Intel Xeon processor L5640</b>	<b>BX80614L5640</b> (box) <b>AT80614005133AB</b> (tray)	2.40 GHz	5.86 GT/s	12 MB	1066 MHz	6 / 12	✓	✓	60 W	7 35858 21411 7
	<b>Intel Xeon processor L5630</b>	<b>BX80614L5630</b> (box) <b>AT80614005484AA</b> (tray)	2.13 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	✓	✓	40 W	7 35858 21419 3
	<b>Intel Xeon processor L5609</b>	<b>AT80614005940AA</b> (tray only)	1.86 GHz	4.80 GT/s	12 MB	1066 MHz	4 / 4			40 W	N/A

INTEL® THERMAL SOLUTION STS100 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS

PRODUCT NAME	BOXED PRODUCT CODE	DESCRIPTION	RECOMMENDED USAGE <sup>3</sup>	MAX. THERMAL DESIGN POWER
<b>Intel® Thermal Solution STS100C</b>	<b>BXSTS100C</b>	Passive / active combination thermal solution with removable fan	<b>With fan installed:</b> <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide adequate ventilation and correct temperature air to the thermal solution.</li> </ul> <b>With fan removed:</b> <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide ducted airflow to the thermal solution.</li> <li>▪ 2U or larger rack chassis that provide ducted airflow to the thermal solution.</li> </ul>	130 W
<b>Intel Thermal Solution STS100A</b>	<b>BXSTS100A</b>	Active thermal solution with fixed fan	Pedestal chassis that provide adequate ventilation and correct temperature air to the thermal solution.	80 W
<b>Intel Thermal Solution STS100P</b>	<b>BXSTS100P</b>	25.5mm-tall passive thermal solution	1U, 2U, or blade chassis that provide ducted airflow to the thermal solution.	95 W

INTEL® XEON® PROCESSOR E5-4600 PRODUCT FAMILY FOR SERVER SYSTEMS FEATURING FOUR LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5-4650</b>	<b>BX80621E54650</b> (box) <b>CM8062101229200</b> (tray)	2.70 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	130 W	7 35858 23290 6
	<b>Intel Xeon processor E5-4640</b>	<b>BX80621E54640</b> (box) <b>CM8062101229400</b> (tray)	2.40 GHz	8 GT/s	20 MB	1600 MHz	6 / 12	✓	✓	95 W	7 35858 23350 7
	<b>Intel Xeon processor E5-4620</b>	<b>BX80621E54620</b> (box) <b>CM8062101145500</b> (tray)	2.20 GHz	7.20 GT/s	16 MB	1333 MHz	8 / 16	✓	✓	95 W	7 35858 23295 1

INTEL® XEON® PROCESSOR E5-4600 PRODUCT FAMILY FOR SERVER SYSTEMS FEATURING FOUR LGA2011 SOCKETS (THERMAL SOLUTION SOLD SEPARATELY)

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E5-4617</b>	<b>CM8062101145700</b> (tray only)	2.90 GHz	7.20 GT/s	15 MB	1600 MHz	6 / 6		✓	95 W	N/A
	<b>Intel Xeon processor E5-4610</b>	<b>BX80621E54610</b>	2.40 GHz	7.20 GT/s	15 MB	1333 MHz	6 / 12	✓	✓	95 W	7 35858 23300 2
	<b>Intel Xeon processor E5-4607</b>	<b>BX80621E54607</b>	2.20 GHz	6.40 GT/s	12 MB	1066 MHz	6 / 12	✓	✓	95 W	7 35858 23310 1
	<b>Intel Xeon processor E5-4603</b>	<b>BX80621E54603</b>	2 GHz	6.40 GT/s	10 MB	1066 MHz	4 / 8	✓	✓	95 W	7 35858 23315 6
	<b>Intel Xeon processor E5-4650L</b>	<b>BX80621E54650L</b> (box) <b>CM8062101229300</b> (tray)	2.60 GHz	8 GT/s	20 MB	1600 MHz	8 / 16	✓	✓	115 W	7 35858 23305 7

INTEL® XEON® PROCESSOR E7-4800 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING FOUR LGA1567 SOCKETS

NEW	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>4</sup> SPEED	SHARED L3 CACHE	MAX. MEMORY SPEED	NO. OF CORES / THREADS	INTEL® HYPER-THREADING TECHNOLOGY <sup>1</sup>	INTEL® TURBO BOOST TECHNOLOGY <sup>2</sup>	POWER	UPC CODE
	<b>Intel® Xeon® processor E7-4870</b>	<b>BX80615E74870</b>	2.40 GHz	6.40 GT/s	30 MB	1066 MHz	10 / 20	✓	✓	130 W	7 35858 21849 8
	<b>Intel Xeon processor E7-4860</b>	<b>AT80615007254AA</b> (tray only)	2.26 GHz	6.40 GT/s	24 MB	1066 MHz	10 / 20	✓	✓	130 W	N/A
	<b>Intel Xeon processor E7-4850</b>	<b>AT80615007449AA</b> (tray only)	2 GHz	6.40 GT/s	24 MB	1066 MHz	10 / 20	✓	✓	130 W	N/A
	<b>Intel Xeon processor E7-4830</b>	<b>BX80615E74830</b>	2.13 GHz	6.40 GT/s	24 MB	1066 MHz	8 / 16	✓	✓	105 W	7 35858 21850 4
	<b>Intel Xeon processor E7-4820</b>	<b>AT80615005772AC</b> (tray only)	2 GHz	5.86 GT/s	18 MB	1066 MHz	8 / 16	✓	✓	105 W	N/A
	<b>Intel Xeon processor E7-4807</b>	<b>AT80615006432AB</b> (tray only)	1.86 GHz	4.80 GT/s	18 MB	1066 MHz	6 / 12	✓		95 W	N/A

For more information, visit [www.intel.com/xeon](http://www.intel.com/xeon)

<sup>1</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading)

<sup>2</sup> Intel® Turbo Boost Technology requires a PC with a processor with Intel Turbo Boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See [www.intel.com/technology/turboboost](http://www.intel.com/technology/turboboost) for more information.

<sup>3</sup> Contact your chassis supplier for compatibility details.

<sup>4</sup> Intel® QPI-Intel® QuickPath Interconnect; GT/s-Gigatransfers per second.

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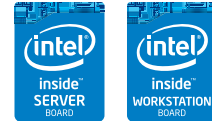
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# Intel® Server / Workstation Boards



## INTEL® SERVER BOARDS SUPPORTING THE INTEL® XEON® PROCESSOR E5-2600 FAMILY

### GET POWERFUL. GET FLEXIBLE. GET EFFICIENT.

Designed to optimize the features of the Intel® Xeon® processor E5-2600 product family, Intel has unleashed an entirely new portfolio of boards and systems purpose-built with your needs in mind. Ranging from high-performance to half-width, HPC-focused to specialized workstation, Intel is committed to quality performance and innovative design.



Product Name	Intel® Compute Module HNS2600JF	Intel® Compute Module HNS2600WP
<b>Description</b>	The Intel® Compute Module HNS2600JF family provides cost-optimized performance and memory throughput with optional integrated QDR / FDR InfiniBand*. Support for up to 3 PCI Express* 3.0 x16 slots. (Extended life product.)	The ideal solution for high-performance computing, the Intel® Compute Module HNS2600WP family delivers a larger memory footprint and support for up to 4 PCI Express* 3.0 x16 slots in a half-width form factor. Integrated QDR / FDR InfiniBand* is available. (Extended life product.)
<b>Target Market</b>	HPC	HPC
<b>Order Code</b>	<b>HNS2600JF: no Infiniband*</b> <b>HNS2600JFF: integrated InfiniBand FDR (56 Gb/s)</b> <b>HNS2600JFQ: integrated InfiniBand QDR (40 Gb/s)</b>	<b>HNS2600WP: no Infiniband*</b> <b>HNS2600WPF: integrated InfiniBand FDR (56 Gb/s)</b> <b>HNS2600WPQ: integrated InfiniBand QDR (40 Gb/s)</b>
<b>Form Factor</b>	Custom (6.42" x 17.7")	Custom (6.8" x 18.9")
<b>Intel® Server Chassis or System</b>	Intel® Server Chassis H2000JR/KR family	Intel® Server Chassis H2000JR/KR family
<b>Processor Support<sup>1</sup></b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	3	4
<b>PCI Slot Types</b>	3 PCI Express 3.0 x16	4 PCI Express 3.0 x16
<b>Memory Capacity</b>	8 LR / U / RDIMMs 1333 / 1600 MHz ECC DDR3 256 GB max	16 LR / U / RDIMMs 1333 / 1600 MHz ECC DDR3 512 GB max
<b>SATA Ports</b>	6-port SATA (2 6.0 Gb/s)	6-port SATA (2 6.0 Gb/s)
<b>SAS Options</b>	4 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	4 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)	1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® I/O Module <sup>2</sup> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 <sup>2</sup>	Intel® I/O Module <sup>2</sup> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 <sup>2</sup>
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available when combined with an Intel Chassis	3 year limited warranty, optional 2 year extended warranty available when combined with an Intel Chassis



Product Name	Intel® Server Board S2600GL / GZ	Intel® Server Board S2600IP	Intel® Server Board S2600CP
<b>Description</b>	The Intel® Server Board S2600GL / GZ, Intel's technology showcase board, features maximum memory capacity, rack-optimized performance, and extensive I/O flexibility, making it ideal for high-performance and cloud computing. (Extended life product.)	With support for up to 8 single-width cards or 4 x16 double-width cards, the Intel® Server Board S2600IP provides enterprise customers with maximum I/O flexibility, storage flexibility, and is available in both rack and pedestal options. (Extended life product.)	Small- to medium-sized businesses can benefit from the Intel® Server Board S2600CP's storage capacity, mainstream performance, and I/O flexibility. (Extended life product.)
<b>Target Market</b>	Data center / cloud	Enterprise / storage	Small to medium businesses
<b>Order Code</b>	<b>S2600GL4: 16 DIMMs</b> <b>S2600GZ4: 24 DIMMs</b>	<b>S2600IP4: integrated I/O expansion module PCI Express* x8 Gen3</b>	<b>S2600CP2: Dual Port Ethernet Controller 1 GbE</b> <b>S2600CP4: Quad Port Ethernet Controller 1 GbE</b> <b>DBS2600CP2IOC: Dual 1 GbE, 8-port 6 Gb SAS PCI Express* card</b> <b>DBS2600CP4IOC: Quad 1 GbE, 8-port 6 Gb SAS PCI Express card</b>
<b>Form Factor</b>	Custom (16.5" x 16.5")	Custom (14.2" x 15")	SSI EEB (12" x 13")
<b>Intel® Server Chassis or System</b>	Intel® Server System R1000GL/GZ family Intel® Server System R2000GL/GZ family	Intel® Server System R2000IP family Intel® Server System P4000IP family	Intel® Server System P4000CP family Intel® Server Chassis P4000M
<b>Processor Support<sup>1</sup></b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	2	8+2	6
<b>PCI Slot Types</b>	2 PCI Express* 3.0 x8 personality modules 2 PCI Express 3.0 x24 superslots (6 PCI Express 3.0 x8 or 2 PCI Express 3.0 x16 + 2 PCI Express 3.0 x8)	1 PCI Express 3.0 x16 3 PCI Express 3.0 x8 or x0 3 PCI Express 3.0 x8 or x16 1 PCI Express 2.0 x4 1 PCI Express 2.0 x4 via SAS ROC module 1 PCI Express 1.0 x8 via I/O expansion module	1 PCI Express 3.0 x16 5 PCI Express 3.0 x8
<b>Memory Capacity</b>	16 or 24 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 or 768 GB max	16 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 GB max	16 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 GB max
<b>SATA Ports</b>	10-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s)	10-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s)	14-port SATA (12 3.0 Gb/s, 2 6.0 Gb/s)
<b>SAS Options</b>	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)	2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)	1 or 2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available



	Intel® Server Board S2600CO	Intel® Workstation Board W2600CR	Intel® Server Board S1600JP
<b>Product Name</b>	<b>Intel® Server Board S2600CO</b>	<b>Intel® Workstation Board W2600CR</b>	<b>Intel® Server Board S1600JP</b>
<b>Description</b>	An ideal server building block for embedded or storage systems and small- to medium-sized businesses, the Intel® Server Board S2600CO has a standard form factor, rich I/O with flexible configurations, and a 5-year life cycle. (Extended life product.)	The Intel® Workstation Board W2600CR is an expert solution that supports a maximum TDP processor, 16 DDR3 / DDR3L DIMM slots, dual 1 GbE LOM support, Firewire*, and high-end PCI Express* graphics cards.	A performance single-socket, half-width board, rich in I/O (40 Gen3 lanes) for a streamlined 1U rack mount server presentation. (Extended life product.)
<b>Target Market</b>	Embedded / storage / small to medium businesses	Data-intensive applications	Embedded / storage / small to medium businesses
<b>Order Code</b>	<b>S2600CO4: 4 SAS ports</b> <b>S2600COE: Firewire* 1394b, 8 SAS ports</b> <b>S2600COEIOC: Firewire 1394b, 8-port 6 Gb SAS PCI Express* card included</b>	<b>W2600CR2: up to 4 double-wide graphics cards</b>	<b>S1600JP2: Dual Port Ethernet Controller 1 GbE</b> <b>S1600JP4: Quad Port Ethernet Controller 1 GbE</b>
<b>Form Factor</b>	SSI EEB (12" x 13")	Custom (14.2" x 15")	Custom (6.8" x 13.8")
<b>Intel® Server Chassis or System</b>	Intel® Server Chassis P4000M	Intel® Workstation System P4000CR family	Intel® Server System R1000JP family
<b>Processor Support¹</b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>	<b>2 Intel® Xeon® processors E5-2600 product family</b>	<b>1 Intel® Xeon® processor E5-2600 / E5-1600 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	6	8+2	3
<b>PCI Slot Types</b>	4 PCI Express 3.0 x16 1 PCI Express 3.0 x8 1 PCI Express 2.0 x4	1 PCI Express 3.0 x16 3 PCI Express 3.0 x8 or x0 3 PCI Express 3.0 x8 or x16 1 PCI Express 2.0 x4 1 PCI Express 2.0 x4 via SAS ROC module 1 PCI Express 1.0 x8 via I/O expansion module	2 PCI Express* 3.0 x16 1 PCI Express 3.0 x8
<b>Memory Capacity</b>	16 LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 GB max	16 x LR / U / RDIMMs 1333 / 1600 MHz ECC DDR3 512 GB max	8 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 256 GB max
<b>SATA Ports</b>	10-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s)	10-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s)	10-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s)
<b>SAS Options</b>	4 or 8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	4 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)	1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)	1 or 2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available when combined with an Intel Chassis	3 year limited warranty , optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available

## INTEL® SERVER BOARDS SUPPORTING THE INTEL® XEON® PROCESSOR E5-4600 FAMILY

### CONTROL THE ENTERPRISE WITH THE INTEL® SERVER BOARD S4600LH

Intel's new density and cost-optimized four-socket (4S) server board extends the capabilities of the Intel® Xeon® processor E5 family, with up to a 75 percent performance boost over the Intel® Xeon® processor E5-2600 product family, plus increased network and storage sharing efficiencies. The Intel® Xeon® processor E5-4600 product family dramatically reduces compute time with Intel® Advanced Vector Extensions (Intel® AVX), and with Intel® Integrated I/O, latency is reduced while adding capacity and bandwidth.



Product Name	Intel® Server Board S4600LH
Description	Four-socket, incredibly dense server board with excellent floating-point performance and performance-per-watt for enterprise and HPC applications utilizing the Intel® Xeon® processor E5-4600 product family with support for Intel® MIC. Available with integrated Dual Port Intel® Ethernet Controllers (1 GbE or 10 GbE) and 48 DIMMs for massive memory support of 1.5 terabytes. (Extended life product.)
Target Market	Enterprise / HPC
Order Code	<b>S4600LH2: integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)</b> <b>S4600LT2: integrated Dual Port Intel® Ethernet Controller X540 (10 GbE)</b>
Form Factor	Custom (16.7" x 20")
Intel® Server Chassis or System	Intel® Server System R2208LT2HKC4 family Intel® Server System R2304LH2HKC family
Processor Support <sup>1</sup>	<b>4 Intel® Xeon® processors E5-4600 product family</b>
Chipset	Intel® C600 Chipset
Total PCI Slots	6+2
PCI Slot Types	6 PCI Express* 3.0 x16 2 PCI Express 3.0 x8 via I/O expansion module
Memory Capacity	48 x LR / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 1500 GB max
SATA Ports	11-port SATA (8 3.0 Gb/s, 2 6.0 Gb/s, 1 3.0 Gb/s)
SAS Options	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
Integrated LAN	1 Integrated Dual Port Intel® Ethernet Controller X540 (10 GbE) or 1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)
Management Support	Intel® Server Management Software Integrated BMC with IPMI 2.0
Intel® RAID Support	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
Module Upgrades	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
Warranty	3 year limited warranty, optional 2 year extended warranty available

## INTEL® SERVER BOARDS SUPPORTING THE INTEL® XEON® PROCESSOR E5-2400 FAMILY

### INTEL® SERVER BOARDS AND SYSTEMS BASED ON THE INTEL® XEON® PROCESSOR E5-2400 PRODUCT FAMILY FURTHER EXPAND INTEL'S SERVER LINE UP

Our latest line of Intel® Server Boards featuring the Intel® Xeon® processor E5-2400 product family pave the way for better performance, better value, and better sales. Supporting a wide range of 1U, 2U, and pedestal systems with more options and more features, the family of E5-2400 server products deliver server class performance at competitive price points.



Product Name	Intel® Server Board S1400FP	Intel® Server Board S1400SP
<b>Description</b>	Perfect for entry-level applications with 6 DIMMs, dual Intel® Ethernet Controllers, 24 PCI Express* Gen3 I/O lanes, and Intel® Server Management for affordable and effective performance. (Extended life product.)	Flexible single-socket board that brings I/O and SAS expansion options to an entry-level, single-slot server for easy customization. Systems available with quad or dual 1 GbE NIC. (Extended life product.)
<b>Target Market</b>	First server	Embedded
<b>Order Code</b>	<b>S1400FP2: Dual Port Ethernet Controller 1 GbE</b> <b>S1400FP4: Quad Port Ethernet Controller 1 GbE</b>	<b>S1400SP2: Dual Port Ethernet Controller 1 GbE</b> <b>S1400SP4: Quad Port Ethernet Controller 1 GbE</b>
<b>Form Factor</b>	SSI ATX (12" x 9.6")	SSI ATX-like (12" x 9.6")
<b>Intel® Server Chassis or System</b>	Intel® Server Chassis P4000S family	Intel® Server System R1304SP family
<b>Processor Support<sup>1</sup></b>	<b>1 Intel® Xeon® processor E5-2400 product family</b>	<b>1 Intel® Xeon® processor E5-2400 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	4+1	1+1+1
<b>PCI Slot Types</b>	1 PCI Express 3.0 x8 3 PCI Express 3.0 x4 1 PCI Express 2.0 x4	1 PCI Express 3.0 x8 1 PCI Express 3.0 x4 via I/O expansion module 1 PCI Express 3.0 x8 via I/O expansion module
<b>Memory Capacity</b>	6 x R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 96 GB max	6 x R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 96 GB max
<b>SATA Ports</b>	6-port SATA (4 3.0 Gb/s, 2 6.0 Gb/s)	6-port SATA (4 3.0 Gb/s, 2 6.0 Gb/s)
<b>SAS Options</b>	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	1 or 2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)	1 or 2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available when combined with an Intel Chassis	3 year limited warranty, optional 2 year extended warranty available





	Intel® Server Board S2400LP	Intel® Server Board S2400EP
<b>Product Name</b>	Intel® Server Board S2400LP	Intel® Server Board S2400EP
<b>Description</b>	A mainstream, cost-efficient solution for high-density computing, provides 12 DIMMs via 6 channels and supports 2 PCI Express* 3.0 slots (1 x16, 1 x8) in a half-width form factor. (Extended life product.)	Value dual-socket board in 1U rack supports embedded environments with 28 PCI Express* Gen 3 I/O lanes and 8 DIMMs. 1U rack available with dual GbE. (Extended life product.)
<b>Target Market</b>	IPDC / HPC	Embedded
<b>Order Code</b>	<b>S2400LP / HNS2400LP: no Infiniband (Last date to order HNS2400LP is September 30, 2013)</b>	<b>S2400EP2: Dual Port Ethernet Controller 1 GbE S2400EP4: Quad Port Ethernet Controller 1 GbE</b>
<b>Form Factor</b>	Custom (6.8" x 16.6")	SSI CEB (12" x 10.5")
<b>Intel® Server Chassis or System</b>	Intel® Server Chassis H2000JR/KR family	Intel® Server System R1304EP2SHFN
<b>Processor Support<sup>1</sup></b>	<b>2 Intel® Xeon® processors E5-2400 product family</b>	<b>2 Intel® Xeon® processors E5-2400 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	2	1+1+1
<b>PCI Slot Types</b>	1 PCI Express 3.0 x16 1 PCI Express 3.0 x8	1 PCI Express 3.0 x16 1 PCI Express 3.0 x8 via I/O expansion module 1 PCI Express 3.0 x4 via I/O expansion module
<b>Memory Capacity</b>	12 LR / U / RDIMMs 1333 / 1600 MHz ECC DDR3 384 GB max	8 LV / R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 128 GB max
<b>SATA Ports</b>	5-port SATA (4 3.0 Gb/s, 1 6.0 Gb/s)	2-port SATA (2 6.0 Gb/s)
<b>SAS Options</b>	4 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)	1 or 2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® I/O Module <sup>2</sup> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 <sup>2</sup>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available when combined with an Intel Chassis	3 year limited warranty, optional 2 year extended warranty available



Product Name	Intel® Server Board S2400BB	Intel® Server Board S2400SC
<b>Description</b>	Best solution for price / performance-per-watt and per square foot with spread core design for exceptional power efficiency. 12 DIMMs and extensive I/O flexibility plus integrated quad GbE and more. (Extended life product.)	Expanded I/O with 33 total PCI Express* lanes and dual processor sockets bring cost-effective features to small- and medium-sized businesses. Flexible storage and server management capabilities in rack or pedestal configurations.
<b>Target Market</b>	IPDC / cloud	Medium business
<b>Order Code</b>	<b>S2400BB4</b>	<b>S2400SC2</b>
<b>Form Factor</b>	Custom (13.5" x 13.5")	SSI CEB (12" x 10.5")
<b>Intel® Server Chassis or System</b>	Intel® Server System R1000BB family Intel® Server System R2000BB family	Intel® Server System R2300SC family Intel® Server System P4300SC family Intel® Server Chassis P4000S/M
<b>Processor Support<sup>1</sup></b>	<b>2 Intel® Xeon® processors E5-2400 product family</b>	<b>2 Intel® Xeon® processors E5-2400 product family</b>
<b>Chipset</b>	Intel® C600 Chipset	Intel® C600 Chipset
<b>Total PCI Slots</b>	8+1	4+1
<b>PCI Slot Types</b>	2 PCI Express* 3.0 x16 6 PCI Express 3.0 x8 1 PCI Express 2.0 x8 via I/O expansion module	1 PCI Express 3.0 x16 1 PCI Express 3.0 x8 1 PCI Express 3.0 x4 1 PCI Express 2.0 x4 1 Legacy 32/33 PCI slot
<b>Memory Capacity</b>	12 LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 384 GB max	8 LV / R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 128 GB max
<b>SATA Ports</b>	10-port SATA (6 3.0 Gb/s, 2 6.0 Gb/s)	6-port SATA (4 3.0 Gb/s, 2 6.0 Gb/s)
<b>SAS Options</b>	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter	8 integrated SAS ports, 6 Gb/s SAS via optional Intel® RAID Module / Adapter
<b>Integrated LAN</b>	2 Integrated Dual Port Intel® Ethernet Controllers I350 (1 GbE)	1 Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology2 (ESRT2) RAID levels 0, 1, 5, 10
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available

## NEW INTEL® SERVER BOARDS SUPPORTING THE INTEL® XEON® PROCESSOR E3-1200 V3 FAMILY

### ENTRY-LEVEL SERVER BOARDS FOR EASY AND AFFORDABLE SOLUTIONS

Single-socket server boards featuring the Intel® Xeon® processor E3-1200 v2 and E3-1200 v3 product family are a simple, yet powerful way for small businesses to get the server-level features they need, with Intel technology and support. 1U rack and 4U pedestal systems available for easy integration.

NEW



NEW



	Intel® Entry Server Board S1200V3RPL	Intel® Entry Server Board S1200V3RPS
<b>Product Name</b>	Intel® Entry Server Board S1200V3RPL	Intel® Entry Server Board S1200V3RPS
<b>Description</b>	Entry Server Board for pedestal integration with optional management capabilities	Lowest-cost entry Server Board with basic server features
<b>Target Market</b>	First server	First server
<b>Order Code</b>	<b>S1200V3RPL</b>	<b>S1200V3RPS</b>
<b>Form Factor</b>	MicroATX (9.6" x 9.6")	MicroATX (9.6" x 9.6")
<b>Intel® Server Chassis or System</b>	Intel® Server Chassis P4000 family Intel® Server System P4304RPL family	Intel® Server Chassis P4000 family Intel® Server System R1304RPS family
<b>Processor Support<sup>1</sup></b>	<b>1 Intel® Xeon® processor E3-1200 v3 product family</b>	<b>1 Intel® Xeon® processor E3-1200 v3 product family</b>
<b>Chipset</b>	Intel® C226 Chipset	Intel® C222 Chipset
<b>Total PCI Slots</b>	4+1	4
<b>PCI Slot Types</b>	2 x PCI Express* 3.0 x8 1 x PCI Express 2.0 x4 1 x PCI Express 2.0 x1 1 x internal mezzanine connector x8	2 x PCI Express* 3.0 x8 1 x PCI Express 2.0 x4 1 x PCI Express 2.0 x1
<b>Memory Capacity</b>	4 x LR / UDIMMs 1333 / 1600 ECC 32 GB max	4 x LR / UDIMMs 1333 / 1600 ECC 32 GB max
<b>SATA Ports</b>	6-port SATA (6 x 6.0 Gb/s)	6-port SATA (2 x 6.0 Gb/s)
<b>SAS Options</b>	Optional via mezzanine connector	N/A
<b>Integrated LAN</b>	Dual Integrated Intel® Ethernet Controller I210 (1 GbE)	Dual Integrated Intel® Ethernet Controller I210 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology 2 (0, 1, 5, and 10)	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology 2 (0, 1, 5, and 10)
<b>Module Upgrades</b>	Intel® Storage I/O Module Intel® Remote Management Module 4 Intel® Remote Management Module 4 Lite TPM Module	TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available

NEW



NEW



	Intel® Entry Server Board S1200V3RPO	Intel® Entry Server Board S1200V3RPM
<b>Product Name</b>	Intel® Entry Server Board S1200V3RPO	Intel® Entry Server Board S1200V3RPM
<b>Description</b>	Rack-optimized entry Server Board with maximum I/O expansion and optional management	Rack-optimized entry Server Board with maximum I/O expansion, where application needs processor graphics computation
<b>Target Market</b>	Small business, data center	Small business, data center
<b>Order Code</b>	<b>S1200V3RPO</b>	<b>S1200V3RPM</b>
<b>Form Factor</b>	MicroATX (9.6" x 9.6")	MicroATX (9.6" x 9.6")
<b>Intel® Server Chassis or System</b>	Intel® Server System R1208RPO family Intel® Server System R1304RPO family	Intel® Server System R1208RPM family
<b>Processor Support¹</b>	<b>1 Intel® Xeon® processor E3-1200 v3 product family</b>	<b>1 Intel® Xeon® processor E3-1200 v3 product family</b>
<b>Chipset</b>	Intel® C224 Chipset	Intel® C226 Chipset
<b>Total PCI Slots</b>	1+1	1+1
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x8 1 x internal or external mezzanine connector x8 OR 2 x mezzanine connectors x4	1 x PCI Express* 3.0 x8 1 x internal or external mezzanine connector x8 OR 2 x mezzanine connectors x4
<b>Memory Capacity</b>	4 x LR / UDIMMs 1333 / 1600 ECC 32 GB max	4 x LR / URDIMMs 1333 / 1600 ECC 32 GB max
<b>SATA Ports</b>	6-port SATA (4 x 6.0 Gb/s)	6-port SATA (6 x 6.0 Gb/s)
<b>SAS Options</b>	Optional via mezzanine connector	Optional via mezzanine connector
<b>Integrated LAN</b>	Dual Integrated Intel® Ethernet Controller I210 (1 GbE)	Dual Integrated Intel® Ethernet Controller I210 (1 GbE)
<b>Management Support</b>	Intel® Server Management Software Integrated BMC with IPMI 2.0	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology 2 (0, 1, 5, and 10)	Intel® Rapid Storage Technology (0, 1, 5, and 10 + JBOD) Intel® Embedded Server RAID Technology 2 (0, 1, 5, and 10)
<b>Module Upgrades</b>	Intel® I/O Module Intel® Storage I/O Module Intel® Remote Management Module 4 Intel® Remote Management Module 4 Lite TPM Module	Intel® I/O Module Intel® Storage I/O Module Intel® Remote Management Module 4 Intel® Remote Management Module 4 Lite TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available



Product Name	Intel® Entry Server Board S1200KP	Intel® Entry Server Board S1200BTS	Intel® Entry Server Board S1200BTL
<b>Description</b>	Sub-entry, mini-ITX server board for minimal footprint and lowest acquisition cost. Great for embedded applications requiring server performance.	Recommended first server where lowest price with reliability are key. Basic server features with room to grow.	Entry server board with management options expands deployment opportunities for remote access with low price point and basic server features.
<b>Target Market</b>	First server / embedded / storage	First server	First server / remote branch office
<b>Order Code</b>	<b>DBS1200KPR</b>	<b>S1200BTSR</b>	<b>S1200BTLR, S1200BTLRM for use with Intel® RAID Modules RMS25PB080/040, RMT3PB080, and RMS25KB080/040</b>
<b>Form Factor</b>	Mini-ITX (6.7" x 6.7")	MicroATX (9.6" x 9.6")	ATX (12" x 9.6")
<b>Intel® Server Chassis or System</b>	N/A	Intel® Server Chassis P4000S Intel® Server System R1304BTS family Intel® Server System P4304BTS family	Intel® Server Chassis P4000S Intel® Server System R1304BTL family Intel® Server System P4304BTL family
<b>Processor Support<sup>1</sup></b>	<b>1 Intel® Xeon® processor E3-1200 v2 product family</b>	<b>1 Intel® Xeon® processor E3-1200 v2 product family</b>	<b>1 Intel® Xeon® processor E3-1200 v2 product family</b>
<b>Chipset</b>	Intel® C206 Chipset	Intel® C202 Chipset	Intel® C204 Chipset
<b>Total PCI Slots</b>	1	4	5
<b>PCI Slot Types</b>	1 PCI Express* 2.0 x8 (x16 mechanical)	1 PCI Express* 3.0 x8 (x16 mechanical) 1 PCI Express 3.0 x8 (x8 mechanical) 1 PCI Express 3.0 x4 (x8 mechanical) 1 PCI 32-bit / 33 MHz (5 V)	1 PCI Express* 3.0 x8 (x16 mechanical) 3 PCI Express 3.0 x4 (x8 mechanical) 1 PCI 32-bit / 33 MHz (5 V) 1 Mezzanine connector—optional SAS module
<b>Memory Capacity</b>	2 DDR3 UDIMMs 1066 / 1333 MHz ECC 16 GB max	4 DDR3 UDIMMs 1066 / 1333 / 1600 MHz ECC 32 GB max	4 DDR3 UDIMMs 1066 / 1333 / 1600 MHz ECC 32 GB max
<b>SATA Ports</b>	4-port SATA (2 6.0 Gb/s, 2 3.0 Gb/s)	6-port SATA (6 3.0 Gb/s)	6-port SATA (2 6.0 Gb/s, 4 3.0 Gb/s)
<b>SAS Options</b>	N/A	N/A	Optional SAS or SAS RAID via I/O Expansion Modules
<b>Integrated LAN</b>	Intel® Dual Gigabit Controller 82574L and 82579	Intel® Dual-Gigabit Controllers 82574L and 82579	Intel® Dual-Gigabit Controllers 82574L and 82579
<b>Management Support</b>	Intel® Deployment Assistant only	Intel® Deployment Assistant only	Intel® Server Management Software Integrated BMC with IPMI 2.0
<b>Intel® RAID Support</b>	Intel® Rapid Storage Technology (0, 1, 5, and 10)	Intel® Rapid Storage Technology (0, 1, 5, and 10)	Intel® Rapid Storage Technology (0, 1, 5, and 10) Intel® Embedded Server RAID Technology (0, 1, and 10)
<b>Module Upgrades</b>	N/A	TPM Module	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module
<b>Warranty</b>	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available	3 year limited warranty, optional 2 year extended warranty available

For more information, visit [www.intel.com/go/serverboards](http://www.intel.com/go/serverboards) or [ark.intel.com](http://ark.intel.com)

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

<sup>2</sup> On interposer (need accessory kit AXXRMM4IOM or AXXRMM4IOMW).

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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## INTEL® COMPUTE MODULE HNS2600JF AND INTEL® SERVER CHASSIS H2000XXJR/KR

<b>Description</b>	Specifically designed for the HPC market, a high-density, four-node solution supporting optional QDR / FDR InfiniBand®, balancing optimal memory bandwidth and computing power to maximize price performance. (Extended life product.)
<b>Target Market</b>	IPDC / HPC embedded
<b>Supported Compute Modules</b> (Sold separately, chassis supports up to 4 total)	<b>4 x HNS2600JF:</b> No InfiniBand <b>4 x HNS2600JFF:</b> Integrated InfiniBand FDR (56 Gb/s) <b>4 x HNS2600JFQ:</b> Integrated InfiniBand QDR (40 Gb/s)
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family per module</b>
<b>Total PCI Slots</b>	3 per module
<b>PCI Slot Types</b>	4 x 3 PCI Express* 3.0 x16
<b>Memory Capacity</b>	4 x 8 LR / U / RDIMMs 1333 / 1600 ECC 256 GB max per module
<b>Module Upgrades</b>	Intel® I/O Module <sup>1</sup> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 <sup>1</sup>



### FOUR MODULE 2U RACK CHASSIS

Dimensions (H x W x D)	3.5" x 17.2" x 29.5"
System Cooling	3 x high-speed hot-swap redundant 40mm dual rotor fans per module
Power Supply	1200 W or 1600 W AC Common Redundant PSU (Platinum Efficiency)
Thermal Solution	Included with Compute Module
Other Components	Intel® System Management Software, iBMC with IPMI Optional SAS 6G upgrade kit
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC CHASSIS SKUS

<b>H2216XXJR</b>	16 x 2.5" hot-swap HDD 2 x 1200 W AC Common Redundant PSU
<b>H2216XXKR</b>	16 x 2.5" hot-swap HDD 2 x 1600 W AC Common Redundant PSU
<b>H2312XXJR</b>	12 x 3.5" hot-swap HDD 2 x 1200 W AC Common Redundant PSU
<b>H2312XXKR</b>	12 x 3.5" hot-swap HDD 2 x 1600 W AC Common Redundant PSU

*Note: Systems based on Intel® Server Boards S2600JF have been disaggregated to chassis and compute module. Module plus chassis pricing has changed to equate the original integrated system price.*

## INTEL® COMPUTE MODULE HNS2600WP AND INTEL® SERVER CHASSIS H2000XXJR/KR

<b>Description</b>	The ideal option for high-performance computing and data center deployment with maximum memory and I/O capability. Integrated QDR / FDR InfiniBand* available. (Extended life product.)
<b>Target Market</b>	IPDC / HPC embedded
<b>Supported Compute Modules</b> (Sold separately, chassis supports up to 4 total)	<b>4 x HNS2600WP:</b> No InfiniBand <b>4 x HNS2600WPF:</b> Integrated InfiniBand FDR (56 Gb/s) <b>4 x HNS2600WPQ:</b> Integrated InfiniBand QDR (40 Gb/s)
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family per module</b>
<b>Total PCI Slots</b>	4 per module
<b>PCI Slot Types</b>	4 x 4 PCI Express* 3.0 x16
<b>Memory Capacity</b>	4 x 16 LR / U / RDIMMs 1333 / 1600 ECC 512 GB max per module
<b>Module Upgrades</b>	Intel® I/O Module <sup>1</sup> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 <sup>1</sup>



## FOUR MODULE 2U RACK SYSTEMS

Dimensions (H x W x D)	3.5" x 17.2" x 29.5"
System Cooling	3 x high-speed hot-swap redundant 40mm dual rotor fans per module
Power Supply	1200 W or 1600 W AC Common Redundant PSU (Platinum Efficiency)
Thermal Solution	Included with Compute Module
Other Components	Intel® System Management Software, iBMC with IPMI Optional SAS 6G upgrade kit
Warranty	3 year limited warranty, optional 2 year extended warranty available

## SPECIFIC CHASSIS SKUS

<b>H2216XXJR</b>	16 x 2.5" hot-swap HDD 2 x 1200 W AC Common Redundant PSU
<b>H2216XXKR</b>	16 x 2.5" hot-swap HDD 2 x 1600 W AC Common Redundant PSU
<b>H2312XXJR</b>	12 x 3.5" hot-swap HDD 2 x 1200 W AC Common Redundant PSU
<b>H2312XXKR</b>	12 x 3.5" hot-swap HDD 2 x 1600 W AC Common Redundant PSU

*Note: Systems based on Intel® Server Boards S2600WP have been disaggregated to chassis and compute module. Module plus chassis pricing has changed to equate the original integrated system price.*



## INTEL® SERVER SYSTEMS R1000GZ AND R2000GZ BASED ON THE INTEL® S2600GL / GZ SERVER BOARDS

<b>Description</b>	Rack-optimized Server Systems deliver unmatched memory capacity, performance, I/O capacity, and flexibility in an expansive family of 1U and 2U systems for the most demanding enterprise data center, cloud, or HPC environments. (Extended life product.)
<b>Target Market</b>	Data center / cloud
<b>Server Board Included</b>	<b>S2600GL4:</b> 16 DIMM and 4 x 1 Gb ethernet ports <b>S2600GZ4:</b> 24 DIMM and 4 x 1 Gb ethernet ports
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family</b>
<b>Total PCI Slots</b>	2
<b>PCI Slot Types</b>	2 x PCI Express Gen3 x24 Riser Slots
<b>Memory Capacity</b>	16 or 24 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 or 768 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module



## 1U RACK SYSTEMS

Dimensions (H x W x D)	1.75" x 16.93" x 27.95"
System Cooling	Redundant cooling fans
Power Supply	460 W AC Redundant PSU (Gold Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
PCI Riser Slots	1x PCI Express* x16, x16 mechanical
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

## SPECIFIC SKUS

<b>R1208GL4DS</b>	8 x 2.5" hot-swap HDD 16 DIMM 460 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R1208GZ4GC</b>	8 x 2.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R1208GZ4GS9</b>	8 x 2.5" hot-swap HDD 24 DIMM 750 W AC Redundant PSU
<b>R1304GL4DS9</b>	4 x 3.5" hot-swap HDD 16 DIMM 460 W AC Redundant PSU
<b>R1304GZ4GC</b>	4 x 3.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Intel® Remote Management Module 4
<b>R1304GZ4GS9</b>	4 x 3.5" hot-swap HDD 24 DIMM 750 W AC Redundant PSU

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INTEL® SERVER SYSTEMS R1000GZ AND R2000GZ BASED ON THE INTEL® S2600GL / GZ SERVER BOARDS *continued*

**2U RACK SYSTEMS**

Dimensions (H x W x D)	3.44" x 16.93" x 27.95"
System Cooling	Redundant cooling fans
Power Supply	750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
PCI Riser Slots	2 x PCI Express* x8, x16 mechanical, 1 x8, x8 mechanical 1 x PCI Express x16, x16 mechanical, 1 x8, x8 mechanical 2 x PCIx 133 MHz, 1 PCIe x8, x8 mechanical
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>R2208GL4GS</b>	8 x 2.5" hot-swap HDD 16 DIMM 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2208GZ4GC</b>	8 x 2.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2208GZ4GS9</b>	8 x 2.5" hot-swap HDD 24 DIMM 750 W AC Redundant PSU
<b>R2216GZ4GC</b>	16 x 2.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Software RAID Key RKSAS8 Intel® RAID Expander RES2CV240 24-port Intel® Remote Management Module 4
<b>R2224GZ4GC4</b>	24 x 2.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Intel® Remote Management Module 4

**SPECIFIC SKUS**

<b>R2308GL4GS</b>	8 x 3.5" hot-swap HDD 16 DIMM 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2308GZ4GC</b>	8 x 3.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2308GZ4GS9</b>	8 x 3.5" hot-swap HDD 24 DIMM 750 W AC Redundant PSU
<b>R2312GL4GS</b>	12 x 3.5" hot-swap HDD 16 DIMM 750 W AC Redundant PSU Intel® Remote Management Module 4
<b>R2312GZ4GC4</b>	12 x 3.5" hot-swap HDD 24 DIMM 2 x 750 W AC Redundant PSU Intel® Remote Management Module 4
<b>R2312GZ4GS9</b>	12 x 3.5" hot-swap HDD 24 DIMM 750 W AC Redundant PSU

## INTEL® SERVER SYSTEMS R2000IP AND P4000IP BASED ON THE INTEL® SERVER BOARD S2600IP

<b>Description</b>	Provides unsurpassed I/O capacity by exposing all 80 PCI Express* Gen3 lanes available in the chipset to offer 8 single-width or 4 double-width card support with a full range of SAS RAID and I/O expansion options for the ultimate in flexibility. (Extended life product.)
<b>Target Market</b>	Enterprise / storage
<b>Server Board Included</b>	<b>S2600IP4:</b> 16 DIMM and 4 x 1 Gb ethernet ports
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family</b>
<b>Total PCI Slots</b>	8+2
<b>PCI Slot Types</b>	1 x PCI Express 3.0 x16 3 x PCI Express 3.0 x8 or x0 3 x PCI Express 3.0 x8 or x16 1 x PCI Express 2.0 x4 1 x PCI Express 2.0 x4 via SAS ROC module 1 x PCI Express 1.0 x8 via I/O expansion module
<b>Memory Capacity</b>	16 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module

## 2U RACK SYSTEMS

Dimensions (H x W x D)	3.44" x 16.93" x 27.95"
System Cooling	Redundant cooling fans
Power Supply	750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

## SPECIFIC SKUS

<b>R2208IP4LHPC</b>	8 x 2.5" hot-swap HDD 2 x 750 W AC Redundant PSU Software RAID Key RKSAS8 Intel® Remote Management Module 4
<b>R2308IP4LHPC</b>	8 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2312IP4LHPC</b>	12 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Intel® RAID Expander RES2SV240 Intel® Integrated RAID Module RMS25CB080 Intel® Remote Management Module 4

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## INTEL® SERVER SYSTEMS R2000IP AND P4000IP BASED ON THE INTEL® SERVER BOARD S2600IP *continued*

### 4U PEDESTAL SYSTEMS

Dimensions (H x W x D)	17.24" x 6.81" x 26.9"
System Cooling	Redundant cooling fans
Power Supply	1200 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC SKUS

<b>P4216IP4LHJC</b>	16 x 2.5" hot-swap HDD 2 x 1200 W AC Redundant PSU Software RAID Key RKSAS8
<b>P4308IP4LHJC</b>	8 x 3.5" hot-swap HDD 2 x 1200 W AC Redundant PSU Software RAID Key RKSATA8

## INTEL® SERVER SYSTEMS P4000CP BASED ON THE INTEL® SERVER BOARD S2600CP

<b>Description</b>	Integrated system with a variety of storage and power supply options for powerful performance and flexible feature advantages specific to the small and medium business and storage segments. (Extended life product.)
<b>Target Market</b>	Small- to medium-sized businesses
<b>Server Board Included</b>	<b>S2600CP4:</b> Quad 1 GbE Ethernet Controllers
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family</b>
<b>Total PCI Slots</b>	6
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x16 5 x PCI Express 3.0 x8
<b>Memory Capacity</b>	16 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 512 GB max
<b>Module Upgrades</b>	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module

**4U PEDESTAL SYSTEMS**

Dimensions (H x W x D)	17.24" x 6.81" x 24.9"
System Cooling	Non-redundant or redundant cooling fans
Power Supply	550 W AC Fixed PSU (Gold Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Hardware RAID Controller RMS25PB080 provides 6 Gb/s to enable 8 SAS / SATA drives Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>P4308CP4MHEN</b>	8 x 3.5" hot-swap HDD 550 W AC Fixed PSU Non-redundant cooling fans Software RAID Key RKSATA8
<b>P4308CP4MHGC</b>	8 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Redundant cooling fans Software RAID Key RKSATA8

## INTEL® SERVER SYSTEMS R1000JP BASED ON THE INTEL® SERVER BOARD S1600JP

<b>Description</b>	Systems featuring a performance, single-socket, half-width board, rich in I/O (40 Gen3 lanes) for a streamlined 1U rack mount server presentation. (Extended life product.)
<b>Target Market</b>	Embedded / storage / small- to medium-sized businesses
<b>Server Board Included</b>	<b>S1600JP4:</b> Integrated Quad 1 GbE Ethernet Controllers
<b>Processors Supported</b>	<b>1 x Intel® Xeon® processor E5-2600 product family or Intel® Xeon® processor E5-1600 product family</b>
<b>Total PCI Slots</b>	3
<b>PCI Slot Types</b>	2 x PCI Express* 3.0 x16 1 x PCI Express 3.0 x8
<b>Memory Capacity</b>	8 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 256 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4



### 1U RACK SYSTEMS

Dimensions (H x W x D)	1.75" x 17.2" x 24.75"
System Cooling	Redundant cooling fans
Power Supply	450 W DC Redundant PSU, 450 W AC Redundant PSU (Gold Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC SKUS

<b>R1208JP40C</b>	8 x 2.5" hot-swap HDD 2 x 450 W AC Redundant PSU
<b>R1208JP4TC</b>	8 x 2.5" hot-swap HDD 2 x 450 W DC Redundant PSU
<b>R1208JP4GS</b>	8 x 2.5" hot-swap HDD 750 W AC Redundant PSU
<b>R1304JP40C</b>	4 x 3.5" hot-swap HDD 2 x 450 W AC Redundant PSU
<b>R1304JP4TC</b>	4 x 3.5" hot-swap HDD 2 x 450 W DC Redundant PSU
<b>R1304JP4GS</b>	4 x 3.5" hot-swap HDD 750 W AC Redundant PSU

## INTEL® WORKSTATION SYSTEMS P4000CR BASED ON THE INTEL® WORKSTATION BOARD W2600CR

<b>Description</b>	These workstation systems balance the need for computational power with I/O capacity and flexibility to deliver amazing application performance.
<b>Target Market</b>	Data-intensive applications
<b>Workstation Board Included</b>	<b>W2600CR2:</b> up to 4 double-wide graphics cards
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2600 product family</b>
<b>Total PCI Slots</b>	8+2
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x16 3 x PCI Express 3.0 x8 or x0 3 x PCI Express 3.0 x8 or x16 1 x PCI Express 2.0 x4 1 x PCI Express 2.0 x4 via SAS ROC module 1 x PCI Express 1.0 x8 via I/O expansion module
<b>Memory Capacity</b>	16 x LR / U / RDIMMs 1333 / 1600 MHz ECC DDR3 512 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module

**4U PEDESTAL SYSTEMS**

Dimensions (H x W x D)	17.24" x 6.81" x 26.9"
System Cooling	Non-redundant cooling fans
Power Supply	1600 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Hardware RAID Controller RMS25PB080 provides 6 Gb/s to enable 8 SAS / SATA drives Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>P4304CR2LFKN</b>	4 x 3.5" fixed HDD 1600 W AC Redundant PSU
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## INTEL® SERVER SYSTEMS R2000LH2 / LT2 BASED ON THE INTEL® SERVER BOARD S4600LH

<b>Description</b>	The uncompromising performance and high reliability server of choice for demanding applications, featuring support for 4 Intel® Xeon® processor E5-4600 and massive memory capacity of 1.5 TB. (Extended life product.)
<b>Target Market</b>	Enterprise / HPC
<b>Server Board Included</b>	<b>S4600LH2:</b> Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE) <b>S4600LT2:</b> Integrated Dual Port Intel® Ethernet Controller X540 (10 GbE)
<b>Processors Supported</b>	<b>4 x Intel® Xeon® processors E5-4600 product family</b>
<b>Total PCI Slots</b>	6+2
<b>PCI Slot Types</b>	6 x PCI Express* 3.0 x16 2 x PCI Express 3.0 x8 via I/O expansion module
<b>Memory Capacity</b>	48 x LR / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 1500 GB max
<b>Module Upgrades</b>	Intel® I/O Module: Ethernet and InfiniBand* Intel® Integrated RAID ROC or IOC Module (in PCI Express FF) Intel® Remote Management Module 4 (included) TPM Module
<b>Additional Board Options</b>	eUSB SSD, SATA DOM, and mSATA support (for internal keys and boot)



## 2U RACK SYSTEMS

Dimensions (H x W x D)	3.43" x 17.24" x 28"
System Cooling	11 x high-speed hot-swap redundant 40mm dual rotor fans
Power Supply	1600 W AC Common Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Intel® Remote Management Module 4 Optional optical disk drive Optional Local Control Panel
Warranty	3 year limited warranty, optional 2 year extended warranty available

## SPECIFIC SKUS

<b>R2208LT2HKC4</b>	8 x 2.5" hot-swap HDD Hardware RAID Controller RMS25PB080 provides 6 Gb/s to enable 8 SAS / SATA drives Integrated Dual Port Intel® Ethernet Controller X540 (10 GbE) 2 x 1600 W AC Common Redundant PSU Intel® Remote Management Module 4
<b>R2304LH2HKC</b>	4 x 3.5" hot-swap HDD Integrated Dual Port Intel® Ethernet Controller I350 (1 GbE) 2 x 1600 W AC Common Redundant PSU Intel® Remote Management Module 4

## INTEL® SERVER SYSTEMS R1000SP BASED ON THE INTEL® SERVER BOARD S1400SP

<b>Description</b>	Built for entry-level affordability, this single-socket rack system provides real server performance at a low cost, making it an ideal embedded, data center, and storage solution building block. (Extended life product.)
<b>Target Market</b>	Embedded
<b>Server Board Included</b>	<b>S1400SP2:</b> Integrated Dual 1 GbE Ethernet Controllers <b>S1400SP4:</b> Integrated Quad 1 GbE Ethernet Controllers
<b>Processors Supported</b>	<b>1 x Intel® Xeon® processor E5-2400 product family</b>
<b>Total PCI Slots</b>	1+1+1
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x8 1 x PCI Express 3.0 x4 via I/O expansion module 1 x PCI Express 3.0 x8 via I/O expansion module
<b>Memory Capacity</b>	6 x R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 96 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module



### 1U RACK SYSTEMS

Dimensions (H x W x D)	1.7" x 17.2" x 21.8"
System Cooling	Non-redundant cooling fans
Power Supply	350 W AC Fixed PSU (Silver Efficiency), 450 W AC Redundant Power Supply (Gold Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC SKUS

<b>R1304SP2SHBN</b>	4 x 3.5" hot-swap HDD Intel® S1400SP2 Server Board with Integrated Dual 1 GbE Ethernet Controllers 350 W AC Fixed PSU
<b>R1304SP4SHOC</b>	4 x 3.5" hot-swap HDD Intel® S1400SP4 Server Board with Integrated Quad 1 GbE Ethernet Controllers 2 x 450 W AC Redundant PSU

## INTEL® SERVER SYSTEMS R1000EP BASED ON THE INTEL® SERVER BOARD S2400EP

<b>Description</b>	Designed for high-density rack-optimized deployments, either in value data centers or embedded applications. (Extended life product.)
<b>Target Market</b>	Embedded
<b>Server Board Included</b>	<b>S2400EP2:</b> Dual 1 GbE Ethernet Controllers
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2400 product family</b>
<b>Total PCI Slots</b>	1+1+1
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x16 1 x PCI Express 3.0 x8 via I/O expansion module 1 x PCI Express 3.0 x4 via I/O expansion module
<b>Memory Capacity</b>	8 x LV / R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 128 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module



### 1U RACK SYSTEMS

Dimensions (H x W x D)	1.7" x 17.2" x 21.8"
System Cooling	Non-redundant cooling fans
Power Supply	600 W AC Fixed PSU (Silver Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC SKUS

<b>R1304EP2SHFN</b>	4 x 3.5" hot-swap HDD 600 W AC Fixed PSU
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## INTEL® SERVER SYSTEMS R1000BB AND R2000BB BASED ON THE INTEL® SERVER BOARD S2400BB

<b>Description</b>	Innovative spread core design makes this the high-density and energy-efficient choice for data center and cloud applications where return on investment is measured in price and performance-per-watt. (Extended life product.)
<b>Target Market</b>	IPDC / cloud
<b>Server Board Included</b>	<b>S2400BB4:</b> 12 DIMM and 4 x 1 Gb ethernet ports
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5 2400 product family</b>
<b>Total PCI Slots</b>	8+1
<b>PCI Slot Types</b>	2 x PCI Express* 3.0 x16 6 x PCI Express 3.0 x8 1 x PCI Express 2.0 x8 via I/O expansion module
<b>Memory Capacity</b>	12 x LR / U / RDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 384 GB max
<b>Module Upgrades</b>	Intel® I/O Module Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module

**1U RACK SYSTEMS**

Dimensions (H x W x D)	1.75" x 17.2" x 24.75"
System Cooling	Redundant cooling fans
Power Supply	460 W AC Redundant PSU (Gold Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>R1208BB4DC</b>	8 x 2.5" hot-swap HDD 2 x 460 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R1304BB4DC</b>	4 x 3.5" hot-swap HDD 2 x 460 W AC Redundant PSU Intel® Remote Management Module 4
<b>R1208BB4GS9</b>	8 x 2.5" hot-swap HDD 750 W AC Redundant PSU
<b>R1304BB4GS9</b>	4 x 3.5" hot-swap HDD 750 W AC Redundant PSU

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INTEL® SERVER SYSTEMS R1000BB AND R2000BB BASED ON THE INTEL® SERVER BOARD S2400BB *continued*

**2U RACK SYSTEMS**

Dimensions (H x W x D)	3.5" x 17.2" x 24.75"
System Cooling	Redundant cooling fans
Power Supply	750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>R2208BB4GS9</b>	8 x 2.5" hot-swap HDD 750 W AC Redundant PSU
<b>R2308BB4GC</b>	8 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Software RAID Key RKSATA8 Intel® Remote Management Module 4
<b>R2312BB4GS9</b>	12 x 3.5" hot-swap HDD 750 W AC Redundant PSU

## INTEL® SERVER SYSTEMS R2000SC AND P4000SC BASED ON THE INTEL® SERVER BOARD S2400SC

<b>Description</b>	Expanded I/O for demanding first server environments makes this an ideal choice for small businesses seeking to maximize ROI while delivering affordable server-level performance.
<b>Target Market</b>	Medium business / RBO
<b>Server Board Included</b>	<b>S2400SC</b>
<b>Processors Supported</b>	<b>2 x Intel® Xeon® processors E5-2400 product family</b>
<b>Total PCI Slots</b>	4+1
<b>PCI Slot Types</b>	1 x PCI Express* 3.0 x16 1 x PCI Express 3.0 x8 1 x PCI Express 3.0 x4 1 x PCI Express 2.0 x4 1 x Legacy 32/33 PCI slot
<b>Memory Capacity</b>	8 x LV / R / U / DIMMs 1066 / 1333 / 1600 MHz ECC DDR3 128 GB max
<b>Module Upgrades</b>	Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module

**2U RACK SYSTEMS**

Dimensions (H x W x D)	3.5" x 17.2" x 24.75"
System Cooling	Non-redundant cooling fans
Power Supply	600 W AC Fixed PSU (Silver Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>R2308SC2SHFN</b>	8 x 3.5" hot-swap HDD 600 W AC Fixed PSU
<b>R2312SC2SHGR</b>	12 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Power Distribution Board Intel® Remote Management Module 4 Software RAID Key RKSATA8

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INTEL® SERVER SYSTEMS R2000SC AND P4000SC BASED ON THE INTEL® SERVER BOARD S2400SC *continued*

**4U PEDESTAL SYSTEMS**

Dimensions (H x W x D)	17.24" x 6.81" x 21.5" or 17.24" x 6.81" x 24.9"
System Cooling	Non-redundant or redundant cooling fans
Power Supply	550 W AC Fixed PSU (Silver Efficiency), 750 W AC Redundant PSU (Platinum Efficiency)
Thermal Solution	Included
Other Components	Includes Intel® System Management Software, iBMC with IPMI Optional optical disk drive
Warranty	3 year limited warranty, optional 2 year extended warranty available

**SPECIFIC SKUS**

<b>P4304SC2SFEN</b>	4 x 3.5" fixed HDD 550 W AC Fixed PSU Non-redundant cooling fans 17.24" x 6.81" x 21.5" P4000S chassis
<b>P4308SC2MHGC</b>	8 x 3.5" hot-swap HDD 2 x 750 W AC Redundant PSU Redundant cooling fans Power Distribution Board Intel® Remote Management Module 4 17.24" x 6.81" x 24.9" P4000M chassis



## INTEL® SERVER SYSTEMS R1000RP AND P4000RP BASED ON THE INTEL® SERVER BOARD

<b>Description</b>	Entry Server systems with management options expand deployment opportunities with low price point and basic server features.
<b>Target Market</b>	First server
<b>Server Board Included</b>	<b>S1200RPS:</b> Lowest cost with basic server features <b>S1200RPL:</b> Pedestal solution with optional management <b>S1200RPO:</b> Rack Optimized to support IOM and Storage Modules <b>S1200RPM:</b> Can support processors with GT2 graphics
<b>Processors Supported</b>	<b>Intel® Xeon® processor E3-1200v3 product family</b>
<b>Total PCI Slots</b>	4
<b>PCI Slot Types</b>	<b>S1200RPS:</b> 2 x PCI Express* 3.0 x8, 1 x PCI Express 2.0 x4, 1 x PCI Express 2.0 x1 <b>S1200RPL:</b> 2 x PCI Express 3.0 x8, 1 x PCI Express 2.0 x4, 1 x PCI Express 2.0 x1, 1 x internal mezzanine connector x8 <b>S1200RPO:</b> 1 x PCI Express 3.0 x8, 1 x internal or external mezzanine connector x8 OR 2 x mezzanine connectors x4 <b>S1200RPM:</b> 1 x PCI Express 3.0 x8, 1 x internal or external mezzanine connector x8 OR 2 x mezzanine connectors x4
<b>Memory Capacity</b>	4 x DDR3 UDIMMs 1333 / 1600 ECC 32 GB max
<b>Module Upgrades</b>	<b>S1200RPS:</b> TPM Module <b>S1200RPL:</b> Intel® Storage I/O slot, Intel® Remote Management Module 4, TPM Module <b>S1200RPO / S1200RPM:</b> Intel I/O Modules, Intel® Storage I/O slot, Intel® Remote Management Module 4, TPM Module

## 1U RACK SYSTEMS

Dimensions (H x W x D)	1.75" x 17.24" x 21.8"
System Cooling	Non-redundant cooling fans
Power Supply	450 W Redundant or 350 W Fixed PSU (Silver Efficiency)
Thermal Solution	Sold separately
Other Components	Optional optical disk drive
Warranty	3 year limited warranty

## SPECIFIC SKUS

<b>R1304RPSSFBN</b>	4 x 3.5" fixed HDD Intel® Server Board S1200RPS 350 W Fixed PSU
<b>R1304RPOSHBN</b>	4 x 3.5" hot-swap HDD Intel® Server Board S1200RPO 350 W Fixed PSU
<b>R1304RPMSHOR</b>	4 x 3.5" hot-swap HDD Intel® Server Board S1200RPM 2 x 450 W hot-swap Redundant PSU
<b>R1208RPOSHOR</b>	8 x 2.5" hot-swap HDD Intel® Server Board S1200RPO 2 x 450 W hot-swap Redundant PSU
<b>R1208RPMSHOR</b>	8 x 2.5" hot-swap HDD Intel® Server Board S1200RPM 2 x 450 W hot-swap Redundant PSU

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INTEL® SERVER SYSTEMS R1000RP AND P4000RP BASED ON THE INTEL® SERVER BOARD S1200V3RP *continued*

## 4U PEDESTAL SYSTEMS

Dimensions (H x W x D)	17.24" x 6.9" x 21.5"
System Cooling	Non-redundant cooling fans
Power Supply	460 W hot-swap PSU (Silver Efficiency)
Thermal Solution	Sold separately
Other Components	Optional optical disk drive
Warranty	3 year limited warranty

## SPECIFIC SKUS

<b>P4308RPLSHDR</b>	8 x 3.5" hot-swap HDD Intel® Server Board S1200RPL 2 x 460 W hot-swap Redundant PSU
<b>P4304XXSFCN</b>	KDK
<b>P4304XXSHCN</b>	KDK

## INTEL® SERVER SYSTEMS R1000BT AND P4000BT BASED ON THE INTEL® SERVER BOARDS S1200BTL / BTS

<b>Description</b>	Low-priced, entry-level server systems featuring the Intel® Xeon® processor E3 product family expand deployment opportunities for first server customers. Optional server management on some models.
<b>Target Market</b>	First server
<b>Server Board Included</b>	<b>S1200BTSR:</b> no management <b>S1200BTLR:</b> Intel® System Management Software, iBMC with IPMI
<b>Processors Supported</b>	<b>1 x Intel® Xeon® processor E3-1200 / E3-1200 v2 product family / Intel® Core™ i3 processor series</b>
<b>Total PCI Slots</b>	4 or 5
<b>PCI Slot Types</b>	<b>S1200BTSR:</b> 1 x PCI Express* 3.0 x8, 1 x PCI Express 3.0 x8 (x8 mechanical), 1 x PCI Express 3.0 x4 (x8 mechanical), 1 x PCI 32-bit / 33 MHz (5 V) <b>S1200BTLR:</b> 1 x PCI Express 3.0 x8 (x16 mechanical), 3 x PCI Express 3.0 x4 (x8 mechanical), 1 x PCI 32-bit / 33 MHz (5 V), 1 x Mezzanine connector—optional SAS module
<b>Memory Capacity</b>	4 x DDR3 UDIMMs 1066 / 1333 / 1600 MHz ECC DDR3 32 GB max
<b>Module Upgrades</b>	<b>S1200BTSR:</b> TPM Module <b>S1200BTLR:</b> Intel® Integrated RAID ROC or IOC Module Intel® Remote Management Module 4 TPM Module



### 1U RACK SYSTEMS

Dimensions (H x W x D)	1.75" x 17.24" x 21.8"
System Cooling	Non-redundant cooling fans
Power Supply	250 W or 350 W AC Fixed PSU (Silver Efficiency)
Thermal Solution	Sold separately
Other Components	Optional optical disk drive
Warranty	3 year limited warranty

### SPECIFIC SKUS

<b>R1304BTSSFANR</b>	4 x 3.5" fixed HDD Intel® Server Board S1200BTSR 250 W AC Fixed PSU
<b>R1304BTLSFANR</b>	4 x 3.5" fixed HDD Intel® Server Board S1200BTLR 250 W AC Fixed PSU
<b>R1304BTLSHBNR</b>	4 x 3.5" hot-swap HDD Intel® Server Board S1200BTLR 350 W AC Fixed PSU

### 4U PEDESTAL SYSTEMS

Dimensions (H x W x D)	17.24" x 6.9" x 21.5"
System Cooling	Non-redundant cooling fans
Power Supply	365 W AC Fixed PSU (Silver Efficiency)
Thermal Solution	Sold separately
Other Components	Optional optical disk drive
Warranty	3 year limited warranty

### SPECIFIC SKUS

<b>P4304BTSSFCNR</b>	4 x 3.5" fixed HDD Intel® Server Board S1200BTSR
<b>P4304BTLSFCNR</b>	4 x 3.5" fixed HDD Intel® Server Board S1200BTLR
<b>P4304BTLSHCNR</b>	4 x 3.5" hot-swap HDD Intel® Server Board S1200BTLR

For more information, visit [www.intel.com/go/serversystems](http://www.intel.com/go/serversystems) or [ark.intel.com](http://ark.intel.com)

<sup>1</sup> On interposer (need accessory kit AXXRMM4IOM or AXXRMM4IOMw).

<sup>2</sup> Model available with TPM-enabled board supporting Intel® Trusted Execution Technology (Intel® TXT). No computer system can provide absolute security under all conditions. Intel TXT requires a computer system with Intel® Virtualization Technology, an Intel TXT-enabled processor, chipset, BIOS, Authenticated Code Modules, and an Intel TXT-compatible measured launched environment (MLE). Intel TXT also requires the system to contain a TPM v1.s. For more information, visit [www.intel.com/technology/security](http://www.intel.com/technology/security)

<sup>3</sup> High efficiency power supply.

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

## INTEL® STORAGE SYSTEMS

**Description** A flexible and expandable storage system with single- and multi-cable connectivity, redundant fans, and options for redundant power supplies simplifies your server configuration. Features 12 x 3.5" drives or 24 x 2.5" drives and works seamlessly with Intel® Servers and Intel® RAID for a complementary storage solution. Up to 48 TB storage capacity possible. Cascading up to 2 levels. (Extended life product.)

**Target Market** Enterprise / storage



### 2U RACK SYSTEMS

Dimensions (H x W x D)	3.44" x 16.93" x 27.95"
System Cooling	Redundant cooling fans
Power Supply	460 W Redundant PSU (Gold Efficiency)
Other Components	Dual-port backplane for full redundancy Single or redundant SAS/SATA 6.0 Gb/s via SFF-8088 connection Fan and PSU monitoring via SES
Warranty	3 year limited warranty, optional 2 year extended warranty available

### SPECIFIC SKUS

<b>JBOD2312S2SP</b>	12 x 3.5" hot-swap HDD 36-port SAS expander 460 W AC PSU 2 x external SFF-8088 connectors
<b>JBOD2224S2SP</b> (Available late Q3 2013)	24 x 2.5" hot-swap HDD 36-port SAS expander 460 W AC PSU 2 x external SFF-8088 connectors
<b>JBOD2224S2DP</b>	24 x 2.5" hot-swap HDD 2 x 36-port SAS expander 2 x 460 W AC PSU 4 x external SFF-8088 connectors

The Intel® Storage System JBOD2000 product family works seamlessly with Intel® Server Systems and Intel® RAID and can even be used as a virtual RBOD by using Intel® RAID Controller RS25SB008 or an Intel® Intelligent RAID module. Combine with Intel® Solid-State Drives using Intel® SSD Cache Technology, or set up a network using a SAS switch to serve multiple servers. With several configuration options available, it is a flexible and expandable storage system that simplifies your server environment.

For the latest product SKUs and specifications, visit: <http://ark.intel.com>

For more information, visit [www.intel.com/go/serverproducts](http://www.intel.com/go/serverproducts)

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# Intel® Server Chassis

New Intel® Server Chassis P4000 series requires the separate purchase of a thermal solution kit and air duct specific to the Intel® Server Board selected. See the Accessories and Spares section of the chosen Intel Server Board configuration guide for recommended part numbers.

Other boxed Intel® Thermal Solutions are mechanically compatible with the processor socket but are not thermally validated in Intel Server Chassis.



Chassis		Intel® Server Chassis P4000S	
A general purpose pedestal chassis optimized for thermal and acoustic performance.			
<b>Model</b>	Fixed drive models	Hot-swap drive models	
<b>Chassis Order Code<sup>1</sup></b>	<b>P4304XXSFCN, P4304XXSFEN</b>	<b>P4304XXSHCN, P4304XXSHDR</b>	
<b>Spares Kit Order Code<sup>2</sup></b>	Mechanical Spares Kit: FUPSMSK Electrical Spares Kit: FUPSESK Air ducts sold separately based on board purchased	Mechanical Spares Kit: FUPSMSK Electrical Spares Kit: FUPSESK Air ducts sold separately based on board purchased	
<b>Form Factor</b>	4U Pedestal	4U Pedestal	
<b>Intel® Server Board Support<sup>1</sup></b>	<b>P4304XXSFCN:</b> S1200BTS, S1200BTL, S1200V3RPL, S1200V3RPS, S2600CP2] <b>P4304XXSFEN:</b> S2400SC2, S2600CP2]	<b>P4304XXSHCN:</b> S1200BTL, S1200V3RPL, S1200V3RPS, S2600CP2] <b>P4304XXSHDR:</b> S2400SC2, S2600CP2], all S1400FP	
<b>Drive Bays</b>	Up to four 3.5" fixed SAS / SATA drives	Up to four 3.5" hot-swap SAS / SATA drives	
<b>Hot-Swap Disk Drive Bay (Order Code)</b>	Upgrade: convert to four slot hot-swap drive bays using the following Drive Bay upgrade kit: (FUP4X35HSDK), supports four SAS / SATA hot-swap drives	Share the same hot-swap drive bay kit (FUP4X35HSDK), use as a spare	
<b>System Cooling</b>	2 x 92mm internal chassis fan (single fan in P4304XXSFCN)	2 x 92mm internal chassis fan (single fan in P4304XXSHCN)	
<b>Power Supplies</b>	P4304XXSFCN: (1) Fixed 365 W (Silver Efficiency) P4304XXSFEN: (1) Fixed 550 W (Silver Efficiency)	P4304XXSHCN: (1) Fixed 365 W (Silver Efficiency) P4304XXSHDR: (2) Common Redundant 460 W (Gold Efficiency)	
<b>I/O Slots</b>	Up to 6	Up to 6	
<b>Backplane</b>	None included	Included	
<b>Tool-less Features</b>	Front bezel, EMI cover, side cover, PCI card retainer, peripheral bays, PSU installation, and fixed drive carriers	Front bezel, side cover, PCI card retainer, hot-swap drive carriers, hot-swap drive bay, peripheral bays, and PSU installation	
<b>Dimensions (H x W x D)</b>	Pedestal: 17.24" x 6.81" x 21.5" (438mm x 173mm x 546mm)	Pedestal: 17.24" x 6.81" x 21.5" (438mm x 173mm x 546mm)	
<b>Bezel Features</b>	Black, control panel, three 5.25" peripheral drive bays, four internal drive bays, two USB ports	Black, control panel, three 5.25" peripheral drive bays, four hot-swap drive bays and carriers (behind door), security lock, two USB ports	
<b>Front Connectors</b>	2 x USB	2 x USB	
<b>System Security</b>	Side cover: A padlock loop slot available at the rear of the system access cover to prevent access to the processors, memory, and add-in devices Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole	Front door: Security lock (available on hot-swap drive SKUs only) Side cover: A padlock loop slot available at the rear of the system access cover to prevent access to the processors, memory, and add-in devices Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole	





Chassis

Intel® Server Chassis P4000M

A general purpose pedestal chassis targeted at small to medium business supporting CEB and EEB form factor server boards.

Model	Fixed drive models	Hot-swap drive models
Chassis Order Code <sup>1</sup>	<b>P4308XXMFEN</b>	<b>P4208XXMHGC, P4216XXMHGC, P4216XXMHJC, P4308XXMHDR, P4308XXMHEN, P4308XXMHGC, P4308XXMHGN,</b>
Spares Kit Order Code <sup>2</sup>	Mechanical Spares Kit: FUPMMSK Electrical Spares Kit: FUPMESK Air ducts sold separately based on board purchased	Mechanical Spares Kit: FUPMMSK Electrical Spares Kit: FUPMESK Air ducts sold separately based on board purchased
Form Factor	4U Pedestal	4U Pedestal
Intel® Server Board Support <sup>1</sup>	<b>P4308XXMFEN:</b> all S2600CP, all S2600CO, all S2400GP, S2400SC2	<b>P4208XXMHGC, P4216XXMHGC, P4308XXMHDR, P4308XXMHEN, P4308XXMHGC, P4308XXMHGN:</b> all S2600CP, all S2600CO, all S2400GP, S2400SC2 <b>P4216XXMHJC:</b> all S2600CP, all S2600CO, all S2400GP
Drive Bays	Up to eight 3.5" fixed SAS / SATA drives	Up to eight or sixteen 2.5" hot-swap SAS / SATA drives Up to eight 3.5" hot-swap SAS / SATA drives
Hot-Swap Disk Drive Bay (Order Code)	Upgrade: convert to eight slot hot-swap drive bays using the following Drive Bay upgrade kit: (FUP8X25HSDK), supports eight SAS / SATA hot-swap drives	Share the same hot-swap drive bay kit (FUP8X25HSDK), use as spare
System Cooling	2 x 120mm internal chassis fan	2 x 120mm internal chassis fan Redundant Cooling on: P4208XXMHGC, P4216XXMHGC, P4216XXMHJC, P4308XXMHGC
Power Supplies	P4308XXMFEN: (1) Fixed 550 W (Silver Efficiency) No redundant PSU	P4208XXMHGC: (2) Common Redundant 750 W (Platinum Efficiency) P4216XXMHGC: (2) Common Redundant 750 W (Platinum Efficiency) P4216XXMHJC: (2) Common Redundant 1200 W (Platinum Efficiency) P4308XXMHDR: (2) Common Redundant 460 W (Gold Efficiency) P4308XXMHEN: (1) Fixed 550 W (Silver Efficiency) No redundant PSU P4308XXMHGC: (2) Common Redundant 750 W (Platinum Efficiency) P4308XXMHGN: (1) Common Redundant 750 W (Platinum Efficiency)
I/O Slots	Up to 6	Up to 6
Backplane	None included	Included
Tool-less Features	Front bezel, EMI cover, side cover, PCI card retainer, peripheral bays, PSU installation, and fixed drive carriers	Front bezel, side cover, PCI card retainer, hot-swap drive carriers, hot-swap drive bays, peripheral bays, and PSU installation
Dimensions (H x W x D)	Pedestal: 17.24" x 6.81" x 24.9" (438mm x 173mm x 632mm)	Pedestal: 17.24" x 6.81" x 24.9" (438mm x 173mm x 632mm)
Bezel Features	Black, control panel, three 5.25" peripheral drive slots, eight internal drive carriers, two USB ports	Black, control panel, three 5.25" peripheral drive slots, eight and sixteen hot-swap drive carriers (behind door), security lock, two USB ports
Front Connectors	2 x USB	2 x USB
System Security	Side cover: A padlock loop slot available at the rear of the system access cover to prevent access to the processors, memory, and add-in cards Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole	Front door: Security lock (available on hot-swap HDD SKUs only) Side cover: A padlock loop slot available at the rear of the system access cover to prevent access to the processors, memory, and add-in cards Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole



Chassis

Intel® Server Chassis H2000

A 2U rack chassis optimized for compute density, supporting up to four Intel® Compute Modules.

	3.5" drive model	2.5" drive model
<b>Model</b>	H2312XXKR, H2312XXJR	H2216XXKR, H2216XXJR
<b>Chassis Order Code<sup>1</sup></b>	H2312XXKR, H2312XXJR	H2216XXKR, H2216XXJR
<b>Spares Kit Order Code<sup>2</sup></b>	1200 W PSU Spares: FXX1200PCRPS 1600 W PSU Spares: FXX1600PCRPS HSBP Spares: FHW12X35HSBP Node Tray Blank Filler: FH2000BNF Power Distribution Board Spares: FXXCRPSDB Control Panel Spares: FH2000FPANEL HDD Drive Bay Spares: FXX35HSADPB	1200 W PSU Spares: FXX1200PCRPS 1600 W PSU Spares: FXX1600PCRPS HSBP Spares: FHW16X25HSBP Node Tray Blank Filler: FH2000BNF Power Distribution Board Spares: FXXCRPSDB Control Panel Spares: FH2000FPANEL HDD Drive Bay Spares: FXX25HSCAR
<b>Form Factor</b>	2U Rack	2U Rack
<b>Intel® Server Board Support<sup>1</sup></b>	HNS260JF, HNS260JFQ, HNS260JFF, HNS260WP, HNS260WPQ, HNS260WPF, HNS240LP	HNS260JF, HNS260JFQ, HNS260JFF, HNS260WP, HNS260WPQ, HNS260WPF, HNS240LP
<b>Drive Bays</b>	Up to twelve 3.5" hot-swap SAS / SATA drives	Up to sixteen 2.5" hot-swap SAS / SATA drives
<b>Hot-Swap Disk Drive Bay (Order Code)</b>	FXX35HSADPB	FXX25HSCAR
<b>System Cooling</b>	40mm x 56mm Dual Rotor Fan Spare: FXX4056DRFAN	40mm x 56mm Dual Rotor Fan Spare: FXX4056DRFAN
<b>Power Supplies</b>	H2312XXJR: 2x 1200 W Platinum PSU (FXX1200PCRPS) H2312XXKR: 2x 1600 W Platinum PSU (FXX1600PCRPS)	H2216XXJR: 2x 1200 W Platinum PSU (FXX1200PCRPS) H2216XXKR: 2x 1600 W Platinum PSU (FXX1600PCRPS)
<b>I/O Slots</b>	N/A	N/A
<b>Backplane</b>	Included	Included
<b>Tool-less Features</b>	PSU, Compute Node, HDD bays are all hot swap	PSU, Compute Node, HDD bays are all hot swap
<b>Dimensions (H x W x D)</b>	2U Rack: 17.24" x 3.46" x 30.35" (438mm x 87.9mm x 771mm)	2U Rack: 17.24" x 3.46" x 28.86" (438mm x 87.9mm x 733mm)
<b>Bezel Features</b>	2U Rack Bezel Spares: A2UBEZEL	2U Rack Bezel Spares: A2UBEZEL
<b>Front Connectors</b>	N/A	N/A
<b>System Security</b>	N/A	N/A

For more information, visit [www.intel.com/products/server/chassis](http://www.intel.com/products/server/chassis) or [ark.intel.com](http://ark.intel.com)

<sup>1</sup> Refer to [www.intel.com/p/en\\_US/support/server/](http://www.intel.com/p/en_US/support/server/) for up-to-date details on server boards supported by each chassis.

<sup>2</sup> For complete spare and accessory list, please download the latest configuration guide from Spares, parts list and configuration guide at [www.intel.com/p/en\\_US/support](http://www.intel.com/p/en_US/support)

<sup>3</sup> Intel® Server Chassis H2000 series requires the separate purchase of Intel® Compute Modules. See the Accessories and Spares section of the chosen Intel® Server Board configuration guide for recommended part numbers.

All products and dates specified are preliminary based on current expectations and are subject to change without notice. Availability in different channels may vary.

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Intel offers multiple categories of RAID products to protect data, increase performance, scale storage, and enhance server availability. A brief description of each category is listed below with details in the pages that follow.

## CONTROLLER CARDS AND MODULES

- Best: Intel® Integrated Server RAID signifies unique system boards that are designed to add value above that of a standard RAID add-in card to Intel® Server Boards and Systems.
- Better: Intel® RAID Controllers are add-in cards designed to enable a wide variety of RAID solutions.
- Good: Intel® Embedded Server RAID Technology Software RAID Activation Keys are designed for entry-level RAID solutions.

## RAID CACHE BACKUP

- Battery Backup Units (BBU) and Maintenance-Free Backup Units (MFBU) are available for hardware RAID products with embedded cache. The backup options are listed in the "Backup Option" row of the product tables.

## EXPANDER BOARDS

- Intel® RAID Expander Cards are intended for any system with more than 8 drives. As an example of use, 8 RAID ports can be expanded to 24 ports.

## PREMIUM FEATURE KEYS

- Several upgrade features can be added to enhance the performance and data protection of Intel's intelligent RAID cards and modules.

## CABLE KITS AND CONVERTER BOARDS

- Newer generation RAID products do not ship with cables, as multiple options exist depending on the system in which the RAID products are installed. Therefore, Intel offers a variety of cables. A converter board that allows for two internal 8087 connectors to be converted to two external 8088 connectors is also available.

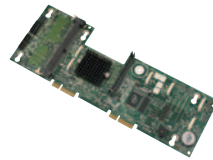
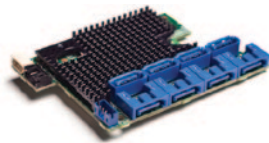
## INTEL® INTEGRATED RAID PRODUCTS



Controller	Intel® Integrated RAID Module RMS25CB080 / 040	Intel® Integrated RAID Module RMT3CB080	Intel® Integrated RAID Module RMS25JB080 / 040	Intel® Integrated RAID Module RMS25PB080 / 040
Market Segment	Mainstream	Mainstream	Entry / Limited Feature	Mainstream
Order Code	<b>RMS25CB080 / RMS25CB040</b>	<b>RMT3CB080</b>	<b>RMS25JB080 / RMS25JB040</b>	<b>RMS25PB080 / RMS25PB040</b>
Processor / RAID On Chip	<b>LSI* 2208</b>	<b>LSI* 2208</b>	<b>LSI* 2308</b>	<b>LSI* 2208</b>
Memory	Embedded 1 GB ECC DDR2 SDRAM	Embedded 512 MB ECC DDR2 SDRAM	2 MB context memory for entry-level hardware RAID calculations	Embedded 1 GB ECC DDR2 SDRAM
PCI Bus	PCI Express* 3.0 x8	PCI Express* 3.0 x8	PCI Express* 3.0 x8	PCI Express* 3.0 x8
Channels	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates
Form Factor	1U capable system board	1U capable system board	1U capable system board	Low-profile PCI Express add-in card
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, and 1E	0, 1, 5, 6, 10, 50, and 60
Backup Options	AXXRSBBU9 (battery backup) AXXRMFBU2 (flash and supercap)	AXXRSBBU9 (battery backup) AXXRMFBU2 (flash and supercap)	N/A	AXXRSBBU9 (battery backup) AXXRMFBU2 (flash and supercap)
Cables	Purchased separately	Purchased separately	Purchased separately	Purchased separately
Intel® Server Board Support	Intel® Xeon® E5 series server boards with a storage I/O module connector	Intel® Xeon® E5 series server boards with a storage I/O module connector	Intel® Xeon® E5 series server boards with a storage I/O module connector	Intel® Xeon® E5 series server boards
Availability	Now	Now	Now	Now

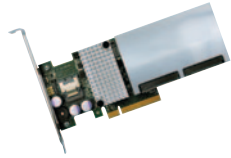


Controller	Intel® Integrated RAID Module RMT3PB080	Intel® Integrated RAID Module RMS25KB080 / 040	Intel® Integrated RAID Module RMS2MH080	Intel® Integrated RAID Module RMS2AF080 / 040
	6.0 Gb/s SATA 3.0 full hardware RAID Module with standard PCI Express* connector	6.0 Gb/s SAS 2.1 entry-level RAID Module with standard PCI Express* connector	6.0 Gb/s SAS 2.0 RAID Module for use with Intel® Server Boards S552OUR and S5500WB	6.0 Gb/s SAS 2.0 entry-level RAID Module for use with Intel® Xeon® E3 and 5600 series server boards with an I/O module slot
Market Segment	Mainstream	Entry / Limited Feature	Mainstream	Entry
Order Code	<b>RMT3PB080</b>	<b>RMS25KB080 / RMS25KB040</b>	<b>AXXRMS2MH080</b>	<b>AXXRMS2AF080 / AXXRMS2AF040</b>
Processor / RAID On Chip	<b>LSI* 2208</b>	<b>LSI* 2308</b>	<b>LSI* 2108</b>	<b>LSI* 2008</b>
Memory	Embedded 512 MB ECC DDR2 SDRAM	2 MB context memory for entry-level hardware RAID calculations	Embedded 512 MB ECC DDR2 SDRAM	2 MB (on card) for RAID 0, 1, 1E, and 128 MB (from server board) for RAID 5 calculations
PCI Bus	PCI Express* 3.0 x8	PCI Express* 3.0 x8	PCI Express* 2.0 x8	PCI Express* 2.0 x4
Channels	8 SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates
Form Factor	Low-profile PCI Express add-in card	Low-profile PCI Express add-in card	1U capable system board	1U capable system board
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, and 1E	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 10, and 50
Backup Options	AXXRSBBU9 (battery backup) AXXRMFBU2 (flash and supercap)	N/A	AXXRSBBU7 AXXRSBBU8 (new longer life)	No
Cables	Purchased separately	Purchased separately	Included	Included
Intel® Server Board Support	Intel® Xeon® E5 series server boards	Intel® Xeon® E5 series server boards	Intel® Server Boards S552OUR and S5500WB	Intel® Server Boards S552OUR, S5500WB, S5520HC, S5520SC, S3420GP, and S1200BT
Availability	Now	Now	Now	Now



Controller	Intel® Integrated RAID Module RMS2LL080 / 040	Intel® Integrated RAID 1U / 2U Midplane	Intel® Integrated RAID Module SROMBSASMR	Intel® Integrated RAID Module AXX4SASMOD
	6.0 Gb/s SAS 2.0 entry-level RAID Module for use with Intel® Xeon® E3 and 5600 series server boards with an I/O module slot	SAS and SATA RAID Module for Intel® Server Systems SR1625UR, SR2600UR, and SR2625UR	4-port internal RAID Module for 1U, 2U, and pedestal use with Intel® Server Boards S5520HC and S5500WB	Flexible Module offering pass-through SAS and multiple entry-level RAID options
Market Segment	Entry / Limited Feature	Mainstream	Mainstream	Entry
Order Code	<b>AXXRMS2LL080 / AXXRMS2LL040</b>	<b>Midplane included with systems requires AXXRAKSAS2 for hardware RAID activation</b>	<b>AXXROMBSASMR</b>	<b>AXX4SASMOD requires AXXRAKSW5 for RAID 5</b>
Processor / RAID On Chip	<b>LSI* 2008</b>	<b>LSI* 1078</b>	<b>LSI* 1078</b>	<b>LSI* 1064</b>
Memory	2 MB for entry-level hardware RAID calculations	Supports up to 1 GB mini-DIMM ECC DDR2 667 MHz DDR2 SDRAM	Embedded 128 MB ECC DDR2 SDRAM	2 MB for entry-level hardware RAID calculations
PCI Bus	PCI Express* 2.0 x4	PCI Express* x4	PCI Express* x8	PCI Express* x4
Channels	8 / 4 SAS / SATA ports supporting point-to-point 6.0 Gb/s data-transfer rates	8 SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates	4 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates	4 SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates
Form Factor	1U capable system board	System midplane	1U capable system board	1U capable system board
RAID Levels	0, 1, and 1E	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 1E, and optional RAID 5
Backup Options	No	AXXRSBBU3	AXXRSBBU3	No
Cables	Included	Included	Included	Included
Intel® Server Board Support	Intel® Server Boards S5520UR, S5500WB, S5520HC, S5520SC, S3420GP, and S1200BT	Intel® Server Board S5520UR	Intel® Server Boards S5520UR, S5500WB, S5520HC, S5520SC, S3420GP, and S1200BT	Intel® Server Boards S5520UR, S5500WB, S5520HC, S5520SC, S3420GP, and S1200BT
Availability	Now	Now	Now	Now

## SAS 2.0 INTEL® RAID CONTROLLER ADD-IN CARDS



Controller	Intel® RAID SSD Cache Controller RCS25ZB040	Intel® RAID Controller RS2SG244	Intel® RAID Controller RS2WG160	Intel® RAID Controller RS25NB008
	High performance 4-port intelligent hardware RAID card with a large capacity integrated NAND cache to significantly boost performance.	Scalable performance 6.0 Gb/s SAS RAID Controller with 24 internal and 4 external ports for SAS / SATA drives	Scalable performance 6.0 Gb/s SAS RAID Controller with 16 internal ports for SAS / SATA drives	Scalable performance dual-core 6.0 Gb/s SAS RAID Controller with 8 external ports for SAS / SATA drives
Order Code	<b>RCS25ZB040 (256 GB cache)</b> <b>RCS25ZB040LX (1024 GB cache)</b>	<b>RS2SG244</b>	<b>RS2WG160</b>	<b>RS25NB008</b>
Processor / RAID On Chip	<b>LSI* SAS2208</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2208</b>
Memory	1 GB embedded DDR3 ECC memory plus either 256 or 1024 GB NAND	512 MB embedded DDR2 ECC memory	512 MB embedded DDR2 ECC memory	1 GB embedded DDR3 ECC memory
PCI Bus	PCI Express* 3.0 x8	PCI Express* 2.0 x8	PCI Express* 2.0 x8	PCI Express* 3.0 x8
Channels	4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	24 internal and 4 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	16 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length (MD2 compliant)	Full-height, 6.6" length	Full-height, 6.6" length	Low-profile, 6.6" length (MD2 compliant)
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60
Intel® Smart Backup Option	AXXRMFBU3	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU9
Cables	Not included	Included	Included	Not included
Availability	Now	Now	Now	August





Controller	Intel® RAID Controller RS25SB008	Intel® RAID Controller RS2MB044	Intel® RAID Controller RS25AB080	Intel® RAID Controller RS25DB080
	Scalable performance dual-core 6.0 Gb/s SAS RAID Controller with 8 external ports for SAS / SATA drives and maintenance-free backup unit (Flash-based)	Scalable performance 6.0 Gb/s SAS RAID Controller with 4 internal and 4 external ports for SAS / SATA drives	Mainstream dual-core 6.0 Gb/s SAS RAID Controller with 8 internal ports for SAS / SATA drives and maintenance-free backup unit (Flash-based)	Mainstream dual-core 6.0 Gb/s SAS RAID Controller with 8 internal ports for SAS / SATA drives
Order Code	<b>RS25SB008</b>	<b>RS2MB044</b>	<b>RS25AB080</b>	<b>RS25DB080</b>
Processor / RAID On Chip	<b>LSI* SAS2208</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2208</b>	<b>LSI* SAS2208</b>
Memory	1 GB embedded DDR2 ECC memory	512 MB embedded DDR2 ECC memory	1 GB embedded DDR2 ECC memory	1 GB embedded DDR3 ECC memory
PCI Bus	PCI Express* 3.0 x8	PCI Express* 2.0 x8	PCI Express* 3.0 x8	PCI Express* 3.0 x8
Channels	8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	4 internal and 4 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60
Intel® Smart Backup Option	Maintenance-free backup unit (Flash-based) included with add-in card	AXXRSBBU7 AXXRSBBU8 (new longer life)	Maintenance-free backup unit (Flash-based) included with add-in card	AXXRSBBU9
Cables	Not included	One 8087 to four 7-pin SATA cable included	Purchased separately	AXXCBL740MS7P (ordered separately)
Availability	Now	Now	Now	Now



Controller	Intel® RAID Controller RS2VB080 / 040	Intel® RAID Controller RS2BL080 / 040	Intel® RAID Controller RS2PI008
	Mainstream 6.0 Gb/s SAS RAD Controller with 8 internal ports for SAS / SATA drives and maintenance-free backup unit (Flash-based)	Mainstream 6.0 Gb/s SAS RAID Controller with 8 internal ports for SAS / SATA drives	Mainstream 6.0 Gb/s SAS RAID Controller with 8 external ports for JBODs with SAS / SATA drives
Order Code	<b>RS2VB080 / RS2VB040</b>	<b>RS2BL080 / RS2BL040</b> (Standard) <b>RS2BL080DE</b> (with Drive Encryption Management)	<b>RS2PI008</b> (Standard) <b>RS2PI008DE</b> (with Drive Encryption Management)
Processor / RAID On Chip	<b>LSI* SAS2108</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2108</b>
Memory	512 MB embedded DDR2 ECC memory	512 MB embedded DDR2 ECC memory	512 MB embedded DDR2 ECC memory
PCI Bus	PCI Express* 2.0 x8	PCI Express* 2.0 x8	PCI Express* 2.0 x8
Channels	8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60
Intel® Smart Backup Option	Maintenance-free backup unit (Flash-based) included with add-in card	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU7 AXXRSBBU8 (new longer life)
Cables	Included	Included	Included
Availability	Now	Now	Now



Controller	Intel® RAID Controller RT3WB080	Intel® RAID Controller RS2WC080 / 040	Intel® RAID Controller RS25GB008	Intel® RAID Controller RS25FB044
	Mainstream SATA-only RAID Controller with 8 ports and SAS expansion support for up to 16 SATA drives	Entry-level 6.0 Gb/s SAS RAID Controller with 8 internal ports for SAS / SATA drives	Entry-level 6.0 Gb/s SAS RAID Controller with 8 external ports for JBOD with SAS / SATA drives	Entry-level 6.0 Gb/s SAS RAID Controller with 4 internal ports for DAS storage and 4 external ports for JBOD storage
Order Code	<b>RT3WB080</b>	<b>RS2WC080 / RS2WC040</b>	<b>RS25GB008</b>	<b>RS25FB044</b>
Processor / RAID On Chip	<b>LSI* SAS2108</b>	<b>LSI* SAS2008</b>	<b>LSI* SAS2308</b>	<b>LSI* SAS2308</b>
Memory	256 MB embedded DDR2 ECC memory	2 MB (on card) for RAID 0, 1, 1E, and 128 MB (from server board) for RAID 5 calculations	2 MB context memory	2 MB context memory
PCI Bus	PCI Express* 2.0 x8	PCI Express* 2.0 x8	PCI Express* 3.0 x8	PCI Express* 3.0 x8
Channels	8 internal SATA ports supporting SAS expansion and point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 / 4 internal SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	4 internal and 4 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)	Low-profile, 6.6" length (MD2 compliant)
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 10, and 50	JBOD	0, 1, 1E, and JBOD
Intel® Smart Backup Option	AXXRSBBU7 AXXRSBBU8 (new longer life)	No	No	No
Cables	Included	Included	Not included	Not included
Availability	Now	Now	Now	Now

## SAS 1.0 INTEL® RAID CONTROLLER ADD-IN CARDS



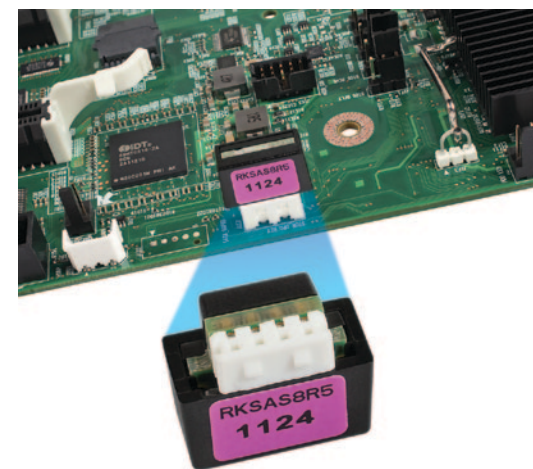
Controller	Intel® RAID Controller SASUC8I	Intel® RAID Controller SASWT4I
	8-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability	4-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability
Order Code	<b>SASUC8I</b>	<b>SASWT4I</b>
Processor / RAID On Chip	<b>LSI* 1068</b>	<b>LSI* 1064</b>
Memory	2 MB for entry-level hardware RAID calculations	2 MB for entry-level hardware RAID calculations
PCI Bus	PCI Express* x4	PCI Express* x4
Channels	8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates	4 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length	Low-profile, 6.6" length
RAID Levels	0, 1, and 1E/10E	0, 1, and 1E/10E
Intel® Smart Backup Option	No	No
Cables	N/A	Included
Availability	Now	Now

## INTEL® SOFTWARE RAID ACTIVATION KEYS

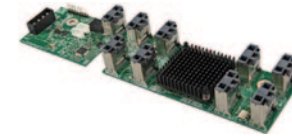
Most Intel® Xeon® 5500 and 5600 series server boards include Intel® Embedded Server RAID Technology 2 which provides RAID 0, 1, and 10. Software RAID 5 can be enabled on these server boards by adding the AXXRAKSW5 activation key.

Most Intel® Xeon E5 series server boards include 8 SCU storage ports with activation and features corresponding to the following table.

ACTIVATION KEY	PRODUCT NAME	SCU STORAGE FUNCTIONALITY
None	N/A	4-port SATA key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, and 10, and Intel® Rapid Storage Technology Enterprise RAID 0, 1, 5, and 10 (no key)
RKSATA4R5	Intel® RAID C600 Upgrade Key RKSATA4R5	4-port SATA key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, 5, and 10, and Intel® Rapid Storage Technology Enterprise RAID 0, 1, 5, and 10 (BLACK)
RKSATA8	Intel® RAID C600 Upgrade Key RKSATA8	8-port SATA key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, and 10, and Intel® Rapid Storage Technology Enterprise RAID 0, 1, 5, and 10 (BLUE)
RKSATA8R5	Intel® RAID C600 Upgrade Key RKSATA8R5	8-port SATA key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, 5, and 10, and Intel® Rapid Storage Technology Enterprise RAID 0, 1, 5, and 10 (WHITE)
RKSAS4	Intel® RAID C600 Upgrade Key RKSAS4	4-port SAS key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, and 10, and Intel® Rapid Storage Technology Enterprise RAID 0, 1, and 10 (GREEN)
RKSAS4R5	Intel® RAID C600 Upgrade Key RKSAS4R5	4-port SAS key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, 5, and 10 and Intel® Rapid Storage Technology Enterprise RAID 0, 1, and 10 (YELLOW)
RKSAS8	Intel® RAID C600 Upgrade Key RKSAS8	8-port SAS key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, and 10 and Intel® Rapid Storage Technology Enterprise RAID 0, 1, and 10 (ORANGE)
RKSAS8R5	Intel® RAID C600 Upgrade Key RKSAS8R5	8-port SAS key with Intel® Embedded Server RAID Technology 2, RAID 0, 1, 5, and 10 and Intel® Rapid Storage Technology Enterprise RAID 0, 1, and 10 (PURPLE)



## INTEL® RAID EXPANDER BOARDS (SAS EXPANDERS)



Expander Board	Intel® RAID Expander RES2SV240	Intel® RAID Expander RES2CV360 / 240
	24-port, 6.0 Gb/s-capable expander card for use with Intel® RAID products	36 / 24-port, 6.0 Gb/s-capable expander card for use with Intel® RAID products
Order Code	<b>RES2SV240</b> (with 6 cables) <b>RES2SV240NC</b> (no cables)	<b>RES2CV360</b> (no cables) / <b>RES2CV240</b> (no cables)
Processor / RAID On Chip	<b>LSI* 6.0 Gb/s Expander</b>	<b>LSI* 6.0 Gb/s Expander</b>
Channels	24 SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	36 / 24 SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 6.6" length (MD2 compliant) can be mounted in PCI Express* slot or chassis wall	Unique system board that requires chassis mounting point
Power Options	Standard PCI Express* x4 connector or RA 4-pin power connector	RA 4-pin power connector
Management	SGPIO	SGPIO
Fault LED Headers	Includes 2 pin headers to support each SAS port	Includes 2 pin headers to support each SAS port
Availability	Now	Now

## INTEL® RAID PREMIUM FEATURES

These features are available as an upgrade for all LSI\* SAS2108 processor-based Intel® RAID products. To identify products with this processor, please refer to the Processor row of the preceding feature tables. The Premium Feature Keys are described below.

PREMIUM FEATURE	SSD CACHE WITH FAST-PATH I/O	DRIVE ENCRYPTION MANAGEMENT	RAPID RECOVERY SNAPSHOT
Key Benefits	<ul style="list-style-type: none"> <li>SSD Cache allows Solid-State Drives to be utilized as additional cache for the RAID Controller. The cache can be used for both reads and writes to assist storage performance.</li> <li>Fast-Path I/O accelerates communication with SSDs providing up to 150,000 I/O reads per second for small, random block-size I/O activity. This is a dramatic increase over solutions not using Fast-Path.</li> </ul>	<ul style="list-style-type: none"> <li>Drive encryption management enables authentication key management, auto-lock, and instant erase of self-encrypting drives (SED).</li> <li>All drives eventually leave the data center and the use of SEDs helps reduce risk of data breaches.</li> <li>Instant erase significantly reduces the cost and time of repurposing or retiring drives.</li> </ul>	<ul style="list-style-type: none"> <li>Rapid Recovery Snapshot allows users to capture source volume data changes and either restore files or rollback applications to a previous Point in Time (PiT).</li> <li>Rapid recovery of lost data from disk can occur within minutes, minimizing the downtime experienced by users and eliminating the lengthy process of restoring data from tape.</li> <li>By isolating a server's boot volume to a separate virtual drive and enabling the auto snapshot feature, users can be guaranteed that bootable snapshots exist, should operating system corruption occur.</li> </ul>
Order Code	AXXRPFKSSD	AXXRPFKDE	AXXRPFKSNSH
Availability	Now	Now	Now

These features are available as an upgrade for all LSI\* SAS2208 processor-based Intel® RAID products. To identify products with this processor, please refer to the Processor row of the preceding feature tables. The Premium Feature Keys are described below.

PREMIUM FEATURE	SSD CACHE WITH FAST-PATH I/O	DRIVE ENCRYPTION MANAGEMENT	RAPID RECOVERY SNAPSHOT
Key Benefits	<ul style="list-style-type: none"> <li>SSD Cache allows Solid-State Drives to be utilized as additional cache for the RAID Controller. Frequently accessed information is stored in the cache, allowing rapid access.</li> <li>Fast-Path I/O accelerates communication with SSDs providing up to 465,000 I/O reads per second for small, random block-size I/O activity. This is a dramatic increase over solutions not using Fast-Path.</li> </ul>	<ul style="list-style-type: none"> <li>Drive encryption management enables authentication key management, auto-lock, and instant erase of self-encrypting drives (SED).</li> <li>All drives eventually leave the data center and the use of SEDs helps reduce risk of data breaches.</li> <li>Instant erase significantly reduces the cost and time of repurposing or retiring drives.</li> </ul>	<ul style="list-style-type: none"> <li>Rapid Recovery Snapshot allows users to capture source volume data changes and either restore files or rollback applications to a previous Point in Time (PiT).</li> <li>Rapid recovery of lost data from disk can occur within minutes, minimizing the downtime experienced by users and eliminating the lengthy process of restoring data from tape.</li> <li>By isolating a server's boot volume to a separate virtual drive and enabling the auto snapshot feature, users can be guaranteed that bootable snapshots exist, should operating system corruption occur.</li> </ul>
Order Code	AXXRPFKSSD2	AXXRPFKDE2	AXXRPFKSNSH2
Availability	Now	Now	Now

## INTEL® RAID HIGH AVAILABILITY STORAGE KEY

- The High Availability Storage solution provides fault tolerance capabilities as a key part of a high-availability data storage system by combining redundant RAID controllers, computer nodes, cable connections, SAS expanders, and dual-port SAS drives.
- Shared storage across two servers can improve performance and at the same time supporting either failover clustering or cluster in a box configurations. Also supported is Microsoft\* failover clustering, controller-to-controller intercommunication over SAS, write-back cache coherency, shared and exclusive DB I/O policies, and exclusive access that allows the operating system to boot from the controller.

**Order code:** AXXRPFKHA2

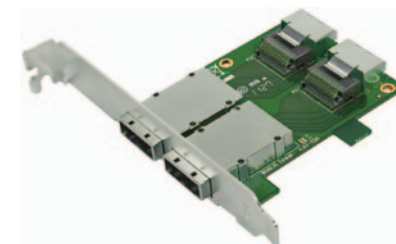
**Availability:** June 2013

## CABLE KITS AND CONVERTER BOARDS

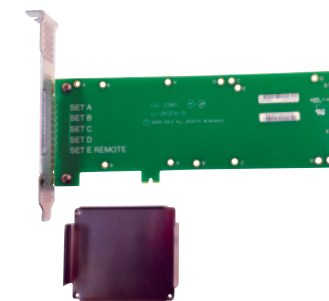
The following cables are available for connecting Intel® RAID cards and modules to storage devices and drive bays. Intel® cables are designed to a high-quality specification and include the ability to bend at a very small radii. These cables allow low-profile Intel RAID products with vertical 8087 connectors to be used in 2U rack chassis while installed in a standard PCI Express\* slot.

CABLE KIT ORDER CODE	NUMBER OF CABLES INCLUDED IN KIT	INITIATOR CONNECTOR	TARGET CONNECTOR	LENGTH
AXXCBL750MS7P	2	8087 mini-SAS straight	Four x 7-pin SATA style	750mm
AXXCBL650SMS	2	8087 mini-SAS straight	8087 mini-SAS straight	650mm

CONVERTER BOARDS	ORDER CODE	DESCRIPTION	INTERNAL CONNECTORS	EXTERNAL CONNECTORS
Intel® RAID Converter Board RCVT8788	AXXRCVT8788	Small form factor board with brackets for installation in a standard or low-profile chassis cutout. Intended to be used to convert internal ports to external ports. Cables are not included.	Two x 8087 mini-SAS	Two x 8088



MOUNTING BRACKET	ORDER CODE	DESCRIPTION	INTERNAL CONNECTORS	EXTERNAL CONNECTORS
Intel RAID® Battery Remote Mounting Bracket	AXXBUBRKTP	A mounting bracket that fits in a low profile PCI Express* slot and holds two RAID batteries or Maintenance Free Backup Units.	None	None





For more information, visit [www.intel.com/go/RAID](http://www.intel.com/go/RAID)

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.

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# Intel® Server Adapters

Help improve a server's reliability, availability, and scalability by adding an Intel® Ethernet 10GbE or 1GbE multi-port adapter.

## CONNECTIVITY FOR COPPER NETWORKS

### 10 GIGABIT-OVER-COPPER



Adapter	Intel® X520-DA2 Dual Port Ethernet Server Adapter	Intel® 10 Gigabit AT2 Server Adapter	Intel® Ethernet Server Adapter X520-T2	Intel® Ethernet Server Adapter X540-T1	Intel® Ethernet Server Adapter X540-T2
Product Code—Singles	E10G42BTDA	E10G41AT2	E10G42BT	X540T1	X540T2
Product Code—Five Packs	E10G42BTDABLK	N/A	N/A	X540T1BLK	X540T2BLK
Connector(s)	2 SFP+ Direct Attach Copper	1 RJ-45	2 RJ-45	1 RJ-45	2 RJ-45
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82599ES	Intel® 82598EB	Intel® 82599ES	Intel® X540	Intel® X540
Bus Width and Type	PCI Express* 2.0 (5 GT/s) x8	PCI Express* 2.0 (2.50 GT/s) x8	PCI Express* 2.0 (5 GT/s) x8	PCI Express* 2.1 (5 GT/s) x8	PCI Express* 2.1 (5 GT/s) x8
Open FCoE Support	Yes	No	No	Yes	Yes

### 10 GIGABIT-OVER-COPPER



Adapter	Intel® 10 Gigabit AF DA Dual Port Server Adapter	NetEffect® Ethernet Server Cluster Adapter DA	NetEffect® Ethernet Server Cluster Adapter CX4	Intel® 10 Gigabit CX4 Dual Port Server Adapter
Product Code—Singles	E10G42AFDA	E10G81G2P	E10G81GT2CX4	EXPX9502CX4
Product Code—Five Packs	N/A	N/A	N/A	N/A
Connector(s)	2 SFP+ Direct Attach Copper	1 SFP+ Direct Attach Copper	1 CX4	2 CX4
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82598EB	NE020	NE020	Intel® 82598EB
Bus Width and Type	PCI Express* 2.0 (2.50 GT/s) x8	PCI Express* 1.1 (2.50 GHz) x8	PCI Express* 1.1 (2.50 GHz) x8	PCI Express* 2.0 (2.50 GT/s) x8

## CONNECTIVITY FOR COPPER NETWORKS

### 10/100/1000 MB/S-OVER-COPPER MULTI-PORT



Adapter	Intel® PRO/1000 PT Quad Port Server Adapter	Intel® PRO/1000 GT Quad Port Server Adapter	Intel® PRO/1000 PT Dual Port Server Adapter
Product Code—Singles	EXPI9404PTL	PWLA8494GT	EXPI9402PT
Product Code—Five Packs	EXPI9404PTLBLK	PWLA8494GTBLK5	EXPI9402PTBLK
Connector(s)	4 RJ-45	4 RJ-45	2 RJ-45
End-Brackets	Low-profile, full-height	Full-height	Low-profile, full-height
Ethernet Controller	Intel® 82571GB	Intel® 82546GB	Intel® 82571GB
Bus Width and Type	PCI Express* x4	64-bit PCI / PCI-X	PCI Express* x4

### 10/100/1000 MB/S-OVER-COPPER MULTI-PORT



Adapter	Intel® PRO/1000 MT Dual Port Server Adapter	Intel® Gigabit ET2 Quad Port Server Adapter	Intel® Gigabit ET Dual Port Server Adapter
Product Code—Singles	PWLA8492MT	E1G44ET2	E1G42ET
Product Code—Five Packs	PWLA8492MTBLK5	E1G44ET2BLK	E1G42ETBLK
Connector(s)	2 RJ-45	4 RJ-45	2 RJ-45
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82546GB	Intel® 82576	Intel® 82576
Bus Width and Type	32- or 64-bit PCI / PCI-X	PCI Express* 2.0 (2.50 GT/s) x4	PCI Express* 2.0 (2.50 GT/s) x4
Virtual Machine Device Queues (VMDq) Support	No	Yes	Yes
Security Features	No	IPsec	IPsec
Halogen Free	No	No	No

## CONNECTIVITY FOR COPPER NETWORKS

### 10/100/1000 MB/S-OVER-COPPER MULTI-PORT



Adapter	Intel® Ethernet Server Adapter I340-T4	Intel® Ethernet Server Adapter I350-T2	Intel® Ethernet Server Adapter I350-T4
Product Code—Singles	E1G44HT	I350T2	I350T4
Product Code—Five Packs	E1G44HTBLK	I350T2BLK	I350T4BLK
Connector(s)	4 RJ-45	2 RJ-45	4 RJ-45
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82580	Intel® I350	Intel® I350
Bus Width and Type	PCI Express* 2.0 (5 GT/s) x4	PCI Express* 2.0 (5 GT/s) x4	PCI Express* 2.0 (5 GT/s) x4
Virtual Machine Device Queues (VMDq) Support	Yes	Yes	Yes
Security Features	No	No	No
Halogen Free	Yes	Yes	Yes
EEE / DMA Coalescing	N/A	Yes	Yes

### 10/100/1000 MB/S-OVER-COPPER SINGLE PORT

NEW



Adapter	Intel® Ethernet Server Adapter I210-T1	Intel® PRO/1000 PT Server Adapter	Intel® PRO/1000 MT Server Adapter
Product Code—Singles	I210T1	EXPI9400PT	PWLA8490MT
Product Code—Five Packs	I210T1BLK	EXPI9400PTBLK	PWLA8490MTBLK5
Connector(s)	1 RJ-45	1 RJ-45	1 RJ-45
End-Brackets	Low profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® I210	Intel® 82572GI	Intel® 82545GM
Bus Width and Type	PCI Express* 2.1 (2.50 GT/s) x1	PCI Express* x1	32- or 64-bit PCI / PCI-X
Audio Video Bridging (AVB)	Yes	No	No

## CONNECTIVITY FOR FIBER NETWORKS

### 10 GIGABIT-OVER-FIBER SINGLE PORT



Adapter	Intel® X520-SR1 Ethernet Server Adapter	Intel® X520-LR1 Ethernet Server Adapter	Intel® 10 Gigabit XF SR Server Adapter
Product Code—Singles	E10G41BFSR	E10G41BFLR	EXPX9501AFXSR
Product Code—Five Packs	E10G41BFSRBLK	E10G41BFLRBLK	N/A
Connector(s)	1 LC	1 LC	1 LC
Fiber Optic Cabling	MMF 62.5 / 50µm up to 300m	SMF up to 10km	MMF 62.5 / 50µm up to 300m
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82599ES	Intel® 82599ES	Intel® 82598EB
Bus Width and Type	PCI Express* 2.0 (5 GT/s) x8	PCI Express* 2.0 (5 GT/s) x8	PCI Express* 2.0 (2.50 GT/s) x8
Open FCoE Support	Yes	Yes	No

### 10 GIGABIT-OVER-FIBER SINGLE PORT



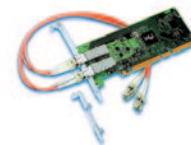
### 10 GIGABIT-OVER-FIBER MULTI-PORT



Adapter	Intel® 10 Gigabit XF LR Server Adapter	NetEffect™ Ethernet Server Cluster Adapter SFP+SR	Intel® X520-SR2 Dual Port Ethernet Server Adapter	Intel® 10 Gigabit XF SR Dual Port Server Adapter
Product Code—Singles	EXPX9501AFXLR	E10G81GF2SR	E10G42BFSR	EXPX9502AFXSR
Product Code—Five Packs	N/A	N/A	E10G42BFSRBLK	N/A
Connector(s)	1 LC	1 LC	2 LC	2 LC
Fiber Optic Cabling	SMF up to 10km	MMF 62.5 / 50µm up to 300m	MMF 62.5 / 50µm up to 300m	MMF 62.5 / 50µm up to 300m
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82598EB	NE020	Intel® 82599ES	Intel® 82598EB
Bus Width and Type	PCI Express* 2.0 (2.50 GT/s) x8	PCI Express* 1.1 (2.50 GHz) x8	PCI Express* 2.0 (5 GT/s) x8	PCI Express* 2.0 (2.50 GT/s) x8
Open FCoE Support	No	No	Yes	No

## CONNECTIVITY FOR FIBER NETWORKS

### GIGABIT-OVER-FIBER MULTI-PORT



Adapter	Intel® Ethernet Server Adapter I350-F2	Intel® PRO/1000 PF Dual Port Server Adapter	Intel® PRO/1000 MF Dual Port Server Adapter	Intel® Gigabit EF Dual Port Server Adapter
Product Code—Singles	I350F2	EXPI9402PF	PWLA8492MF	E1G42EF
Product Code—Five Packs	I350F2BLK	EXPI9402PFBLK	PWLA8492MFBLK5	E1G42EFBLK
Connector(s)	2 LC	2 LC	2 LC	2 LC
Fiber Optic Cabling	MMF 62.5µm up to 275m MMF 50µm up to 550m	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m	MMF 62.5µm up to 275m MMF 50µm up to 550m
End-Brackets	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® I350	Intel® 82571GB	Intel® 82546GB	Intel® 82576
Bus Width and Type	PCI Express* 2.1 (5 GT/s) x4	PCI Express* x4	64-bit PCI / PCI-X	PCI Express* 2.0 (2.50 GT/s) x4
Virtual Machine Device Queues (VMDq) Support	Yes	No	No	Yes
Security Features	No	No	No	IPsec
EEE / DMA Coalescing	Yes	No	No	No

## CONNECTIVITY FOR FIBER NETWORKS

### GIGABIT-OVER-FIBER MULTI-PORT



### GIGABIT-OVER-FIBER SINGLE PORT



Adapter	Intel® Ethernet Server Adapter I350-F4	Intel® Ethernet Server Adapter I340-F4	Intel® PRO/1000 PF Server Adapter
Product Code—Singles	I350F4	E1G44HF	EXPI9400PF
Product Code—Five Packs	I350F4BLK	E1G44HFBLK	EXPI9400PFBLK
Connector(s)	4 LC	4 LC	1 LC
Fiber Optic Cabling	MMF 62.5µm up to 275m MMF 50µm up to 550m	MMF 62.5µm up to 275m MMF 50µm up to 550m	MMF 62.5 / 50µm up to 275m
End-Brackets	Full-height	Full-height	Full-height
Ethernet Controller	Intel® I350	Intel® 82580	Intel® 82572GI
Bus Width and Type	PCI Express* 2.1 (5 GT/s) x4	PCI Express* 2.0 (5 GT/s) x4	PCI Express* x4
Virtual Machine Device Queues (VMDq) Support	Yes	Yes	N/A
Security Features	No	No	N/A
EEE / DMA Coalescing	Yes	No	N/A

For more information, visit [www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

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## QUICKLY GET YOUR SERVERS UP AND RUNNING—AND KEEP THEM RUNNING—WITH INTEL® SERVER MANAGEMENT SOLUTIONS

Intel® Server Management improves security, reduces costs, and helps businesses move from reactive to proactive system management. A mix of hardware and software enables more secure remote management and monitoring of servers, clients, and applications from virtually any location—in a way that IT generalists can understand without attending weeks of training. It's all about IT made easy.

### SIMPLE

- Makes it easy to set up and maintain a more reliable and secure IT infrastructure
- Streamlines tasks throughout server lifecycle with remote management
- Manages IT functions with a single suite of tools

### MORE SECURE

- Keeps IT informed with automated daily health reports and alerts
- Improves reliability and stability with rapid application and patch deployment

### SMART

- Designed specifically for small to midsize businesses
- Reduces travel time and costs
- Provides a proactive solution to server management with reports and alerts

## INTEL® DEPLOYMENT ASSISTANT

Intel® Deployment Assistant is a free deployment application that helps keep servers up to date by locating, comparing, and recommending system updates. To set up your Intel® Servers using the Intel Deployment Assistant, just answer a series of easy-to-understand questions and confirm your configuration choices. The Intel Deployment Assistant will then configure the server and begin loading the chosen operating system. It also reduces redundant tasks by cloning all of your settings and updates to easily and quickly replicate across other identical servers.

FEATURES	BENEFITS
Wizard-based user interface	Reduces complexity while providing comprehensive guidance in the deployment of Intel® Servers.
Automatic detection of server configuration and components	Eliminates steps and saves time by detecting key configuration information including BIOS, LAN, and server management settings.
Load configuration profiles for identical servers	Reduces redundant tasks by saving and loading configuration settings from one server to identical servers.
Wizard-guided RAID configuration	Configures RAID from a single console with simple step-by-step instructions.
Automatic detection of available software updates	Minimizes uncertainty by automatically locating the latest drivers, firmware, and BIOS from the Internet, corporate network, or USB sources.
Unattended OS installation	Saves time—simply answer configuration questions, choose the drivers to include, and pop in the operating system CD. Supports a variety of Linux*, Windows*, and VMware* operating systems.
Multi-server cloning	Using the same easy-to-use wizard for updates, configuration, and OS installs, users can now build a silent PXE or USB image to clone everything on multiple systems at one time. Use it to create templates for future builds, give it to technicians to rebuild systems on-site, or use it in mass deployment environments.
Customized branding	OEMs and integrators can customize the user interface with their choice of colors and logos to promote their brand.



## INTEL® SYSTEM MANAGEMENT SOFTWARE

Intel® System Management Software is a set of management applications comprised of Intel® Active System Console and Intel® SNMP Subagent that let you view and control hardware (servers, desktops, and laptops) and software (operating systems, applications, and patches) across your network.

FEATURES	INTEL® ACTIVE SYSTEM CONSOLE	INTEL® SNMP SUBAGENT
Server Environment	1 to 10 servers	Enterprise
User Interface	Web-based	Integrates into enterprise tools such as HP* OpenView
Operating System Support	Windows*, Linux*	Windows*, Linux*
Single, Easy-to-Use Console	Yes	
Hardware Predictive Failure Analysis	Yes	Yes
Sensor Readings	Yes	Yes
Hardware Event Log	Yes	
Alerting	Yes (e-mail and SNMP)	Yes (SNMP)
Reporting	Yes	
BMC Configuration	Yes	
Power Management	Yes	
Remote Management		Yes
OEM Customization	Yes	



## INTEL® MANAGEMENT MODULE

The Intel® Remote Management Module (Intel® RMM) allows you to securely gain access and control servers and other devices from any machine on the network—any place, any time.



Module	Intel® Remote Management Module 4			
<b>Positioning</b>	Have remote, secure access to full-screen KVM features together with remote CD or USB access without ever having to visit the server. Tightly integrated with onboard system firmware so users can choose between onboard NIC or dedicated management NIC for all RMM4 functionality. The RMM4 Lite contains all of the functionality of the RMM4 without the dedicated NIC and is now a choice on all systems that support the full RMM4.			
<b>Order Code</b>	<b>AXXRMM4Lite</b>	<b>AXXRMM4</b>	<b>AXXRMM4IOM</b>	<b>AXXRMM4IOMW</b>
<b>Supported Systems<sup>1</sup></b>	<b>Select Systems based on Intel® Server Boards S1200V3RPL, S1200V3RPO, S1200V3RPM, S1200BTL, S1400FP, S1400SP, S2400LP, S2600JF, S2600WP, S2400EP, S2400BB, S2400SC, S2400GP, S1600JP, S2600GL, S2600GZ, S2600IP, S2600CP, S2600CO, MFS2600KI, S4600LH, W2600CR</b>	<b>Select Systems based on Intel® Server Boards S1200V3RPL, S1200V3RPO, S1200V3RPM, S1200BTL, S1400FP, S1400SP, S2400LP, S2600JF, S2600WP, S2400EP, S2400BB, S2400SC, S2400GP, S1600JP, S2600GL, S2600GZ, S2600IP, S2600CP, S2600CO, MFS2600KI, S4600LH, W2600CR</b>	<b>Select Systems based on Intel® Server Boards S2600JF, S2400LP</b>	<b>Select Systems based on Intel® Server Boards S2600WP</b>
<b>Remote Server Restart</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware
<b>OEM Customization</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware
<b>USB Virtual Media Redirection</b>	Yes	Yes	Yes	Yes
<b>LDAP, SSH, SSL Support</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware
<b>WS-MAN</b>	No	No	No	No
<b>Embedded Video / GUI (KVM) Redirection</b>	Yes	Yes	Yes	Yes
<b>Embedded Web Server</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware
<b>Dedicated Server Management NIC</b>	No	Yes	Yes	Yes
<b>Local and Remote Configuration</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware
<b>Agent-less Management</b>	Support built into system firmware	Support built into system firmware	Support built into system firmware	Support built into system firmware

For more information, visit [www.intel.com/go/servermanagement](http://www.intel.com/go/servermanagement)

<sup>1</sup> For the latest Intel® Server Board support please visit <http://support.intel.com/support/motherboards/server>

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Features and functions of the Intel® Management Packs are dependent on the features and functions available on the server and client hardware and the loaded software and operating systems.

Not all features and functions are available on all products and may require Intel® AMT or IPMI technologies for additional functionality.

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INTEL® SATA SOLID-STATE DRIVES  
Intel® SATA Solid-State Drives

[www.intel.com/go/channelssd](http://www.intel.com/go/channelssd)

## SERVER

Server Highlights

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[intelmodularserver.com/](http://intelmodularserver.com/)

RAID

[www.intel.com/go/raid](http://www.intel.com/go/raid)

Server Adapters

[www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

Server Management

[www.intel.com/go/servermanagement](http://www.intel.com/go/servermanagement)

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