

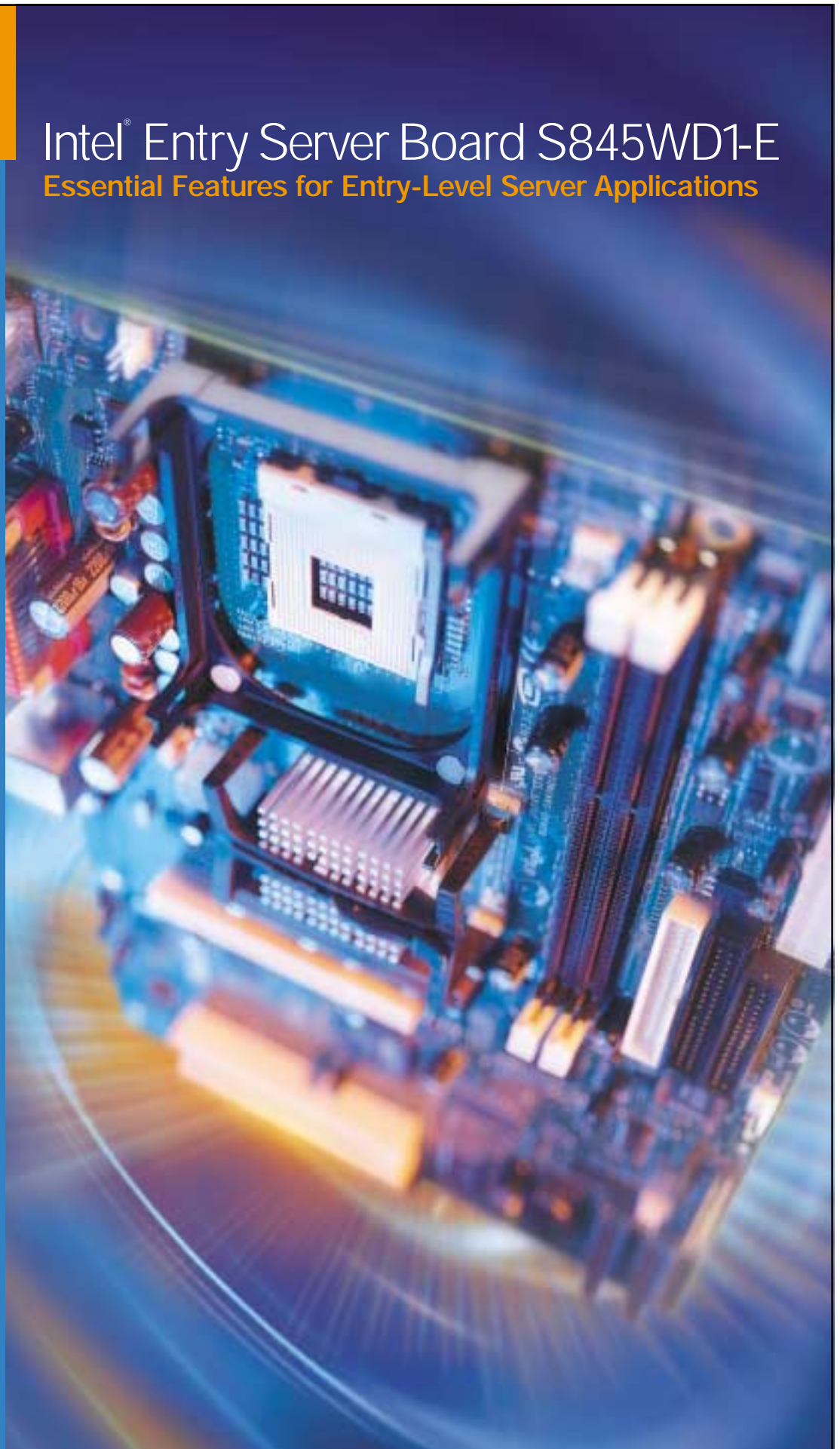


# Intel® Entry Server Board S845WD1-E

## Essential Features for Entry-Level Server Applications

### Product Brief

- ECC Memory Support
- Dual Intel® PRO/100+ Server Network Connections
- ATA/100 RAID



# Exceptional Quality and Value for e-Business

Business productivity is significantly influenced by server performance, availability, and scalability. This means businesses need a server-level system, especially when it comes to essential components such as the motherboard, if they are to accommodate multiple simultaneous users, perform intensive calculations, and protect critical data. To meet such requirements, Intel offers the Intel® Entry Server Board S845WD1-E.

## Delivers the Essentials

The Intel Entry Server Board S845WD1-E delivers essential features for entry-level server applications, such as 2GB Error-Correcting Code (ECC) DDR200/266 memory capacity, dual-channel ATA/100 RAID, and dual server Ethernet controllers. It supports one Intel® Pentium® 4 processor with either a 400MHz or 533MHz system bus and contains Server System Infrastructure (SSI) components for power, reliability, and flexibility. The 1U form factor version of the Server Board S845WD1-E includes a high-performance, active-fan heat sink to ensure reliable thermal performance in a qualified high-density chassis<sup>1</sup>.



## Designed for Multiple General-Purpose and Appliance Applications

The Server Board S845WD1-E provides exceptional quality and value for entry-level pedestal and 1U high-density server solutions, such as the following:

- Web hosting
- Domain Name Server
- File and print
- Cache
- E-mail
- Firewall
- Proxy
- Virtual Private Network

## Features

Supports one Intel Pentium 4 processor with 400MHz or 533MHz system bus and 512KB L2 cache

Intel® 845E chipset<sup>2</sup>

Integrated dual-redundant Intel® PRO/100+ Server Network Connections

Three 32-bit/33MHz PCI slots (riser required for 1U and 2U form-factor systems)

Supports up to 2 GB of ECC DDR200/266 memory with two DIMM sockets

Integrated ATA/100 RAID

Integrated ATI Rage® XL video controller and AGP slot

Management controller<sup>3</sup> and Intel® LANDesk® Client Manager software

Active 1U-capable heat sink (optional)

Three-year limited warranty

## Benefits

Excellent processing performance for entry-level server applications

Quality and reliability

Teaming offers up to 200Mbps data transfer with network; redundancy offers fail-over insurance if one network connection becomes unusable

Expansion flexibility

Error-Correcting Code (ECC) improves availability and data integrity; 2GB capacity supports memory-demanding applications

Advanced data protection using ATA (IDE) hard drives

High-quality video without a video adapter card, or AGP video with an AGP card

Proactive monitoring and remote server management capability that helps to ensure maximum server availability

Thermal performance to allow for the latest Intel® Pentium® 4 processor in a 1U chassis

Peace of mind

<sup>1</sup> Please see the Intel® Entry Server Board S845WD1-E section of support.intel.com for a complete list of reference chassis.

<sup>2</sup> Intel® 845E chipset with Intel® ICH2.

<sup>3</sup> Usage of Intel® LANDesk® Client Manager software is dependent on operating system. See Intel LANDesk documentation for details.

# Intel® Entry Server Board S845WD1-E

Support for one Intel® Pentium® 4 processor with 400MHz or 533MHz system bus

Up to 2 GB of ECC DDR200/266 unbuffered SDRAM

Intel® 845E chipset<sup>2</sup>

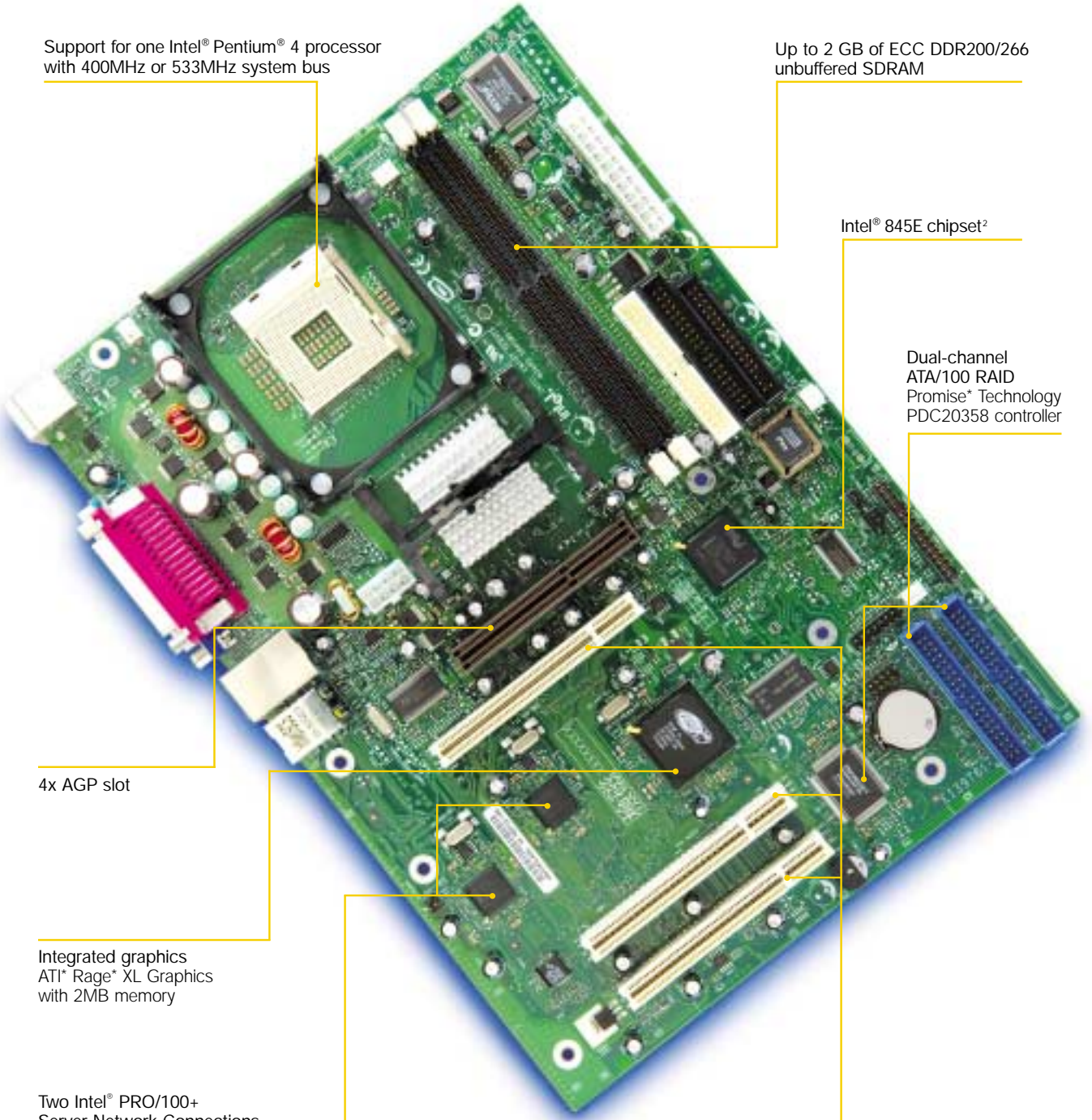
Dual-channel ATA/100 RAID Promise® Technology PDC20358 controller

4x AGP slot

Integrated graphics ATI® Rage® XL Graphics with 2MB memory

Two Intel® PRO/100+ Server Network Connections Intel® 82550PM controllers

Three PCI slots



## The Boxed Intel® Entry Server Board S845WD1-E

Included for easy integration:

1. One Intel Entry Server Board S845WD1-E
2. Quick Start User Guide
3. Resource CD-ROM with software utilities and technical product information
4. One floppy-drive cable
5. One ATA/66/100 hard-drive cable
6. Configuration label, stickers, and back-panel label

Standard configuration (for 2U rack and pedestal systems) also includes:

7. ATX 2.01-compliant I/O shield

1U configuration (for 1U form-factor systems ONLY) also includes:

8. High-performance, 1U-capable active heat sink



## Build Value with Intel: Server Products, Programs, and Support



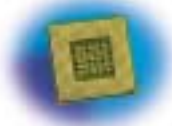
Intel is committed to providing industry-leading server building blocks, programs, and support services to help system integrators successfully compete in the evolving Internet economy. Get the high-value server solutions you need to succeed by taking advantage of the outstanding value Intel provides its system integrators:

- High-quality server building blocks
- Extensive breadth of server building blocks
- Solutions and tools to enable e-Business
- Comprehensive training services
- Worldwide 24x7 technical support
- World-class service, including a three-year limited warranty and Advanced Warranty Replacement

For more information on Intel's added-value server offerings, please visit: [www.intel.com/go/serverbuilder](http://www.intel.com/go/serverbuilder)

# Complete Your Intel® Entry Server Board S845WD1-E with Intel® Server Building Blocks

Add the following Intel building blocks to your Intel® Entry Server Board S845WD1-E to help ensure a highly reliable, available, and scalable server:



Intel® Pentium® 4 Processors are designed to deliver superior performance for demanding applications and environments.



Intel® RAID Controllers are designed to protect data, applications, and the server operating system from disk failures. Intel offers an affordable high-performance line of RAID products, which are tested and validated for easy integration with Intel server building blocks.



Intel® PRO Server Adapters, including Fast Ethernet and Gigabit Ethernet server adapters, help to reduce bottlenecks and improve availability with industry-leading performance and advanced server features.

## Additional Intel Server Building Blocks

Intel provides a broad family of processors, server boards, chassis, platforms, RAID controllers, server network adapters, and server management software from which to build powerful server-based solutions. For the latest information on Intel server building blocks, please visit:

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



Intel® Server Chassis SC5100 (base configuration) is a chassis designed for easy integration with the Server Board S845WD1-E. The pedestal or 5U form-factor server chassis delivers:

- Five 1-inch-high fixed-drive bays
- Three 5.25-inch peripheral bays
- 300W PFC power supply
- SSI-compliant front panel

The Server Chassis SC5100 comes with extensive international safety and EMC regulatory approvals and offers the added reliability, availability, and scalability that customers demand.



# Intel® Entry Server Board S845WD1-E Specifications

## Processor/Cache

Processors Supported	Intel® Pentium® 4 processors with a 400MHz or 533MHz system bus and up to 512 KB of integrated L2 cache. For the latest processor support information visit: <a href="http://support.intel.com/support/motherboards/server">http://support.intel.com/support/motherboards/server</a>
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## System Memory

Memory Capacity	Two DIMM sockets for up to 2 GB (64MB to 1GB DIMMs supported)
Memory Type	ECC DDR200/266 unbuffered SDRAM 72-bit ECC, 184-pin gold-plated DIMMs
DIMM Sizes	64 MB, 128 MB, 256 MB, 512 MB, 1 GB
Memory Voltage	2.5V only
Error Detection	Corrects single-bit errors, detects double-bit errors (using ECC memory)

## Integrated On Board

Chipset	Intel® 845E chipset <sup>2</sup>
ATA/100 RAID Controller	Promise® Technology PDC20267 ATA/100 IDE RAID controller provides two channels of ATA/100 IDE that can be configured into either RAID level 0 or RAID level 1; maximum data transfer: 100 MB/sec on each ATA/100 channel
Intel® PRO/100+ Server Network Connections	Two integrated Intel® PRO/100+ Server Network Connectors (Intel® 82550PM controllers); supports 10BASE-T and 100BASE-TX, RJ45 output
Graphics	ATI® Rage® XL SVGA PCI video controller with 2 MB of video memory
Super I/O Controller	SMSC LPC47M102 I/O controller

## Input/Output

PCI	Three PCI slots: 32-bit/33MHz
IDE	One EIDE channel for a total of two IDE devices
USB	Two stacked USB connectors at rear panel, one internal front-panel USB header to provide two USB ports
Serial Ports	One external Serial A Port and one internal Serial B Header
Floppy Controller	1.44MB, 2.88MB, 3-mode support
Keyboard/Mouse	PS/2, 8240A-compatible

## Intel® LANDesk™ Client Manager<sup>3</sup>

Server Monitoring	To monitor temperatures, voltages, and fans
Remote Management	Remote access to system status, logs, configuration data, and utilities, without a remote-management card
Server Troubleshooting	Event filtering and proactive alerting via LAN

## Tested Operating Systems

Fully Validated	Microsoft® Windows® 2000 Server, Red Hat® Linux® 7.2
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## System BIOS

BIOS Type	4Mb Flash EEPROM with AMI® BIOS, Multiboot BBS (BIOS Boot Specification) 1.4-compliant
Special Features	Plug and Play, IDE drive autoconfigure, SMBIOS 2.3.1, ECC/Parity support, and multilingual support

## Jumpers and Front-Panel Connectors

Jumpers	BIOS configuration
Front-Panel Connectors	Power LED, power on/off switch, reset

## Mechanical

Server-Board Style	ATX
Server-Board Size	12" x 8.6"

## Power Requirements

+5V	7.06 A maximum continuous current
+5V Standby	1.5 A minimum continuous current
+12V	5.0 A maximum continuous current
+3.3V	12.0 A maximum continuous current
-5V	0.00 A maximum continuous current
-12V	0.25 A maximum continuous current

## Environment

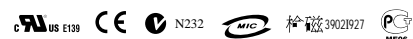
Ambient Temperature <sup>4</sup>	Operating (system): 10°C to 35°C; non-operating/storage (system): -40°C to +70°C ambient
Relative Humidity	Non-operating: 95%, non-condensing at 30°C

## Product Regulations (safety compliance)

Europe	EN60950; CE Mark-EU Directive 73/23/EEC
International	IEC60950
Russia	GOST R 50377-92 (GOST-R Mark)
U.S. and Canada	UL/CUL 950-CSA 950 (UL Recognition Mark)

## EMI Verification (configured in a compatible<sup>5</sup> Intel host system)

Australia/New Zealand	Verified to AS/NZS 3548, Class A (C-tick Mark)
Canada	Verified to ICES-003, Class A
Europe	Verified to EN55022 (Class A) and EN55024 (CE Mark—EU Directive 89/336/EEC)
International/Japan	Verified to CISPR-22/VCCI, Class A
Korea	RRL Certification to MIC Notices 1997-41 & 1997-42
Russia	Verified to GOSTR 29216-91, GOSTR 50628-95 (GOST-R Mark)
Taiwan	Verified to BSMI 13438, Class A (DOC)
U.S.	Verified to FCC, Class A



## Recommended Configurations and Order Codes

The following table provides several suggested configurations for pedestal, 1U, and 2U form factors using the Intel® Entry Server Board S845WD1-E. Please visit: [www.intel.com/go/serverbuilder](http://www.intel.com/go/serverbuilder) for the most recent product updates.

Item	Pedestal system	1U system	2U system
Intel® Entry Server Board S845WD1-E	S845WD1	S845WD11U	S845WD1
Intel® Server Chassis SC5100 <sup>6</sup>	KHD2BASE300	Reference chassis only <sup>7</sup>	Reference chassis only <sup>7</sup>
5U Rack Kit (optional)	AHD2RACK	—	—
Chassis Spares Kit (optional)	FHD2SPRS	—	—
Intel® Server RAID Controller SRCU31L <sup>8</sup>	BOXSRCU31LA	BOXSRCU31LA	BOXSRCU31LA
Intel® PRO/1000 XT Server Adapter <sup>8</sup>	PWLAB490XT	PWLAB490XT	PWLAB490XT

<sup>4</sup> Environmental ambient temperature is the system-intake measurement for an Intel® Entry Server Board S845WD1-E installed in an Intel® Server Chassis SC5100.

<sup>5</sup> Compatible host system denotes the system(s) with which Intel tested the board and found it compliant.

<sup>6</sup> Intel® Entry Server Board S845WD1-E is compatible with the Base Configuration of the Intel Server Chassis SC5100 only.

<sup>7</sup> See <http://support.intel.com> for a complete list of Intel and third-party compatible chassis.

<sup>8</sup> See <http://support.intel.com> for a complete list of Intel and third-party validated adapters.

For the most current product information on Intel server building blocks, visit: [www.intel.com/go/serverbuilder](http://www.intel.com/go/serverbuilder)

All products, dates, and figures specified are preliminary based on current expectations, provided for planning purposes only, and are subject to change without notice. Availability in different channels may vary.

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