

# INTEL® PRODUCT QUICK REFERENCE MATRIX

SECOND HALF 2011 NON-NDA

## INTRODUCTION

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**Intel® vPro™ Technology Solution**

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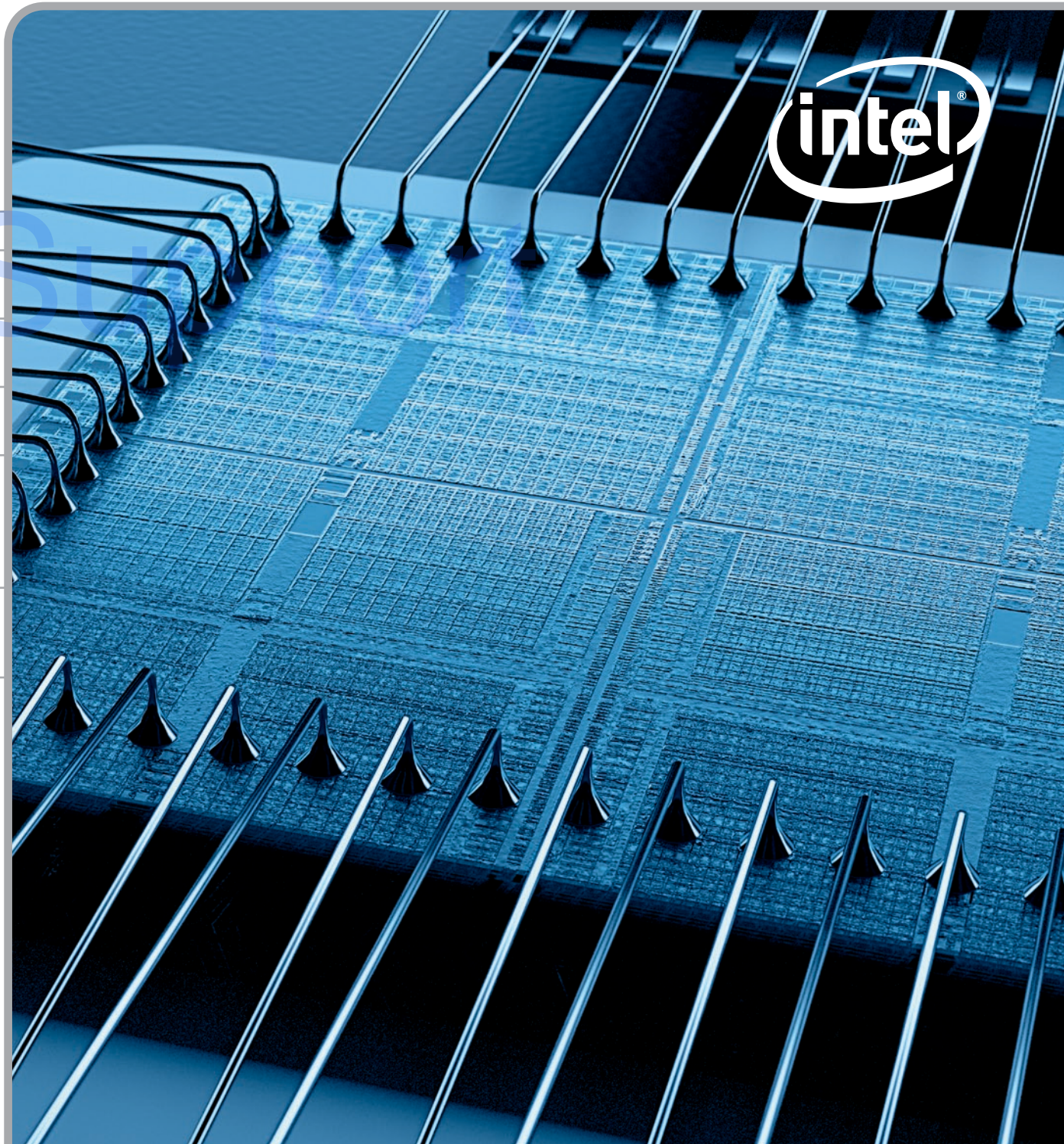
**Server Services**

**Enabled Solutions Acceleration Alliance**

**VMware\* Software**

**Symantec\***

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







## DEAR INTEL® TECHNOLOGY PROVIDER PROGRAM MEMBER,

Thanks to you, the Channel is continuing to lead the ramp of the 2nd generation Intel® Core™ processor family. During the first six months, Sandy Bridge<sup>1</sup> was the fastest ramp of any other Channel desktop introduction by offering the Channel Intel's newest microarchitecture and socket longevity. Now we have a new challenge. During Sean Maloney's keynote speech at Computex on May 31, he said, "Computing is taking many forms. Technology innovation is a catalyst, and we believe the changes Intel is making to its roadmaps, together with strong industry collaboration, will bring about an exciting change in personal computing over the next few years." With this announcement, Intel is making significant changes to our roadmap to enable over time a new mainstream line of mobile computers called Ultrabooks™. This new breed of laptops will combine best-in-class performance, responsiveness, and security in thin and light elegant form factors. Upcoming quarterly product matrix publications will contain more specifics on Ultrabooks.

As you continue to sell the 2nd gen Intel Core processors for home or office to your customers, reference the Training and Events page on the Intel Reseller Center site to take advantage of trainings, webinars, and live or virtual events that will increase your knowledge of Intel's range of products and technologies. Focus on the flexibility to add services and additional hardware that supports Intel® Wireless Display and software upgrades that take advantage of the processor technologies that deliver a PC with the smart performance and visual experience your customers demand.

We hope you have a very successful selling quarter and make sure to visit the Intel® Technology Provider Web site, designed to support your technology sales and marketing efforts. You can also download the Intel® Desktop CPU Decoder and the Intel® Solid-State Drives and Intel® Desktop Boards Decoder Apps to provide you with immediate product specifications on the go.



*Steve Dallman*

Steve Dallman  
Vice President and General Manager  
Worldwide Reseller Channel Organization



<sup>1</sup> Sandy Bridge is a code name of Intel Corporation.

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## THE 2011 VERSION OF INTEL® vPRO™ TECHNOLOGY

Processor



Intel® Core™ i7 and  
Intel® Core™ i5 Processors<sup>1</sup>

+

Chipset



Intel® Q Series Chipsets

+

Network



Intel® Gigabit Network



## SELL INTEL® CORE™ vPRO™ TO MORE SMALL- AND MEDIUM-SIZE BUSINESSES

1

**Intel® Core™ vPro™ processors  
deliver easy PC care**

### Intel KVM Remote Control<sup>2</sup>

- Remote troubleshoot regardless of the operating system state
- No additional software or hardware is needed on the client PC
- No other solution on the market today can do this

### Host-Based Setup

- Activate vPro Technology in minutes
- As easy as deploying a patch

2

**Intel Core vPro processors  
enable smart security**

### Identity Protection Technology

- Simple way for Web sites and enterprises to allow secure log-in
- Easy to use, extra layer of security to protect against online fraud attacks

### AES-NI Encryption

- “Use WinZip\* to encrypt sensitive data up to 4x faster.”
- AnandTech.com\*, January 2010**
- Significantly reduce the performance penalty when taking advantage of whole disk encryption

3

**Take advantage of money on the table by selling Intel® vPro™**

### Partner and Distribution Opportunities

- Up to a \$20 Intel vPro activation rebate paid per board, directly to system integrators. Visit [www.intel.com/go/activate](http://www.intel.com/go/activate) for details.
- Recurring revenue by delivering remote PC support services
- Stronger customer relationships and repeat business

### Small- and Medium-size Business Return on Investment

- Tangible return on investment via reduced support and energy costs<sup>3</sup>

For more information, visit [www.intelsalestools.com/#category=4](http://www.intelsalestools.com/#category=4)

<sup>1</sup> The following SKUs are Intel® vPro™ eligible:

Desktop—i5-650, i5-660, i5-670, i7-870, i7-860, and i7-860s.

Mobile—i7-820QM, i7-720QM, i7-620M, i7-640LM, i7-620LM, i7-640UM, i7-620UM, i5-540M, i5-520M, and i5-520UM.

<sup>2</sup> Intel KVM Remote Control Specifications:

a. These SKUs support Intel KVM Remote Control—i5-650, i5-660, i5-670, i7-620M, i7-640LM, i7-640UM, i7-620LM, i7-620UM, i5-540M, i5-520M, and i5-520UM.

b. Intel® HD Graphics must be active to support Intel KVM Remote Control. KVM is not supported with discrete graphics installed. Systems must be using Intel® Active Management Technology 6.0 (Intel® AMT 6.0) or above.

c. Intel KVM Remote Control is only available on Intel® vPro™ platforms.

d. Other requirements are Intel vPro eligible LAN, and Intel vPro eligible chipsets (Q57, QM57, QS57), along with requisite BIOS enabling.

e. The client PC does not require additional software.

f. Remote consoles must be enabled with KVM protocol to remotely control Intel KVM Remote Control capable clients.

<sup>3</sup> For more details on the powerful ROI calculations to show end users the value of moving to Intel® vPro™ technology platforms, visit [www3.intel.com/cd/channel/distributor/asm-na/eng/446248.htm](http://www3.intel.com/cd/channel/distributor/asm-na/eng/446248.htm).

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# BUILT-IN VISUALS, AVAILABLE ON SELECT MODELS OF THE 2ND GENERATION INTEL® CORE™ PROCESSOR FAMILY

## Intel® Built-In Visuals—Built for Mainstream Desktop and Mobile PC Users

Intel® Built-In Visuals provide superb visual performance for sharper images, richer color, and lifelike video and audio. Watch movies and Internet videos in high definition, play popular game titles, and get full support for Microsoft\* Windows\* 7. There's no need for an extra add-in graphics card—full graphics and media support is already built-in. Intel Built-In Visuals are available on the all-new 2nd generation Intel® Core™ processor family.

Processor	2nd generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	Previous generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	
FEATURE	BENEFIT		
<b>Intel® Quick Sync Video</b>	Saves valuable time for PC users who want to create and edit video, sync it to other devices, and share it—at home and on the Internet. Intel® Quick Sync Video uses dedicated media processing to accelerate video encoding.	Yes	No
<b>Intel® InTru™ 3D</b>	Enjoy the ultimate 3-D visual experience—seamlessly from your PC. Now you can watch your favorite 3-D Blu-ray* movies using active shutter glasses all delivered in full 1080p resolution on your stereo 3-D over HDMI* 1.4.	Yes	No
<b>Intel® Clear Video HD Technology</b>	Provides visual quality and color fidelity enhancements for spectacular 1080p HD playback and immersive Web browsing.	Yes <i>(New quality enhancements)</i>	Yes
<b>Intel® Wireless Display</b>	Intel® Wireless Display lets you enjoy all of your personal and online content on a big screen with a simple wireless connection.	Yes <i>(Full 1080p protected content support)</i>	Yes <i>(Limited to 1080i, unprotected content)</i>
<b>Intel® Insider™</b>	Stream or purchase 1080p HD premium movies on your PC through participating Internet movie sites.	Yes	No
<b>Intel® HD Graphics</b>	Intel® HD Graphics is built into the processor and delivers immersive mainstream gaming and 3-D experiences.	Yes <i>(Intel® HD Graphics 3000/2000)<sup>1</sup></i>	Yes <i>(Intel® HD Graphics)</i>
<b>Intel® Advanced Vector Extensions</b>	Intel® Advanced Vector Extensions gives more computing power to application developers with a new 256-bit instruction set extensions to Intel® SSE.	Yes	No

## Intel® Quick Sync Video

Intel® Quick Sync Video makes fast work of creating, editing, syncing, and sharing your videos—at home and online. Intel Quick Sync Video, built into 2nd generation Intel® Core™ processors, delivers breakthrough hardware acceleration that lets you complete in minutes what used to take hours. Create DVDs or Blu-ray\* discs, edit videos, convert video files for your portable media device, and convert videos for upload to your favorite social networking sites—all in a flash.

Processor	2nd generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	Previous generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	
FEATURE	BENEFIT		
<b>H.264 Encode</b>	Saves valuable time when creating and editing Blu-ray* discs, and other videos in h.264 format.	Yes	No <i>(software only)</i>
<b>MPEG2 Encode</b>	Saves valuable time when creating and editing DVDs, and other videos in MPEG2 format.	Yes	No <i>(software only)</i>

## Intel® Clear Video HD Technology

Intel® Clear Video HD Technology delivers seamless video and brings imagery to life with rich, accurate colors when you are browsing the Web, watching videos, and enjoying your favorite HD programs. Intel Clear Video HD Technology in 2nd generation Intel® Core™ processors lets you view images as they were meant to be seen.

		Processor	2nd generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	Previous generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)
FEATURE	BENEFIT			
<b>Blu-ray* Disc Playback</b>	High-density optical disc format designed for the storage of data and high-definition video.		Yes	Yes
<b>Blu-ray Stereo 3-D Disc Playback</b>	Playback of Blu-ray* stereo 3-D content on your PC.		Yes <i>(with HDMI* 1.4)</i>	Yes <i>(Passive polarized only)</i>
<b>Intel® Clear Video HD Technology</b>	Delivers enhanced high-definition video playback, sharper images, and precise color control.		Yes <i>(New quality enhancements)</i>	Yes
<b>DVD Upscaling</b>	Provides high-quality DVD upscaling through Windows* 7.		Yes	Yes
HD Hardware Acceleration				
<b>AVC/H.264, MPEG2, VC1 Decode</b>	Enables smoother playback and longer battery life when viewing h.264, MPEG2, or VC1 DVD, Blu-ray, or streaming content.		Yes	Yes
<b>Dual Video Decode</b>	Enables Blu-ray picture-in-picture hardware acceleration.		Yes	Yes
<b>HW Decode MFTs</b>	Enables faster Windows 7 drag and drop transcoding for MPEG2, VC1, and h.264 content.		Yes	Yes
Video Sharpness / Detail				
<b>Skin Tone Enhancement</b>	Enhances skin tones to look more real and natural.		New	No
<b>Total Color Control</b>	Enables adjustment of saturation levels per base color for brighter, richer colors.		New	No
<b>Auto Contrast Enhancement</b>	Fixes underexposed or overexposed areas of your videos.		New	No
<b>De-interlacing</b>	Reduces static and motion artifacts, improving the clarity and stability of the video picture.		Advanced	Advanced
<b>Sharpness Detail</b>	Sharpens the image to provide finer detail and improved image quality.		Yes	Yes
<b>Noise Reduction</b>	Filters out unwanted noise to provide finer detail and cleaner images.		Yes	Yes
<b>Film Mode Detection</b>	Detects film cadence and recovers original film content to improve image quality.		Yes	Yes
<b>Video Scaling / Panel Scalar</b>	Provides high-quality scaling to view content clearly in non-native resolution.		Yes <i>(8x8 polyphase)</i>	Yes <i>(8x8 polyphase)</i>
Vibrant Color				
<b>Deep Color and x.v.Color</b>	Together, Deep Color and x.v.Color enable future HDTVs to display more natural, accurate, and vivid colors.		Yes	Yes
<b>ProcAmp / Color Control</b>	Enhances fine detail of video playback and allows for user control over brightness, contrast, and saturation.		Yes	Yes



## Display and Audio Features Comparison

Connect to a wide range of digital displays and resolutions, including the latest digital interfaces such as HDMI\* and DisplayPort\*. In addition, 2nd generation Intel® Core™ processors support high-definition resolutions, including 720p, 1080i, and 1080p.

		Processor	2nd generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	Previous generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)
FEATURE	BENEFIT			
<b>New Control Panel</b>	New look and feel, easier to use, with custom resolution settings.		Yes	Yes
<b>TV Setup Utility</b>	Provides step-by-step configuration wizard for seamless TV setup and configuration.		Intel® TV Wizard	Intel® TV Wizard
<b>Maximum Display Resolution</b>	Higher pixel resolutions allow the PC to show more image detail.		DisplayPort* 2560 x 1600, HDMI*, VGA	DisplayPort* 2560 x 1600, HDMI*, VGA
Display Support				
<b>HDMI* with HDCP</b>	Provides a user-friendly, single-cable connector that enables transmission of superior, uncompressed digital video and audio.		Version 1.4 (3-D, Deep Color, premium audio, auto lip-sync)	Version 1.3a (Deep Color, premium audio, auto lip-sync)
<b>DisplayPort* with HDCP</b>	Highly scalable and efficient display interface for the PC.		Version 1.1 (with audio)	Version 1.1 (with audio)
<b>Embedded DisplayPort</b>	Highly scalable and efficient display interface for notebooks.		Yes <sup>1</sup>	Yes <sup>1</sup>
<b>LVDS</b>	Low-voltage digital display interface.		Yes <sup>2</sup>	Yes <sup>2</sup>
<b>DVI with HDCP</b>	Digital video interface that maximizes the visual quality of digital displays such as LCD displays and digital projectors.		Yes	Yes
<b>VGA</b>	Standard analog display interfaces, such as VGA, provide basic visual quality when connected to CRTs, LCDs, or HDTVs.		Yes	Yes
Audio Support				
<b>Dolby* TrueHD, DTS* Premium Suite*</b>	Supported on a significant number of Blu-ray* titles for the highest quality audio.		Yes	Yes

## 3-D Features Comparison

Intel® Core™ processors with Intel® HD Graphics deliver a responsive, attractive 3-D visual experience for casual and mainstream PC games. When you buy a PC equipped with Intel HD graphics, you get a cost-effective solution with the performance for more gaming fun.

		Processor	2nd generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)	Previous generation Intel® Core™ processor family (Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3)
FEATURE	BENEFIT			
<b>Unified Shader Architecture</b>			4th Generation	3rd Generation
<b>Execution Units (EUs)</b>	Delivers new levels of 3-D technology, enabling more realistic game play and providing greater resolution and color-depth settings to the system's video and graphics subsystem.		6/12 EUs	12 EUs
<b>Core Frequency</b>			Up to 1350 MHz	Up to 900 MHz
<b>Video Memory</b>			Up to 1.70 GB	Up to 1.70 GB
<b>DirectX* Support</b>		Standardized programming interface used in games as an interface to the system's graphics through Microsoft* Windows*.		10.1
<b>OpenGL* Support</b>	Standardized programming interface used by 2-D and 3-D graphics applications.		3.0	2.1
<b>Shader Model Support</b>	Enables complex animations and visual effects in games with realistic shading, lighting, and textures.		4.1	4.0

For more information, visit  
[www.intel.com/technology/visualtechnology/index.htm](http://www.intel.com/technology/visualtechnology/index.htm)  
[www.intel.com/technology/quicksynch/index.thm](http://www.intel.com/technology/quicksynch/index.thm)  
[www.intel.com/technology/graphics/intelhd.htm](http://www.intel.com/technology/graphics/intelhd.htm)  
[www.intel.com/technology/graphics/ctv.htm](http://www.intel.com/technology/graphics/ctv.htm)

<sup>1</sup> Mobile only, not supported on desktops.

<sup>2</sup> For desktops, only supported with the Intel® A57 Express Chipset.

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## INTEL® HIGH-PERFORMANCE SATA SOLID-STATE DRIVES (SSD)

Intel® Solid-State Drives represent a revolutionary breakthrough that delivers a giant leap in storage performance. Unlike traditional hard disk drives, Intel SSDs have no moving parts, resulting in a quiet, cool, highly rugged storage solution that also offers faster system responsiveness.

Drawing from decades of memory engineering experience, and industry-leading, compute-quality NAND Flash memory manufacturing processes, Intel SSDs are designed to deliver outstanding performance for a wide range of computing applications. Intel SSDs also feature low-write amplification and a unique wear-leveling design for higher reliability, meaning Intel SSDs not only perform better, they last longer.



New Intel® SSD 320 Series retail box includes a notebook installation kit.

Intel® Solid-State Drive	Intel® SSD 510 Series	Intel® SSD 320 Series	Intel® SSD 311 Series <span style="color: blue;">NEW</span>	Intel® SSD 310 Series
Target Applications	<b>Performance SSD:</b> High-performance storage for 2nd gen Intel® Core™ processor-based notebook and desktop PCs with a 6.0 Gb/s SATA interface.	<b>Mainstream SSD:</b> Performance storage for notebook, desktop, and embedded PCs with a SATA 3.0 Gb/s interface. Utilizes Intel's newest 25nm NAND Flash memory.	<b>Optimized for Intel® Smart Response Technology:</b> Performance-boosting cache for a traditional HDD in a notebook or desktop PC. Requires select 6 Series Intel® Express Chipset and Intel® Rapid Storage Technology Driver 10.5.	<b>Value SSD:</b> Performance boot drive and primary drive for very small form factor client PCs and for use in embedded PCs with a SATA 3.0 Gb/s interface.
SATA Interface	SATA 6.0 Gb/s	SATA 3.0 Gb/s	SATA 3.0 Gb/s	SATA 3.0 Gb/s
Form Factor	2.5" drive	2.5" / 1.8" drive <span style="color: blue;">NEW</span>	2.5" drive / mSATA	mSATA (mini PCI Express*)
Capacities	250 GB / 120 GB	600 GB / 300 GB / 160 GB / 120 GB / 80 GB / 40 GB	20 GB	80 GB / 40 GB
Random IOPs (4 KB)	250 GB / 120 GB Reads: up to 20K <sup>1</sup> IOPs Writes: up to 8K <sup>1</sup> IOPs	600 GB (fastest <sup>2</sup> ) Reads: up to 39.5K <sup>1</sup> IOPs Writes: up to 23K <sup>1</sup> IOPs 40 GB (slowest <sup>2</sup> ) Reads: up to 30K <sup>1</sup> IOPs Writes: up to 3.7K <sup>1</sup> IOPs	20 GB Reads: up to 37K <sup>1</sup> IOPs Writes: up to 3.3K <sup>1</sup> IOPs	80 GB Reads: up to 35K <sup>1</sup> IOPs Writes: up to 6.6K <sup>1</sup> IOPs 40 GB Reads: up to 25K <sup>1</sup> IOPs Writes: up to 2.5K <sup>1</sup> IOPs
Sequential Bandwidth (Sustained MB/s)	250 GB (SATA 6.0 Gb/s / SATA 3.0 Gb/s) Reads: up to 500 MB/s / up to 265 MB/s Writes: up to 315 MB/s / up to 240 MB/s 120 GB (SATA 6.0 Gb/s / SATA 3.0 Gb/s) Reads: up to 450 MB/s / up to 265 MB/s Writes: up to 210 MB/s / up to 200 MB/s	600 GB (fastest <sup>2</sup> ) Reads: up to 270 MB/s Writes: up to 220 MB/s 40 GB (slowest <sup>2</sup> ) Reads: up to 200 MB/s Writes: up to 45 MB/s	20 GB Reads: up to 200 MB/s Writes: up to 105 MB/s	80 GB Reads: up to 200 MB/s Writes: up to 70 MB/s 40 GB Reads: up to 170 MB/s Writes: up to 35 MB/s
Write Endurance	5 years minimum useful life with up to 20 GB/day written <sup>1</sup>	5 years minimum useful life with up to 20 GB/day written <sup>1</sup>	5 years minimum useful life with up to 20 GB/day written <sup>1</sup>	5 years minimum useful life with up to 20 GB/day written <sup>1</sup>
Works With: Intel® Data Migration Software Intel® Solid-State Drive Toolbox	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Warranty	Three year limited warranty	Five year limited warranty <span style="color: blue;">NEW</span>	Three year limited warranty	Three year limited warranty
Production Availability	Now	Now	Now	Now

### Intel® Data Migration Software

- Transfer operating system, applications, and files from an old HDD or SSD to a new Intel® Solid-State Drive<sup>3</sup>
- Easy to use
- Free


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

### Intel® SSD Toolbox

- Schedule and run SSD Trim<sup>4</sup> via Intel® Optimizer
- View drive information, such as model, serial, and firmware numbers
- View SMART data, such as host writes and media wear out
- Run drive diagnostics

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

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

	PRODUCT NAME	CAPACITY	PRODUCT CODE	PRODUCT DESCRIPTION	PACKAGE TYPE	PACKAGE CONTENTS	QUANTITY PER BOX	
✓	Intel® SSD 510 Series	250 GB	<b>SSDSC2MH250A2K5</b>	34nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1	
		120 GB	<b>SSDSC2MH120A2K5</b>	34nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1	
✓	Intel® SSD 320 Series	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	
			<b>SSDSA2CW300G310</b>	300 GB	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" / 5.0mm	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		
	<b>SSDSA2CW160G3B5</b>	25nm MLC / 2.5" / 9.5mm		Retail box	SSD with desktop and notebook installation kits <sup>6</sup>	1		
✓		120 GB	<b>SSDSA1NW160G301</b>	25nm MLC / 1.8" / 5.0mm	OEM box	SSD only	1	
	<b>SSDSA2CW120G310</b>		25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1		
	<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		
	80 GB		<b>SSDSA2CW080G310</b>	25nm MLC / 2.5" / 9.5mm	OEM box	SSD only	1	
			<b>SSDSA2CW080G3K5</b>	25nm MLC / 2.5" / 9.5mm	Reseller box	SSD with desktop installation kit <sup>5</sup>	1	
✓		40 GB	<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" / 5.0mm	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			
✓	Intel® SSD 311 Series	20 GB	<b>SSDSA2VP020G201</b>	34nm SLC / 2.5" / 9.5mm	OEM box	SSD only	1	
✓			<b>SSDMAESC020G201</b>	34nm SLC / mSATA	OEM box	SSD only	1	
	Intel® SSD 310 Series	80 GB	<b>SSDMAEMC080G2C1</b>	34nm MLC / mSATA	OEM box	SSD only	1	
		40 GB	<b>SSDMAEMC040G2C1</b>	34nm MLC / mSATA	OEM box	SSD only	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> Refer to the Intel® SSD 320 Series Data Sheet for performance specifications of each capacity drive.

<sup>3</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>4</sup> Intel® SSD Optimizer utility is available to invoke Trim command for Microsoft® Windows® 7 with Intel® Matrix Storage Manager, Windows Vista®, and Windows® XP. Download the Intel® SSD Toolbox with Intel SSD Optimizer at: [www.intel.com/go/ssdtoolbox](http://www.intel.com/go/ssdtoolbox)

<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 5 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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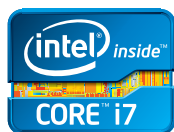


## OUTSTANDING ENTHUSIAST PROCESSORS AND PLATFORMS IN 2011

INTEL® CORE™ PROCESSOR	LGA1366	LGA1155
 <b>Intel® Core™ i7 processor Extreme Edition</b> \$1059 <sup>1</sup>	Intel® Core™ i7-990X processor Extreme Edition (12 MB, 3.46 GHz, 6 cores / 12 threads)	>
 <b>Intel® Core™ i7 processor P2</b> \$594 <sup>1</sup>	Intel® Core™ i7-980 processor  (12 MB, 3.33 GHz, 6 cores / 12 threads)	>
 <b>Intel® Core™ i7 processor P1</b> \$305 <sup>1</sup>	Intel® Core™ i7-970 processor (8 MB, 3.20 GHz, 4 cores / 8 threads)	>
 <b>Intel® Core™ i7 processor P1</b> \$305 <sup>1</sup>		Intel® Core™ i7-2600K processor (8 MB, 3.40 GHz, 4 cores / 8 threads)
 <b>Intel® Core™ i5 processor MS2</b> \$224 <sup>1</sup>		Intel® Core™ i5-2500K processor (6 MB, 3.30 GHz, 4 cores / 8 threads)



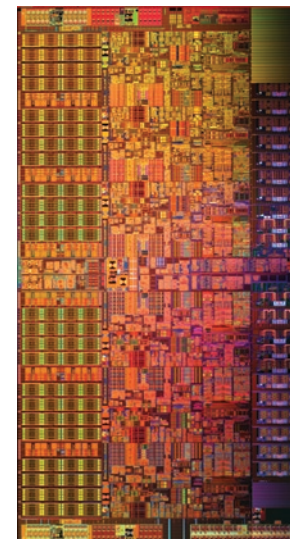
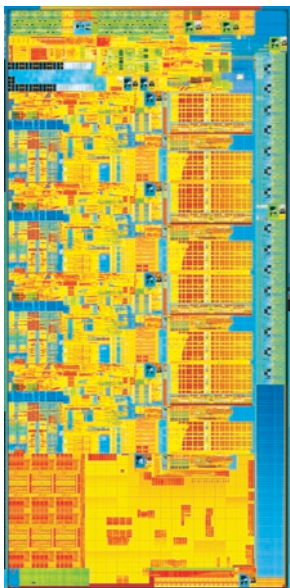
# COMPARING THE INTEL® CORE™ i7 PROCESSOR GENERATIONS: DECIDE WHAT'S IMPORTANT TO YOUR CUSTOMERS (AND TO YOU)



Sandy Bridge<sup>2</sup>  
2nd Generation Intel® Core™  
Processor



Gulftown<sup>2</sup> / Bloomfield<sup>2</sup>  
Intel® Core™ Processor



## Recommend Usages

- Gaming and media transcoding with Intel® HD Graphics
- Mainstream overclocking<sup>3</sup> (*K SKUs only*)

## Why?

- Intel's best mainstream processor performance
- Intel® Quick Sync Video (*transcoding acceleration*)
- Potential for higher maximum air-cooled overclocking<sup>3</sup> frequency (*K SKUs only*)

## Intel® Technology Provider Program Benefits

- Offer Intel's newest microarchitecture
- Socket longevity (*Sandy Bridge<sup>2</sup> + Ivy Bridge<sup>2</sup>*)

## Processor

Intel® Core™ i7-2600K processor 3.40 GHz  
(4 cores / 8 threads)

## Price

\$326<sup>1</sup>

Intel® Core™ i7-2600 processor 3.40 GHz  
(4 cores / 8 threads)

\$305<sup>1</sup>

## Recommend Usages

- Best discrete graphics option for gaming
- Heavily-threaded media editing

## Why?

- Four cores / eight threads provide six cores / twelve threads upgrade path
- Full support for two PCI Express\* x16 graphics cards
- Three-channel memory and larger maximum memory capacity

## Intel® Technology Provider Program Benefits

- Higher margin potential through system customization and premium MB offerings

## Processor

Intel® Core™ i7-970 processor 3.20 GHz  
(6 cores / 12 threads)

## Price

\$594<sup>1</sup>

Intel® Core™ i7-960 processor 3.20 GHz  
(4 cores / 8 threads)

\$305<sup>1</sup>



# INTEL® DESKTOP BOARDS: GET THE BETTER TOGETHER ADVANTAGE

## 2nd Generation Intel® Core™ Processors + Intel® Desktop Boards = Better Together

Now there are even more Intel® Desktop Board products supporting the 2nd generation Intel® Core™ processor family. Experience unique processor features that increase and adapt performance automatically using Intel® Turbo Boost Technology<sup>4</sup> 2.0 and Intel® Hyper-Threading Technology<sup>5</sup>. Significant advances in visual and 3-D graphics capabilities—including dual-stream HD playback, enhanced edit/share for video, and HD stereo 3-D—offer a streamlined visual experience.

## Dream Mega. Go Mini with the New Thin Mini-ITX

Introducing the new thin mini-ITX board, the Intel® Desktop Board DH61AG—it's small and sleek but packs a punch. With approximately half the height of a standard mini-ITX board and all the power of Intel Core processors<sup>6</sup>, this thin mini-ITX board is a perfect fit for any application demanding performance in a low-profile board.

This form factor makes the Intel Desktop Board DH61AG an ideal pairing for home theater PCs as well as for the fast growing all-in-one PC market. Perfect for small form factor thin clients, VESA-mounted PCs, digital signage, and light embedded desktops, the Intel Desktop Board DH61AG also leaves a small environmental footprint. Support for phase shedding technology and up to 50 percent lower thermal design power, lower standby power, and deeper sleep state support significant energy savings. Let your imagination be your design guide with this new offering from Intel Desktop Boards.

## New Features: Faster and Safer

- Bios Vault Technology: Fault tolerant, secure, and virtually incorruptible BIOS
- Fast Boot Technology: Stores system configuration and enables power off to power on in seconds
- Wi-Fi\* / Bluetooth\* Combo: Unique with easy plug and play Bluetooth receiver and three-channel Wi-Fi
- Power Supervisor: Active monitoring for system protection from power surges and more
- Auto Phase Shedding Technology: Dynamic automatic phase shedding for superior power and energy savings



Intel® Desktop Board	Intel® Desktop Board DP67BG	Intel® Desktop Board DH61AG	Intel® Desktop Board DQ67SW	Intel® Desktop Board DH61BE
Series	Extreme	Media	Executive	Classic
Form Factor	ATX	Thin Mini-ITX	MicroATX	MicroATX
Graphic Support	N/A	HDMI* + DVI-I	DisplayPort* + DVI-D + DVI-I	DVI-D + VGA
Audio Support	10-channel	10-channel	8-channel	6-channel
RAID Support	Yes	Yes	Yes	No
USB 3.0	2 ports	2 ports	2 ports	2 ports

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

<sup>1</sup> Distributor list price per 1000 units (USD).

<sup>2</sup> Bloomfield, Gulftown, Ivy Bridge, and Sandy Bridge are code names of Intel Corporation.

<sup>3</sup> Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

<sup>4</sup> Intel® Turbo Boost Technology 2.0 requires a PC with a processor with Intel Turbo Boost Technology 2.0 capability. Intel Turbo Boost Technology 2.0 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.

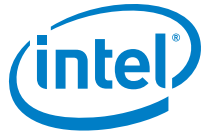
<sup>5</sup> Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. For more information including details on which processors support HT Technology, see [www.intel.com/info/hyperthreading](http://www.intel.com/info/hyperthreading).

<sup>6</sup> Up to 65 W TDP.

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# INTEL® DESKTOP PROCESSORS



INTEL® DESKTOP PROCESSORS

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ i7-990X processor Extreme Edition <sup>2</sup>	<b>BX8061317990X</b>	3.46 GHz	3.73 GHz	1066 MHz	12 MB L3 shared	LGA1366
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ i7-980 processor	<b>BX8061317980</b>	3.33 GHz	3.46 GHz	1066 MHz	12 MB L3 shared	LGA1366
	Intel Core i7-970 processor	<b>BX8061317970</b>	3.20 GHz	3.46 GHz	1066 MHz	12 MB L3 shared	LGA1366
	Intel Core i7-2600K processor <sup>2</sup>	<b>BX80623172600K</b>	3.40 GHz	3.80 GHz	1333 MHz	8 MB L3 shared	LGA1155
	Intel Core i7-2600 processor	<b>BX80623172600</b>	3.40 GHz	3.80 GHz	1333 MHz	8 MB L3 shared	LGA1155
	Intel Core i7-960 processor	<b>BX806051960</b>	3.20 GHz	3.46 GHz	1066 MHz	8 MB L3 shared	LGA1366
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ i5-2500K processor <sup>2</sup>	<b>BX80623152500K</b>	3.30 GHz	3.70 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2500 processor	<b>BX80623152500</b>	3.30 GHz	3.70 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2400 processor	<b>BX80623152400</b>	3.10 GHz	3.40 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2400S processor	<b>BX80623152400S</b>	2.50 GHz	3.30 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2310 processor	<b>BX80623152310</b>	2.90 GHz	3.20 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2300 processor	<b>BX80623152300</b>	2.80 GHz	3.10 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-760 processor	<b>BX8060515760</b>	2.80 GHz	3.43 GHz	1333 MHz	8 MB L3 shared	LGA1156
	Intel Core i5-650 processor	<b>BX8061615650</b>	3.20 GHz	3.46 GHz	1333 MHz	4 MB L3 shared	LGA1156
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ i3-2120 processor	<b>BX80623132120</b>	3.30 GHz	N/A	1333 MHz	3 MB L3 shared	LGA1155
	Intel Core i3-2105 processor	<b>BX80623132105</b>	3.10 GHz	N/A	1333 MHz	3 MB L3 shared	LGA1155
	Intel Core i3-2100 processor	<b>BX80623132100</b>	3.10 GHz	N/A	1333 MHz	3 MB L3 shared	LGA1155
	Intel Core i3-550 processor	<b>BX8061613550</b>	3.20 GHz	N/A	1333 MHz	4 MB L3 shared	LGA1156
	Intel Core i3-540 processor	<b>BX8061613540</b>	3.06 GHz	N/A	1333 MHz	4 MB L3 shared	LGA1156
	Intel Core i3-530 processor	<b>BX8061613530</b>	2.93 GHz	N/A	1333 MHz	4 MB L3 shared	LGA1156

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

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ 2 Duo processor E7600	BX80571E7600	3.06 GHz	N/A	1066 MHz	3 MB L2 shared	LGA775
	Intel Core 2 Duo processor E7500	BX80571E7500	2.93 GHz	N/A	1066 MHz	3 MB L2 shared	LGA775
	Intel Core 2 Duo processor E7400	BX80571E7400	2.80 GHz	N/A	1066 MHz	3 MB L2 shared	LGA775
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Pentium® processor G850	BX80623G850	2.90 MHz	N/A	1333 MHz	3 MB L2 shared	LGA775
	Intel Pentium processor G840	BX80623G840	2.80 MHz	N/A	1333 MHz	3 MB L2 shared	LGA775
	Intel Pentium processor G620	BX80623G620	2.60 MHz	N/A	1066 MHz	3 MB L2 shared	LGA775
	Intel Pentium processor G6950	BX80616G6950	2.80 GHz	N/A	1066 MHz	3 MB L3 shared	LGA1156
	Intel Pentium processor E6800	BX80571E6800	3.40 GHz	N/A	1066 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E6700	BX80571E6700	3.20 GHz	N/A	1066 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E6600	BX80571E6600	3.06 GHz	N/A	1066 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E6300	BX80571E6300	2.80 GHz	N/A	1066 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E5800	BX80571E5800	3.20 GHz	N/A	800 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E5700	BX80571E5700	3 GHz	N/A	800 MHz	2 MB L2 shared	LGA775
	Intel Pentium processor E5500	BX80571E5500	2.80 GHz	N/A	800 MHz	2 MB L2 shared	LGA775
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Celeron® processor E3500	BX80571E3500	2.70 GHz	N/A	800 MHz	1 MB L2 shared	LGA775
	Intel Celeron processor E3400	BX80571E3400	2.60 GHz	N/A	800 MHz	1 MB L2 shared	LGA775
	Intel Celeron processor E3300	BX80571E3300	2.50 GHz	N/A	800 MHz	1 MB L2 shared	LGA775
	Intel Celeron processor 430	BX80557430	1.80 GHz	N/A	800 MHz	512 KB L2	LGA775
	LOW-POWER PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® TURBO BOOST TECHNOLOGY <sup>1</sup>	MEMORY SPEED	CACHE	PACKAGE
	Intel® Core™ i5-2400S processor	BX80623I52400S	2.50 GHz	3.30 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel Core i5-2405S processor	BX80623I52405S	2.50 GHz	3.30 GHz	1333 MHz	6 MB L3 shared	LGA1155
	Intel® Core™ i3-2100T processor	BX80623I32100T	2.50 GHz	N/A	1333 MHz	3 MB L3 shared	LGA1155
	Intel® Pentium® processor G620T	BX80623G620T	2.20 GHz	N/A	1066 MHz	3 MB L3 shared	LGA1155

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

<sup>1</sup> Intel® Turbo Boost Technology—maximum single-core turbo frequency (GHz). 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>2</sup> Overclocking enabled. Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

Please refer to the product quick reference matrix located on Intel® Reseller Center: [www.intel.com/reseller](http://www.intel.com/reseller)

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 more information.

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# INTEL® DESKTOP BOARDS

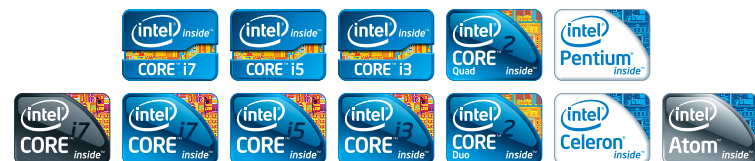
## DESIGNED FOR PERFORMANCE



INTEL® DESKTOP BOARDS

	Desktop Board	Form Factor	Package	Memory	Integrated Graphics Port <sup>1</sup>	PCIe* x16	PCIe x1	PCI	PATA (devices)	SATA 3 6.0 Gb/s	SATA 2 3.0 Gb/s (eSATA)	RAID	Audio	USB 3	USB 2 (ext+int)	1394 (ext+int)		2nd Gen	Prev Gen	2nd Gen	Prev Gen	2nd Gen	Prev Gen
EXTREME	DX58S02	ATX	LGA1366	DDR3 2400		3	2	1		2	6 (2)	▪	10-ch	2	6+6	1+1	▪		▪				
	DX580G	ATX	LGA1366	DDR3 1600		2	3	1		2	6	▪	8-ch	2	6+6	1+1	▪		▪				
	DP67BG	ATX	LGA1155	DDR3 1600		1	3	2		2	4 (1)	▪	10-ch		8+6	1+1		▪		▪			
	DX58SO	ATX	LGA1366	DDR3 1600		3	1	1			6 (2)	▪	10-ch		8+4	1+1	▪		▪				
MEDIA	DZ68DB	ATX	LGA1155	DDR3 1333	DisplayPort*+ HDMI*+DVI-I	1	2	1		2	3 (1)	▪	10-ch	2	6+8	1+1		▪		▪			
	DH61AG	Thin mini-ITX	LGA1155	DDR3 1333	eDisplayPort*+ HDMI+DVI-I+ LVDS		1 + 2 mini PCIe				2 (1)		10-ch	2	2+8			▪		▪			
	DP67BA	ATX	LGA1155	DDR3 1333		1	2	2		2	3 (1)	▪	10-ch	2	6+8	1+1		▪		▪			
	DP67DE	MicroATX	LGA1155	DDR3 1333		1	2	1		2	3 (1)	▪	10-ch	2	6+8	1+1		▪		▪			
	DH67CF	mini-ITX	LGA1155	DDR3 1333	DisplayPort+ HDMI+DVI-I	1				2	2 (1)	▪	10-ch	2	4+6			2		▪			
	DH67GD	MicroATX	LGA1155	DDR3 1333	DisplayPort+ HDMI+DVI-I	1	2	1		2	3 (1)	▪	10-ch	2	6+8	1+1		▪		▪			
	DH67BL	MicroATX	LGA1155	DDR3 1333	HDMI+DVI-I	1	2	1		2	3 (1)	▪	10-ch	2	6+8			▪		▪			
	DH67CL	ATX	LGA1155	DDR3 1333	HDMI+DVI-I	1	2	3		2	3 (1)	▪	10-ch	2	6+8			▪		▪			
	DP55WG	ATX	LGA1156	DDR3 1600		2	2	2			6	▪	10-ch		8+6	1+1			▪		▪		
	DP55WB	MicroATX	LGA1156	DDR3 1333		1	2	1			6	▪	8-ch		8+6	1+1			▪		▪		
	DH57JG	mini-ITX	LGA1156	DDR3 1333	HDMI+DVI	1					4 (1)	▪	10-ch		6+6				2				
	DH57DD	MicroATX	LGA1156	DDR3 1333	HDMI*+DVI	1	2	1			5 (1)	▪	10-ch		6+8	1+1			▪		▪		
	DH55TC	MicroATX	LGA1156	DDR3 1333	HDMI+DVI+ VGA	1	2	1			6 (2)		8-ch		6+6				▪		▪		
	DH55HC	ATX	LGA1156	DDR3 1333	HDMI+DVI+ VGA	1	2	3			6 (2)		8-ch		6+6				▪		▪		
EXECUTIVE	DQ67SW	MicroATX	LGA1155	DDR3 1333	DisplayPort+ DVI-D+DVI-I	1	2	1		2	2 (2)	▪	8-ch	2	4+8	1+1		▪		▪			
	DQ670W	MicroATX	LGA1155	DDR3 1333	DVI-D+VGA	1	2	1		2	2 (2)	▪	8-ch		6+8			▪		▪			
	DQ67EP	mini-ITX	LGA1155	DDR3 1333	DisplayPort+ DVI-D+DVI-I	1	1 mini PCIe			2	2 (2)	▪	8-ch	2	4+6				▪		▪		
	DQ57TM	MicroATX	LGA1156	DDR3 1333	DisplayPort+ DVI+DVI	1	2	1			5 (1)	▪	6-ch		6+8				▪		▪		
	DQ57TML	MicroATX	LGA1156	DDR3 1333	DVI+VGA	1	2	1			4	▪	6-ch		4+8				▪		▪		

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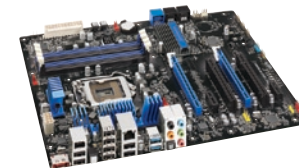
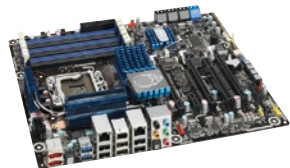


	Desktop Board	Form Factor	Package	Memory	Integrated Graphics Port <sup>1</sup>	PCIe* x16	PCIe x1	PCI	PATA (devices)	SATA 3 6.0 Gb/s	SATA 2 3.0 Gb/s (eSATA)	RAID	Audio	USB 3	USB 2 (ext+int)	1394 (ext+int)	2nd Gen	Prev Gen	2nd Gen	Prev Gen	2nd Gen	Prev Gen					
CLASSIC	DB65AL	MicroATX	LGA1155	DDR3 1333	DVI-D+VGA	1	2	1		1	5 (2)		8-ch		6+6			▪		▪		▪					
	DH61BE	MicroATX	LGA1155	DDR3 1333	DVI-D+VGA	1	2	1		2	4		8-ch	2	2+8			▪		▪		▪					
	DH61CR	MicroATX	LGA1155	DDR3 1333	DVI-D+VGA	1	2	1			4		6-ch		4+6			▪		▪		▪					
	DH61DL	mini-ITX	LGA1155	DDR3 1333	DVI-D+VGA		1 + 1 mini PCIe				3		6-ch	2	2+6			▪		▪		▪					
	DH61WW	MicroATX	LGA1155	DDR3 1333	VGA	1	1	1			4		6-ch		4+2			▪		▪		▪					
	DH55PJ	MicroATX	LGA1156	DDR3 1333	DVI+VGA	1	2	1			4		8-ch		6+6				▪		▪		▪				
	DG43RK	MicroATX	LGA775	DDR3 1333 <sup>3</sup>	HDMI+DVI	1	2	1			4		10-ch		6+6	1+1					▪		▪				
	DG41TX	MicroATX	LGA775	DDR3 1333 <sup>3</sup>	DVI+VGA	1	1	2	1 (2)		4		6-ch		4+4								▪		▪		
	DG41KR	MicroATX	LGA775	DDR3 1066	HDMI+VGA	1	1	2	1 (2)		4		10-ch		4+4								▪		▪		
	DG41AN	mini-ITX	LGA775	DDR3 1333 <sup>3</sup>	DVI+VGA			1			3		6-ch		4+4								▪		▪		
INNOVATION	D525MW	mini-ITX		DDR3 SODIMM	VGA+LVDS			1			2		8-ch		4+2												▪
	D425KT	mini-ITX		DDR3 SODIMM	VGA			1			2		4-ch		4+4												▪
ESSENTIAL	DG41WV	MicroATX	LGA775	DDR3 1066	VGA	1	1	2			4		6-ch		4+4								▪		▪		
	D510MO	mini-ITX		DDR2 800	VGA			1			2		6-ch		4+3												▪
	D410PT	mini-ITX		DDR2 800	VGA			1			2		4-ch		4+4												▪
	D945GSEJT	mini-ITX		SODIMM	DVI+VGA			1	1 (2)		2		4-ch		3+3												▪

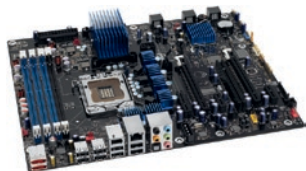
For specific processor compatibility, visit <http://processormatch.intel.com>

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

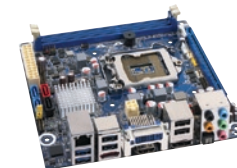
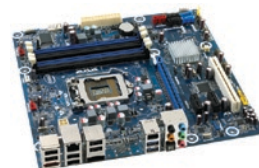




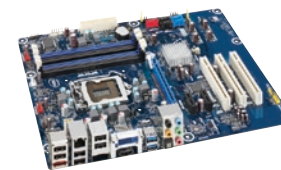
Series	Extreme Series	Extreme Series	Extreme Series
Product Family	<b>Intel® Desktop Board DX58S02</b>	<b>Intel® Desktop Board DX580G</b>	<b>Intel® Desktop Board DP67BG</b>
Form Factor	ATX	ATX	ATX
Product Code / UPC	<b>BOXDX58S02 / 00735858217255</b>	<b>BOXDX580G / 00735858217293</b>	<b>BOXDP67BG / 00735858217101</b>
10-pack Product Code / UPC	BLKDX58S02 / 00735858217279	BLKDX580G / 00735858217309	BLKDP67BG / 00735858217064
Processor Support	<b>Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package</b>	<b>Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	N/A
Chipset	Intel® X58 Express Chipset	Intel® X58 Express Chipset	Intel® P67 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	N/A	N/A	N/A
Discrete Graphics Connector	Three PCI Express* 2.0 x16 connectors ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support	Two PCI Express* 2.0 x16 connectors ( <i>x16 electrical</i> ) ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support	One PCI Express* 2.0 x16 connector or switchable to two PCI Express 2.0 x8 connectors ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support
Memory Support	Tri-channel DDR3 with six connectors for 2400 MHz memory ( <i>overclocked<sup>6</sup></i> ) (48 GB <sup>7</sup> max) Intel® Extreme Memory Profiles support	Tri-channel DDR3 with six connectors for 1600+ MHz memory (48 GB <sup>7</sup> max)	Dual-channel DDR3 with four connectors for 1600 / 1333 / 1066 MHz (16 GB <sup>7</sup> max)
Expansion Connectors	Two PCI Express* 2.0 x1 connectors and one PCI connector	Three PCI Express* 2.0 x1 connectors and one PCI connector	Three PCI Express* 2.0 x1 connectors and two PCI connectors
Audio	Ten-channel Intel® High Definition Audio <sup>8</sup> ( <i>five back panel analog ports and one optical port</i> )	Eight-channel Intel® High Definition Audio <sup>8</sup> ( <i>three back panel analog ports</i> )	Ten-channel Intel® High Definition Audio <sup>8</sup> ( <i>six back panel analog ports and one optical port</i> )
USB Ports	Twelve Hi-Speed USB 2.0 ports ( <i>six external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports	Twelve Hi-Speed USB 2.0 ports ( <i>six external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports	Fourteen USB 2.0 ports ( <i>eight external ports and six additional ports via internal headers</i> )
1394 Ports	Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )	Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )	Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )
Storage	Two SATA ports (6.0 Gb/s), six SATA ports (3.0 Gb/s), and two eSATA ports	Two SATA ports (6.0 Gb/s) and six SATA ports (3.0 Gb/s)	Two SATA ports (6.0 Gb/s), four SATA ports (3.0 Gb/s), and one eSATA port
RAID	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10
Onboard LAN	Dual Intel® PRO 10/100/1000 Network Connection Bluetooth* / Wi-Fi* module	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Extreme Tuning Utility <sup>10</sup> ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Extreme Tuning Utility <sup>10</sup> ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities Intel® Extreme Tuning Utility <sup>10</sup> ESET* Smart Security 4 (45-day license) Laplink* PCmover Express*
BIOS	Intel® Rapid BIOS Boot Intel® Express BIOS	Intel® Rapid BIOS Boot Intel® Express BIOS	Intel® Rapid BIOS Boot Intel® Express BIOS
Windows Vista* and WHQL Support	Windows Vista* Premium	Windows Vista* Premium	Windows Vista* Premium
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



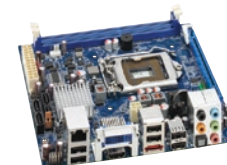
Series	Extreme Series	Media Series	Media Series
Product Family	<b>Intel® Desktop Board DX58SO</b>	<b>Intel® Desktop Board DZ68DB</b>	<b>Intel® Desktop Board DH61AG</b>
Form Factor	ATX	ATX	Thin Mini-ITX
Product Code / UPC	<b>BOXDX58SO / 00735858203036</b>	<b>BOXDZ68DB / 00735858221351</b>	<b>BOXDH61AG / 00735858220255</b>
10-pack Product Code / UPC	BLKDX58SO / 00735858203043	BLKDZ68DB / 00735858221344	BLKDH61AG / 00735858220262
Processor Support	<b>Intel® Core™ i7 processor Extreme Edition and Intel® Core™ i7 processors in the LGA1366 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7 (65 W TDP), Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>
Intel® QPI (GT/s)* / Supported FSB (MHz)	6.40 GT/s / 4.80 GT/s	N/A	N/A
Chipset	Intel® X58 Express Chipset	Intel® Z68 Express Chipset	Intel® H61 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	N/A	Intel® HD Graphics (DisplayPort* + HDMI* + DVI-I)	Intel® HD Graphics (Embedded DisplayPort* + HDMI* + DVI-I + LVDS)
Discrete Graphics Connector	Two PCI Express* 2.0 x16 connectors (electrical x16) and one PCI Express 2.0 x16 connector (electrical x4) ATI* CrossFireX* and NVIDIA* SLI* multi-GPU platform support	One PCI Express* x16 connector	N/A
Memory Support	Tri-channel DDR3 with four connectors for 1600+ / 1333 / 1066 MHz memory (16 GB* max) Intel® Extreme Memory Profiles support	Dual-channel DDR3 with 4 connectors for 1333 / 1066 / 800 MHz memory (32 GB* max)	Dual-channel SODIMM DDR3 with two connectors for 1333 / 1066 / 800 MHz memory (16 GB* max)
Expansion Connectors	Two PCI Express 2.0 x1 connectors and one PCI connector	Two PCI Express 2.0 x1 connectors and one PCI connector	One PCI Express* 2.0 x1 connector and two PCI Express Mini Card connectors (one full length, one half length)
Audio	Ten-channel Intel® High Definition Audio <sup>9</sup> with Dolby* Home Theater (five back panel analog ports and one optical port)	Ten-channel Intel® High Definition Audio <sup>9</sup>	Ten-channel Intel® High Definition Audio <sup>9</sup>
USB Ports	Twelve Hi-Speed USB 2.0 ports (eight back panel ports and four additional ports via two internal headers)	Fourteen Hi-Speed USB 2.0 ports (six external ports and eight additional ports via internal headers) and two USB 3.0 ports	Ten Hi-Speed USB 2.0 ports (two external ports and eight additional ports via internal headers) and two USB 3.0 ports
1394 Ports	Two IEEE 1394a ports (one back panel port and one additional port via internal header)	Two IEEE 1394a ports (one external port and one via internal header)	N/A
Storage	Six SATA ports (3.0 Gb/s) and two eSATA ports	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)	Two SATA ports (3.0 Gb/s) and one eSATA back panel port (3.0 Gb/s)
RAID	Intel® Matrix Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	N/A
Onboard LAN	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Control Center Acronis* True Image 11 Home CyberLink* Live Premium Diskkeeper* Home Edition DivX* Pro for Windows* Dolby* Control Center Norton 360* PLAYXPRT* In-Game Platform Kaspersky* Anti-Virus <sup>11</sup> Kingsoft* Antivirus <sup>12</sup> Kingsoft* Powerword* <sup>12</sup>	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express* LucidLogix* Virtu* GPU Virtualization	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*
BIOS	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery Digital Signature Technology Unified Firmware Interface (UEFI)	BIOS Vault Technology	BIOS Vault Technology
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



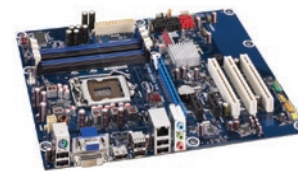
Series	Media Series	Media Series	Media Series
Product Family	<b>Intel® Desktop Board DP67BA</b>	<b>Intel® Desktop Board DP67DE</b>	<b>Intel® Desktop Board DH67CF</b>
Form Factor	ATX	MicroATX	Mini-ITX
Product Code / UPC	<b>BOXDP67BA / 00735858217088</b>	<b>BOXDP67DE / 00735858217125</b>	<b>BOXDH67CF / 00735858216999</b>
10-pack Product Code / UPC	BLKDP67BA / 00735858217057	BLKDP67DE / 00735858217071	BLKDH67CF / 00735858216944
Processor Support	<b>Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and other Intel® processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and other Intel® processors in the LGA1155 package</b>	<b>Intel® Core™ i7<sup>2</sup>, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	N/A
Chipset	Intel® P67 Express Chipset	Intel® P67 Express Chipset	Intel® H67 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	N/A	N/A	Intel® HD Graphics ( <i>DisplayPort* + HDMI* + DVI-I</i> )
Discrete Graphics Connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector
Memory Support	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility	Dual-channel DDR3 with two connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility
Expansion Connectors	Two PCI Express* 2.0 x1 connectors and two PCI connectors	Two PCI Express* 2.0 x1 connectors and one PCI connector	N/A
Audio	Ten-channel Intel® High Definition Audio <sup>9</sup>	Ten-channel Intel® High Definition Audio <sup>9</sup>	Ten-channel Intel® High Definition Audio <sup>9</sup>
USB Ports	Fourteen USB 2.0 ports ( <i>six external ports and eight via internal headers</i> ) and two USB 3.0 ports	Fourteen USB 2.0 ports ( <i>six external ports and eight additional ports via internal headers</i> ) and two USB 3.0 ports	Ten USB 2.0 ports ( <i>four external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports
1394 Ports	Two IEEE 1394a ports ( <i>one external port and one via internal header</i> )	Two IEEE 1394a ports ( <i>one external port and one via internal header</i> )	N/A
Storage	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)	Two SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)
RAID	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10
Onboard LAN	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 integrated NIC
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*
BIOS	N/A	N/A	N/A
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty




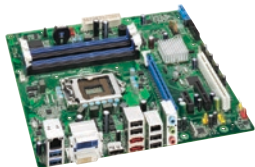

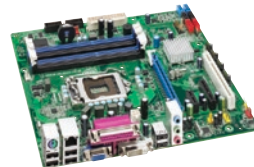

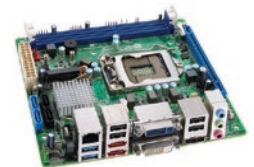
Series	Media Series	Media Series	Media Series
Product Family	<b>Intel® Desktop Board DH67GD</b>	<b>Intel® Desktop Board DH67BL</b>	<b>Intel® Desktop Board DH67CL</b>
Form Factor	MicroATX	MicroATX	ATX
Product Code / UPC	<b>BOXDH67GD / 00735858217033</b>	<b>BOXDH67BL / 00735858216975</b>	<b>BOXDH67CL / 00735858217019</b>
10-pack Product Code / UPC	BLKDH67GD / 00735858216968	BLKDH67BL / 00735858216937	BLKDH67CL / 00735858216951
Processor Support	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	N/A
Chipset	Intel® H67 Express Chipset	Intel® H67 Express Chipset	Intel® H67 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	Intel® HD Graphics ( <i>DisplayPort* + HDMI* + DVI-I</i> )	Intel® HD Graphics ( <i>HDMI* + DVI-I</i> )	Intel® HD Graphics ( <i>HDMI* + DVI-I</i> )
Discrete Graphics Connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector
Memory Support	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (32 GB <sup>7</sup> max) 1.2 V to 1.8 V memory voltage control for max DIMM compatibility
Expansion Connectors	Two PCI Express* 2.0 x1 connectors and one PCI connector	Two PCI Express* 2.0 x1 connectors and one PCI connector	Two PCI Express* 2.0 x1 connectors and three PCI connectors
Audio	Ten-channel Intel® High Definition Audio <sup>9</sup>	Ten-channel Intel® High Definition Audio <sup>9</sup>	Ten-channel Intel® High Definition Audio <sup>9</sup>
USB Ports	Fourteen USB 2.0 ports ( <i>six external ports and eight via internal headers</i> ) and two USB 3.0 ports	Fourteen USB 2.0 ports ( <i>six external ports and eight additional ports via internal headers</i> ) and two USB 3.0 ports	Fourteen USB 2.0 ports ( <i>six external ports and eight additional ports via internal headers</i> ) and two USB 3.0 ports
1394 Ports	Two IEEE 1394a ports ( <i>one back panel port and one via internal header</i> )	N/A	N/A
Storage	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)	Three SATA ports (3.0 Gb/s) with one port compatible with eSATA extension, two SATA ports (6.0 Gb/s), and one eSATA back panel port (3.0 Gb/s)
RAID	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10
Onboard LAN	Intel® PRO 10/100/1000 integrated NIC	Intel® PRO 10/100/1000 integrated NIC	Intel® PRO 10/100/1000 integrated NIC
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express* LucidLogix* Virtu* GPU Virtualization	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express* LucidLogix* Virtu* GPU Virtualization	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express* LucidLogix* Virtu* GPU Virtualization
BIOS	N/A	N/A	N/A
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



Series	Media Series		Media Series	Media Series
Product Family	Intel® Desktop Board DP55WG		Intel® Desktop Board DP55WB	Intel® Desktop Board DH57JG
Form Factor	ATX		MicroATX	Mini-ITX
Product Code / UPC	BOXDP55WG / 00735858206037		BOXDP55WB / 00735858209144	BOXDH57JG / 00735858210232
10-pack Product Code / UPC	BLKDP55WG / 00735858206044		BLKP55WB / 00735858209151	BLKDH57JG / 00735858210249
Processor Support	Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package		Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package	Intel® Core™ i7 <sup>2</sup> , Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A		N/A	N/A
Chipset	Intel® P55 Express Chipset		Intel® P55 Express Chipset	Intel® H57 Express Chipset
Supports HT Technology <sup>5</sup>	Yes		Yes	Yes
Integrated Graphics Core <sup>1</sup>	N/A		N/A	Intel® HD Graphics (HDMI* + DVI-I)
Discrete Graphics Connector	Two PCI Express* 2.0 x16 connectors ( <i>electrical x8</i> ) and one PCI Express 2.0 x16 connector ( <i>electrical x4</i> )		One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector
Memory Support	Dual-channel DDR3 with four connectors for 1600+ / 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)		Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)
Expansion Connectors	Two PCI Express 2.0 x1 connectors and two PCI connectors		Two PCI Express 2.0 x1 connectors and one PCI connector	N/A
Audio	Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby* Home Theater ( <i>five back panel analog ports and one optical port</i> )		Eight-channel Intel® High Definition Audio <sup>8</sup> ( <i>three back panel analog ports</i> )	Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby* Home Theater ( <i>five back panel analog ports and one optical port</i> )
USB Ports	Fourteen Hi-Speed USB 2.0 ports ( <i>eight back panel ports and six additional ports via three internal headers</i> )		Fourteen Hi-Speed USB 2.0 ports ( <i>eight back panel ports and six additional ports via three internal headers</i> )	Twelve Hi-Speed USB 2.0 ports ( <i>six back panel ports and six additional ports via three internal headers</i> )
1394 Ports	Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )		Two IEEE 1394a ports ( <i>one back panel port and one additional port via internal header</i> )	N/A
Storage	Six SATA ports (3.0 Gb/s)		Six SATA ports (3.0 Gb/s)	Four SATA ports (3.0 Gb/s) and one eSATA port
RAID	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10		Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10
Onboard LAN	Intel® PRO 10/100/1000 Network Connection		Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A		N/A	N/A
Lead Free	Yes		Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities Dismaker* Pro Premier (Microsoft® Windows* XP and Windows Vista*)	DivX* Pro for Windows* Dolby* Control Center Laplink* PCmover Express* Norton Internet Security* 2009	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* Pro for Windows* Dolby* Control Center ESET* Smart Security 4
BIOS	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery	Digital Signature Technology Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery
Windows Vista* and WHQL Support	Windows Vista Premium Windows* 7		Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty		3 year limited warranty	3 year limited warranty



Series	Media Series	Media Series	Media Series
Product Family	<b>Intel® Desktop Board DH57DD</b>	<b>Intel® Desktop Board DH55TC</b>	<b>Intel® Desktop Board DH55HC</b>
Form Factor	MicroATX	MicroATX	ATX
Product Code / UPC	<b>BOXDH57DD / 00735858213264</b>	<b>BOXDH55TC / 00735858210171</b>	<b>BOXDH55HC / 00735858210218</b>
10-pack Product Code / UPC	BLKDH57DD / 00735858213288	BLKDH55TC / 00735858210188	BLKDH55HC / 00735858210201
Processor Support	<b>Intel® Core™ i7, Intel® Core™ i5, Intel® Core™ i3, and Intel® Pentium® processors in the LGA1156 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	N/A
Chipset	Intel® H57 Express Chipset	Intel® H55 Express Chipset	Intel® H55 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	Intel® HD Graphics (HDMI* + DVI)	Intel® HD Graphics (HDMI* + DVI-D + VGA)	Intel® HD Graphics (HDMI* + DVI-D + VGA)
Discrete Graphics Connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector
Memory Support	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)	Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB <sup>7</sup> max)
Expansion Connectors	One PCI Express 2.0 x1 connector and two PCI connectors	Two PCI Express 2.0 x1 connectors and one PCI connector	Two PCI Express 2.0 x1 connectors and three PCI connectors
Audio	Ten-channel Intel® High Definition Audio <sup>9</sup> with Dolby* Home Theater (five back panel analog ports and one optical port)	Eight-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	Eight-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)
USB Ports	Fourteen Hi-Speed USB 2.0 ports (six back panel ports and eight additional ports via four internal headers)	Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)	Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)
1394 Ports	Two IEEE 1394a ports (one back panel port and one additional port via internal header)	N/A	N/A
Storage	Five SATA ports (3.0 Gb/s) and one eSATA port	Six SATA ports (3.0 Gb/s) with two ports compatible with eSATA dongles	Six SATA ports (3.0 Gb/s) with two ports compatible with eSATA dongles
RAID	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	N/A	N/A
Onboard LAN	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* Pro for Windows* Dolby* Control Center ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*
BIOS	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery Digital Signature Technology Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery Digital Signature Technology Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery Digital Signature Technology Unified Firmware Interface (UEFI)
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty

	 	 	 
<b>Series</b>	<b>Executive Series</b> - Supports Intel® vPro™ Technology	<b>Executive Series</b> - Supports Intel® vPro™ Technology	<b>Executive Series</b> - Supports Intel® vPro™ Technology
<b>Product Family</b>	<b>Intel® Desktop Board DQ67SW</b>	<b>Intel® Desktop Board DQ670W</b>	<b>Intel® Desktop Board DQ67EP</b>
<b>Form Factor</b>	MicroATX	MicroATX	MicroATX
<b>Product Code / UPC</b>	<b>BOXDQ67SWB3 / 00735858221177</b>	<b>BOXDQ670WB3 / 00735858221221</b>	<b>BOXDQ67EPB3 / 00735858221269</b>
<b>10-pack Product Code / UPC</b>	BLKDQ67SWB3 / 00735858221184	BLKDQ670WB3 / 00735858221238	BLKDQ67EPB3 / 00735858221276
<b>Processor Support</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i5 and Intel® Core™ i3 processors in the LGA1155 package</b>
<b>Intel® QPI (GT/s)<sup>4</sup> / Supported FSB (MHz)</b>	N/A	N/A	N/A
<b>Chipset</b>	Intel® Q67 Express Chipset	Intel® Q67 Express Chipset	Intel® Q67 Express Chipset
<b>Supports HT Technology<sup>5</sup></b>	Yes	Yes	Yes
<b>Integrated Graphics Core<sup>1</sup></b>	Intel® HD Graphics ( <i>DisplayPort* + DVI-D + DVI-I</i> )	Intel® HD Graphics ( <i>DVI-D + VGA</i> )	Intel® HD Graphics ( <i>DisplayPort* + DVI-D + DVI-I</i> )
<b>Discrete Graphics Connector</b>	One PCI Express* x16 connector	One PCI Express* x16 connector	One PCI Express* x16 connector
<b>Memory Support</b>	Dual-channel DDR3 with four connectors for 1333 / 1066 / 800 MHz memory ( <i>32 GB* max</i> )	Dual-channel DDR3 with four connectors for 1333 / 1066 / 800 MHz memory ( <i>32 GB* max</i> )	Dual-channel DDR3 with four connectors for 1333 / 1066 / 800 MHz memory ( <i>32 GB* max</i> )
<b>Expansion Connectors</b>	One PCI Express 2.0 x4 connector, one PCI Express 2.0 x1 connector, and one PCI connector	One PCI Express 2.0 x4 connector, one PCI Express 2.0 x1 connector, and one PCI connector	One PCI Express* 2.0 x1 connector and one PCI Express Mini Card connector ( <i>half length</i> )
<b>Audio</b>	Eight-channel Intel® High Definition Audio <sup>9</sup>	Eight-channel Intel® High Definition Audio <sup>9</sup>	Eight-channel Intel® High Definition Audio <sup>9</sup>
<b>USB Ports</b>	Twelve Hi-Speed USB 2.0 ports ( <i>four external ports and eight additional ports via internal headers</i> ) and two USB 3.0 ports	Fourteen Hi-Speed USB 2.0 ports ( <i>six external ports and eight additional ports via internal headers</i> )	Ten Hi-Speed USB 2.0 ports ( <i>four external ports and six additional ports via internal headers</i> ) and two USB 3.0 ports
<b>1394 Ports</b>	Two IEEE 1394a ports ( <i>one external port and one via internal header</i> )	N/A	N/A
<b>Storage</b>	Two SATA ports ( <i>3.0 Gb/s</i> ), two SATA ports ( <i>6.0 Gb/s</i> ), and two eSATA back panel ports ( <i>3.0 Gb/s</i> )	Four SATA ports ( <i>3.0 Gb/s</i> ) with two ports compatible with eSATA extension, and two SATA ports ( <i>6.0 Gb/s</i> )	Two SATA ports ( <i>3.0 Gb/s</i> ), two SATA ports ( <i>6.0 Gb/s</i> ), and two eSATA back panel ports ( <i>3.0 Gb/s</i> )
<b>RAID</b>	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10	Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10
<b>Onboard LAN</b>	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
<b>Trusted Platform Module</b>	Yes ( <i>discrete</i> )	Yes ( <i>discrete</i> )	Yes ( <i>discrete</i> )
<b>Lead Free</b>	Yes	Yes	Yes
<b>Software</b>	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Professional* RealVNC* Viewer Plus ( <i>Internet download</i> ) Spiceworks* IT Desktop Wave* EMBASSY* Security Center	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Professional* RealVNC* Viewer Plus ( <i>Internet download</i> ) Spiceworks* IT Desktop Wave* EMBASSY* Security Center	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Professional* RealVNC* Viewer Plus ( <i>Internet download</i> ) Spiceworks* IT Desktop Wave* EMBASSY* Security Center
<b>BIOS</b>	BIOS Vault Technology	BIOS Vault Technology	BIOS Vault Technology
<b>Windows Vista* and WHQL Support</b>	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
<b>Warranty</b>	3 year limited warranty	3 year limited warranty	3 year limited warranty



Executive Series - Supports Intel® vPro™ technology

**Intel® Desktop Board DQ57TM**

MicroATX

BOXDQ57TM / 00735858210263

BLKDQ57TM / 00735858210270

Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package

N/A

Intel® QPI (GT/s)<sup>4</sup> / Supported FSB (MHz)

Chipset

Intel® Q57 Express Chipset  
Intel® Active Management Technology<sup>13</sup> 6.0

Supports HT Technology<sup>5</sup>

Yes

Integrated Graphics Core<sup>1</sup>

Intel® HD Graphics (DisplayPort\* + DVI-D + DVI-I)

Discrete Graphics Connector

One PCI Express\* 2.0 x16 connector

Memory Support

Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB<sup>7</sup> max)

Expansion Connectors

Two PCI Express 2.0 x1 connectors and one PCI connector

Audio

Six-channel Intel® High Definition Audio<sup>8</sup> (three back panel analog ports)

USB Ports

Fourteen Hi-Speed USB 2.0 ports (six back panel ports and eight additional ports via four internal headers)

1394 Ports

N/A

Storage

Five SATA ports (3.0 Gb/s) with one port compatible with eSATA dongles and one back panel eSATA port

RAID

Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10

Onboard LAN

Intel® PRO 10/100/1000 Network Connection

Trusted Platform Module

Yes (discrete)

Lead Free

Yes

Software

Intel® Core Utilities Bundle<sup>9</sup>  
Intel® Desktop Utilities  
Intel® IT Director  
Intel® Remote PC Assist  
Technology Client Agent  
ESET\* Smart Security 4  
Laplink\* PCmover\*  
Spiceworks\* IT Desktop

BIOS

Intel® Easy Update  
Intel® Quiet System Technology  
Intel® Smart Recovery  
Digital Signature Technology  
Unified Firmware Interface (UEFI)

Windows Vista\* and WHQL Support

Windows Vista\* Premium  
Windows\* 7

Warranty

3 year limited warranty



Executive Series - Supports Intel® vPro™ technology

**Intel® Desktop Board DQ57TML**

MicroATX

N/A

BLKDQ57TML / 00735858215169

Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1156 package

N/A

Intel® Q57 Express Chipset  
Intel® Active Management Technology<sup>13</sup> 6.0

Yes

Intel® HD Graphics (DVI-D + VGA)

One PCI Express\* 2.0 x16 connector

Dual-channel DDR3 with four connectors for 1333 / 1066 MHz memory (16 GB<sup>7</sup> max)

Two PCI Express 2.0 x1 connectors and one PCI connector

Six-channel Intel® High Definition Audio<sup>8</sup> (three back panel analog ports)

Twelve Hi-Speed USB 2.0 ports (four back panel ports and eight additional ports via four internal headers)

N/A

Four SATA ports (3.0 Gb/s)

Intel® Rapid Storage Technology for RAID 0, 1, 5, and 10

Intel® PRO 10/100/1000 Network Connection

Yes (discrete)

Yes

Intel® Core Utilities Bundle<sup>9</sup>  
Intel® Desktop Utilities  
Intel® IT Director  
Intel® Remote PC Assist  
Technology Client Agent  
ESET\* Smart Security 4  
Laplink\* PCmover\*  
Spiceworks\* IT Desktop

Intel® Easy Update  
Intel® Quiet System Technology  
Intel® Smart Recovery  
Digital Signature Technology  
Unified Firmware Interface (UEFI)

Windows Vista\* Premium  
Windows\* 7

3 year limited warranty



Classic Series

**Intel® Desktop Board DB65AL**

MicroATX

BOXDB65ALB3 / 00735858221207

BLKDB65ALB3 / 00735858221214

Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package

N/A

Intel® B65 Express Chipset

Yes

Intel® HD Graphics (DVI-D + VGA)

One PCI Express\* x16 connector

Dual-channel DDR3 with four connectors for 1333 / 1066 / 800 MHz memory (32 GB<sup>7</sup> max)

Two PCI Express 2.0 x1 connectors and one PCI connector

Eight-channel Intel® High Definition Audio<sup>8</sup>

Twelve Hi-Speed USB 2.0 ports (six external ports and six additional ports via internal headers) and two USB 3.0 ports

N/A

Five SATA ports (3.0 Gb/s) with two ports compatible with eSATA extension, and one SATA port (6.0 Gb/s)

N/A

Intel® PRO 10/100/1000 Network Connection

N/A

Yes


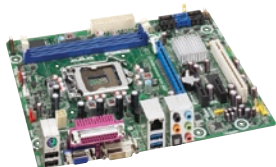

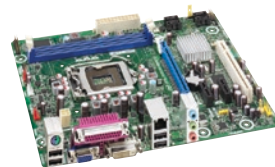


Intel® Core Utilities Bundle<sup>9</sup>  
Intel® Desktop Utilities  
ESET\* Smart Security 4  
Laplink\* PCmover Express\*

BIOS Vault Technology

Windows Vista\* Premium  
Windows\* 7

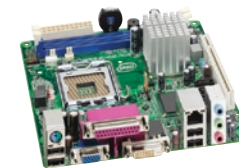
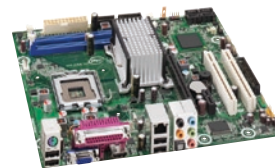
3 year limited warranty



	 	 	 
Series	Classic Series	Classic Series	Classic Series
Product Family	<b>Intel® Desktop Board DH61BE</b>	<b>Intel® Desktop Board DH61CR</b>	<b>Intel® Desktop Board DH61DL</b>
Form Factor	MicroATX	MicroATX	Mini-ITX
Product Code / UPC	<b>BOXDH61BEB3 / 00735858220910</b>	<b>BOXDH61CRB3 / 00735858220880</b>	<b>BOXDH61DLB3 / 00735858220941</b>
10-pack Product Code / UPC	BLKDH61BEB3 / 00735858220927	BLKDH61CRB3 / 00735858220897	BLKDH61DLB3 / 00735858220958
Processor Support	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	N/A
Chipset	Intel® H61 Express Chipset	Intel® H61 Express Chipset	Intel® H61 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes
Integrated Graphics Core <sup>1</sup>	Intel® HD Graphics (DVI-D + VGA)	Intel® HD Graphics (DVI-D + VGA)	Intel® HD Graphics (DVI-D + VGA)
Discrete Graphics Connector	One PCI Express* x16 connector	One PCI Express* x16 connector	N/A
Memory Support	Dual-channel DDR3 with two connectors for 1333 / 1066 / 800 MHz memory (16 GB <sup>2</sup> max)	Dual-channel DDR3 with two connectors for 1333 / 1066 / 800 MHz memory (16 GB <sup>2</sup> max)	Dual-channel DDR3 with two connectors for 1333 / 1066 / 800 MHz memory (16 GB <sup>2</sup> max)
Expansion Connectors	Two PCI Express 2.0 x1 connectors and one PCI connector	Two PCI Express 2.0 x1 connectors and one PCI connector	One PCI Express* 2.0 x1 connector and one PCI Express Mini Card connector (full length)
Audio	Eight-channel Intel® High Definition Audio <sup>9</sup>	Six-channel Intel® High Definition Audio <sup>9</sup>	Six-channel Intel® High Definition Audio <sup>9</sup>
USB Ports	Ten Hi-Speed USB 2.0 ports (two external ports and eight additional ports via internal headers) and two USB 3.0 ports	Ten Hi-Speed USB 2.0 ports (four external ports and six additional ports via internal headers)	Eight Hi-Speed USB 2.0 ports (two external ports and six additional ports via internal headers) and two USB 3.0 ports
1394 Ports	N/A	N/A	N/A
Storage	Four SATA ports (3.0 Gb/s) and two SATA ports (6.0 Gb/s)	Four SATA ports (3.0 Gb/s)	Three SATA ports (3.0 Gb/s)
RAID	N/A	N/A	N/A
Onboard LAN	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*
BIOS	BIOS Vault Technology	BIOS Vault Technology	BIOS Vault Technology
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



Series	Classic Series	Classic Series	Classic Series
Product Family	<b>Intel® Desktop Board DH61WW</b>	<b>Intel® Desktop Board DH55PJ</b>	<b>Intel® Desktop Board DG43RK</b>
Form Factor	MicroATX	MicroATX	MicroATX
Product Code / UPC	<b>BOXDH61WWB3 / 00735858220859</b>	<b>BOXDH55PJ / 00735858215077</b>	<b>BOXDG43RK / 00735858213615</b>
10-pack Product Code / UPC	BLKDH61WWB3 / 00735858220866	BLKDH55PJ / 00735858215060	BLKDG43RK / 00735858213608
Processor Support	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™ i7, Intel® Core™ i5, and Intel® Core™ i3 processors in the LGA1155 package</b>	<b>Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package</b>
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	1333 MHz / 1066 MHz / 800 MHz
Chipset	Intel® H61 Express Chipset	Intel® H55 Express Chipset	Intel® G43 Express Chipset
Supports HT Technology <sup>5</sup>	Yes	Yes	N/A
Integrated Graphics Core <sup>1</sup>	Intel® HD Graphics (VGA)	Intel® HD Graphics (DVI-D + VGA)	Intel® Graphics Media Accelerator X4500 (HDMI* + DVI-I)
Discrete Graphics Connector	One PCI Express* x16 connector	One PCI Express* 2.0 x16 connector	One PCI Express* 2.0 x16 connector
Memory Support	Dual-channel DDR3 with two connectors for 1333 / 1066 / 800 MHz memory (16 GB <sup>2</sup> max)	Dual-channel DDR3 with two connectors for 1333 / 1066 MHz memory (8 GB <sup>2</sup> max)	Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (8 GB <sup>2</sup> max)
Expansion Connectors	One PCI Express 2.0 x1 connector and one PCI connector	Two PCI Express 2.0 x1 connectors and one PCI connector	Two PCI Express 2.0 x1 connectors and one PCI connector
Audio	Six-channel Intel® High Definition Audio <sup>8</sup>	Eight-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)	Ten-channel Intel® High Definition Audio <sup>8</sup> with Dolby* Home Theater (five back panel analog ports and one optical port)
USB Ports	Six Hi-Speed USB 2.0 ports (four external ports and two additional ports via internal headers)	Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)	Twelve Hi-Speed USB 2.0 ports (six back panel ports and six additional ports via three internal headers)
1394 Ports	N/A	N/A	Two IEEE 1394a ports (one back panel port and one additional port via internal header)
Storage	Four SATA ports (3.0 Gb/s)	Four SATA ports (3.0 Gb/s)	Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices
RAID	N/A	N/A	N/A
Onboard LAN	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection	Intel® PRO 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Intel® Desktop Utilities DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009 Skype* TypePad* WildTangent* WildGames*
BIOS	BIOS Vault Technology	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery	Digital Signature Technology Unified Firmware Interface (UEFI) Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



Series	Classic Series	Classic Series	Classic Series
Product Family	<b>Intel® Desktop Board DG41TX</b>	<b>Intel® Desktop Board DG41KR</b>	<b>Intel® Desktop Board DG41AN</b>
Form Factor	MicroATX	MicroATX	Mini-ITX / MicroATX-compatible
Product Code / UPC	<b>BOXDG41TX / 00735858214384</b>	<b>BOXDG41KR / 00735858209212</b>	<b>BOXDG41AN / 00735858215329</b>
10-pack Product Code / UPC	BLKDG41TX / 00735858214407	BLKDG41KR / 00735858209229	BLKDG41AN / 00735858215312
Processor Support	<b>Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package</b>	<b>Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package</b>	<b>Intel® Core™2 Quad (65 W TDP), Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package</b>
Intel® QPI (GT/s)* / Supported FSB (MHz)	1333 MHz / 1066 MHz / 800 MHz	1333 MHz / 1066 MHz / 800 MHz	1333 MHz / 1066 MHz / 800 MHz
Chipset	Intel® G41 Express Chipset	Intel® G41 Express Chipset	Intel® G41 Express Chipset
Supports HT Technology <sup>5</sup>	N/A	N/A	N/A
Integrated Graphics Core <sup>1</sup>	Intel® Graphics Media Accelerator X4500 (DVI-D + VGA)	Intel® Graphics Media Accelerator X4500 (HDMI* + VGA)	Intel® Graphics Media Accelerator X4500 (DVI-D + VGA)
Discrete Graphics Connector	One PCI Express* 2.0 x16 connector	One PCI Express* x16 connector	N/A
Memory Support	Dual-channel DDR3 with two connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (4 GB <sup>2</sup> max)	Dual-channel DDR3 with two connectors for 1066 / 800 MHz memory (4 GB <sup>2</sup> max)	Dual-channel DDR3 with four connectors for 1333 <sup>3</sup> / 1066 / 800 MHz memory (4 GB <sup>2</sup> max)
Expansion Connectors	One PCI Express 2.0 x1 connector and two PCI connectors	One PCI Express 2.0 x1 connector and two PCI connectors	One PCI connector
Audio	Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)	Ten-channel Intel® High Definition Audio <sup>8</sup> (five back panel analog ports and one optical port)	Six-channel Intel® High Definition Audio <sup>8</sup> (three back panel analog ports)
USB Ports	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)
1394 Ports	N/A	N/A	N/A
Storage	Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices	Four SATA ports (3.0 Gb/s) and one PATA 100 / 66 connector for up to two devices	Three SATA ports (3.0 Gb/s)
RAID	N/A	N/A	N/A
Onboard LAN	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection
Trusted Platform Module	N/A	N/A	N/A
Lead Free	Yes	Yes	Yes
Software	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009 Phoenix* HyperSpace*	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*
BIOS	Intel® Easy Update Digital Signature Technology Intel® Quiet System Technology Unified Firmware Interface (UEFI) Intel® Smart Recovery	Intel® Easy Update Digital Signature Technology Intel® Quiet System Technology Unified Firmware Interface (UEFI) Intel® Smart Recovery	Intel® Easy Update Digital Signature Technology Intel® Quiet System Technology Unified Firmware Interface (UEFI) Intel® Smart Recovery
Windows Vista* and WHQL Support	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7	Windows Vista* Premium Windows* 7
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



Series	Innovation Series	Innovation Series	Essential Series	
Product Family	<b>Intel® Desktop Board D525MW</b>	<b>Intel® Desktop Board D425KT</b>	<b>Intel® Desktop Board DG41WV</b>	
Form Factor	Mini-ITX	Mini-ITX	MicroATX	
Product Code / UPC	<b>BOXD525MW / 00735858215206</b>	<b>BOXD425KT / 00735858215251</b>	<b>BOXDG41WV / 00735858214216</b>	
10-pack Product Code / UPC	BLKD525MW / 00735858215183	BLKD425KT / 00735858215244	BLKDG41WV / 00735858214223	
Processor Support	<b>Intel® Atom™ processor D525 integrated</b>	<b>Intel® Atom™ processor D425 integrated</b>	<b>Intel® Core™2 Quad, Intel® Core™2 Duo, Intel® Pentium®, and Intel® Celeron® processors in the LGA775 package</b>	
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	1333 MHz / 1066 MHz / 800 MHz	
Chipset	Intel® NM10 Express Chipset	Intel® NM10 Express Chipset	Intel® G41 Express Chipset	
Supports HT Technology <sup>5</sup>	Yes	Yes	N/A	
Integrated Graphics Core <sup>1</sup>	Intel® Graphics Media Accelerator 3150 (VGA)	Intel® Graphics Media Accelerator 3150 (VGA)	Intel® Graphics Media Accelerator X4500 (VGA)	
Discrete Graphics Connector	N/A	N/A	One PCI Express* x16 connector	
Memory Support	DDR3 with two SODIMM connectors for 1066 / 800 MHz memory (4 GB <sup>2</sup> max)	DDR3 with two SODIMM connectors for 1066 / 800 MHz memory (4 GB <sup>2</sup> max)	Dual-channel DDR3 with two connectors for 1333 <sup>14</sup> / 1066 / 800 MHz memory (4 GB <sup>2</sup> max)	
Expansion Connectors	One PCI connector and one PCI Express* Mini Card connector	One PCI connector	One PCI Express 2.0 x1 connector and two PCI connectors	
Audio	Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	Four-channel Intel® High Definition Audio <sup>9</sup> (two back panel analog ports)	Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	
USB Ports	Eight Hi-Speed USB 2.0 ports (four back panel ports, two additional ports via internal headers, one port for PCI Express Mini Card, and one port for flash card / Solid-State Drive)	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)	
1394 Ports	N/A	N/A	N/A	
Storage	Two SATA ports (3.0 Gb/s)	Two SATA ports (3.0 Gb/s)	Four SATA ports (3.0 Gb/s)	
RAID	N/A	N/A	N/A	
Onboard LAN	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection	
Trusted Platform Module	N/A	N/A	N/A	
Lead Free	Yes	Yes	Yes	
Software	Intel AppUp <sup>SM</sup> Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*	Intel AppUp <sup>SM</sup> Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express*	Intel® Core Utilities Bundle <sup>9</sup> Diskeeper* Pro Premier DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009 Skype*	TypePad* WildTangent* WildGames* Kaspersky* Anti-Virus <sup>11</sup> Kingsoft* Antivirus <sup>12</sup> Kingsoft* Powerword* <sup>12</sup>
BIOS	Intel® Easy Update Intel® Smart Recovery Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Smart Recovery Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Quiet System Technology Intel® Smart Recovery	Digital Signature Technology Unified Firmware Interface (UEFI)
Windows Vista* and WHQL Support	Windows* 7 Home Basic Windows* 7 Starter	Windows* 7 Home Basic Windows* 7 Starter	Windows Vista* Premium	
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty	



Series	Essential Series	Essential Series	Essential Series	
Product Family	<b>Intel® Desktop Board D510MO</b>	<b>Intel® Desktop Board D410PT</b>	<b>Intel® Desktop Board D945GSEJT</b>	
Form Factor	Mini-ITX	Mini-ITX	Mini-ITX / MicroATX-compatible	
Product Code / UPC	<b>BOXD510MO / 00735858210362</b>	<b>BOXD410PT / 00735858210416</b>	<b>N/A</b>	
10-pack Product Code / UPC	BLKD510MO / 00735858210379	BLKD410PT / 00735858210423	BLKD945GSEJT / 00735858206945	
Processor Support	<b>Intel® Atom™ processor D510 integrated</b>	<b>Intel® Atom™ processor D410 integrated</b>	<b>Intel® Atom™ processor N270 integrated</b>	
Intel® QPI (GT/s) <sup>4</sup> / Supported FSB (MHz)	N/A	N/A	533 MHz	
Chipset	Intel® NM10 Express Chipset	Intel® NM10 Express Chipset	Intel® 945GSE Express Chipset	
Supports HT Technology <sup>5</sup>	Yes	Yes	Yes	
Integrated Graphics Core <sup>1</sup>	Intel® Graphics Media Accelerator 3150 (VGA)	Intel® Graphics Media Accelerator 3150 (VGA)	Intel® Graphics Media Accelerator 950 (DVI + VGA)	
Discrete Graphics Connector	N/A	N/A	N/A	
Memory Support	DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>7</sup> max)	DDR2 with two connectors for 800 / 667 MHz memory (4 GB <sup>7</sup> max)	DDR2 SDRAM with one connector for 533 MHz memory (2 GB max)	
Expansion Connectors	One PCI connector and one PCI Express* Mini Card connector	One PCI connector	One PCI Express* Mini Card connector and one PCI connector	
Audio	Six-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	Four-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	Four-channel Intel® High Definition Audio <sup>9</sup> (three back panel analog ports)	
USB Ports	Seven Hi-Speed USB 2.0 ports (four back panel ports, two additional ports via internal header, and one USB port for flash card / Solid-State Drive)	Eight Hi-Speed USB 2.0 ports (four back panel ports and four additional ports via two internal headers)	Six Hi-Speed USB 2.0 ports (three back panel ports, one front panel port, and one additional USB port for Solid-State Drive)	
1394 Ports	N/A	N/A	N/A	
Storage	Two SATA ports (3.0 Gb/s)	Two SATA ports (3.0 Gb/s)	Two SATA ports and one PATA 100 connector for up to two devices (44-pin mobile header)	
RAID	N/A	N/A	N/A	
Onboard LAN	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection	Integrated 10/100/1000 Network Connection	
Trusted Platform Module	N/A	N/A	N/A	
Lead Free	Yes	Yes	Yes	
Software	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express* Norton Internet Security* 2009	Intel® Core Utilities Bundle <sup>9</sup> DivX* for Windows* ESET* Smart Security 4 Laplink* PCmover Express* Norton Internet Security* 2009	Intel® Core Utilities Bundle <sup>9</sup> Acronis* True Image 11 Home Diskeeper* Home Edition DivX* for Windows* Laplink* PCmover Express* Norton Internet Security* 2009	Skype* TypePad* WildTangent* WildGames* Kaspersky* Anti-Virus <sup>11</sup> Kingsoft* Antivirus <sup>12</sup> Kingsoft* Powerword* <sup>12</sup>
BIOS	Intel® Easy Update Intel® Smart Recovery Unified Firmware Interface (UEFI)	Intel® Easy Update Intel® Smart Recovery Unified Firmware Interface (UEFI)	Unified Firmware Interface (UEFI)	
Windows Vista* and WHQL Support	Windows* 7 Home Basic Windows* 7 Starter	Windows* 7 Home Basic Windows* 7 Starter	Windows Vista* Basic	
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty	

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

<sup>1</sup> Requires a processor with Intel® HD Graphics.

<sup>2</sup> Requires a custom thermal solution—Pairing a mini-ITX chassis with the thermal solution supplied with an Intel® Core™ i7 processor will not meet the thermal requirements of an Intel Core i7 processor. Therefore, before pairing the Intel® Desktop Board DH67CF or DH57JG with an Intel Core i7 processor, verify that your thermal solution and chassis will meet the necessary thermal requirements. Failing to do so will cause the processor to throttle, significantly decreasing system performance.

<sup>3</sup> DDR3 1333 is supported through overlocking in BIOS.

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

<sup>5</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>6</sup> Warning: Altering clock frequency and/or voltage may (i) reduce system stability and useful life of the system and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the processor beyond its specifications.

<sup>7</sup> System resources and hardware (such as PCI and PCI Express\*) require physical memory address locations that can reduce available addressable system memory. This could result in a reduction of as much as 1 GB or more of physical addressable memory being available to the operating system and applications, depending on the system configuration and operating system.

<sup>8</sup> Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel® HD Audio, refer to [www.intel.com/design/chipsets/hdaudio.htm](http://www.intel.com/design/chipsets/hdaudio.htm)

<sup>9</sup> The Intel® Core Utilities Bundle includes Intel® Integrator Assistant, Intel® Integrator Toolkit, Intel® Express Installer, and Intel® Express BIOS Update.

<sup>10</sup> Intel® Extreme Tuning Utility is only compatible with Intel® Desktop Boards based on the Intel® X38 Express Chipset and newer. Auto-tuning capabilities may not be available for all Extreme Series motherboards.

<sup>11</sup> Russian only.

<sup>12</sup> Chinese only.

<sup>13</sup> Intel® Active Management Technology (Intel® AMT) requires the computer to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source, and a network connection.

<sup>14</sup> DDR3 1333 MHz SDRAM will run at 1066 MHz speed.

Intel® Desktop Boards may contain design defects or errors known as errata, which may cause the product to deviate from published specifications. Current characterized errata are available on request. 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® ETHERNET DESKTOP ADAPTERS

10/100/1000 Mb/s-OVER-COPPER



10/100 Mb/s-OVER-COPPER



	Intel® Gigabit CT Desktop Adapter	Intel® PRO/1000 GT Desktop Adapter	Intel® PRO/100 M Desktop Adapter
<b>Product Code</b> —Singles	EXPI9301CT	PWLA8391GT	PILA8460M
<b>Product Code</b> —Bulk Twenty Packs (Full-Height End Brackets)	EXPI9301CTBLK <sup>1</sup>	PWLA8391GTBLK	PILA8460MBLK20
<b>Product Code</b> —Bulk Twenty Packs (Low-Profile End Brackets)	EXPI9301CTBLK <sup>1</sup>	PWLA8391GTLBLK	N/A
<b>Connector</b>	1 RJ-45	1 RJ-45	1 RJ-45
<b>Ethernet Controllers</b>	Intel® 82574L	Intel® 82541PI	Intel® 82551QM
<b>Bus Width and Type</b>	PCI Express* x1	32-bit PCI 2.3	32-bit PCI 2.2

Intel offers an award-winning line of Ethernet, Fast Ethernet, and Gigabit Ethernet desktop adapters. Choose from a variety of adapters designed to extend Gigabit Ethernet performance to the desktop, enhance desktop management, and provide flexible connectivity for your legacy PCs.

For more information, visit the Intel Web site at: [www.intel.com/network/connectivity/products/desktop\\_adapters.htm](http://www.intel.com/network/connectivity/products/desktop_adapters.htm)

<sup>1</sup> Full-height bracket installed, low-profile bracket added in package.

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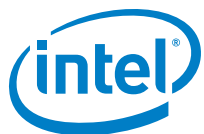
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# INTEL® MOBILE PROCESSORS





INTEL® MOBILE PROCESSORS

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	DDR3 MEMORY	CACHE	PACKAGE / TYPE
	Intel® Core™ i7-2920XM processor Extreme Edition	FF8062700834406 (tray only)	2.50 GHz	1600 MHz	8 MB L3	Socket-G1 (45nm)
	Intel Core i7-940XM processor Extreme Edition	BY80607002526AE (tray only)	2.13 GHz	1333 MHz	8 MB L3	Socket-G1 (45nm)
	Intel Core i7-920XM processor Extreme Edition	BY80607002529AF (tray only)	2 GHz	1333 MHz	8 MB L3	Socket-G1 (45nm)
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	DDR3 MEMORY	CACHE	PACKAGE / TYPE
	Intel® Core™ i7-2820QM processor	BX80627172820QM	2.30 GHz	1600 MHz	8 MB L3	Socket-G1 (45nm)
	Intel Core i7-2720QM processor	BX80627172720QM	2.20 GHz	1600 MHz	6 MB L3	Socket-G1 (45nm)
	Intel Core i7-2620M processor	FF8062700838809 (tray only)	2.70 GHz	1333 MHz	4 MB L3	Socket-G1 (45nm)
	Intel Core i7-840QM processor	BX8060717840QM	1.86 GHz	1333 MHz	8 MB L3	Socket-G1 (45nm)
	Intel Core i7-820QM processor	BY80607002904AK (tray only)	1.73 GHz	1333 MHz	8 MB L3	Socket-G1 (45nm)
	Intel Core i7-740QM processor	BX8060717740QM	1.73 GHz	1333 MHz	6 MB L3	Socket-G1 (45nm)
	Intel Core i7-720QM processor	BX8060717720QM	1.60 GHz	1333 MHz	6 MB L3	Socket-G1 (45nm)
	Intel Core i7-640M processor	CP80617004152AE (tray only)	2.80 GHz	1066 MHz	4 MB L3	Socket-G1 (32nm)
	Intel Core i7-620M processor	CP80617003981AH (tray only)	2.66 GHz	1066 MHz	4 MB L3	Socket-G1 (32nm)
	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	DDR3 MEMORY	CACHE	PACKAGE / TYPE
	Intel® Core™ i5-2540M processor	BX80627152540M	2.60 GHz	1333 MHz	3 MB L3	Socket-G1 (32nm)
	Intel Core i5-2520M processor	BX80627152520M	2.50 GHz	1333 MHz	3 MB L3	Socket-G1 (32nm)
	Intel Core i5-580M processor	BX8061715580M	2.66 GHz	1066 MHz	3 MB L3	Socket-G1 (32nm)
	Intel Core i5-560M processor	BX8061715560M	2.66 GHz	1066 MHz	3 MB L3	Socket-G1 (32nm)
	Intel Core i5-540M processor	BX8061715540M	2.53 GHz	1066 MHz	3 MB L3	Socket-G1 (32nm)
	Intel Core i5-520M processor	BX8061715520M	2.40 GHz	1066 MHz	3 MB L3	Socket-G1 (32nm)

Unlock your on-the-go computing experience with mobile-optimized processor technologies from Intel. Providing revolutionary levels of performance, long battery life, and expansive connectivity, along with enhanced security and manageability for business, Intel® technologies enable a powerful computing experience in sleek, thin, and light notebook designs.

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

 PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	DDR3 MEMORY	CACHE	PACKAGE / TYPE
<b>Intel® Celeron® processor P4600</b>	<b>CP80617005307AB</b> ( <i>tray only</i> )	2 GHz	1066 MHz	2 MB L3	Socket-G1 (32nm)
<b>Intel Celeron processor P4500</b>	<b>CP80617004803AA</b> ( <i>tray only</i> )	1.86 GHz	1066 MHz	2 MB L3	Socket-G1 (32nm)
 PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	DDR3 MEMORY	CACHE	PACKAGE / TYPE
<b>Intel® Celeron® processor T3500</b>	<b>AW80577GG0451ML</b> ( <i>tray only</i> )	2.10 GHz	800 MHz	1 MB L2	Socket-P (45nm)
<b>Intel Celeron processor T3300</b>	<b>AW80577NG0411ML</b> ( <i>tray only</i> )	2 GHz	800 MHz	1 MB L2	Socket-P (45nm)
<b>Intel Celeron processor T3100</b>	<b>AW80577GG0371ML</b> ( <i>tray only</i> )	1.90 GHz	800 MHz	1 MB L2	Socket-P (45nm)
<b>Intel Celeron processor T3000</b>	<b>AW80577GG0331ML</b> ( <i>tray only</i> )	1.80 GHz	800 MHz	1 MB L2	Socket-P (45nm)
<b>Intel Celeron processor 900</b>	<b>AW80585NG0491MA</b> ( <i>tray only</i> )	2.20 GHz	800 MHz	1 MB L2	Socket-P (45nm)

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

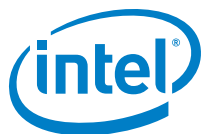
Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. Visit [www.intel.com/products/processor\\_number](http://www.intel.com/products/processor_number) for more details.

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# INTEL® CENTRINO® WIRELESS

INTEL® CENTRINO® WIRELESS

SEGMENT	SIMPLE CONNECTIVITY		DUAL-STREAM		ADVANCED FEATURES		HIGHEST PERFORMANCE
<b>Intel® Centrino® Wireless</b> (Intel Code name)	<b>Wireless-N 100</b> (Crane Peak)	<b>Wireless-N 130</b> (Crane Peak + Bluetooth*)	<b>Wireless-N 1000</b> (Condor Peak)	<b>Wireless-N 1030</b> (Rainbow Peak 1)	<b>Advanced-N 6205</b> (Taylor Peak)	<b>Advanced-N 6230</b> (Rainbow Peak 2)	<b>Ultimate-N 6300</b> (Puma Peak)
<b>Speed</b>	150 Mb/s RX	150 Mb/s RX	300 Mb/s RX	300 Mb/s RX	300 Mb/s RX	300 Mb/s RX	450 Mb/s RX
<b>Spatial Streams</b> (TX x RX)	150 Mb/s TX (1x1)	150 Mb/s TX (1x1)	150 Mb/s TX (1x2)	150 Mb/s TX (1x2)	300 Mb/s TX (2x2)	300 Mb/s TX (2x2)	450 Mb/s TX (3x3)
<b>Bands</b>	2.40 GHz Single Band	2.40 GHz Single Band	2.40 GHz Single Band	2.40 GHz Single Band	2.40 GHz and 5 GHz Dual Band	2.40 GHz and 5 GHz Dual Band	2.40 GHz and 5 GHz Dual Band
<b>Enterprise / SMB Features</b>			Intel® PROSet for Windows* 7 Cisco* CCXv4	Intel® PROSet for Windows* 7 Cisco* CCXv4	Intel® PROSet for Windows* 7 Cisco* CCXv4	Intel® PROSet for Windows* 7 Cisco* CCXv4	Intel® PROSet for Windows* 7 Cisco* CCXv4
<b>Intel® vPro™ Technology</b>					✓	✓	✓
<b>Intel® My WiFi Technology</b>	✓	✓	✓	✓	✓	✓	✓
<b>Intel® Wireless Display</b>							
<b>Bluetooth*</b>							
<b>Wi-Fi* Certification</b>							
<b>Order Codes</b>							
100 pieces	100BN.HMWG	130BN.HMWG	112BN.HMWG	11230BN.HMWG	62205AN.HMWG	62230AN.HMWG	633AN.HMWG
10 pieces	100BN.HMWWB	130BN.HMWWB	112BN.HMWWB	11230BN.HMWWB	62205AN.HMWWB	62230AN.HMWWB	633AN.HMWWB

Intel® Centrino® wireless networking solutions enable network connectivity without wires for notebook PC platforms. Intel® products provide uncompromising performance, enhanced security, and scalability for fast, flexible connectivity at work, at home, or on the road.

For more information, visit [www.intel.com/network/connectivity/products/wireless/index.htm](http://www.intel.com/network/connectivity/products/wireless/index.htm)

For more information, visit [www.intel.com/network/connectivity/products/wireless/index.htm](http://www.intel.com/network/connectivity/products/wireless/index.htm)

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## NEW ENTRY SERVER AND WORKSTATION PLATFORM

### Intel® Xeon® Processor E3-1200 Product Family

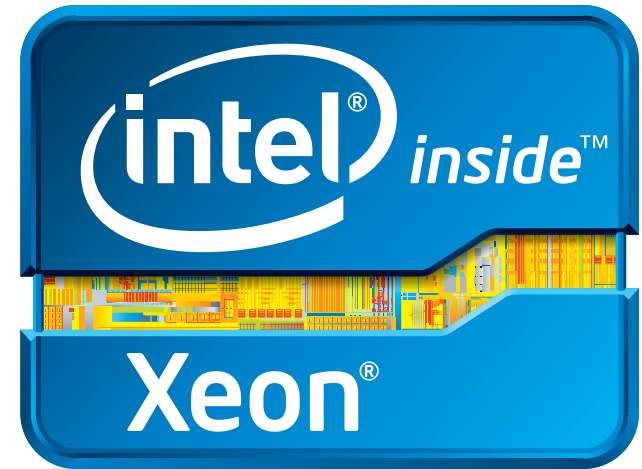
The Intel® Xeon® processor E3-1200 product family gives small business customers the benefits of a real server. Get increased performance over previous-generation servers<sup>1</sup> at costs comparable to desktop systems with improved responsiveness and enhanced security—plus room to grow. Entry-level workstation platforms featuring the Intel Xeon processor E3-1200 product family with Intel® HD Graphics P3000 enable mainstream CAD and entry-level animation users to employ a robust 3-D graphics experience—without the need for a discrete graphics card.

## NEW MISSION-CRITICAL SERVER PLATFORM

### Intel® Xeon® Processor E7-4800 Product Family

The Intel® Xeon® processor E7-4800 product family combines up to 10 cores and 20 processing threads and 30 MB of shared L3 cache in a single device that supports companies' most data-demanding workloads with improved scalability and increased memory and I/O capacity. Advanced reliability and security features work to maintain data integrity, accelerate encrypted transactions, and maximize the availability of mission-critical applications.

For more information on these new platforms, see the Server / Workstation Processors section of this Matrix.



## SERVER SERVICES FROM INTEL

Now Delivering the Competitive Edge—Intel® Server Component Extended Warranty Program and Intel® On-Site Repair for Servers

Offer your customers the security of on-site parts replacement, and/or an additional two-year warranty for Intel® Server Products. This enables you to provide the support services your customers require without maintaining costly inventory. And pairing your server sales with Intel's extended services can help enhance your ability to provide increased support and value as a one-stop-shop for even more customers.

### Advantages

- Add a new sales opportunity
- Increase solution value to your customers
- Improve customer retention

For more information, visit [www.intel.com/Assets/PDF/prodbrief/325549.pdf](http://www.intel.com/Assets/PDF/prodbrief/325549.pdf) and [www.intel.com/Assets/PDF/prodbrief/325033.pdf](http://www.intel.com/Assets/PDF/prodbrief/325033.pdf) or see the Server Services section of this Matrix.



Available Q3

## COMING SOON—NEW SUB-ENTRY SERVER BOARD FEATURING THE INTEL® XEON® PROCESSOR E3-1200 PRODUCT FAMILY

The Intel® Server Board S1200KP bridges the transition from desktop to server

With only two UDIMMs and 16 2nd gen I/O lanes, this mini-ITX board brings the power and reliability of the Intel® Xeon® processor E3-1200 to a new small form factor.

### INTEL® SERVER BOARD S1200KP

<b>Platform</b>	Intel® Xeon® processor E3-based platform ( <i>Bromolow</i> <sup>2</sup> )
<b>Processor</b>	Intel® Xeon® processor E3-1200 product family ( <i>Sandy Bridge</i> <sup>2</sup> )
<b>Chipset</b>	Intel® C206 Chipset ( <i>Cougar Point</i> <sup>2</sup> )

<sup>1</sup> For more information on server performance, visit [www.intel.com/performance/server/xeonE3-1200/summary.htm](http://www.intel.com/performance/server/xeonE3-1200/summary.htm)

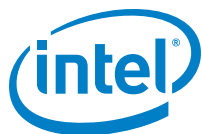
<sup>2</sup> Bromolow, Sandy Bridge and Cougar Point are code names of Intel Corporation.

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# INTEL® SERVER PLATFORMS



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>Expandable</b> Leading performance, reliability, and scalability  <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	1066 MHz	Up to 30 MB L3	Intel® 7500 Chipset
<b>Efficient Performance</b> Energy efficient, cost effective  <b>Target usage:</b> Optimized for general purpose servers ( <i>e-mail, Web, file, business applications</i> ) and IT infrastructure virtualization  <b>Recommended configuration:</b> 2 processors	Best	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
	Good	Intel® Xeon® processor 5500 series	2	Up to 4	2.93 GHz	60-95 W	Up to 6.40 GT/s	Up to 8 MB L3 shared	Intel® 5520 Chipset
<b>Entry</b> Cost optimized  <b>Target usage:</b> Small businesses with fewer than 100 employees, basic needs ( <i>e-mail, network, file / print</i> )  <b>Recommended configuration:</b> 1-2 processors	Best	Intel® Xeon® processor 5600 series	2	Up to 6	2.93 GHz	40-95 W	Up to 5.86 GT/s	Up to 12 MB L3 shared	Intel® 5520 Chipset
	Better	Intel® Xeon® processor E3-1200 product family	1	4	3.50 GHz	20-95 W	1333 MHz	Up to 8 MB L3 shared	Intel® C202 or Intel® C204 Chipset
	Good	Intel® Xeon® processor 3400 series	1	4	3.06 GHz	30-95 W	1333 MHz	8 MB L3 shared	Intel® 3400 or Intel® 3420 Chipset

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

## 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> Optimized for high-performance analytics  <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 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
	Good	Intel® Xeon® processor E3-1200 product family	1	4	3.50 GHz	20-95 W	1333 MHz	Up to 8 MB L3 shared	Intel® C202 or Intel® C204 Chipset
<b>Workstation</b> Optimized for complex analysis / visualization  <b>Target usage:</b> Graphics rendering, multimedia content development, engineering applications (CAD / CAM), software development	Best	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
	Better	Intel® Xeon® processor 3600 series	1	6	3.33 GHz	130 W	6.40 GT/s	Up to 12 MB L3 shared	Intel® X58 Express Chipset
	Good	Intel® Xeon® processor E3-1200 product family	1	4	3.40 GHz	95 W	1333 MHz	Up to 8 MB L3 shared	Intel® C206 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.

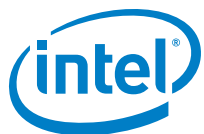
<sup>3</sup> Intel® QPI-Intel® QuickPath Interconnect; GT/s-Gigatransfers per second.

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® PROCESSOR E3-1200 PRODUCT FAMILY FOR SERVER SYSTEMS FEATURING ONE LGA1155 SOCKET (thermal solution included)

 PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	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	<b>BX80623E31280</b>	3.50 GHz	3.90 GHz	8 MB	1333 MHz	4 / 8		▪	▪	95 W <i>(thermal solution not included)</i>	7 35858 21763 7
✓ Intel Xeon processor E3-1270	<b>BX80623E31270</b>	3.40 GHz	3.80 GHz	8 MB	1333 MHz	4 / 8		▪	▪	80 W	7 35858 21764 4
✓ Intel Xeon processor E3-1260L	<b>CM8062301061800</b> <i>(tray only)</i>	2.40 GHz	3.30 GHz	8 MB	1333 MHz	4 / 8	Intel® HD Graphics 2000	▪	▪	45 W	
✓ Intel Xeon processor E3-1240	<b>BX80623E31240</b>	3.30 GHz	3.70 GHz	8 MB	1333 MHz	4 / 8		▪	▪	80 W	7 35858 21765 1
✓ Intel Xeon processor E3-1230	<b>BX80623E31230</b>	3.20 GHz	3.60 GHz	8 MB	1333 MHz	4 / 8		▪	▪	80 W	7 35858 21766 8
✓ Intel Xeon processor E3-1220	<b>BX80623E31220</b>	3.10 GHz	3.40 GHz	8 MB	1333 MHz	4 / 4			▪	80 W	7 35858 21767 5
✓ Intel Xeon processor E3-1220L	<b>CM8062307262828</b> <i>(tray only)</i>	2.20 GHz	3.40 GHz	3 MB	1333 MHz	2 / 4		▪	▪	20 W	


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.

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


INTEL® XEON® PROCESSOR E3-1200 PRODUCT FAMILY FOR WORKSTATION SYSTEMS FEATURING ONE LGA1155 SOCKET *(thermal solution included)*

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	SINGLE-CORE TURBO MAX. SPEED	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 E3-1275	<b>BX80623E31275</b>	3.40 GHz	3.80 GHz	8 MB	1333 MHz	4 / 8	Intel® HD Graphics P3000	■	■	95 W	7 35858 21763 7
✓	Intel Xeon processor E3-1245	<b>BX80623E31245</b>	3.30 GHz	3.70 GHz	8 MB	1333 MHz	4 / 8	Intel HD Graphics P3000	■	■	80 W	7 35858 21764 4
✓	Intel Xeon processor E3-1235	<b>BX80623E31235</b>	3.20 GHz	3.60 GHz	8 MB	1333 MHz	4 / 8	Intel HD Graphics P3000	■	■	45 W	7 35858 21769 9
✓	Intel Xeon processor E3-1225	<b>BX80623E31225</b>	3.10 GHz	3.40 GHz	8 MB	1333 MHz	4 / 4	Intel HD Graphics P3000		■	80 W	7 35858 21765 1


INTEL® XEON® PROCESSOR W3600 SERIES FOR WORKSTATION SYSTEMS FEATURING ONE LGA1366 SOCKET *(thermal solution included)*

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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 W3690	<b>BX80613W3690</b>	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	130 W	7 35858 21786 6
✓	Intel Xeon processor W3680	<b>BX80613W3680</b>	3.33 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	130 W	7 35858 21408 7
	Intel Xeon processor W3670	<b>BX80613W3670</b>	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)


	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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 W3580	<b>BX80601W3580</b>	3.33 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	130 W	7 35858 21004 1
✓	Intel Xeon processor W3570	<b>BX80601W3570</b>	3.20 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	130 W	7 35858 20633 4
	Intel Xeon processor W3565	<b>BX80601W3565</b>	3.20 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	■	■	130 W	7 35858 21200 7
	Intel Xeon processor W3550	<b>BX80601W3550</b>	3.06 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	■	■	130 W	7 35858 21005 8
	Intel Xeon Processor W3540	<b>BX80601W3540</b>	2.93 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	■	■	130 W	7 35858 20634 1
	Intel Xeon processor W3530	<b>BX80601W3530</b>	2.80 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	■	■	130 W	7 35858 21384 4
	Intel Xeon processor W3520	<b>BX80601W3520</b>	2.66 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 8	■	■	130 W	7 35858 20635 8

## INTEL® XEON® PROCESSOR 5600 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS (thermal solution sold separately)


	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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>	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	130 W	7 35858 21629 6
✓	Intel Xeon processor X5687	<b>AT80614005919AB</b> (tray only)	3.60 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	■	■	130 W	
	Intel Xeon processor X5680	<b>BX80614X5680</b>	3.33 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	130 W	7 35858 21412 4
	Intel Xeon processor X5677	<b>AT80614005145AB</b> (tray only)	3.46 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	■	■	130 W	
✓	Intel Xeon processor X5675	<b>BX80614X5675</b>	3.06 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	95 W	7 35858 21630 2
✓	Intel Xeon processor X5672	<b>AT80614005922AA</b> (tray only)	3.20 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	■	■	95 W	

continued on next page


INTEL® XEON® PROCESSOR 5600 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS (thermal solution sold separately) continued

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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 X5670	<b>BX80614X5670</b>	2.93 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	95 W	7 35858 21413 1
	Intel Xeon processor X5667	<b>AT80614005154AB</b> <i>(tray only)</i>	3.06 GHz	6.40 GT/s	12 MB	1333 MHz	4 / 8	■	■	95 W	
	Intel Xeon processor X5660	<b>BX80614X5660</b>	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>	2.66 GHz	6.40 GT/s	12 MB	1333 MHz	6 / 12	■	■	95 W	7 35858 21415 5
✓	Intel Xeon processor X5647	<b>AT80614006780AA</b> <i>(tray only)</i>	2.93 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	■	■	130 W	
✓	Intel Xeon processor E5649	<b>BX80614E5649</b>	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>	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>	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>	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>	2.40 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	■	■	80 W	7 35858 21418 6
✓	Intel Xeon processor E5607	<b>BX80614E5607</b>	2.26 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 4			80 W	7 35858 21633 3
✓	Intel Xeon processor E5606	<b>BX80614E5606</b>	2.13 GHz	4.80 GT/s	8 MB	1066 MHz	4 / 4			80 W	7 35858 21634 0
✓	Intel Xeon processor E5603	<b>BX80614E5603</b>	1.60 GHz	4.80 GT/s	4 MB	1066 MHz	4 / 4			80 W	7 35858 21635 7
	Intel Xeon processor L5640	<b>BX80614L5640</b>	2.40 GHz	5.86 GT/s	12 MB	1066 MHz	6 / 12	■	■	60 W	7 35858 21411 7
	Intel Xeon processor L5630	<b>BX80614L5630</b>	2.13 GHz	5.86 GT/s	12 MB	1066 MHz	4 / 8	■	■	40 W	7 35858 21419 3
	Intel Xeon processor L5609	<b>AT80614005940AA</b> <i>(tray only)</i>	1.86 GHz	4.80 GT/s	12 MB	1066 MHz	4 / 4			40 W	


## INTEL® XEON® PROCESSOR 5500 SERIES FOR SERVER / WORKSTATION SYSTEMS FEATURING TWO LGA1366 SOCKETS (thermal solution sold separately)

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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 W5590</b>	<b>BX80602W5590</b>	3.33 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	130 W	7 35858 20995 3
	<b>Intel Xeon processor W5580</b>	<b>BX80602W5580</b>	3.20 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	130 W	7 35858 20568 9
	<b>Intel Xeon processor X5570</b>	<b>BX80602X5570</b>	2.93 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	95 W	7 35858 20569 6
	<b>Intel Xeon processor X5560</b>	<b>BX80602X5560</b>	2.80 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	95 W	7 35858 20570 2
	<b>Intel Xeon processor X5550</b>	<b>BX80602X5550</b>	2.66 GHz	6.40 GT/s	8 MB	1333 MHz	4 / 8	■	■	95 W	7 35858 20571 9
	<b>Intel Xeon processor E5540</b>	<b>BX80602E5540</b>	2.53 GHz	5.86 GT/s	8 MB	1066 MHz	4 / 8	■	■	80 W	7 35858 20572 6
	<b>Intel Xeon processor E5530</b>	<b>BX80602E5530</b>	2.40 GHz	5.86 GT/s	8 MB	1066 MHz	4 / 8	■	■	80 W	7 35858 20573 3
	<b>Intel Xeon processor L5530</b>	<b>BX80602L5530</b>	2.40 GHz	5.86 GT/s	8 MB	1066 MHz	4 / 8	■	■	60 W	7 35858 20996 0
	<b>Intel Xeon processor E5520</b>	<b>BX80602E5520</b>	2.26 GHz	5.86 GT/s	8 MB	1066 MHz	4 / 8	■	■	80 W	7 35858 20574 0
	<b>Intel Xeon processor L5520</b>	<b>BX80602L5520</b>	2.26 GHz	5.86 GT/s	8 MB	1066 MHz	4 / 8	■	■	60 W	7 35858 20575 7
	<b>Intel Xeon processor E5507</b>	<b>BX80602E5507</b>	2.26 GHz	4.80 GT/s	4 MB	800 MHz	4 / 4			80 W	7 35858 21389 9
	<b>Intel Xeon processor E5506</b>	<b>BX80602E5506</b>	2.13 GHz	4.80 GT/s	4 MB	800 MHz	4 / 4			80 W	7 35858 20576 4
	<b>Intel Xeon processor L5506</b>	<b>BX80602L5506</b>	2.13 GHz	4.80 GT/s	4 MB	800 MHz	4 / 4			60 W	7 35858 20579 5
	<b>Intel Xeon processor E5504</b>	<b>BX80602E5504</b>	2 GHz	4.80 GT/s	4 MB	800 MHz	4 / 4			80 W	7 35858 20577 1
	<b>Intel Xeon processor E5503</b>	<b>BX80602E5503</b>	2 GHz	4.80 GT/s	4 MB	800 MHz	2 / 2			80 W	7 35858 21390 5
	<b>Intel Xeon processor E5502</b>	<b>BX80602E5502</b>	1.86 GHz	4.80 GT/s	4 MB	800 MHz	2 / 2			80 W	7 35858 20578 8


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

	PROCESSOR NAME	BOXED PRODUCT CODE	DESCRIPTION	RECOMMENDED USAGE <sup>4</sup>	MAX. THERMAL DESIGN POWER
	<b>Intel® Thermal Solution STS100C</b>	<b>BXSTS100C</b>	Passive / active combination thermal solution with removable fan	With fan installed: <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide adequate ventilation and correct temperature air to the thermal solution.</li> </ul> With fan removed: <ul style="list-style-type: none"> <li>▪ Pedestal chassis that provide ducted airflow to the thermal solution.</li> <li>▪ 2U or larger rack chassis<sup>4</sup> 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 E7-4800 PRODUCT FAMILY FOR SERVER / WORKSTATION SYSTEMS FEATURING FOUR LGA1567 SOCKETS

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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> <i>(tray only)</i>	2.26 GHz	6.40 GT/s	24 MB	1066 MHz	10 / 20	▪	▪	130 W	
✓	<b>Intel Xeon processor E7-4850</b>	<b>AT80615007449AA</b> <i>(tray only)</i>	2 GHz	6.40 GT/s	24 MB	1066 MHz	10 / 20	▪	▪	130 W	
✓	<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> <i>(tray only)</i>	2 GHz	5.86 GT/s	18 MB	1066 MHz	8 / 16	▪	▪	105 W	
✓	<b>Intel Xeon processor E7-4807</b>	<b>AT80615006432AB</b> <i>(tray only)</i>	1.86 GHz	4.80 GT/s	18 MB	1066 MHz	6 / 12	▪		95 W	

INTEL® XEON® PROCESSOR 7500 SERIES FOR SERVER SYSTEMS FEATURING UP TO FOUR FCLGA1567 SOCKETS *(thermal solution sold separately)*

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	INTEL® QPI <sup>3</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 X7560</b>	<b>BX80604X7560</b>	2.26 GHz	6.40 GT/s	24 MB	1066 MHz	8 / 16	■	■	130 W	7 35858 21315 8
	<b>Intel Xeon processor L7555</b>	<b>AT80604004875AA</b> <i>(tray only)</i>	1.86 GHz	5.86 GT/s	24 MB	1066 MHz	8 / 16	■	■	95 W	
	<b>Intel Xeon processor X7550</b>	<b>BX80604X7550</b>	2 GHz	6.40 GT/s	18 MB	1066 MHz	8 / 16	■	■	130 W	7 35858 21316 5
	<b>Intel Xeon processor L7545</b>	<b>AT80604004881AA</b> <i>(tray only)</i>	1.86 GHz	5.86 GT/s	18 MB	1066 MHz	6 / 12	■	■	95 W	
	<b>Intel Xeon processor X7542</b>	<b>AT80604005280AA</b> <i>(tray only)</i>	2.66 GHz	5.86 GT/s	12 MB	1066 MHz	6 / 6		■	130 W	
	<b>Intel Xeon processor E7540</b>	<b>BX80604E7540</b>	2 GHz	6.40 GT/s	18 MB	1066 MHz	6 / 12	■	■	105 W	7 35858 21317 2
	<b>Intel Xeon processor E7530</b>	<b>AT80604004884AA</b> <i>(tray only)</i>	1.86 GHz	5.86 GT/s	12 MB	1066 MHz	6 / 12	■	■	105 W	
	<b>Intel Xeon processor E7520</b>	<b>BX80604E7520</b>	1.86 GHz	4.80 GT/s	18 MB	800 MHz	4 / 8	■		95 W	7 35858 21318 9

## MULTI-CORE INTEL® XEON® PROCESSOR 7000 SEQUENCE FOR SERVER SYSTEMS FEATURING UP TO FOUR MPGA604 SOCKETS

	PROCESSOR NAME	PRODUCT CODE	CLOCK SPEED	FRONT SIDE BUS	CACHE	NO. OF CORES / THREADS	POWER	UPC CODE
	<b>Intel® Xeon® processor X7460</b>	<b>BX80582X7460</b>	2.67 GHz	1066 MHz	16 MB L3	6 / 6	130 W	7 35858 20355 5
	<b>Intel Xeon processor L7455</b>	<b>AD80582JH046003</b> <i>(tray only)</i>	2.13 GHz	1066 MHz	12 MB L3	6 / 6	50 W	
	<b>Intel Xeon processor E7450</b>	<b>BX80582E7450</b>	2.40 GHz	1066 MHz	12 MB L3	6 / 6	90 W	7 35858 20356 2
	<b>Intel Xeon processor L7445</b>	<b>AD80583JH046003</b> <i>(tray only)</i>	2.13 GHz	1066 MHz	12 MB L3	4 / 4	50 W	
	<b>Intel Xeon processor E7440</b>	<b>BX80583E7440</b>	2.40 GHz	1066 MHz	16 MB L3	4 / 4	90 W	7 35858 20357 9
	<b>Intel Xeon processor E7430</b>	<b>AD80583QH046003</b> <i>(tray only)</i>	2.13 GHz	1066 MHz	12 MB L3	4 / 4	90 W	
	<b>Intel Xeon processor E7420</b>	<b>BX80583E7420</b>	2.13 GHz	1066 MHz	8 MB L3	4 / 4	90 W	7 35858 20358 6
	<b>Intel Xeon processor E7310</b>	<b>BX80565E7310</b>	1.60 GHz	1066 MHz	4 MB	4 / 4	80 W	7 35858 19669 7
	<b>Intel Xeon processor L7345</b>	<b>LF80565JH0368M</b> <i>(tray only)</i>	1.86 GHz	1066 MHz	8 MB	4 / 4	50 W	
	<b>Intel Xeon processor E7220</b>	<b>LF80564QH0778M</b> <i>(tray only)</i>	2.93 GHz	1066 MHz	8 MB	2 / 2	80 W	

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

<sup>4</sup> Contact your chassis supplier for compatibility details.

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 BOARDS



Intel® Server and Workstation Boards deliver industry-leading performance with maximum energy efficiency and lower hardware refresh costs to provide the quality, flexibility, and support you need to build configurable, customized, and cost-effective solutions.

USAGE MODEL	INTEL® SERVER BOARD	FORM FACTOR	NUMBER OF PROCESSORS	INTEL® XEON® PROCESSOR	INTEL® CHIPSET	MEMORY	PCI EXPRESS*	INTEL® I/O EXPANSION
High Density / Enterprise	S5520UR/URT <sup>1</sup>	SSI TEB (12" x 13")	2	5600	5520 w/ ICH10R	12 x DDR3 (192 GB)	1 x24 Gen2 riser, 1 x8 Gen2 IOM	RMM3, GbE, 10GbE, SAS, InfiniBand*
	S5500HV	Custom (6.3" x 16.7")	2	5600	5500 w/ ICH10R	12 x DDR3 (96 GB)	1 x16 Gen2 half length	N/A
	S5500WB	SSI EATX (12" x 13")	2	5600	5500 w/ ICH10R	8 x DDR3 (64 GB)	1 x8 Gen2, 1 x4 Gen2	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR1640TH <sup>2</sup>	Custom	2 per board	3400	3420	8 x DDR3 (64 GB) per board	N/A	RMM3Lite V
Performance Server	S5520HC/HCT <sup>1</sup>	SSI EEB (12" x 13")	2	5600	5520 w/ ICH10R	12 x DDR3 (192 GB)	4 x8 Gen2, 1 x4, 1 x32-bit	RMM3, SAS
	S5500HCV	SSI EEB (12" x 13")	2	5600	5500 w/ ICH10R	9 x DDR3 (144 GB)	2 x8 Gen2, 1 x4 Gen2, 1 x4, 1 x32-bit	RMM3, SAS
Value Server	S5500BC	SSI CEB (12" x 10.5")	2	5600	5500 w/ ICH10R	8 x DDR3 (32 GB)	2 x8 Gen2, 1 x4 Gen2, 1 x4, 1 x32-bit All half length	RMM3
	S3420GPLC	ATX	1	3400	3420	6 x RDIMMs or 4 x UDIMMs, DDR3 (32 GB or 16 GB)	2 x8 Gen2, 1 x4, 1 x32-bit	N/A
	S3420GPLX	ATX	1	3400	3420	6 x RDIMMs or 4 x UDIMMs, DDR3 (32 GB or 16 GB)	2 x8 Gen2, 1 x4 Gen2, 1 x1, 1 x4, 1 x32-bit	RMM3, SAS
	S3420GPRX	ATX	1	3400	3420	6 x RDIMMs or 4 x UDIMMs, DDR3 (32 GB or 16 GB)	1 x8 Gen2	RMM3Lite, GbE, SAS
	S3420GPV	ATX	1	3400	3420	4 x UDIMMs, DDR3 (16 GB)	2 x8 Gen2, 1 x4, 1 x32-bit	N/A
	S1200BTL	ATX	1	E3-1200	C204	4 x UDIMMs, DDR3 (32 GB)	1 x16 Gen2, 3 x8 Gen2, 1 x32-bit	RMM4, RMM4Lite, SAS, TPM
	S1200BTS	MicroATX	1	E3-1200	C202	4 x UDIMMs, DDR3 (32 GB)	1 x16 Gen2, 1 x8 Gen2, 1 x4 Gen2, 1 x32-bit	TPM
Workstation	S5520SC	SSI EEB (12" x 13")	2	5600	5520 w/ ICH10R	12 x DDR3 (96 GB)	2 x16 Gen2, 1 x4, 1 x1, 1 x32-bit	RMM3, SAS
	WX58BP	ATX	1	3600	X58 Express w/ ICH10R	4 x DDR3 (12 GB)	2 x16 Gen2, 1 x4 Gen2, 2 x1, 1 x32-bit	N/A
Modular	MFS5520VI	Custom	2	5600	5520 w/ ICH10R	12 x DDR3 (96 GB)	N/A	GbE I/O Mezzanine Card

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

To find and compare additional product specifications, visit <http://ark.intel.com>






Boards	Intel® Entry Server Board S1200BTL	Intel® Entry Server Board S1200BTS
	<i>Entry server board with management options</i>	<i>Value server board for cost-sensitive applications</i>
Order Code <sup>3</sup>	<b>S1200BTL</b>	<b>S1200BTS</b>
Form Factor	ATX (12" x 9.6")	MicroATX (9.6" x 9.6")
Intel® Server Chassis Support	Intel® Server Chassis P4304 Intel® Server System R1304BTL family Intel® Server System P4304BTL family	Intel® Server Chassis P4304 Intel® Server System R1304BTS family Intel® Server System P4304BTS family
Processor Support <sup>4</sup>	<b>Intel® Xeon® processor E3-1200 product family</b>	<b>Intel® Xeon® processor E3-1200 product family</b>
Number of Processors Supported	1	1
Chipset	Intel® C204 Chipset	Intel® C202 Chipset
Total Slots	5	4
Slot Types	1 x PCI Express* 2.0 x8 (x16 mechanical) 3 x PCI Express 2.0 x4 (x8 mechanical) 1 x PCI 32-bit / 33 MHz (5 V) 1 x Mezzanine connector—optional SAS module	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express 2.0 x4 (x8 mechanical) 1 x PCI 32-bit / 33 MHz (5 V)
Memory Capacity	4 x DDR3 memory DIMM slots through 2 memory channels (Unbufferd only)	4 x DDR3 memory DIMM slots through 2 memory channels (Unbufferd only)
Integrated Serial ATA	6-port SATA (2 x 6.0 Gb/s, 4 x 3.0 Gb/s)	6-port SATA (6 x 3.0 Gb/s)
SAS Option	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules	N/A
Integrated LAN	Embedded Intel® Dual-Gigabit Controllers 82574L and 82579	Embedded Intel® Dual-Gigabit Controllers 82574L and 82579
Integrated Graphics	Server Engine* LLC Pilot III* with 64 MB DDR2 memory, 8 MB allocated to graphics	SM712 Graphic Controller
System Management Software	Intel® System Management Software Intel® Deployment Assistant	Intel® Deployment Assistant
Server Management Support	Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRMM4 or AXXRMM4Lite)	N/A
Intel® RAID Support	Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10
Integrated Security	Header for optional Intel® Trusted Platform Module (Intel® TPM Module)	Header for optional Intel® Trusted Platform Module (Intel® TPM Module)
Warranty	3 year limited warranty	3 year limited warranty



Boards	Intel® Entry Server Board S3420GPLX	Intel® Entry Server Board S3420GPLC
	Entry server board with support for mainstream applications and additional features	Entry server board with support for mainstream applications
Order Code <sup>3</sup>	S3420GPLX	S3420GPLC
Intel® Server Chassis Support	Intel® Server Chassis SC5650UP	Intel® Server Chassis SC5650UP Intel® Server System SR1630GP Intel® Server System SR1630HGP
Processor Support <sup>4</sup>	Intel® Xeon® processor 3400 series	Intel® Xeon® processor 3400 series
Number of Processors Supported	1	1
Chipset	Intel® 3420 Chipset and PCI Express* switch	Intel® 3420 Chipset
Total Slots	6	4
Slot Types	1 x PCI Express 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express 2.0 x4 (x8 mechanical) 1 x PCI Express x4 (x8 mechanical) 1 x PCI Express x1 (x1 mechanical) 1 x PCI 32-bit / 33 MHz (5 V) 1 x Mezzanine connector—SAS module	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express x4 (x8 mechanical) 1 x PCI 32-bit / 33 MHz (5 V)
Memory Capacity	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)
Integrated Serial ATA	6-port SATA (3.0 Gb/s)	6-port SATA (3.0 Gb/s)
SAS Option	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules	N/A
Integrated LAN	Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM	Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
System Management Software	Intel® System Management Software 3.x Intel® Deployment Assistant	Intel® System Management Software 3.x Intel® Deployment Assistant
Server Management Support	Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRM3)	Integrated baseboard management controller with IPMI 2.0 support
Intel® RAID Support	Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10
Warranty	3 year limited warranty	3 year limited warranty



Boards	Intel® Entry Server Board S3420GPRX	Intel® Entry Server Board S3420GPV
	<i>High-efficiency server board for rack optimization</i>	<i>Essential server features for entry-level applications</i>
Order Code <sup>3</sup>	<b>S3420GPRX</b>	<b>S3420GPV</b>
Intel® Server Chassis Support	Intel® Server System SR1630GPRX Intel® Server System SR1630HGPRX	Intel® Server Chassis SC5650UP
Processor Support <sup>4</sup>	<b>Intel® Xeon® processor 3400 series</b>	<b>Intel® Xeon® processor 3400 series</b>
Number of Processors Supported	1	1
Chipset	Intel® 3420 Chipset	Intel® 3420 Chipset
Total Slots	1	4
Slot Types	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x Mezzanine connector—internal SAS module 2 x Mezzanine connector—external I/O module (GbE and SAS)	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express x4 (x8 mechanical) 1 x PCI 32-bit / 33 MHz (5 V)
Memory Capacity	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels (32 GB max for RDIMM and 16 GB max for UDIMM)	4 x UDIMMs DDR3 memory through dual memory channels (16 GB max for UDIMM)
Integrated Serial ATA	6-port SATA (3.0 Gb/s)	6-port SATA (3.0 Gb/s)
SAS Option	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules	N/A
Integrated LAN	Embedded Intel® 5 ports Gigabit Controllers (one for 82574L and four for 82576EB) Optional Quad or Dual GbE solution via Intel® I/O Expansion Modules	Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Onboard graphic controller (SM712)
System Management Software	Intel® System Management Software 3.x Intel® Deployment Assistant Intel® Remote Management Module 3 Lite (AXXRMM3LITE)	Intel® System Management Software 3.x Intel® Deployment Assistant
Server Management Support	Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via 82574L (RMM3 Lite required)	N/A
Intel® RAID Support	Integrated SAS / SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10
Warranty	3 year limited warranty	3 year limited warranty

			
<b>Boards</b>	<b>Intel® Server Board S5520UR</b>	<b>Intel® Server Board S5500WB</b>	<b>Intel® Server Board S5520HC</b>
	<i>Highly integrated, rack-optimized server board for enterprise data centers and high-performance computing</i>	<i>A rack-optimized server board, purpose-built for high energy efficiency and lowest total cost of ownership in dense computing applications</i>	<i>A pedestal-optimized server board designed with world-class performance, scalable management, and maximum expandability for small and medium business applications</i>
<b>Order Code<sup>3</sup></b>	<b>BB5520URR (OEM 10-pack) / S5520URT (TPM-enabled option)</b>	<b>S5500WBR or S5500WBR12V</b>	<b>S5520HCR / S5520HCT (TPM-enabled option)</b>
<b>Intel® Server Chassis Support</b>	Intel® Server System SR1600UR family Intel® Server System SR1625UR family Intel® Server System SR2600UR family Intel® Server System SR2625UR family	Intel® Server System SR1690WB Intel® Server System SR1695WB	Intel® Server Chassis SC5600 family Intel® Server Chassis SC5650 family Intel® Server System SC5650HCBRP
<b>Processor Support<sup>4</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>5</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>5</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>5</sup></b>
<b>Number of Processors Supported</b>	1 or 2	1 or 2	1 or 2
<b>Intel® QuickPath Interconnect (GT/s)<sup>5</sup></b>	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
<b>Chipset</b>	Intel® 5520 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R	Intel® 5520 Chipset with ICH10R
<b>Total Slots</b>	1U: 1 2U: up to 5 Plus proprietary I/O module and Midplane2 connection	Up to 2, plus 1 via Intel® I/O Expansion Module (chassis dependent)	6
<b>Slot Types</b>	1U: 1 x PCI Express* 2.0 x16 (x16 mechanical via riser) 2U: Options vary by system 3 x full-height PCI Express 2.0 x8 (passive riser) 3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8 3 x full-height PCI-X 133 MHz 2 x full-height PCI-X 133 MHz, 1 x full-height and 2 x low-profile PCI Express 2.0 x8 Optional 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module Optional 1 x PCI Express x4 via bridge board connector on Midplane2	1 x PCI Express* 2.0 x8 in slot 6 (x16 mechanical) 1 x PCI Express 2.0 x4 in slot 1 (x8 mechanical) 1 x PCI Express 2.0 x8 (GbE, 10 GbE, SAS, and InfiniBand* options) via Intel® I/O Expansion Module	1 x PCI Express* 2.0 x8 (x16 mechanical) 3 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express x4 (x8 mechanical shared with Intel® 4-port SAS I/O module) 1 x PCI 32-bit / 33 MHz (5 V)
<b>Memory Capacity</b>	12 x DDR3 memory DIMM slots through 6 memory channels	8 x DDR3 memory DIMM slots through 6 memory channels	12 x DDR3 memory DIMMs through 6 memory channels
<b>Integrated Serial ATA</b>	6-port SATA (3.0 Gb/s) via ICH10R	6-port SATA (3.0 Gb/s) via ICH10R	6-port SATA (3.0 Gb/s) via ICH10R
<b>SAS Option</b>	Optional SAS / SATA RAID solution via Intel® Integrated Server RAID system boards	Optional via Intel® I/O Expansion Modules: 4-port internal SAS, 4-port internal SAS hardware RAID	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules
<b>Integrated LAN</b>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>	Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>7</sup>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>
<b>Integrated Graphics</b>	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
<b>System Management Software</b>	Intel® System Management Software 3.x Intel® Deployment Assistant	Intel® System Management Software 3.x Intel® Deployment Assistant	Intel® System Management Software 3.x Intel® Deployment Assistant
<b>Server Management Support</b>	Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRMM3)	Support for the new simplified Data Center Management Interface (DCMI), IPMI 2.0, and Intel® Intelligent Power Node Manager Optional Intel® Remote Management Module (AXXRMM3)	Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRMM3)
<b>Intel® RAID Support</b>	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRAKSW5 Optional SAS RAID with Intel® Integrated RAID module AXXRMBASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60 Compatible with Intel® RAID Controller add-in cards	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRAKSW5 Optional SAS RAID with Intel® Integrated RAID module AXXRMBASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60 Compatible with Intel® RAID Controller add-in cards	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRAKSW5 Optional SAS RAID with Intel® Integrated RAID module AXXRMBASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60 Compatible with Intel® RAID Controller add-in cards
<b>Warranty</b>	3 year limited warranty	3 year limited warranty	3 year limited warranty



Boards	Intel® Server Board S5500HCV	Intel® Server Board S5500HV	Intel® Server Board S5500BC
	<i>A pedestal-optimized server board designed with enterprise-class performance and scalable management, for small and medium business applications</i>	<i>A high-performance, half-width dual-socket server board optimized for high-density HPC applications</i>	<i>An entry-level server board for rack- and pedestal-optimized server solutions designed for business-class performance and quality</i>
Order Code <sup>3</sup>	<b>S5500HCVR</b>	<b>BB5500HVR (OEM 10-pack)</b>	<b>S5500BCR</b>
Intel® Server Chassis Support	Intel® Server Chassis SC5600 family Intel® Server Chassis SC5650 family	Intel® Server System SR1670HV	Pedestal: Intel® Server System SC5650BCDP, Intel® Server Chassis SC5650 family 1U Rack: Intel® Server System SR1630BC
Processor Support <sup>4</sup>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>6</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>6</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>6</sup></b>
Number of Processors Supported	1 or 2	1 or 2	1 or 2
Intel® QuickPath Interconnect (GT/s) <sup>5</sup>	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
Chipset	Intel® 5500 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R
Total Slots	5	1	5
Slot Types	2 x PCI Express* 2.0 x8 ( <i>x8 mechanical</i> ) 1 x PCI Express 2.0 x4 ( <i>x16 mechanical</i> ) 1 x PCI Express x4 ( <i>x8 mechanical shared with Intel® 4-port SAS I/O module</i> ) 1 x PCI 32-bit / 33 MHz (5 V)	1 x low-profile, half-length PCI Express* 2.0 x 16	Pedestal: 2 x half-length PCI Express* 2.0 x8 ( <i>x8 mechanical</i> ) 1 x half-length PCI Express 2.0 x4 ( <i>x8 mechanical</i> ) 1 x half-length PCI Express x4 1 x half-length PCI 32-bit / 33 MHz (5 V) Rack: 1 x low-profile, half-length PCI Express 2.0 x8 riser in slot 6
Memory Capacity	9 x DDR3 memory DIMMs through 6 memory channels	12 x DDR3 memory DIMMs through 6 memory channels	8 x DDR3 memory DIMMs through 4 memory channels
Integrated Serial ATA	6-port SATA (3.0 Gb/s) via ICH10R	4-port SATA (3.0 Gb/s) via ICH10R	6-port SATA (3.0 Gb/s) via ICH10R
SAS Option	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules	N/A	N/A
Integrated LAN	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>	Embedded Intel® 82574L PHYs with Intel® I/O Acceleration Technology	Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Onboard ASPEED* AST2050 with integrated 2D video controller with 8 MB video memory	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
System Management Software	Intel® System Management Software 3.x Intel® Deployment Assistant	IPMI 2.0 Management Features	Intel® System Management Software 3.x Intel® Deployment Assistant
Server Management Support	Integrated baseboard management controller with IPMI 2.0 support, Intel® Intelligent Power Node Manager and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRM3)	Onboard ASPEED AST2050 with integrated baseboard management controller with IPMI 2.0 support	Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module (AXXRM3)
Intel® RAID Support	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRKSW5 Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60 Compatible with Intel® RAID Controller add-in cards	Includes SATA RAID with Intel® Matrix RAID 0, 1, 5, and 10 or LSI* MegaSR 0, 1, and 10 Compatible with select Intel® RAID Controller add-in cards	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRKSW5 Compatible with Intel® RAID Controller add-in cards
Warranty	3 year limited warranty	3 year limited warranty	3 year limited warranty



Boards	Intel® Workstation Board S5520SC	Intel® Workstation Board WX58BP
	<i>A workstation-optimized board designed with world-class performance and flexible expandability for graphics-intensive applications</i>	<i>Entry-level workstation board supports ECC memory</i>
Order Code <sup>3</sup>	<b>S5520SCR</b>	<b>WX58BP</b>
Intel® Server Chassis Support	Intel® Server Chassis SC5600BASE Intel® Server Chassis SC5650WS Intel® Server System SC5650SCWS	N/A
Processor Support <sup>4</sup>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>5</sup></b>	<b>Intel® Xeon® processor 3500 or 3600 series<sup>8</sup></b>
Number of Processors Supported	1 or 2	1
Intel® QuickPath Interconnect (GT/s) <sup>5</sup>	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
Chipset	Intel® 5520 Chipset with ICH10R	Intel® X58 Express Chipset
Total Slots	5	6
Slot Types	2 x PCI Express* 2.0 x16 ( <i>x16 mechanical</i> ) 1 x PCI Express 2.0 x4 ( <i>x8 mechanical shared with Intel® 4-port SAS I/O module</i> ) 1 x PCI Express x1 ( <i>x4 mechanical</i> ) 1 x PCI 32-bit / 33 MHz ( <i>5 V</i> )	2 x PCI Express* 2.0 x16 ( <i>supports ATI CrossFire*</i> ) 1 x PCI Express 2.0 x4 2 x PCI Express x1 1 x PCI 32-bit / 33 MHz
Memory Capacity	12 x DDR3 memory DIMMs through 6 memory channels	4 DIMM slots for DDR3 1333 / 1066 Unbuffered ECC / non-ECC DIMMs ( <i>16 GB max</i> ) via 3 channels
Integrated Serial ATA	6-port SATA ( <i>3.0 Gb/s</i> ) via ICH10R	6-port SATA ( <i>3.0 Gb/s</i> )
SAS Option	Optional SAS or SAS RAID solutions via Intel® I/O Expansion Modules	N/A
Integrated LAN	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>7</sup>	1 x Intel® Gigabit Ethernet Controller
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	N/A
System Management Software	Intel® System Management Software 3.x Intel® Deployment Assistant	N/A
Server Management Support	Integrated baseboard management controller with IPMI 2.0 support and option for KVM and virtual media redirection with dedicated NIC via Intel® Remote Management Module ( <i>AXXROMM3</i> )	N/A
Intel® RAID Support	Includes SATA RAID with Intel® Embedded Server RAID Technology providing host-based RAID 0, 1, and 10 Optional host-based RAID 5 with activation key AXXRAKSW5 Optional SAS RAID with Intel® Integrated RAID module AXXROMBSASMR providing RAID 0, 1, 5, and 6 and spans 10, 50, and 60 Compatible with Intel® RAID Controller add-in cards	Includes SATA RAID support using Intel® Matrix RAID 0, 1, 5, and 10 Compatible with Intel® RAID Controller add-in cards
Warranty	3 year limited warranty	3 year limited warranty

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

<sup>1</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>2</sup> Board not sold separately. Two boards included in Intel® Server System SR1640TH.

<sup>3</sup> Out of the box support for the Intel® Xeon® processor 5600 series will be indicated by the addition of the letter "R" at the end of the Product Order Code. For boards and systems currently supporting the Intel® Xeon® processor 5500 series, a BIOS update is required before installing the Intel Xeon processor 5600 series. Refer to <http://support.intel.com> for more information.

<sup>4</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on processors supported by each server board.

<sup>5</sup> GT/s—Gigatransfers per second.

<sup>6</sup> When installing two processors, both processors must be from the same processor series—either two Intel® Xeon® processor 5500 series or two Intel® Xeon® processor 5600 series.

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

<sup>8</sup> For the Intel® Workstation Board WX58BP currently supporting the Intel® Xeon® processor 3500 series, a BIOS update is required before installing the Intel® Xeon® processor 3600 series. Visit <http://support.intel.com> for more information.

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 SYSTEMS



Intel® Server Systems are engineered from the processor out to meet a range of business needs, from SMB applications to virtualization deployments to HPC infrastructure. Rely on Intel's legacy of quality, flexibility, and support to grow your business.

USAGE MODEL	INTEL® SERVER SYSTEM	FORM FACTOR	INTEL® SERVER BOARD	DRIVE BAYS	POWER SUPPLY	INTEL® I/O EXPANSION
High-Performance Server	SC5650HCBRP	5U ped	S5520HC	6 x 3.5" hot-swap SAS/SATA	600 W 1+0 redundant <sup>3</sup>	RMM3, SAS
High-Performance Workstation	SC5650SCWS	5U ped	S5520SC	6 x 3.5" hot-swap SAS/SATA	1000 W with integrated cooling fan <sup>3</sup>	RMM3, SAS
High-Density / Enterprise	SR1600UR	1U	S5520UR	3 x 3.5" fixed or hot-swap SAS/SATA	600 W <sup>1</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR1625UR	1U	S5520UR	8 x 2.5" hot-swap SAS/SATA	650 W 1+0 redundant <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR2600UR	2U	S5520UR	6 x 3.5" hot-swap SAS/SATA, 2 x 2.5" internal fixed SATA drive mounts	750 W 1+0 redundant <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR2625UR <sup>1</sup>	2U	S5520UR	8 x 3.5" hot-swap SAS/SATA, 2 x 2.5" internal fixed SATA drive mounts	750 W 1+0 redundant <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
Storage	SR2612UR	2U	S5520UR	12 x 3.5" hot-swap SAS/SATA, 2 x 2.5" internal fixed SATA drive mounts	2 x 760 W 1+0 redundant <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR1670HV	1U	S5500HV	8 x 2.5" hot-swap SATA	2 x 770 W	N/A
HPC / Data Center	SR1690WB	1U	S5500WB	4 x 3.5" hot-swap SAS/SATA configurable to support 2.5"	650 W <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR1695WB	1U	S5500WB	4 x 3.5" hot-swap SAS/SATA configurable to support 2.5"	450 W AC or DC 1+0 redundant <sup>3</sup>	RMM3, GbE, 10GbE, SAS, InfiniBand*
	SR1630BC	1U	S5500BC	2 x 3.5" fixed SATA, 1 x slim-line DVD-ROM	400 W <sup>3</sup>	RMM3
Value Server	SC5650BCDP	5U ped	S5500BC	6 x 3.5" hot-swap SAS/SATA	600 W	RMM3
	SR1630GP/HGP	1U	S3420GPLC	2 or 3 x 3.5" fixed SATA, 1 x slim-line DVD-ROM	350 W	N/A
	SR1630GPRX/HGPRX	1U	S3420GPRX	2 or 3 x 3.5" fixed SATA, 1 x slim-line DVD-ROM	350 W <sup>3</sup>	RMM3Lite, GbE, SAS
	SR1695GPRX	1U	S3420GPRX	4 x 3.5" hot-swap SAS/SATA configurable to support 2.5"	400 W AC 1+0 redundant <sup>3</sup>	RMM3Lite, GbE, SAS
	R1304BTL/S	1U	S1200BTL/S	4 x 2.5" or 3.5" fixed or hot-swap SAS/SATA, 1 x slim-line optical drive	350 W for hot-swap 250 W for fixed	TPM BTL only: RMM4, RMM4Lite, SAS
	P4304BTL/S	4U ped	S1200BTL/S	4 x fixed or hot-swap SAS/SATA	365 W <sup>3</sup>	TPM BTL only: RMM4, RMM4Lite, SAS
Web / Hosting	SR1640TH	1U	SR1640TH <sup>2</sup>	4 x 3.5" fixed SATA	2 x 450 W <sup>3</sup>	RMM3Lite V
Modular	MFSYS25	6U	MFS5520VI	14 x 2.5" SAS/SATA/SSD	Up to 4 x 1000 W, N+1	GbE I/O Mezzanine Card
	MFSYS35	6U	MFS5520VI	6 x 3.5" SAS/SATA	Up to 4 x 1000 W, N+1	GbE I/O Mezzanine Card

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

To find and compare additional product specifications, visit <http://ark.intel.com>



System	Intel® Server System R1304BTLSHBN	Intel® Server System R1304BTLSFAN	Intel® Server System R1304BTSSFAN
	<i>Flexible, value-priced system with management options</i>	<i>Fixed HDDs with management options</i>	<i>Lowest priced rack server offered by Intel</i>
Order Code <sup>4, 5</sup>	<b>R1304BTLSHBN</b>	<b>R1304BTLSFAN</b>	<b>R1304BTSSFAN</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTL</li> <li>Intel® Server Chassis with 350 W power supply</li> <li>One full-height PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTL</li> <li>Intel® Server Chassis with 250 W power supply</li> <li>One full-height PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTS</li> <li>Intel® Server Chassis with 250 W power supply</li> <li>One full-height PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Pre-routed cables</li> </ul>
Number of Processors Supported	1	1	1
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor E3-1200 product family</b>	<b>Intel® Xeon® processor E3-1200 product family</b>	<b>Intel® Xeon® processor E3-1200 product family</b>
Chipset	Intel® C204 Chipset	Intel® C204 Chipset	Intel® C202 Chipset
Total Slots	5	5	4
Slot Types	1 x PCI Express 2.0 x8 3 x PCI Express 2.0 x4 1 x PCI 32 / 33 MHz (5 V) SAS options via Intel® I/O Expansion Module	1 x PCI Express 2.0 x8 3 x PCI Express 2.0 x4 1 x PCI 32 / 33 MHz (5 V) SAS options via Intel® I/O Expansion Module	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express 2.0 x4 (x8 mechanical) 1 x PCI 32 / 33 MHz (5 V)
Memory Capacity	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)
Backplane	N/A	N/A	N/A
Integrated LAN	Dual Gigabit NICs (Intel® Gigabit Controllers 82574 and 82579)	Dual Gigabit NICs (Intel® Gigabit Controllers 82574 and 82579)	Dual Gigabit NICs (Intel® Gigabit Controllers 82574 and 82579)
Integrated Graphics	Server Engine* LLC Pilot III* with 128 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot III* with 128 MB DDR2 memory, 8 MB allocated to graphics	SM712 Graphic Controller
Server Management Support	Intel® System Management Software Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 4 and 4 Lite (AXXRMM4, AXXRMM4LITE)	Intel® System Management Software Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 4 and 4 Lite (AXXRMM4, AXXRMM4LITE)	Intel® Deployment Assistant
Intel® RAID Controller Compatibility <sup>7</sup>	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10
Form Factor	1U Rack	1U Rack	1U Rack
Drive Bays	4 x hot-swap 2.5" or 3.5" SATA (3.0 Gb/s) HDDs 1 x fixed slim-line DVD-ROM	4 x fixed 2.5" or 3.5" SATA (3.0 Gb/s) HDDs 1 x fixed slim-line DVD-ROM	4 x fixed 2.5" or 3.5" SATA (3.0 Gb/s) HDDs 1 x fixed slim-line DVD-ROM
Thermal Solution	UP passive thermal solution included	UP passive thermal solution included	UP passive thermal solution included
System Cooling	3 x 40mm fixed cooling fans with duct	3 x 40mm fixed cooling fans with duct	3 x 40mm fixed cooling fans with duct
Power Supply	350 W non-redundant	250 W non-redundant	250 W non-redundant
Dimensions (H x W x D)	1.75" x 17.24" x 21.8" (438mm x 45mm x 553mm)	1.75" x 17.24" x 21.8" (438mm x 45mm x 553mm)	1.75" x 17.24" x 21.8" (438mm x 45mm x 553mm)



System	Intel® Server System SR1640TH	Intel® Server System SR1630GP	Intel® Server System SR1630GPRX
	<i>High-density, 1U four-node system with optimized power efficiency and cooling for space- and cost-sensitive customers</i>	<i>Highly integrated, 1U rack solution for cost-sensitive customers</i>	<i>Highly integrated, 1U rack solution for cost-sensitive customers</i>
Order Code <sup>4,5</sup>	<b>SR1640TH</b>	<b>SR1630GP</b>	<b>SR1630GPRX</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S3420TH</li> <li>Intel® Server Chassis with dual 450 W 80 PLUS* Silver-level power supply</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S3420GPLC</li> <li>Intel® Server Chassis with 350 W power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 350 W 80 PLUS* Silver-level power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul>
Number of Processors Supported	4	1	1
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor 3400 series</b>	<b>Intel® Xeon® processor 3400 series</b>	<b>Intel® Xeon® processor 3400 series</b>
Chipset	Intel® 3420 Chipset	Intel® 3420 Chipset	Intel® 3420 Chipset
Total Slots	0	1	1
Slot Types	N/A	1 x PCI Express 2.0 x8	1 x PCI Express 2.0 x8 1 x PCI Express 2.0 x8 ( <i>GbE and SAS options</i> ) via Intel® I/O Expansion Module
Memory Capacity	4 x DIMMs DDR3 memory through dual memory channels	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels
Backplane	N/A	N/A	N/A
Integrated LAN	2 x Embedded Intel® Dual-Gigabit Controllers 82574L	Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM	Embedded 5-port Intel® Gigabit Controllers ( <i>one for 82574L and four for 82576EB</i> )
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
Server Management Support	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMM3LITEV</i> )	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMM3LITE</i> )
Intel® RAID Controller Compatibility <sup>7</sup>	N/A	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10
Form Factor	1U Rack	1U Rack	1U Rack
Drive Bays	4 x fixed 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs	2 x fixed 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs 1 x fixed slim-line DVD-ROM	2 x fixed 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs 1 x fixed slim-line DVD-ROM
Thermal Solution	4 x UP passive thermal solution included	1 x UP passive thermal solution included	1 x UP passive thermal solution included
System Cooling	6 x fixed cooling fans with 2 x air duct	2 x fixed cooling blowers with duct	3 x fixed cooling blowers with duct
Power Supply	450 W non-redundant 80 PLUS Silver-level efficiency	350 W non-redundant	350 W non-redundant; 80 PLUS Silver-level efficiency
Dimensions (H x W x D)	1.7" x 17.3" x 26.8" (44mm x 440mm x 680mm)	1.7" x 16.9" x 20" (43mm x 430mm x 508mm)	1.7" x 16.9" x 20" (43mm x 430mm x 508mm)



System	Intel® Server System SR1630HGP	Intel® Server System SR1630HGPRX	Intel® Server System SR1695GPRX
	<i>Flexible high-density server solution for entry-level system infrastructures</i>	<i>Flexible high-density server solution for entry-level system infrastructures</i>	<i>High-density redundant server solution with AC PSU</i>
Order Code <sup>4,5</sup>	<b>SR1630HGP</b>	<b>SR1630HGPRX</b>	<b>SR1695GPRX</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S3420GPLC</li> <li>Intel® Server Chassis with 350 W power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 350 W 80 PLUS* Silver-level power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Black rail kit</li> <li>Pre-routed cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S3420GPRX</li> <li>Intel® Server Chassis with 400 W 80 PLUS* Silver-level power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line DVD-ROM bay</li> <li>Pre-routed cables</li> </ul>
Number of Processors Supported	1	1	1
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor 3400 series</b>	<b>Intel® Xeon® processor 3400 series</b>	<b>Intel® Xeon® processor 3400 series</b>
Chipset	Intel® 3420 Chipset	Intel® 3420 Chipset	Intel® 3420 Chipset
Total Slots	1	1	1
Slot Types	1 x PCI Express 2.0 x8	1 x PCI Express 2.0 x8 1 x PCI Express 2.0 x8 ( <i>GbE and SAS options</i> ) via Intel® I/O Expansion Module	1 x PCI Express 2.0 x8 1 x PCI Express 2.0 x8 ( <i>GbE and SAS options</i> ) via Intel® I/O Expansion Module
Memory Capacity	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels	6 x RDIMMs or 4 x UDIMMs DDR3 memory through dual memory channels
Backplane	Hot-swap SAS / SATA backplane	Hot-swap SAS / SATA backplane	Hot-swap SAS / SATA backplane
Integrated LAN	Embedded Intel® Dual-Gigabit Controllers 82574L and 82578DM	Embedded 5-port Intel® Gigabit Controllers ( <i>one for 82574L and four for 82576EB</i> )	Embedded 5-port Intel® Gigabit Controllers ( <i>one for 82574L and four for 82576EB</i> )
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
Server Management Support	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMM3LITE</i> )	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 3 Lite ( <i>AXXRMM3LITE</i> )
Intel® RAID Controller Compatibility <sup>7</sup>	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10 Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans 10, 50, and 60	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Matrix Storage Technology with host-based software RAID levels 0, 1, 5, and 10 Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans 10, 50, and 60
Form Factor	1U Rack	1U Rack	1U Rack
Drive Bays	3 x hot-swap 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs 1 x fixed slim-line DVD-ROM	3 x hot-swap 3.5" SATA ( <i>3.0 Gb/s</i> ) HDDs 1 x fixed slim-line DVD-ROM	4 x 3.5" hot-swap drive bays Configurable to support 1 x 2.5" hot-swap drive in each bay
Thermal Solution	1 x UP passive thermal solution included	1 x UP passive thermal solution included	1 x UP passive thermal solution included
System Cooling	2 x fixed cooling blowers with duct	3 x fixed cooling blowers with duct	3 x fixed cooling blowers with duct
Power Supply	350 W non-redundant	350 W non-redundant; 80 PLUS Silver-level efficiency	400 W non-redundant; 80 PLUS Silver-level efficiency
Dimensions (H x W x D)	1.7" x 16.9" x 25.51" ( <i>43mm x 430mm x 648mm</i> )	1.7" x 16.9" x 25.51" ( <i>43mm x 430mm x 648mm</i> )	1.69" x 17.76" x 26.42" ( <i>43mm x 451mm x 671mm</i> )



	Intel® Server System SR1600UR	Intel® Server System SR1625UR
<b>System</b>	<b>Intel® Server System SR1600UR</b>	<b>Intel® Server System SR1625UR</b>
	<i>Rack-optimized, highly integrated server systems for high-density, cost-sensitive applications</i>	<i>Highly integrated rack server system with reach storage subsystem for high-density applications</i>
<b>Order Code<sup>4, 5</sup></b>	<b>SR1600URR SR1600URHSR</b>	<b>SR1625URR SR1625URSASR</b>
<b>Components Included</b>	<ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with specific configuration below: SR1600URR: Fan board in place of backplane, PCI Express* 2.0 riser with one full-height and full-length x16 slot, three cold-swap hard drive carriers SR1600URHSR: No backplane (<i>must be ordered separately</i>) PCI Express 2.0 riser with one full-height and full-length x16 slot, three hard drive carriers</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below: SR1625URR: Passive midplane, PCI Express* riser with one full-height and full-length x16 slot, six hard drive carriers SR1625URSASR: Active midplane, PCI Express riser with one full-height and full-length x16 slot, six hard drive carriers</li> </ul>
<b>Number of Processors Supported</b>	1 to 2	1 to 2
<b>Processor Support<sup>6</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>
<b>Intel® QPI (GT/s)<sup>8</sup> / System Bus Speed (MHz)</b>	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
<b>Chipset</b>	Intel® 5520 Chipset with ICH10R	Intel® 5520 Chipset with ICH10R
<b>Total Slots</b>	1 + Intel® I/O Expansion Module	1 + Intel® I/O Expansion Module
<b>Slot Types</b>	1 x PCI Express 2.0 x16 via riser 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module 1 x PCI Express x4 cable-less connection to optional SAS backplane	1 x PCI Express 2.0 x16 via riser 1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module 1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane <sup>2</sup>
<b>Memory Capacity</b>	12 x DDR3 memory DIMMs through 6 memory channels	12 x DDR3 memory DIMMs through 6 memory channels
<b>Backplane</b>	SR1600URR: Fan board only, HDDs are cabled SR1600URHSR: Active SAS / SATA or Passive SATA hot-swap backplane ( <i>must be ordered separately</i> )	Hot-swap SAS / SATA backplane
<b>Integrated LAN</b>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>
<b>Integrated Graphics</b>	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
<b>Server Management Support</b>	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module ( <i>AXXRM3</i> )	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module ( <i>AXXRM3</i> )
<b>Intel® RAID Controller Compatibility<sup>7</sup></b>	Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key Optional SAS: Intel® Integrated Server RAID system boards with software RAID 0, 1, and optional software RAID 5 with activation key	Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans ( <i>10, 50, and 60</i> ) offer value above a traditional add-in card
<b>Form Factor</b>	1U rack	1U rack
<b>Drive Bays</b>	3 x 3.5" drive bays	8 x 2.5" drive bays
<b>Thermal Solution</b>	2 x passive thermal solutions included	2 x passive thermal solutions included
<b>System Cooling</b>	5 x non-redundant dual-rotor fans	5 x non-redundant dual-rotor fans
<b>Power Supply</b>	600 W high-efficiency power supply, 80 PLUS* Bronze-level efficiency	Up to two 650 W power supply modules for H1 redundant configurations, 80 PLUS* Base-level efficiency
<b>Dimensions (H x W x D)</b>	1.7" x 16.93" x 27.25" (43mm x 430mm x 692mm)	1.7" x 16.93" x 27.95" (43mm x 430mm x 710mm)



	Intel® Server System SR2600UR	Intel® Server System SR2625UR
<b>System</b>	<b>Intel® Server System SR2600UR</b>	<b>Intel® Server System SR2625UR</b>
	<i>Highly integrated rack server system with highest I/O expandability options</i>	<i>Highly integrated with highest I/O expandability options using 2.5" HDDs</i>
<b>Order Code<sup>4, 5</sup></b>	SR2600URBRPR SR2600URLXR SR2600URSATAR	SR2625URBRPR SR2625URLXR SR2625URLXTR (option with TPM-enabled board S5520URT)
<b>Components Included</b>	<ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below: SR2600URBRPR: Passive midplane, PCI Express* riser with three x8 slots, three system fans, five hard drive carriers</li> <li>SR2600URLXR: Active midplane, PCI Express riser with five x8 slots, six hot-swap and redundant fans, five hard drive carriers</li> <li>SR2600URSATAR: Passive midplane, PCI Express riser with five x8 slots, six hot-swap and redundant fans, five hard drive carriers, two power supplies</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with one power supply and specific configuration below: SR2625URBRPR: Passive midplane, PCI Express* riser with three x8 slots, six hard drive carriers</li> <li>SR2625URLXR: Active midplane, PCI Express riser with five x8 slots, eight hard drive carriers</li> </ul>
<b>Number of Processors Supported</b>	1 to 2	1 to 2
<b>Processor Support<sup>6</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>
<b>Intel® QPI (GT/s)<sup>8</sup> / System Bus Speed (MHz)</b>	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
<b>Chipset</b>	Intel® 5520 Chipset with ICH10R	Intel® 5520 Chipset with ICH10R
<b>Total Slots</b>	Up to 5 + Intel® I/O Expansion Module	Up to 5 + Intel® I/O Expansion Module
<b>Slot Types</b>	1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module 1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane2 SR2600URBRP: 3 x full-height PCI Express 2.0 x8 SR2600URLX: 3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8 Optional riser 1: 1 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8, 2 x full-height PCI-X 133 MHz Optional riser 2: 3 x full-height PCI-X 133 MHz	1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module 1 x PCI Express 1.0 x4 via bridge board connector to hardware SAS RAID controller on Midplane2 SR2625URBRP: 3 x full-height PCI Express 2.0 x8 SR2625URLX: 3 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8 Optional riser 1: 1 x full-height PCI Express 2.0 x8, 2 x low-profile PCI Express 2.0 x8, 2 x full-height PCI-X 133 MHz Optional riser 2: 3 x full-height PCI-X 133 MHz
<b>Memory Capacity</b>	12 x DDR3 memory DIMMs through 6 memory channels	12 x DDR3 memory DIMMs through 6 memory channels
<b>Backplane</b>	Hot-swap SAS / SATA backplane	Hot-swap SAS / SATA backplane
<b>Integrated LAN</b>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>
<b>Integrated Graphics</b>	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
<b>Server Management Support</b>	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)
<b>Intel® RAID Controller Compatibility<sup>7</sup></b>	Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans (10, 50, and 60) offer value above a traditional add-in card	Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key Optional SAS: Intel® Integrated Server RAID system boards with RAID 0, 1, 1E, 5, and 6 plus spans (10, 50, and 60) offer value above a traditional add-in card
<b>Form Factor</b>	2U rack	2U rack
<b>Drive Bays</b>	5 x 3.5" drive bays, + 1 optional Optional 2 x 2.5" fixed drive mounts	8 x 2.5" drive bays Optional 2 x 2.5" fixed drive mounts
<b>Thermal Solution</b>	2 x passive thermal solutions included	2 x passive thermal solutions included
<b>System Cooling</b>	SR2600URBRP: 3 x non-redundant fans SR2600URLX: 6 x redundant and hot-swap standard fans SR2600URSATA: 6 x redundant fans	SR2625URBRP: 3 x non-redundant fans SR2625URLX/LXT: 6 x redundant and hot-swap standard fans
<b>Power Supply</b>	Up to two high-efficiency 750 W power supply modules for 1+1 redundant configurations, 80 PLUS* Gold-level efficiency with Intel® On Demand Redundant Power Technology	Up to two high-efficiency 750 W power supply modules for 1+1 redundant configurations, 80 PLUS* Gold-level efficiency with Intel® On Demand Redundant Power Technology
<b>Dimensions (H x W x D)</b>	3.44" x 16.93" x 27.95" (87mm x 430mm x 710mm)	3.44" x 16.93" x 27.95" (87mm x 430mm x 710mm)






System	Intel® Server System SR2612UR	Intel® Server System SR1670HV	Intel® Server System SR1690WB
	<i>A rack-optimized, highly-integrated server system designed for applications demanding maximum storage capability, and/or performance</i>	<i>A rack-optimized, high-performance server system providing two dual-socket 12 DIMM nodes in a 1U chassis focused on maximizing compute density for HPC workloads</i>	<i>An energy-optimized 1U rack server system designed to meet your general purpose high-density needs</i>
Order Code <sup>4, 5</sup>	<b>SR2612URR</b>	<b>SR1670HVR</b>	<b>SR1690WBR</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S5520UR</li> <li>Intel® Server Chassis with redundant power supply and specific configuration below: Expander midplane, PCI Express* riser with three x8 slots, twelve hard drive carriers</li> </ul>	<ul style="list-style-type: none"> <li>Two Intel® Server Boards S5500HV</li> <li>Intel® Server Chassis SR1670</li> <li>Two 770 W non-redundant power supplies</li> <li>Eight 2.5" hard drive carriers</li> <li>Hot-swap SATA backplane</li> <li>Eight high-speed fans</li> <li>Two PCI Express* 2.0 risers</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S5500WB</li> <li>Intel® Server Chassis SR1690</li> <li>650 W non-redundant power supply</li> <li>Four 3.5" hard drive carriers</li> <li>Hot-swap SAS / SATA backplane</li> <li>Four high-speed fans</li> <li>One PCI Express* 2.0 riser</li> </ul>
Number of Processors Supported	1 to 2	1 to 2 per node (2 to 4 total)	1 to 2
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>
Intel® QPI (GT/s) <sup>8</sup> / System Bus Speed (MHz)	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
Chipset	Intel® 5520 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R
Total Slots	Up to 3 + Intel® I/O Expansion Module	1	Up to 2 + Intel® I/O Expansion Module
Slot Types	1 x PCI Express 2.0 x8 via Intel® I/O Expansion Module 3 x full-height PCI Express 2.0 x8 Optional riser: 2 x low-profile PCI Express 2.0 x8	1 x low profile, half-length PCI Express 2.0 x16	1 x full-height PCI Express 2.0 x16 1 x PCI Express 2.0 x8 (GbE, 10 GbE, SAS, and InfiniBand* options) via Intel® I/O Expansion Module
Memory Capacity	12 x DDR3 memory DIMMs	12 x DDR3 memory DIMMs through 6 memory channels on each node	8 x DDR3 memory DIMMs through 6 memory channels
Backplane	Hot-swap SAS / SATA backplane	Hot-swap SATA backplane	Hot-swap SAS / SATA backplane
Integrated LAN	Embedded Intel® Dual-Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>	Embedded Intel® 82574L PHYs with Intel® I/O Acceleration Technology	Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>10</sup>
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Onboard ASPEED* AST2050 with integrated 2D video controller with 8 MB video memory	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
Server Management Support	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)	IPMI 2.0 Management features	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module (AXXRM3)
Intel® RAID Controller Compatibility <sup>7</sup>	Integrated: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 for internal 2.5" boot drives Also validated with Intel® RAID adapters	Integrated: Four SATA II ports supporting Intel® Matrix RAID Technology with software RAID levels 0, 1, 5, and 10 ( <i>Windows* only</i> ) and LSI* MegaRAID with software RAID levels 0, 1, and 10 ( <i>Windows and Linux*</i> )	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key
Form Factor	2U rack	1U rack	1U rack
Drive Bays	12 x 3.5" drive bays 2 x 2.5" fixed drive mounts ( <i>internal</i> )	8 x 2.5" hot-swap drive bays	4 x 3.5" hot-swap drive bays Configurable to support 1 x 2.5" hot-swap drive in each bay
Thermal Solution	2 x passive thermal solutions included	2 x passive thermal solutions per node ( <i>four total</i> ) included	2 x passive thermal solutions included
System Cooling	4 x non-redundant fans	8 x non-redundant fans ( <i>four per node</i> )	4 x non-redundant fans
Power Supply	Two high-efficiency 760 W power supply modules supporting redundant 1+1 power configurations, 80 PLUS* Silver-level efficiency	High-efficiency 770 W non-redundant power supply per node ( <i>two total</i> ) 80 PLUS* Silver-level efficiency	High-efficiency 650 W non-redundant power supply with PMBus capability; 80 PLUS* Silver-level efficiency
Dimensions (H x W x D)	3.44" x 17.23" x 30.75" (87mm x 438mm x 781mm)	1.7" x 17.2" x 27" (43mm x 435mm x 685mm)	1.7" x 17" x 26" (43mm x 432mm x 659mm)



System	Intel® Server System SR1695WB	Intel® Server System SR1630BC
	<i>An energy-optimized 1U rack server system featuring AC or DC PSU redundancy; designed to meet your high RAS and general purpose high-density needs</i>	<i>An entry-level family of rack-optimized server systems designed for business-class performance and quality for small- to medium-sized business applications</i>
Order Code <sup>4,5</sup>	<b>SR1695WB</b>	<b>SR1630BCR</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S5500WB</li> <li>Intel® Server Chassis SR1695 with one AC or DC redundant capable 450 W high-efficiency power supply</li> <li>Four 3.5" hard drive carriers</li> <li>Hot-swap SAS / SATA backplane</li> <li>Four high-speed fans</li> <li>One PCI Express* 2.0 riser</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S5500BC (SATA)</li> <li>Intel® Server Chassis SR1630</li> <li>400 W non-redundant high-efficiency power supply</li> <li>One low-profile PCI Express* riser card</li> <li>Slim-line CD-ROM bay</li> <li>Basic rail kit</li> <li>Pre-routed cables</li> </ul>
Number of Processors Supported	1 to 2	1 to 2
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>
Intel® QPI (GT/s) <sup>8</sup> / System Bus Speed (MHz)	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
Chipset	Intel® 5500 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R
Total Slots	Up to 2 + Intel® I/O Expansion Module	1
Slot Types	1 x full-height PCI Express 2.0 x16 1 x PCI Express 2.0 x8 ( <i>GbE, 10 GbE, SAS, and InfiniBand* options</i> ) via Intel® I/O Expansion Module	1 x low-profile, half-length PCI Express 2.0 x8 via riser
Memory Capacity	8 x DDR3 memory DIMMs through 6 memory channels	8 x DDR3 memory DIMMs through 4 memory channels
Backplane	Hot-swap SAS / SATA backplane	Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM
Integrated LAN	Embedded Intel® Dual-Gigabit Controller 82576EB with Intel® Virtualization Technology <sup>10</sup>	N/A
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
Server Management Support	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module ( <i>AXXRM3</i> )	Intel® System Management Software 3.x Intel® Deployment Assistant IPMI 2.0 onboard
Intel® RAID Controller Compatibility <sup>7</sup>	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key	Integrated: Intel® Embedded Server RAID Technology with software RAID levels 0, 1, and 10 Optional software RAID 5 with activation key
Form Factor	1U rack	1U rack
Drive Bays	4 x 3.5" hot-swap drive bays Configurable to support 1 x 2.5" hot-swap drive in each bay	2 x fixed 3.5" SATA HDDs Optional slim-line optical drive
Thermal Solution	2 x passive thermal solutions included	N/A ( <i>Uses 1U passive thermal solution: BXSTS100P</i> )
System Cooling	4 x non-redundant fans	2 x fixed cooling blowers with duct
Power Supply	Up to two high-efficiency 450-watt ( <i>AC or DC</i> ) power supply modules supporting 1+0 or redundant 1+1 power configurations ( <i>Systems ship with 1 power supply; customer required to purchase second PSU module for 1+1 redundancy</i> )	400 W high-efficiency non-redundant power supply; 80 PLUS* Bronze-level efficiency
Dimensions (H x W x D)	1.7" x 17.75" x 26.5" (43mm x 451mm x 673mm)	1.7" x 16.9" x 20" (43mm x 429mm x 508mm)



			
<b>System</b>	<b>Intel® Server System P4304BTL SFCN</b> <i>Small office pedestal with flexible management options</i>	<b>Intel® Server System P4304BTL SHCN</b> <i>Small office pedestal with flexible management options and hot-swap capability</i>	<b>Intel® Server System P4304BTL SSSFCN</b> <i>Basic small office pedestal server</i>
<b>Order Code<sup>4, 5</sup></b>	<b>P4304BTL SFCN</b>	<b>P4304BTL SHCN</b>	<b>P4304BTL SSSFCN</b>
<b>Components Included</b>	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTL</li> <li>Intel® Server Chassis P4304</li> <li>Four fixed 3.5" HDD carriers</li> <li>One rear chassis fan</li> <li>One 365 W power supply</li> <li>Four SATA cables</li> <li>Cabled front panel with front panel cable and front panel USB cable</li> <li>Two SATA device power adapter cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTL</li> <li>Intel® Server Chassis P4304</li> <li>Four hot-swap 3.5" HDD drive kits</li> <li>One rear chassis fan</li> <li>One 365 W power supply</li> <li>Four SATA cables</li> <li>Cabled front panel with front panel cable and front panel USB cable</li> <li>Two SATA device power adapter cables</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S1200BTL</li> <li>Intel® Server Chassis P4304</li> <li>Four fixed 3.5" HDD carriers</li> <li>One rear chassis fan</li> <li>One 365 W power supply</li> <li>Four SATA cables</li> <li>Cabled front panel with front panel cable and front panel USB cable</li> <li>Two SATA device power adapter cables</li> </ul>
<b>Number of Processors Supported</b>	1	1	1
<b>Processor Support<sup>6</sup></b>	<b>Intel® Xeon® processor E3-1200 product family</b>	<b>Intel® Xeon® processor E3-1200 product family</b>	<b>Intel® Xeon® processor E3-1200 product family</b>
<b>Chipset</b>	Intel® C204 Chipset	Intel® C204 Chipset	Intel® C202 Chipset
<b>Total Slots</b>	5	5	4
<b>Slot Types</b>	1 x PCI Express 2.0 x8 3 x PCI Express 2.0 x4 1 x PCI 32 / 33 MHz (5 V) SAS options via Intel® I/O Expansion Module	1 x PCI Express 2.0 x8 3 x PCI Express 2.0 x4 1 x PCI 32 / 33 MHz (5 V) SAS options via Intel® I/O Expansion Module	1 x PCI Express* 2.0 x8 (x16 mechanical) 1 x PCI Express 2.0 x8 (x8 mechanical) 1 x PCI Express 2.0 x4 (x8 mechanical) 1 x PCI 32 / 33 MHz (5 V)
<b>Memory Capacity</b>	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)	4 x DIMMs DDR3 memory through dual memory channels (Unbuffered only)
<b>Integrated LAN</b>	Dual Gigabit NICs Intel® Gigabit Controllers 82574 and 82579	Dual Gigabit NICs Intel® Gigabit Controllers 82574 and 82579	Dual Gigabit NICs Intel® Gigabit Controllers 82574 and 82579
<b>Integrated Graphics</b>	Server Engine* LLC Pilot III* with 128 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot III* with 128 MB DDR2 memory, 8 MB allocated to graphics	SM712 Graphic Controller
<b>Server Management Support</b>	Intel® System Management Software Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 4 and 4 Lite (AXXRMM4, AXXRMM4LITE)	Intel® System Management Software Intel® Deployment Assistant IPMI 2.0 onboard with optional Intel® Remote Management Module 4 and 4 Lite (AXXRMM4, AXXRMM4LITE)	Intel® Deployment Assistant
<b>Intel® RAID Controller Compatibility<sup>7</sup></b>	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10	Integrated SATA: Intel® Embedded Server RAID Technology with host-based software RAID levels 0, 1, and 10 Integrated SATA: Intel® Rapid Storage Technology with host-based software RAID levels 0, 1, 5, and 10
<b>Form Factor</b>	4U pedestal	4U pedestal	4U pedestal
<b>Drive Bays</b>	4 x hot-swap 2.5" or 3.5" SATA (3.0 Gb/s) HDDs 1 x fixed slim-line DVD-ROM	4 x 3.5" hot-swap SAS / SATA drive bays	4 x 3.5" hot-swap SAS / SATA drive bays
<b>System Cooling</b>	1 x 92mm rear chassis fan	1 x 92mm rear chassis fan	1 x 92mm rear chassis fan
<b>Power Supply</b>	365 W high-efficiency, non-redundant power supply 80 PLUS* Silver-level efficiency	365 W high-efficiency, non-redundant power supply 80 PLUS* Silver-level efficiency	365 W high-efficiency, non-redundant power supply 80 PLUS* Silver-level efficiency
<b>Dimensions (H x W x D)</b>	17.24" x 6.81" x 21.5" (438mm x 173mm x 546mm)	17.24" x 6.81" x 21.5" (438mm x 173mm x 546mm)	17.24" x 6.81" x 21.5" (438mm x 173mm x 546mm)



System	Intel® Server System SC5650HCBRP	Intel® Server System SC5650BCDP	Intel® Workstation System SC5650SCWS
	<i>High-reliability and expandable integrated dual-socket pedestal server</i>	<i>Integrated, cost-effective dual-socket pedestal server</i>	<i>Integrated, high-performance dual-socket workstation</i>
Order Code <sup>4, 5</sup>	<b>SC5650HCBRPR</b>	<b>SC5650BCDPR</b>	<b>SC5650SCWSR</b>
Components Included	<ul style="list-style-type: none"> <li>Intel® Server Board S5520HC</li> <li>Intel® Server Chassis SC5650BRP</li> <li>Backplane with SAS expander (AXX6DRV3GEXP) supports up to six 3.5" hot-swap hard drives</li> <li>Two data cables for hard drive backplane</li> <li>One SATA data cable for optical drive</li> <li>One IPMB cable for hard drive backplane</li> <li>Cabled front panel with front panel cable, chassis intrusion cable, and front panel USB cable</li> <li>One SATA device power adapter cable</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Server Board S5500BC</li> <li>Intel® Server Chassis SC5650DP</li> <li>Fixed hard drive cage supports up to six 3.5" hard drives, support for six hot-swap hard drives with optional backplane kit</li> <li>Four SATA data cables for hard drives and optical drives</li> </ul>	<ul style="list-style-type: none"> <li>Intel® Workstation Board S5520SC</li> <li>Intel® Workstation Chassis SC5650WS</li> <li>Fixed hard drive cage supports up to six 3.5" hard drives, support for six hot-swap hard drives with optional backplane kit</li> <li>Four SATA data cables for hard drives and optical drives</li> <li>Cabled front panel with front panel cable, chassis intrusion cable, and front panel USB cable</li> <li>One SATA device power adapter cable</li> </ul>
Number of Processors Supported	1 or 2	1 or 2	1 or 2
Processor Support <sup>6</sup>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>	<b>Intel® Xeon® processor 5500 or 5600 series<sup>9</sup></b>
Intel® QPI (GT/s) <sup>8</sup> / System Bus Speed (MHz)	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s	6.40 GT/s / 5.86 GT/s / 4.80 GT/s
Chipset	Intel® 5520 Chipset with ICH10R	Intel® 5500 Chipset with ICH10R	Intel® 5520 Chipset with ICH10R
Total Slots	6	5	5
Slot Types	4 x PCI Express* 2.0 x8 (x8 mechanical) 1 x PCI Express 1.0 x4 (x8 mechanical shared with optional SAS module) 1 x PCI 32 / 33 MHz (5 V)	2 x half-length PCI Express* 2.0 x8 (x8 mechanical) 1 x half-length PCI Express 2.0 x4 (x8 mechanical) 1 x half-length PCI Express x4 1 x half-length PCI 32 / 33 MHz (5 V)	2 x PCI Express* 2.0 x16 (x16 mechanical) 1 x PCI Express 1.0 x4 (x8 mechanical shared with optional SAS module) 1 x PCI Express 1.0 x1 (x4 mechanical) 1 x PCI 32 / 33 MHz (5 V)
Memory Capacity	12 x DDR3 memory DIMMs through 6 memory channels	8 x DDR3 memory DIMMs through 4 memory channels	12 x DDR3 memory DIMMs through 6 memory channels
Integrated SCSI	N/A	N/A	N/A
Integrated LAN	Embedded Intel Dual Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>	Embedded Intel® Dual-Gigabit Controllers 82574L and 82567LM	Embedded Intel® Dual Gigabit Controller 82575EB with Intel® Virtualization Technology <sup>10</sup>
Integrated Graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics	Server Engine* LLC Pilot II* with 64 MB DDR2 memory, 8 MB allocated to graphics
Server Management Support	Integrated IPMI 2.0 baseboard management controller Power management with Intel® Intelligent Power Node Manager Optional Intel® Remote Management Module (RMM3)	Integrated IPMI 2.0 baseboard management controller Power management with Intel® Intelligent Power Node Manager Optional Intel® Remote Management Module (RMM3)	Integrated IPMI 2.0 baseboard management controller Power management with Intel® Intelligent Power Node Manager Optional Intel® Remote Management Module (RMM3)
Intel® RAID Controller Compatibility <sup>7</sup>	Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10 Optional SW RAID 5 with activation key Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60	Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10 Optional SW RAID 5 with activation key Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60	Integrated Intel® Embedded Server RAID Technology II with host-based Sw RAID levels 0, 1, and 10 Optional SW RAID 5 with activation key Optional Intel® SAS Entry RAID Module AXX4SASMOD with RAID 0, 1, 1E, or Intel® Integrated RAID Module SR0MBSASMR with RAID 0, 1, 5, 6, and striping capability for spans 10, 50, and 60
Form Factor	5.2U pedestal, convertible to 6U rack	5.2U pedestal, convertible to 6U rack	5.2U pedestal, convertible to 6U rack
Drive Bays	6 x 3.5" hot-swap SAS / SATA drive bays Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory	6 x 3.5" hot-swap SAS / SATA drive bays Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory	6 x 3.5" hot-swap SAS / SATA drive bays Supports 2.5" hot-swap SAS, SATA, or Solid-State Drive with optional 2.5" hard drive carrier accessory
System Cooling	3 x non-redundant fans	3 x non-redundant fans	3 x non-redundant fans
Power Supply	600 W high-efficiency, 1+0 redundant power supply	600 W non-redundant power supply	Non-redundant 1000 W high-efficiency PFC power supply with integrated cooling fan
Dimensions (H x W x D)	17.8" x 9.256" x 19" (452mm x 235mm x 483mm)	17.8" x 9.256" x 19" (452mm x 235mm x 483mm)	17.8" x 9.256" x 19" (452mm x 235mm x 483mm)

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

<sup>1</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>2</sup> Board not sold separately.

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

<sup>4</sup> North American power cord included in order codes ending in NA, power cord not included in all other order codes.

<sup>5</sup> Out of the box support for the Intel® Xeon® processor 5600 series will be indicated by the addition of the letter "R" at the end of the Product Order Code. For boards and systems currently supporting the Intel® Xeon® processor 5500 series, a BIOS update is required before installing the Intel Xeon processor 5600 series. Refer to <http://support.intel.com> for more information.

<sup>6</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on processors supported by each server board.

<sup>7</sup> Refer to [http://support.intel.com/support/motherboards/server/compat\\_matrix.htm](http://support.intel.com/support/motherboards/server/compat_matrix.htm) for up-to-date details on RAID controllers supported by each server system.

<sup>8</sup> Intel® QPI—Intel® QuickPath Interconnect; GT/s—Gigatransfers per second.

<sup>9</sup> When installing two processors, both processors must be from the same processor series—either two Intel® Xeon® processor 5500 series or two Intel® Xeon® processor 5600 series.

<sup>10</sup> Intel® Virtualization Technology requires a computer system with an enabled Intel® processor, BIOS, virtual machine monitor (VMM) and, for some uses, certain computer system software enabled for it. Functionality, performance or other benefits will vary depending on hardware and software configurations and may require a BIOS update. Software applications may not be compatible with all operating systems. Please check with your application vendor.

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 CHASSIS



Chassis

## Intel® Server Chassis P4304

*Ultra-quiet, expandable pedestal chassis with variable fan speed control and customizable front bezel*

Chassis Order Code <sup>1</sup>	P4304XXSFCN / P4304XXSFCNNA	P4304XXSHCN / P4304XXSHCNNA
Spares Kit Order Code	Mechanical Spares Kit <sup>3</sup> : FUPSMSK Electrical Spares Kit <sup>3</sup> : FUPSESK	Mechanical Spares Kit <sup>3</sup> : FUPSMSK Electrical Spares Kit <sup>3</sup> : FUPSESK
Form Factor	4U Pedestal	4U Pedestal
Intel® Server Board Support <sup>2</sup>	<b>Intel® Server Boards S1200BTL and S1200BTS</b>	<b>Intel® Server Board S1200BTL</b>
Drive Bays	Support for up to four 3.5" fixed SAS/SATA drives	Support for up to four 3.5" hot-swap SAS/SATA drives
Hot-Swap Disk Drive Bay: Order Code	Up to four hot-swap drive bays via the following hot-swap disk drive bay upgrade kits: 4-drive SAS/SATA ( <i>FUP4X35HSDK</i> )	Share the same hot-swap drive bay kit ( <i>FUP4X35HSDK</i> ), use as a spare
System Cooling	1 x 92mm rear chassis fan	1 x 92mm rear chassis fan
Power Supply	Non-redundant 365 W high-efficiency power supply, 80 Plus* Silver-level	Non-redundant 365 W high-efficiency power supply, 80 Plus* Silver-level
Tool-less Features	Front bezel, EMI cover, side cover, PCI card retainer, peripheral bays, and PSU installation	Front bezel, EMI cover, side cover, PCI card retainer, hot-swap hard drive trays, hot-swap hard drive bays, peripheral bays, and PSU installation
Dimensions (H x W x D)	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)
Bezel Features	Black, control panel, three 5.25" peripheral drive bays, four internal hard drive bays, USB ports	Black, control panel, three 5.25" peripheral drive bays, four hot-swap hard drive bays and carriers ( <i>behind door</i> ), security lock, 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 microprocessors, memory, and add-in cards Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole	Front door: Security lock ( <i>available on hot-swap HDD SKU</i> ) Side cover: A padlock loop slot available at the rear of the system access cover to prevent access to the microprocessors, memory, and add-in cards Side cover: Intrusion switch Back panel: Kensington* cable lock mounting hole

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



Chassis

**Intel® Server Chassis SC5650**

*A cost-effective entry-level chassis designed for reliable operation for small business servers and workstation environments*

Configuration	Base	BRP	WS	UP
Chassis Order Code <sup>1</sup>	<b>SC5650DP</b>	<b>SC5650BRP</b>	<b>SC5650WS</b>	<b>SC5650UP</b>
Spares Kit Order Code	Maintenance kit: FPPTPMKIT	Maintenance kit: FPPTPMKIT	Maintenance kit: FPPTPMKIT	Maintenance kit: FPPTUPPMKIT
Form Factor	Pedestal, convertible to 6U Rack	Pedestal, convertible to 6U Rack	Pedestal, convertible to 6U Rack	Pedestal, convertible to 6U Rack
Intel® Server Board Support <sup>2</sup>	<b>Intel® Server Boards S5500BC, S5520HC, and S5500HCV</b>	<b>Intel® Server Boards S5500BC, S5520HC, and S5500HCV</b>	<b>Intel® Workstation Board S5520SC</b>	<b>Intel® Server Boards S3420GPLX, S3420GPLC, and S3420GPV</b>
Drive Bays	Support for up to six 3.5" fixed or hot-swap SAS/SATA drives	Support for up to six 3.5" fixed or hot-swap SAS/SATA drives	Support for up to six 3.5" fixed or hot-swap SAS/SATA drives	Support for up to six 3.5" fixed or hot-swap SAS/SATA drives
Hot-Swap Disk Drive Bay: Order Code	Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP	Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP	Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP	Up to six hot-swap drive bays via the following hot-swap disk drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP
System Cooling	3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)	3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)	3 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 120mm PCI fan, 1 x 92mm drive bay fan)	2 x non-redundant cooling fans (1 x 120mm chassis fan, 1 x 92mm drive bay fan)
Power Supply	Non-redundant 600 W PFC power supply with integrated cooling fan	Redundant 1+0 high-efficiency 600 W PFC power supply with integrated cooling fan One additional 600 W PSU can be added for redundancy	Non-redundant 1000 W high-efficiency PFC power supply with integrated cooling fan	Non-redundant 400 W high-efficiency PFC power supply with integrated cooling fan
Tool-less Features	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, fixed PSU, floppy drives, and CD / DVD ROM drives
Dimensions (H x W x D)	Pedestal: 17.8" x 9.256" x 19" (452mm x 235mm x 483mm) Rack: 9.256" x 17.6" x 19" (235mm x 447mm x 483mm)	Pedestal: 17.8" x 9.256" x 19" (452mm x 235mm x 483mm) Rack: 9.256" x 17.6" x 19" (235mm x 447mm x 483mm)	Pedestal: 17.8" x 9.256" x 19" (452mm x 235mm x 483mm) Rack: 9.256" x 17.6" x 19" (235mm x 447mm x 483mm)	Pedestal: 17.8" x 9.256" x 19" (452mm x 235mm x 483mm) Rack: 9.256" x 17.6" x 19" (235mm x 447mm x 483mm)
Bezel Features	Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports	Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports	Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports	Black, control panel controls and indicators, two half-height 5.25" peripheral drive bays, internal hard drive bay cage (behind door), security lock, USB ports
Front Connectors	2 x USB	2 x USB	2 x USB	2 x USB



**Chassis**

**Intel® Server Chassis SC5600**

*An enterprise-level chassis designed with world-class performance and maximum expandability for small and medium business applications*

Configuration	Base	BRP	LX
Chassis Order Code <sup>1</sup>	<b>SC5600BASE</b>	<b>SC5600BRP</b>	<b>SC5600LX</b>
Spares Kit Order Code	Maintenance kit: FRIGTPMKIT	Maintenance kit: FRIGTPMKIT	Maintenance kit: FRIGTPMKIT
Form Factor	Pedestal, convertible to 5U Rack	Pedestal, convertible to 5U Rack	Pedestal, convertible to 5U Rack
Intel® Server Board Support <sup>2</sup>	<b>Intel® Server Boards S5520HC and S5500HCV Intel® Workstation Board S5520SC</b>	<b>Intel® Server Boards S5520HC and S5500HCV</b>	<b>Intel® Server Boards S5520HC and S5500HCV</b>
Drive Bays	Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives	Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives	Support for up to ten 3.5" fixed or hot-swap SAS/SATA drives
Hot-Swap Disk Drive Bay: Order Code	Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP 4-drive SAS/SATA—AXX4DRV3GR 4-drive SAS/SATA Expander—AXX4DRV3GEXP	Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP 4-drive SAS/SATA—AXX4DRV3GR 4-drive SAS/SATA Expander—AXX4DRV3GEXP	Up to ten hot-swap drive bays are possible with the combination of the following drive bay upgrade kits: 6-drive SAS/SATA—AXX6DRV3GR 6-drive SAS/SATA Expander—AXX6DRV3GEXP 4-drive SAS/SATA—AXX4DRV3GR 4-drive SAS/SATA Expander—AXX4DRV3GEXP
System Cooling	3 x fixed, non-redundant chassis fans (2 x 120mm, 1 x 92mm)	3 x fixed, non-redundant chassis fans (2 x 120mm, 1 x 92mm)	4 x tool-less, hot-swappable and redundant chassis fans with handle-mounted diagnostic failure LEDs (2 x 120mm, 2 x 92mm)
Power Supply	Non-redundant 670 W PFC power supply with integrated cooling fan	Redundant 1+1 high-efficiency 750 W PFC power supply with integrated cooling fan	Redundant 1+1 high-efficiency 750 W PFC power supply with integrated cooling fan
Tool-less Features	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives	Installation and removal of fans, fixed and hot-swap hard drives, fixed and hot-swap drive bays, PCI cards, hot-swap PSU modules, fixed PSU, floppy drives, and CD / DVD ROM drives
Dimensions (H x W x D)	Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm) Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)	Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm) Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)	Rack: 8.6" x 16.6" x 27.4" (218mm x 422mm x 696mm) Pedestal: 17" x 8.6" x 28.4" (432mm x 218mm x 721mm)
Bezel Features	Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports	Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports	Black, security lock, control panel controls and indicators, three tool-less 5.25" peripheral drive bays, internal hard drive bay cage ( <i>behind door</i> ), security lock, USB ports
Front Connectors	2 x USB 1 x optional front or rear mounted serial port	2 x USB 1 x optional front or rear mounted serial port	2 x USB 1 x optional front or rear mounted serial port

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

<sup>1</sup> North American power cord included in order codes ending in NA; power cord not included in all other order codes.

<sup>2</sup> Refer to <http://support.intel.com/support/motherboards/server> for up-to-date details on server boards supported by each chassis.

<sup>3</sup> For complete spare and accessory list, please download the latest configuration guide from Spares, parts list and configuration guide - S1200BT family.

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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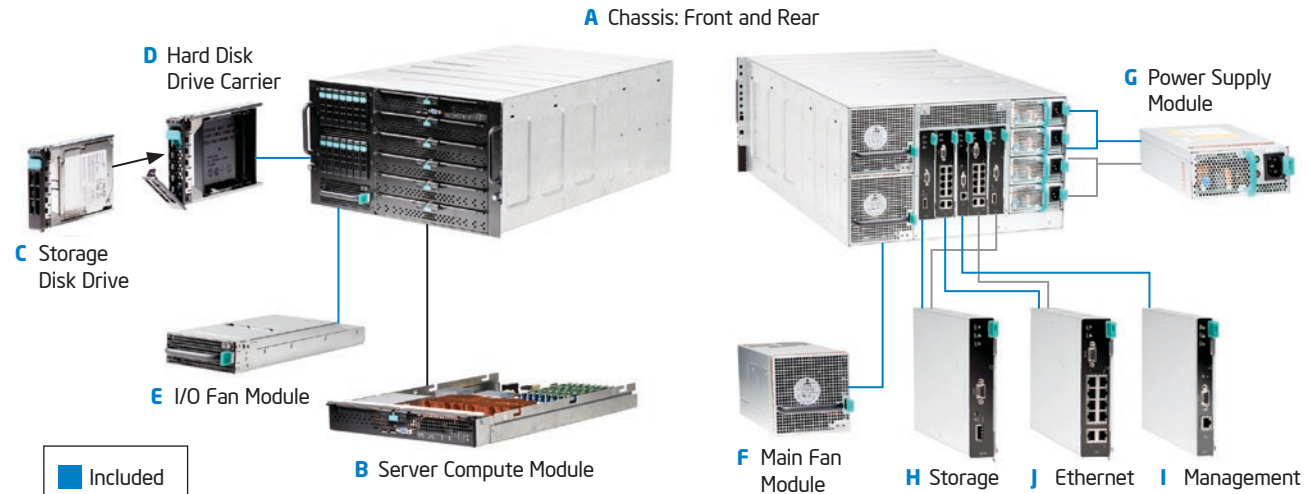
# INTEL® MODULAR SERVER

Simple. Flexible. Complete.

The Intel® Modular Server is an integrated system built on Intel® Multi-Flex Technology that includes SAN storage, computing, and networking to simplify the growing demands of your IT infrastructure. The Intel Modular Server features:

- Up to six Server Compute Modules
- Integrated SAN storage
- Integrated Ethernet Switch Modules
- All hot-swappable components
- Virtual Presence remote management capabilities
- Optional software upgrade features (Intel® Shared LUN that allows HA clustering and advanced virtualization applications and Intel® Modular Server Storage Management Pack for LUN cloning, RAID morphing, and storage pool defragmentation)

As an integrated system, the Intel Modular Server has capabilities not found in the common rack server setup, including virtual drives that provide grow-as-you-go flexibility and Virtual Presence management for simplicity.



- |   |  |  |
|---|--|--|
| <p><b>A Chassis</b></p> <ul style="list-style-type: none"> <li>▪ 1-6 Server Compute Modules</li> <li>▪ Storage Drive Bay</li> </ul> <p><b>B Server Compute Module (required)</b></p> <ul style="list-style-type: none"> <li>▪ Model MFS5520VIR</li> <li>▪ Up to 2 Intel® Xeon® processors</li> <li>▪ Up to 12 DDR3 DIMMs</li> <li>▪ Dual Gigabit Mezzanine expansion card (optional)</li> </ul> | <p><b>C Storage Hard Disk Drive (required)</b></p> <ul style="list-style-type: none"> <li>▪ Up to 14 2.5-inch SAS / SATA drives or</li> <li>▪ Up to 6 3.5-inch SAS / SATA drives</li> </ul> <p><b>D Hard Disk Drive Carriers (included)</b></p> <p><b>E Hot-Swappable I/O Fan Module (included)</b></p> <p><b>F Hot-Swappable Main Fan Module (included)</b></p> <p><b>G Hot-Swappable Power Supply Module (2 included, 2 optional)</b></p> <ul style="list-style-type: none"> <li>▪ 3 + 1 redundancy</li> </ul> | <p><b>H Storage Control Module (1 included, 1 optional)</b></p> <ul style="list-style-type: none"> <li>▪ Up to 2 Storage Control Modules for redundancy</li> </ul> <p><b>I Management Module (included)</b></p> <p><b>J Ethernet Switch Module (1 included, 1 optional)</b></p> <ul style="list-style-type: none"> <li>▪ Up to 2 Ethernet Switch Modules</li> <li>▪ Each module features 10/100/1000GbE full-duplex ports</li> </ul> |
|---|--|--|

## INTEL® MODULAR SERVER PRODUCTS



Server	<b>Intel® Modular Server Compute Module MFS5520VI</b>
	<i>High-performance, power- and heat-efficient Intel® 64-bit-capable, multi-core server</i>
Order Code	<b>MFS5520VIR</b>
Intel® Server Chassis Support	Intel® Modular Server System MFSYS25 / MFSYS35
Processor Support	<b>Intel® Xeon® processor</b>
Number of Processors Supported	2
Supported Speeds	6.40 GT/s / 5.86 GT/s / 4.80 GT/s ( <i>Intel® QuickPath Interconnect</i> )
Chipset	Intel® 5520 Server Chipset
Total Slots	1 Mezzanine expansion connector
Memory Capacity	12 DDR3 DIMMs ( <i>6 per processor</i> )
Integrated SAS HBA	Connectivity to shared storage provided via onboard LSI* 1064e controller
Integrated LAN	2 x Gigabit Ethernet ( <i>4 x with optional gigabit mezzanine card AXGBIOMEZV</i> )
Integrated Graphics	Server Engines* LLC Pilot II* controller with 64 MB DDR2 memory
Integrated Management	Remote management ( <i>KVM over IP</i> ), Remote Media Redirection, and Remote Serial Console
Application Management	Provided by Intel® System Management Software
Front Connectors	4 x USB, 1 x DB15 video

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

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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Chassis	<b>Intel® Modular Server System MFSYS25 / MFSYS35</b>
	<i>One system that integrates storage, compute, and networking to simplify the demands of your business</i>
Chassis Order Code	<b>MFSYS25 / MFSYS35</b>
Spares Kit Order Code	See <a href="http://support.intel.com">http://support.intel.com</a> for a complete configuration guide
Form Factor	6U ( <i>can be deployed in a rack or pedestal kit</i> )
Intel® Server Board Support	<b>Intel® Modular Server Compute Module MFS5520VI</b>
Server Slots	6
Shared Storage HDD Bay	Supports up to 14 x 2.5" drives ( <i>MFSYS25</i> ) or 6 x 3.5" drives ( <i>MFSYS35</i> )
Management Module Bay	1 integrated Intel® Modular Server Management Module
Storage Module Bay	1 integrated Intel® Storage Controller, option for redundant storage module
I/O Module Bay	1 integrated Intel® Gigabit Ethernet Switch, option for redundant Ethernet switch
System Cooling	3 x high-flow system fans included
Power Supply	2 x 1000 W, N+1 PFC 100–240 V-capable
Redundant Power Capable	Yes ( <i>fully redundant system configuration requires two additional power modules AXXP5U</i> )
Tool-less Features	Complete tool-less serviceability
Dimensions (H x W x D)	10.3" x 17.5" x 28.4"
Weight	187 lbs ( <i>84.8 kg</i> ) fully configured
Ethernet Switch Module	10 x external 10/100/1000 Mb/s ports, 12 x internal 1 Gb/s ports, Layer 2+, 10 Gb/s switch interlinks, integrated management
Storage Controller Module	SAS 3 Gb-based SAN storage supporting RAID 0, 1, 1E, 5, 6, 10, 50, and 60; external 4 x mini SAS port expansion for integration with external SAS tape or RAID
Chassis Management Module	Web management GUI with remote KVM support, virtual presence, and virtualized access storage management



# INTEL® RAID

## INTEL® INTEGRATED RAID PRODUCTS



	Intel® Integrated RAID Module RMS2MH080	Intel® Integrated RAID Module RMS2AF080 / 040	Intel® Integrated RAID Module RMS2LL080 / 040
Controller	6.0 Gb/s SAS 2.0 RAID module for use with Intel® Server Boards S5520UR and S5500WB	6.0 Gb/s SAS 2.0 entry-level RAID module for use with Intel® Server Boards with at least one I/O module slot	6.0 Gb/s SAS 2.0 entry-level RAID module for use with Intel® Server Boards with at least one I/O module slot
Market Segment	Mainstream	Entry	Entry / Limited Feature
Order Code	<b>AXXRMS2MH080</b>	<b>AXXRMS2AF080 / AXXRMS2AF040</b>	<b>AXXRMS2LL080 / AXXRMS2LL040</b>
Processor / RAID On Chip	<b>LSI* 2108</b>	<b>LSI* 2008</b>	<b>LSI* 2008</b>
Memory	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	2 MB for entry-level hardware RAID calculations
PCI Bus	PCI Express* 2.0 x8	PCI Express* 2.0 x4	PCI Express* 2.0 x4
Channels	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	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
RAID Levels	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 10, and 50	0, 1, and 1E
Intel® Smart Battery Backup Option	AXXRSBBU7 AXXRSBBU8 (new longer life)	No	No
Cables	Included	Included	Included
Availability	Now	Now	Now




Intel offers three categories of RAID products to protect data, increase performance, and enhance server availability:

- **Good:** Intel® Embedded Server RAID Technology with RAID 0, 1, and 10 is included with most Intel® Server Boards and Systems. RAID 5 is available with optional accessory AXXRAKSw5.
- **Better:** Intel® RAID Controllers are add-in cards designed to enable a wide variety of RAID solutions.
- **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.





Intel also offers Battery Backup Units (BBU) and Premium Feature Keys for many RAID products. BBU options are listed in the "Intel® Smart Battery Backup Option" row of the product tables. The Premium Feature Keys are described in the last table of this section.

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



			
<b>Controller</b>	<b>Intel® Integrated RAID 1U / 2U Midplane</b>	<b>Intel® Integrated RAID Module SROMBSASMR</b>	<b>Intel® Integrated RAID Module AXX4SASMOD</b>
	<i>SAS and SATA RAID module for Intel® Server Systems SR1625UR, SR2600UR, and SR2625UR</i>	<i>Four-port internal RAID module for 1U, 2U, and pedestal use with Intel® Server Boards S5520HC and S5500WB</i>	<i>Flexible module offering pass-through SAS and multiple entry-level RAID options</i>
<b>Market Segment</b>	<i>Mainstream</i>	<i>Mainstream</i>	<i>Entry</i>
<b>Order Code</b>	<b>Midplane included with systems requires AXXRAKSAS2 for HW RAID activation</b>	<b>AXXR0MBSASMR</b>	<b>AXX4SASMOD requires AXXRAKSw5 for RAID 5</b>
<b>Processor / RAID On Chip</b>	<b>LSI* 1078</b>	<b>LSI* 1078</b>	<b>LSI* 1064</b>
<b>Memory</b>	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
<b>PCI Bus</b>	PCI Express* x4	PCI Express* x8	PCI Express* x4
<b>Channels</b>	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
<b>Form Factor</b>	System midplane	1U capable system board	1U capable system board
<b>RAID Levels</b>	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 1E, and optional RAID 5
<b>Intel® Smart Battery Backup Option</b>	AXXRSBBU3	AXXRSBBU3	No
<b>Cables</b>	Included	Included	Included
<b>Availability</b>	Now	Now	Now

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

				 <span style="color: blue; font-weight: bold;">NEW</span>
<b>Controller</b>	<b>Intel® RAID Expander RES2SV240</b>	<b>Intel® RAID Controller RS2SG244</b>	<b>Intel® RAID Controller RS2WG160</b>	<b>Intel® RAID Controller RS25NB008</b>
	<i>24-port, 6.0 Gb/s-capable expander card for use with Intel® RAID products to expand 4 ports to 20 or 8 ports to 16</i>	<i>Scalable performance 6.0 Gb/s SAS RAID controller with 24 internal and four external ports for SAS / SATA drives</i>	<i>Scalable performance 6.0 Gb/s SAS RAID controller with 16 internal ports for SAS / SATA drives</i>	<i>Mainstream dual-core 6.0 Gb/s SAS RAID controller with eight external ports for SAS / SATA drives</i>
<b>Order Code</b>	<b>RES2SV240 (with cables) RES2SV240NC (without cables)</b>	<b>RS2SG244</b>	<b>RS2WG160</b>	<b>RS25NB008</b>
<b>Processor / RAID On Chip</b>	<b>LSI* 6.0 Gb/s Expander</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2208</b>
<b>Memory</b>	N/A	512 MB embedded DDR2 ECC memory	512 MB embedded DDR2 ECC memory	1 GB embedded DDR3 ECC memory
<b>PCI Bus</b>	N/A	PCI Express* 2.0 x8	PCI Express* 2.0 x8	PCI Express* 2.0 x8
<b>Channels</b>	24 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
<b>Form Factor</b>	Low-profile, 6.6" length (MD2 compliant)	Full-height, 6.6" length	Full-height, 6.6" length	Low-profile, 6.6" length (MD2 compliant)
<b>RAID Levels</b>	N/A	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60	0, 1, 5, 6, 10, 50, and 60
<b>Intel® Smart Battery Backup Option</b>	No	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU9
<b>Cables</b>	Included	Included	Included	Not included
<b>Availability</b>	Now	Now	Now	August



Controller	Intel® RAID Controller RS25DB080	Intel® RAID Controller RS2VB080 / 040	Intel® RAID Controller RS2MB044
	<i>Mainstream dual-core 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>	<i>Mainstream 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives and maintenance-free backup unit (Flash-based)</i>	<i>Mainstream 6.0 Gb/s SAS RAID controller with four internal and four external ports for SAS / SATA drives</i>
Order Code	<b>RS25DB080</b>	<b>RS2VB080 / RS2VB040</b>	<b>RS2MB044</b>
Processor / RAID On Chip	<b>LSI* SAS2208</b>	<b>LSI* SAS2108</b>	<b>LSI* SAS2108</b>
Memory	1 GB embedded DDR3 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 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	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 ( <i>MD2 compliant</i> )	Low-profile, 6.6" length ( <i>MD2 compliant</i> )	Low-profile, 6.6" length ( <i>MD2 compliant</i> )
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 Battery Backup Option	AXXRSBBU9	Maintenance-free backup unit ( <i>Flash-based</i> ) included with add-in card	AXXRSBBU7 AXXRSBBU8 ( <i>new longer life</i> )
Cables	AXXCBL740MS7P ( <i>ordered separately</i> )	Included	Included
Availability	Now	August	Now



	Intel® RAID Controller RS2BL080 / 040	Intel® RAID Controller RS2PI008	Intel® RAID Controller RT3WB080
Controller	<i>Mainstream 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>	<i>Mainstream 6.0 Gb/s SAS RAID controller with eight external ports for JBODs with SAS / SATA drives</i>	<i>Mainstream SATA-only controller with eight ports and SAS expansion support for up to 16 SATA drives</i>
Order Code	RS2BL080 / RS2BL040 (Standard) RS2BL080DE (with Drive Encryption Management)	RS2PI008 (Standard) RS2PI008DE (with Drive Encryption Management)	RT3WB080
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	256 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 external SAS / SATA ports supporting point-to-point 6.0 Gb/s and 3.0 Gb/s data-transfer rates	8 internal SATA ports supporting SAS expansion and 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 Battery Backup Option	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU7 AXXRSBBU8 (new longer life)	AXXRSBBU7 AXXRSBBU8 (new longer life)
Cables	Included	Included	Included
Availability	Now	Now	Now



Controller	Intel® RAID Controller RS2WC080 / 040	Intel® RAID Controller RS25GB008	Intel® RAID Controller SRCASBB8I
	<i>Entry-level 6.0 Gb/s SAS RAID controller with eight internal ports for SAS / SATA drives</i>	<i>Entry-level 6.0 Gb/s SAS RAID controller with eight external ports for JBOD with SAS / SATA drives</i>	<i>Eight-port internal SAS / SATA RAID in a low-profile, MD2-compliant form factor for mainstream to performance solutions</i>
Order Code	RS2WC080 RS2WC040	RS25GB008	SRCASBB8I
Processor / RAID On Chip	LSI* SAS2008	LSI* SAS2308	LSI* 1078
Memory	2 MB (on card) for RAID 0, 1, 1E, and 128 MB (from server board) for RAID 5 calculations	2 MB Context Memory	Embedded 256 MB ECC DDR2 SDRAM
PCI Bus	PCI Express* 2.0 x8	PCI Express* 2.0 x8	PCI Express* 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 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 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
RAID Levels	0, 1, 5, 10, and 50	JBOD	0, 1, 5, 6, 10, 50, and 60
Intel® Smart Battery Backup Option	No	No	AXXRSBBU6
Cables	Included	Not included	Included
Availability	Now	August	Now





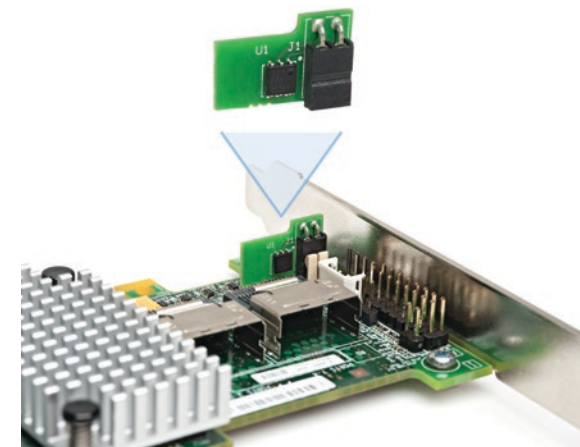
	Intel® RAID Controller SRCASRB	Intel® RAID Controller SRCASLS4I	Intel® RAID Controller SRCATAWB
Controller	<i>Eight-port internal SAS / SATA RAID for mainstream solutions</i>	<i>Four-port internal SAS / SATA RAID in a low-profile, MD2-compliant form factor for entry-level to mainstream solutions</i>	<i>Eight-port SATA RAID supporting up to 16 HDD through an expander backplane for entry-level to mainstream solutions</i>
Order Code	<b>SRCASRB</b>	<b>SRCASLS4I</b>	<b>SRCATAWB</b>
Processor / RAID On Chip	<b>LSI* 1078</b>	<b>LSI* 1078</b>	<b>LSI* 1078</b>
Memory	Embedded 256 MB ECC DDR2 SDRAM	Embedded 128 MB ECC DDR2 SDRAM	Embedded 128 MB ECC DDR2 SDRAM
PCI Bus	PCI Express* x4	PCI Express* x8	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	8 internal SATA ports with 3.0 Gb/s data-transfer rates
Form Factor	Low-profile, 7.75" length	Low-profile, 6.6" length	Low-profile, 7.75" length
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 Battery Backup Option	AXXRSBBU4	AXXRSBBU6	AXXRSBBU4
Cables	Included	Included	Included
Availability	Now	Now	Now



Controller	Intel® RAID Controller SASMF81	Intel® RAID Controller SASUC81	Intel® RAID Controller SASWT41
	<i>Eight-port SAS / SATA card with host-based RAID capability for entry-level RAID solutions</i>	<i>Eight-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability</i>	<i>Four-port SAS / SATA with pass through SAS and entry-level hardware RAID 0, 1, 1E, and 10E capability</i>
Order Code	SASMF81	SASUC81	SASWT41
Processor / RAID On Chip	LSI* 1068	LSI* 1068	LSI* 1064
Memory	N/A	2 MB for entry-level hardware RAID calculations	2 MB for entry-level hardware RAID calculations
PCI Bus	PCI Express* x4	PCI Express* x4	PCI Express* x4
Channels	8 internal SAS / SATA ports supporting point-to-point 3.0 Gb/s data-transfer rates	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	Low-profile, 6.6" length
RAID Levels	0, 1, 5, and 10	0, 1, and 1E/10E	0, 1, and 1E/10E
Intel® Smart Battery Backup Option	No	No	No
Cables	Included	N/A	Included
Availability	Now	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
<b>Key Benefits</b>	<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 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>
<b>Order Code</b>	AXXRPFKSSD	AXXRPFKDE	AXXRPFKSNSH
<b>Availability</b>	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
<b>Key Benefits</b>	<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>
<b>Order Code</b>	AXXRPFKSSD2	AXXRPFKDE2	AXXRPFKSNSH2
<b>Availability</b>	August	August	August

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

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 ADAPTERS

## CONNECTIVITY FOR COPPER NETWORKS

### 10 GIGABIT-OVER-COPPER

				
	<b>Intel® X520-DA2 Dual Port Ethernet Server Adapter</b>	<b>Intel® 10 Gigabit AT2 Server Adapter</b>	<b>Intel® Ethernet Server Adapter X520-T2</b>	<b>Intel® 10 Gigabit CX4 Dual Port Server Adapter</b>
<b>Product Code—Singles</b>	E10G42BTDA	E10G41AT2	E10G42BT	EXPX9502CX4
<b>Product Code—Five Packs</b>	N/A	N/A	N/A	N/A
<b>Connector(s)</b>	2 SFP+ Direct Attach Copper	1 RJ-45	2 RJ-45	2 CX4
<b>End-Brackets</b>	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82599ES	Intel® 82598EB	Intel® 82599ES	Intel® 82598EB
<b>Bus Width and Type</b>	PCI Express* 2.0 (5.0 GT/s) x8	PCI Express* 2.0 (2.5 GT/s) x8	PCI Express* 2.0 (5.0 GT/s) x8	PCI Express* 2.0 (2.5 GT/s) x8

### 10 GIGABIT-OVER-COPPER

			
	<b>Intel® 10 Gigabit AF DA Dual Port Server Adapter</b>	<b>NetEffect™ Ethernet Server Cluster Adapter DA</b>	<b>NetEffect™ Ethernet Server Cluster Adapter CX4</b>
<b>Product Code—Singles</b>	E10G42AFDA	E10G81G2P	E10G81GT2CX4
<b>Product Code—Five Packs</b>	N/A	N/A	N/A
<b>Connector(s)</b>	2 SFP+ Direct Attach Copper	1 SFP+ Direct Attach Copper	1 CX4
<b>End-Brackets</b>	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82598EB	NE020	NE020
<b>Bus Width and Type</b>	PCI Express* 2.0 (2.5 GT/s) x8	PCI Express* 1.1 (2.5 GHz) x8	PCI Express* 1.1 (2.5 GHz) x8

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

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

## CONNECTIVITY FOR COPPER NETWORKS

### 10/100/1000 Mb/s-OVER-COPPER MULTI-PORT



**Intel® PRO/1000 PT  
Quad Port Server Adapter**



**Intel® PRO/1000 GT  
Quad Port Server Adapter**



**Intel® PRO/1000 PT  
Dual Port Server Adapter**

<b>Product Code--Singles</b>	EXPI9404PTL	PWLA8494GT	EXPI9402PT
<b>Product Code--Five Packs</b>	EXPI9404PTL5	PWLA8494GT5	EXPI9402PT5
<b>Connector(s)</b>	4 RJ-45	4 RJ-45	2 RJ-45
<b>End-Brackets</b>	Low-profile, full-height	Full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82571GB	Intel® 82546GB	Intel® 82571GB
<b>Bus Width and Type</b>	PCI Express* x4	64-bit PCI / PCI-X	PCI Express* x4

### 10/100/1000 Mb/s-OVER-COPPER MULTI-PORT



**Intel® PRO/1000 MT  
Dual Port Server Adapter**



**Intel® Gigabit ET2  
Quad Port Server Adapter**



**Intel® Gigabit ET  
Dual Port Server Adapter**

<b>Product Code--Singles</b>	PWLA8492MT	E1G44ET2	E1G42ET
<b>Product Code--Five Packs</b>	PWLA8492MT5	E1G44ET25	E1G42ET5
<b>Connector(s)</b>	2 RJ-45	4 RJ-45	2 RJ-45
<b>End-Brackets</b>	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82546GB	Intel® 82576	Intel® 82576
<b>Bus Width and Type</b>	32- or 64-bit PCI / PCI-X	PCI Express* x4	PCI Express* x4
<b>Virtual Machine Device Queues (VMDq) Support</b>	No	Yes	Yes
<b>Security Features</b>	No	IPsec	IPsec
<b>Halogen Free</b>	No	No	No

## CONNECTIVITY FOR COPPER NETWORKS

### 10/100/1000 Mb/s-OVER-COPPER MULTI-PORT



	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* x4	PCI Express* x4	PCI Express* 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



	Intel® PRO/1000 PT Server Adapter	Intel® PRO/1000 MT Server Adapter
Product Code—Singles	EXPI9400PT	PwLA8490MT
Product Code—Five Packs	EXPI9400PTBLK	PwLA8490MTBLK5
Connector(s)	1 RJ-45	1 RJ-45
End-Brackets	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82572GI	Intel® 82545GM
Bus Width and Type	PCI Express* x1	32- or 64-bit PCI / PCI-X





## CONNECTIVITY FOR FIBER NETWORKS

### 10 GIGABIT-OVER-FIBER SINGLE PORT

	 <b>Intel® X520-SR1 Ethernet Server Adapter</b>	 <b>Intel® X520-LR1 Ethernet Server Adapter</b>	 <b>Intel® 10 Gigabit XF SR Server Adapter</b>
<b>Product Code--Singles</b>	E10G41BFSR	E10G41BFLR	EXPX9501AFXSR
<b>Product Code--Five Packs</b>	N/A	N/A	N/A
<b>Connector(s)</b>	1 LC	1 LC	1 LC
<b>Fiber Optic Cabling</b>	MMF 62.5 / 50µm up to 300m	SMF up to 10km	MMF 62.5 / 50µm up to 300m
<b>End-Brackets</b>	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82599ES	Intel® 82599ES	Intel® 82598EB
<b>Bus Width and Type</b>	PCI Express* 2.0 (5.0 GT/s) x8	PCI Express* 2.0 (5.0 GT/s) x8	PCI Express* 2.0 (2.5 GT/s) x8

### 10 GIGABIT-OVER-FIBER SINGLE PORT



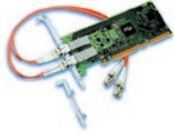


### 10 GIGABIT-OVER-FIBER MULTI-PORT

	 <b>Intel® 10 Gigabit XF LR Server Adapter</b>	 <b>NetEffect™ Ethernet Server Cluster Adapter SFP+SR</b>	 <b>Intel® X520-SR2 Dual Port Ethernet Server Adapter</b>	 <b>Intel® 10 Gigabit XF SR Dual Port Server Adapter</b>
<b>Product Code--Singles</b>	EXPX9501AFXLR	E10G81GF2SR	E10G42BFSR	EXPX9502AFXSR
<b>Product Code--Five Packs</b>	N/A	N/A	N/A	N/A
<b>Connector(s)</b>	1 LC	1 LC	2 LC	2 LC
<b>Fiber Optic Cabling</b>	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
<b>End-Brackets</b>	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height
<b>Ethernet Controller</b>	Intel® 82598EB	NE020	Intel® 82599ES	Intel® 82598EB
<b>Bus Width and Type</b>	PCI Express* 2.0 (2.5 GT/s) x8	PCI Express* 1.1 (2.5 GHz) x8	PCI Express* 2.0 (5.0 GT/s) x8	PCI Express* 2.0 (2.5 GT/s) x8






## CONNECTIVITY FOR FIBER NETWORKS

### GIGABIT-OVER-FIBER MULTI-PORT

					
	Intel® PRO/1000 PF Quad Port Server Adapter	Intel® PRO/1000 PF Dual Port Server Adapter	Intel® PRO/1000 MF Dual Port Server Adapter	Intel® Gigabit EF Dual Port Server Adapter	Intel® Ethernet Server Adapter I340-F4
Product Code—Singles	EXPI9404PF	EXPI9402PF	PWLA8492MF	E1G42EF	E1G44HF
Product Code—Five Packs	EXPI9404PFBLK	EXPI9402PFBLK	PWLA8492MFBLK5	E1G42EFBLK	E1G44HFBLK
Connector(s)	4 LC	2 LC	2 LC	2 LC	4 LC
Fiber Optic Cabling	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m
End-Brackets	Full-height	Low-profile, full-height	Low-profile, full-height	Low-profile, full-height	Full-height
Ethernet Controller	Intel® 82571GB	Intel® 82571GB	Intel® 82546GB	Intel® 82576	Intel® 82580
Bus Width and Type	PCI Express* x4	PCI Express* x4	64-bit PCI / PCI-X	PCI Express* x4	PCI Express* x4
Virtual Machine Device Queues (VMDq) Support	No	No	No	Yes	Yes
Security Features	No	No	No	IPsec	IPsec

### GIGABIT-OVER-FIBER SINGLE PORT

			
	Intel® PRO/1000 PF Server Adapter	Intel® PRO/1000 MF Server Adapter	Intel® PRO/1000 MF Server Adapter (LX)
Product Code—Singles	EXPI9400PF	PWLA8490MF	PWLA8490LX
Product Code—Five Packs	EXPI9400PFBLK	PWLA8490MFBLK5	PWLA8490LXBLK5
Connector(s)	1 LC	1 LC	1 LC
Fiber Optic Cabling	MMF 62.5 / 50µm up to 275m	MMF 62.5 / 50µm up to 275m	SMF 9µm up to 10km, MMF 62.5 / 50µm up to 550m
End-Brackets	Full-height	Low-profile, full-height	Low-profile, full-height
Ethernet Controller	Intel® 82572GI	Intel® 82545GM	Intel® 82545GM
Bus Width and Type	PCI Express* x4	32- or 64-bit PCI / PCI-X	32- or 64-bit PCI / PCI-X

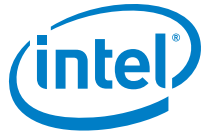
For more information, visit [www.intel.com/go/ethernet](http://www.intel.com/go/ethernet)

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## INTEL® SERVER MANAGEMENT

**Small and midsize businesses (SMBs) face complex IT challenges similar to those of large enterprises, but often without the large budget or staff of IT specialists.**

Intel® Server Management offers software and hardware solutions that:

- Make it easy to set up and maintain a reliable and secure IT infrastructure
- Reduce the cost and time of managing servers, desktops, and applications
- Keep businesses running 24/7



### COMING SOON

Exciting new features are planned for Intel® System Management Software. Contact your Intel sales representative for schedules of upcoming releases.

- New business continuity software designed specifically for the SMB market
- Data protection management (backup and restore)
- Virtualization management
- Hardware management
- RAID and storage management
- Virtual presence user interface (see actual images of the system)
- Power management features

### Get Peace of Mind

Intel® Server Management improves security, reduces costs, and helps businesses move from reactive to proactive system management. A mix of hardware and software enables 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 reliable and secure IT infrastructure
- Streamlines tasks throughout server life cycle with remote management
- Manages IT functions with a single suite of tools

#### 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

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

# INTEL® MANAGEMENT MODULE



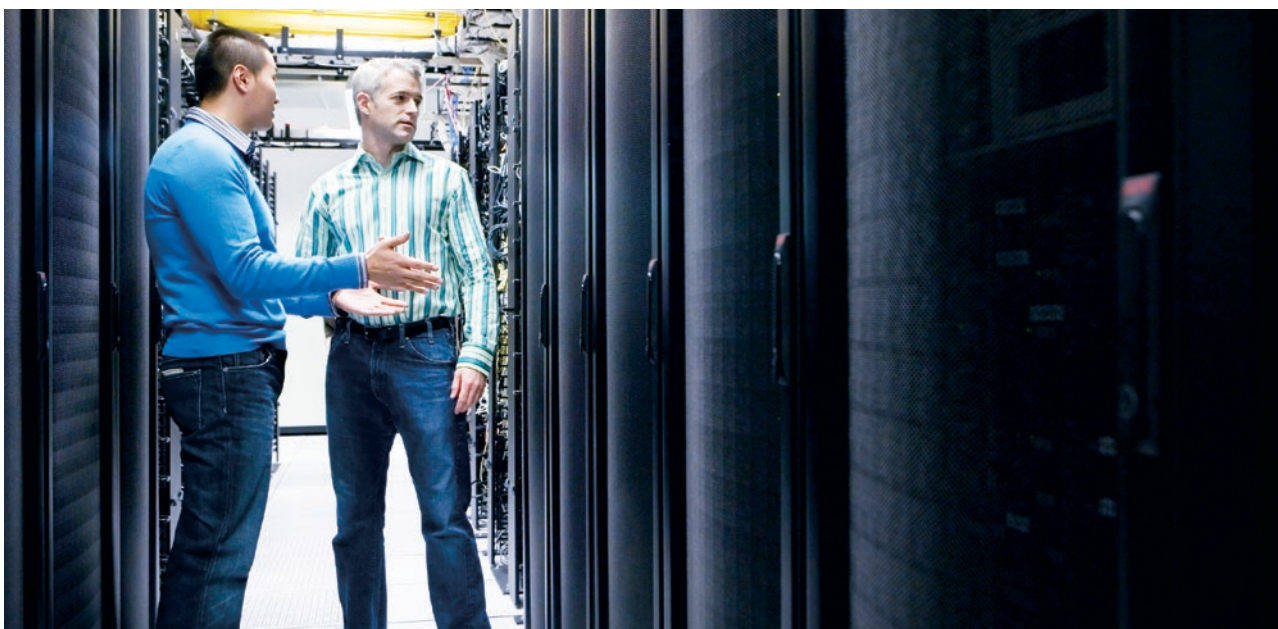
Feature Description	Intel® Remote Management Module 4		Intel® Remote Management Module 3	
Positioning	Have remote, secure access to full-screen KVM features together with remote CD or USB access without ever having to visit the server. Tightly integrated with onboard system firmware so users can choose between onboard NIC or dedicated management NIC for all RMM4 functionality. The RMM4 Lite contains all of the functionality of the RMM3 without the dedicated NIC and is now a choice on all systems that support the full RMM4.		Have remote, secure access to full-screen KVM features together with hardware-health monitoring, remote CD or USB access, and complete power control 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 RMM3 functionality. The RMM3 Lite contains all of the functionality of the RMM3 without the dedicated NIC.	
Order Code	<b>AXXRMM4</b>	<b>AXXRMM4LITE</b>	<b>AXXRMM3</b>	<b>AXXRMM3LITE</b>
Boards and Systems Support <sup>1</sup>	<b>Intel® Server Board S1200BTL</b> <b>Intel® Server Systems R1304BTLSHBN, R1304BTLSFAN, P4304BTLSHCN, P4304BTLSFNC</b>	<b>Intel® Server Board S1200BTL</b> <b>Intel® Server Systems R1304BTLSHBN, R1304BTLSFAN, P4304BTLSHCN, P4304BTLSFNC</b>	<b>Intel® Server Boards S5520UR, S5520HC, S5500HCV, S5520SC, S5500BC, S3420GPLX, S5500WB</b> <b>Intel® Server Systems SR1600UR, SR1600URSAS, SR1625UR, SR1625URSAS, SR1690WB, SR1695WB, SR2600URBRP, SR2600URLX, SR2600URSATA, SR2625URBRP, SR2625URLX, SR2612UR, SC5650HCBRP, SC5650BCDP, SC5650SCWS</b>	<b>Intel® Server Board S3420GPRX</b> <b>Intel® Server Systems SR1630GPRX, SR1630HGPRX, SR1695GPRX</b> <b>AXXRMM3LITEV (SR1640TH only)</b>
Remote Server Restart	Support built into system firmware	Support built into system firmware	Yes	Yes
OEM Customization	Support built into system firmware	Support built into system firmware	Yes	Yes
USB Virtual Media Redirection	Yes	Yes	Yes	Yes
LDAP, SSH, SSL Support	Support built into system firmware	Support built into system firmware	Yes	Yes
WS-MAN	No	No	Yes	Yes
Embedded Video / GUI (KVM) Redirection	Yes	Yes	Yes	Yes
Embedded Web Server	Support built into system firmware	Support built into system firmware	Yes	Yes
Dedicated Server Management NIC	Yes	No	Yes	No
Local and Remote Configuration	Support built into system firmware	Support built into system firmware	Yes	Yes
Agent-less Management	Support built into system firmware	Support built into system firmware	Yes	Yes

# INTEL® DEPLOYMENT ASSISTANT

## 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, and updating your system.
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.



# INTEL® SYSTEM MANAGEMENT SOFTWARE

Features	Intel® Multi-Server Manager	Intel® Active System Console	Microsoft* System Center with Intel® Management Packs	Intel® SNMP Subagent
Server Environment	1 to 100 servers	1 to 10 servers	10 to 30 servers <i>(Use Operations Manager for Enterprise)</i>	Enterprise
User Interface	Web-based	Web-based	Windows* Management Application	Integrates into enterprise tools such as HP* OpenView
Operating System Support	Windows*, Linux*	Windows*, Linux*	Windows*, Linux*	Windows*, Linux*
Single, Easy-to-Use Console	Yes	Yes	Yes	
Hardware Predictive Failure Analysis	Yes	Yes	Yes	Yes
Sensor Readings	Yes	Yes	Yes	Yes
Hardware Event Log	Yes	Yes	Yes	
Hardware and Software Inventory	Yes <i>(hardware and operating system)</i>		Yes	
OS and Application Monitoring			Yes	
Software Patch Deployment			Yes	
Application Deployment			Yes	
Alerting	Yes <i>(e-mail)</i>	Yes <i>(e-mail and SNMP)</i>	Yes <i>(e-mail, SNMP, SMS)</i>	Yes <i>(SNMP)</i>
Reporting	Yes <i>(group or individual)</i>	Yes	Yes <i>(80 powerful software and hardware reports)</i>	
BMC Configuration	Yes	Yes	Yes	
Power Management		Yes	Yes	
Performance Views			Yes	
Remote Management	Yes <i>(Windows*, Linux*, and agentless)</i>		Yes	Yes
Remote Power On/Off/Reboot	Yes <i>(group or individual)</i>		Yes	
Serial Over LAN (Console Redirection)			Yes	
OEM Customization	Yes	Yes	Yes	

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® SERVER SUPPORT SERVICES WIN AND RETAIN MORE LOYAL CUSTOMERS

Intel Now Offers Two Additional Services to Increase Customer Satisfaction

**Intel® Server Component Extended Warranty Program** adds two more years to the standard warranty on Intel® Server components,<sup>1</sup> so you can cover your server products for a total of up to five years after purchase. Plus expedited shipping of replacement parts means your customers are being taken care of with hassle-free technical service.

### Key Benefits Include

- 24x7 online<sup>2</sup> and phone<sup>3</sup> technical support
- Fast shipment of replacement parts
- Immediate fulfillment of warranty replacement requests before defective part is returned<sup>4</sup>

**Intel® On-Site Repair for Servers** provides on-site repair service<sup>5</sup> for Intel white-box servers. Intel helps diagnose the issue and a technician replaces faulty hardware on-site. Next business day<sup>6</sup> support option is available in all 50 U.S. states.

### Key Benefits Include

- 24x7 phone<sup>3</sup> technical support
- Includes supported<sup>5</sup> memory, hard drives, and processors
- Next business day<sup>6</sup> on-site options for mission-critical issues
- Trained technicians go on-site to replace faulty hardware

Pairing your product offerings with the availability of Intel® On-Site Repair for Servers or Intel® Server Component Extended Warranty increases your ability to provide support and value as a one-stop-shop for your customers. Plus, the expanded services won't increase your overhead, helping build your overall success.

For more information on Intel® On-Site Repair for Servers, visit [www.intel.com/Assets/PDF/prodbrief/325549.pdf](http://www.intel.com/Assets/PDF/prodbrief/325549.pdf)

For more information on the Intel® Server Component Extended Warranty, visit [www.intel.com/Assets/PDF/prodbrief/325033.pdf](http://www.intel.com/Assets/PDF/prodbrief/325033.pdf)



<sup>1</sup> Most EPSP products released in 2009 or later are covered, including Intel® Modular Server. EPSP parts only will be included—Intel® Server Boards, Intel® Server Systems, Intel® Server Chassis, Intel® RAID Controllers, server, and FRUs, and accessories. This is the same as the standard product warranty. Components included within the system are covered by the Intel® Server Component Extended Warranty, but single components sold stand-alone are not covered. Third-party add-in cards, memory, hard drives, keyboards, video, mice, graphics cards, RAID backup batteries, optical drives, plastic/sheet metal parts, non-electrical parts, OEM-specific parts, and Intel® processors are not covered. For a complete list of included parts refer the product configuration guides. This service requires registration of major components, including the chassis, Intel® Server Board, and power supplies for systems.

<sup>2</sup> Online Web Chat: Web Chat for Server Product support provided by North America and APAC support teams. Available hours: 1:00 a.m. to 7:00 a.m. PST (APAC) and 7:00 a.m. to 5:00 p.m. PST (North America).

<sup>3</sup> 24x7 phone technical support is available only to Intel® Technology Provider Program members and is provided in English only. Intel recommends that you contact your distributor before contacting Intel. 24x5 phone technical support is available to non-Intel Technology Provider Program members and is provided in English only. Contact information can be found at the contact support Web site, [www.intel.com/support/9089.htm](http://www.intel.com/support/9089.htm).

<sup>4</sup> Advanced Warranty Replacement (AWR) is available to qualified Intel® Channel members. To learn more, visit the Intel® Reseller Center Membership Benefits page at [www3.intel.com/cd/channel/reseller/asmo-na/eng/membershipresources/benefits/current/index.htm](http://www3.intel.com/cd/channel/reseller/asmo-na/eng/membershipresources/benefits/current/index.htm)

<sup>5</sup> Only Intel® processors, Intel® Server Systems, Intel® Server Boards, Intel® RAID controllers, and Intel® server accessories (Intel® products) and specific memory and hard drives listed on the Intel On-site Repair Hardware Compatibility List will be supported under a service contract. Systems must be built using new components with original three-year manufacturer warranty. This service must be purchased at the same time as the hardware. Software/operating systems or system technical support, optimization, or errata repairs are not included or supported by this service. Requests for support beyond hardware remedial services will be referred to the original reseller or integrator. Configuration and reintegration of the unit being serviced is the responsibility of the system owner. Only low-level firmware and BIOS will be updated by the service technician when required to complete POST. This service does not cover dead on arrival, technical advisory recommendations on replacement, cosmetic damages (scratches, dents, etc), lost, stolen, incorrect, or inadequate installation, intentional damage, recovery or transfer of data, or acts of God or nature. This service requires registration of major components, including the chassis, Intel Server Board, and power supplies, power distribution board(s), drive backplane(s), active/passive midplane(s), front panel, management module, fan(s), bridge board(s), I/O module(s), PCI Express\*/PCI-X\* riser(s), Intel RAID controller, memory, hard drives, or processors.

<sup>6</sup> Next Business Day support option is available in all 50 U.S. states. Next Business Day 8-5 response is on-site response occurring Monday through Friday, 8:00 a.m. to 5:00 p.m. customer local time, excluding national holidays. If the reseller or end-customer calls Intel before 5:00 p.m. end-customer local time, Intel will diagnose the specific hardware failure and respond on-site at the end-customer the next business day. If the diagnosis is made after 5:00 p.m. eastern time, the on-site appointment may be scheduled for two business days rather than one. "Response time" is calculated after the service provider determines the specific hardware component that needs replacement and dispatches a repair technician to the end-customer site.

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0711/JD/MS 325556-001US July 2011





## INTEL® ENABLED SOLUTIONS ACCELERATION ALLIANCE (INTEL® ESAA)

Intel® ESAA gives resellers the tools they need to accelerate the delivery of high-quality Intel-based IT solutions. Get to market faster, reach new customers, and achieve even greater success.

Getting components from different vendors to work seamlessly in a single, reliable solution can be a challenge. Meanwhile, end customers want solutions that feature the latest and greatest hardware and software available—without deployment or troubleshooting headaches. And with so many vendors in the marketplace, validation has become critical. That's where the Intel® ESAA Program comes in, giving Intel® Technology Providers and direct Intel OEMs access to pre-verified solution configuration guides ("recipes") jointly developed with IxVs around the globe. Applications include HPC, virtualization, cloud, storage and backup, digital content creation, server management, and more, enabling resellers and direct OEMs<sup>1</sup> to deliver pre-tested, high-quality solutions based on Intel® Server, Workstation, and Desktop Products.

**Membership in the program is an automatic benefit for Intel® Technology Provider Program members at the Platinum and Gold levels. Member benefits include:**

- Faster time to market using pre-tested solution recipes that provide step-by-step configuration instructions
- Reduced engineering costs with access to validated and proven technologies
- Pass-through certification from companies such as VMware, Red Hat, Citrix, EMC, and Novell
- Alignment with Intel's world-class processor technology leadership and support infrastructure

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

More than 1,000 solution configuration recipes are now available at no charge to value-added resellers through the Intel ESAA Program, including support for Intel® Solid-State Drives. Also available are new configuration guides for Intel® Desktop Boards, covering deployment models such as SMB / "green" PCs, digital surveillance, and workstation / enthusiast systems.

### Your Recipe for Success

Available exclusively for Intel® Server, Workstation, and Desktop Boards and Systems, Intel® ESAA recipes provide detailed hardware and software requirements and comprehensive configuration and deployment instructions to help resellers meet complex customer requirements rapidly. With help from the Intel ESAA Program, resellers can get to market early with solutions based on leading-edge Intel® processor technology—and stay ahead of the competitive curve.

For added customer confidence, resellers can request a certificate stating that Intel and the application vendor stand behind their branded Intel-based solution. VMware, Red Hat, Citrix, EMC, and Novell-based solutions may also qualify for free pass-through branded system certification and listing on the vendor's Hardware Compatibility List (HCL).

### More than 30 Software and Hardware Vendors Participate in the Intel® ESAA Program Worldwide

As a worldwide technology community, Intel ESAA strives to promote a healthy and thriving business ecosystem that connects Intel® Technology Providers and direct Intel OEMs with industry-leading software and hardware companies to enable the reliable and seamless integration of Intel Server, Workstation, and Desktop Products. Intel ESAA members benefit from marketing and sales tools, pre- and post-sales training, and technical support so they can get to market faster with leading-edge server technologies.

*"Having step-by-step instructions and certification gave my clients peace of mind."*

DENNIS EVANS, DENNIS' COMPUTERS

<sup>1</sup> Program membership is free but restricted to direct Intel OEMs and Intel® Technology Provider Program members at the Platinum and Gold levels. For more information on how to become a member of the Intel® Technology Provider Program, visit [www.intel.com/cd/channel/reseller/emea/eng/membership/index.htm](http://www.intel.com/cd/channel/reseller/emea/eng/membership/index.htm). Direct OEMs, please contact [esaamail@intel.com](mailto:esaamail@intel.com) for membership information.

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# VMWARE\* SOFTWARE

## Now Add Virtualization To Your Intel® Server Product Opportunities

VMware vSphere\* delivers a powerful virtualization infrastructure, dramatically simplifying IT environments to enable the next generation of flexible and reliable IT services. Intel offers a range of server products and VMware vSphere product options enabling businesses of all sizes to match their virtualization solution to their specific needs.

Intel® Server Products, when paired with the appropriate VMware vSphere product in a pre-validated Intel® ESAA solution recipe, enable value-added resellers to pass confidence and quality on to their customers. The following matrix shows how VMware and Intel® solutions scale to the needs of different businesses.

	Customer Type	Small businesses and branch offices (<20 servers)	Small businesses and branch offices (<20 servers)	New companies starting their adoption of virtualization (>20 servers)	Companies early in their adoption of virtualization but looking to expand (>20 servers)	More mature virtualization customers that are looking to transform internal IT into internal cloud infrastructure
	Recommended VMware vSphere* Edition	VMware vSphere* Essentials with VMware vCenter* Server for Essentials	VMware vSphere* Essentials Plus with VMware vCenter* Server for Essentials	VMware vSphere* Standard and VMware vCenter* Standard <sup>1</sup>	VMware vSphere* Advanced and VMware vCenter* Standard <sup>1</sup>	VMware vSphere* Enterprise Plus and VMware vCenter* Standard <sup>1</sup>
Customer Use Cases	Server consolidation	Yes	Yes	Yes	Yes	Yes
	Improving application up time		Yes		Yes	Yes
	Running mission-critical enterprise applications		Yes		Yes	Yes
	Backing up, restoring, and securing business-critical data		Yes		Yes	Yes
	Ensuring regulatory and security compliance	Yes	Yes	Yes	Yes	Yes
	Automating processes to reduce costs and improve application SLAs					Yes
<b>VMware vSphere License Information</b>		Licensed up to 3 physical hosts (with a maximum of 2 processors per each 6 cores and 256 GB of RAM)	Licensed up to 3 physical hosts (with a maximum of 2 processors per each 6 cores and 256 GB of RAM)	Licensed per processor Up to 6 physical cores per processor 256 GB of RAM per host	Licensed per processor Up to 12 physical cores per processor 256 GB of RAM per host	License per processor Up to 12 physical cores per processor No license memory limit
<b>VMware vSphere Support and Subscription (SNS)</b>		1-year VMware subscription	1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS	1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS	1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS	1-year VMware Basic (12x5) OR 1-year VMware Production (24x7) SNS
<b>Intel® Order Codes for VMware vSphere</b>		<b>VMW4ESS</b>	<b>VMW4ESSPLUS, VMW4ESSPLUSP</b>	<b>VMW4STD, VMW4STD, VMWVCSTD, VMWVCSTD</b>	<b>VMW4ADV, VMW4ADV, VMWVCSTD, VMWVCSTD</b>	<b>VMW4ENTPLUS, VMW4ENTPLUSP, VMWVCSTD, VMWVCSTD</b>

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

<sup>1</sup> One instance of VMware vCenter\* Standard required. VMware vCenter Standard is available with 1-year VMware Basic (12x5) or 1-year VMware Production (24x7) SNS.

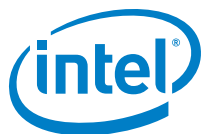
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# SYMANTEC\* BACKUP EXEC\* 2010 SOFTWARE

Expand your sales opportunities with nine different Symantec\* Backup Exec\* 2010 SKUs that have been tested on Intel® Server Boards and Systems

Symantec\* Backup Exec\* 2010 seamlessly integrates virtual machine protection, deduplication, and archiving technology to help small and mid-sized businesses reduce their backup windows and storage consumed without added complexity. The Backup Exec 2010 SKUs offered by Intel include support for Microsoft\* Windows\*, Windows\* Small Business Server, Microsoft\* Exchange, Microsoft\* SQL Server\*, Microsoft\* Hyper-V\*, VMware vSphere\*, plus options to add deduplication and/or archiving support.

Available for purchase from Intel® Authorized Distributors in North America, the addition of Symantec Backup Exec expands Intel's current software offering as part of the Intel® Enabled Solutions Acceleration Alliance (Intel® ESAA) Program. To accelerate the installation and configuration of these software packages by system builders on Intel® Server Products, the Intel ESAA Program offers pre-tested "recipes" that reduce the cost of implementation and speed time to market.

SYMANTEC\* BACKUP EXEC\* 2010 SOFTWARE

## SYMANTEC\* BACKUP EXEC\* 2010 SOFTWARE

Data Protection Need	Backup for 1 Windows* Server	Backup for 1 Windows* Small Business Server	Backup for up to 4 Windows* Servers	Backup for 1 Windows* Server with Microsoft* Exchange	Backup for 1 Windows* Server with Microsoft* SQL	Backup support for VMware* Virtualization Environments	Backup support for Microsoft* Hyper-V* Virtualization Environments	Deduplication	Deduplication and Archiving
<b>Recommended Symantec* Backup Exec* 2010 Suite</b>	Symantec* Backup Exec* 2010	Symantec* Backup Exec* 2010 for Windows Small Business Server	Symantec* Backup Exec* 2010 Multi-Server Suite	Symantec* Backup Exec* 2010 Microsoft Exchange Suite	Symantec* Backup Exec* 2010 Microsoft SQL Suite	Symantec* Backup Exec* 2010 VMware Suite	Symantec* Backup Exec* 2010 Microsoft Hyper-V Suite	Symantec* Backup Exec* 2010 Multi-Server Data Deduplication Suite	Symantec* Backup Exec* 2010 Deduplication and Archiving Suite
<b>Symantec Backup Exec 2010 License Information</b>	Symantec Backup Exec 2010 Microsoft SQL Suite	Symantec Backup Exec 2010 VMware Suite	Includes one Symantec Backup Exec Media Server license and agent for Windows Servers (three licenses) along with the remote agent for Windows Servers and the continuous protection agent capabilities, this agent now also includes the advanced open file option and intelligent disaster recovery option	Includes one Symantec Backup Exec Media Server license and agent for Microsoft Exchange Server 2008 R2, 2003, 2007, and 2010 SP1	Includes one Symantec Backup Exec Media Server license and agent for Microsoft SQL Server 2008 R2, 2005, and 2000 users with granular protection on 32- and 64-bit systems down to the individual database or file group	Includes one Symantec Backup Exec Media Server license and one Backup Exec 2010 Agent for VMware Virtual Infrastructures	Includes one Symantec Backup Exec Media Server license and one Backup Exec 2010 Agent for Microsoft Hyper-V license	Includes one Symantec Backup Exec Media Server license, three agents for Microsoft Windows Systems and one deduplication option license which will support your entire media server environment	Includes one Symantec Backup Exec Media Server license, one deduplication option license which will support your entire media server environment, one exchange archive option (10 pack), and one agent for Microsoft Exchange
<b>Symantec* Support</b>	All SKUs include one-year 24x7 Symantec* Essentials Support								
<b>Intel® Order Codes for Symantec Backup Exec 2010</b>	SYMCBE	SYMCBESBS	SYMCBE3WIN	SYMCBEEXEC	SYMCBESQL	SYMCBEVMW	SYMCBEHYP	SYMCDEDUP	SYMCDEDUPA

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

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## INTEL® vPRO™ TECHNOLOGY

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**Intel® vPro™ Technology Solution**

[www.intelsalestools.com/#category=4](http://www.intelsalestools.com/#category=4)

## GRAPHICS

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**Client Graphics**

[www.intel.com/technology/visualtechnology/index.htm](http://www.intel.com/technology/visualtechnology/index.htm)

## INTEL® SOLID-STATE DRIVES

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**SATA Solid-State Drives**

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

## DESKTOP

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**Desktop Highlights**

[www.intel.com/products/motherboard](http://www.intel.com/products/motherboard)

**Desktop Processors**

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**Desktop Boards**

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**Ethernet Desktop Adapters**

[www.intel.com/network/connectivity/products/desktop\\_adapters.htm](http://www.intel.com/network/connectivity/products/desktop_adapters.htm)

## MOBILE

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**Mobile Processors**

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

**Intel® Centrino® Wireless**

[www.intel.com/network/connectivity/products/wireless/index.htm](http://www.intel.com/network/connectivity/products/wireless/index.htm)

## SERVER

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**Server Highlights**

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

**Server Platforms**

[www.intel.com/xeon](http://www.intel.com/xeon)

**Server / Workstation Processors**

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**Server / Workstation Boards**

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

**Server / Workstation Systems**

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

**Server Chassis**

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**Server Adapters**

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**Server Management**

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**Enabled Solutions Acceleration Alliance**

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