



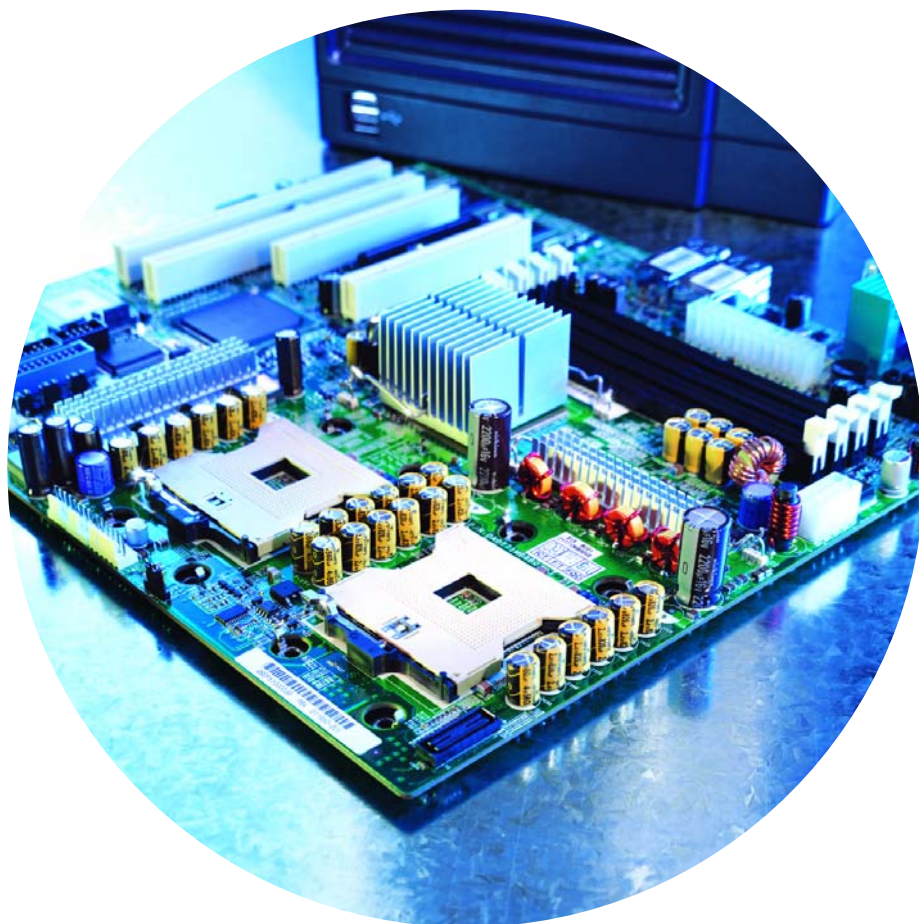
Product Brief

Intel® Server Board SE7320EP2

- Support for Dual 64-bit Intel® Xeon™ Processors
- Intel® E7320 Chipset
- Intel® Server Management 8
- Support for Dual-Channel DDR2 400 SDRAM

Intel® Server Board SE7320EP2

Entry-level server board for small and medium-size businesses



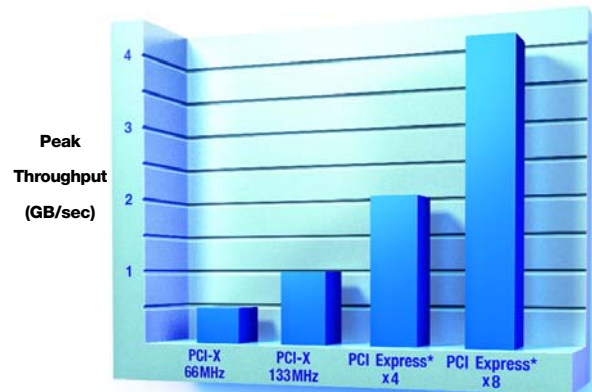
The 64-bit Intel® Xeon™ processor, with up to 2MB L2 Cache, Hyper-Threading Technology, Intel® EM64T¹, and Enhanced Intel SpeedStep® technology², provides an efficient, reliable, and proven server foundation for growing businesses.

Intel® Server Board SE7320EP2

Small and medium-size businesses need a server solution providing data security and flexibility along with reliability, cost-effectiveness, and ease of use. Intel addresses this need with the Intel® Server Board SE7320EP2, a general-purpose value board offering the processor support and chipset power, memory capacity and bandwidth, and comprehensive management capabilities that organizations require to remain competitive in even the toughest marketplace.

For performance and reliability, the Intel Server Board SE7320EP2 supports one or two 64-bit Intel® Xeon™ processors with an 800MHz system bus and the innovative Intel® E7320 chipset. The board also supports up to 8 GB of dual-channel ECC DDR2 400 SDRAM along with three independent PCI buses and five adapter slots supporting not only PCI-X but also the next-generation PCI Express* I/O interconnect technology. These features help to deliver the memory and I/O performance and scalability vital to an expanding enterprise.

To further strengthen data protection and facilitate data retrieval, the Server Board SE7320EP2 includes integrated dual-channel Serial ATA supporting RAID 0 and 1 and an optional four-port SATA card. The board also supports Intel® Server Management 8 and a number of pioneering server technologies to enhance usability, streamline monitoring and servicing, and minimize the costs of management and maintenance. Other advantages of this value board include support for multiple operating systems and third-party add-in cards, memory modules, and reference chassis so that solutions based on the Intel Server Board SE7320EP2 can grow alongside the business.



PCI Express* Offers Outstanding Data Throughput

In the Intel® Server Board SE7320EP2, the PCI Express* x4 slot provides up to four times the throughput of PCI-X 66MHz. Calculations are based on maximum theoretical throughput. Individual results may vary.

Through support for the Intel® E7320 chipset, the Intel® Server Board SE7320EP2 provides impressive levels of overall performance and memory reliability.

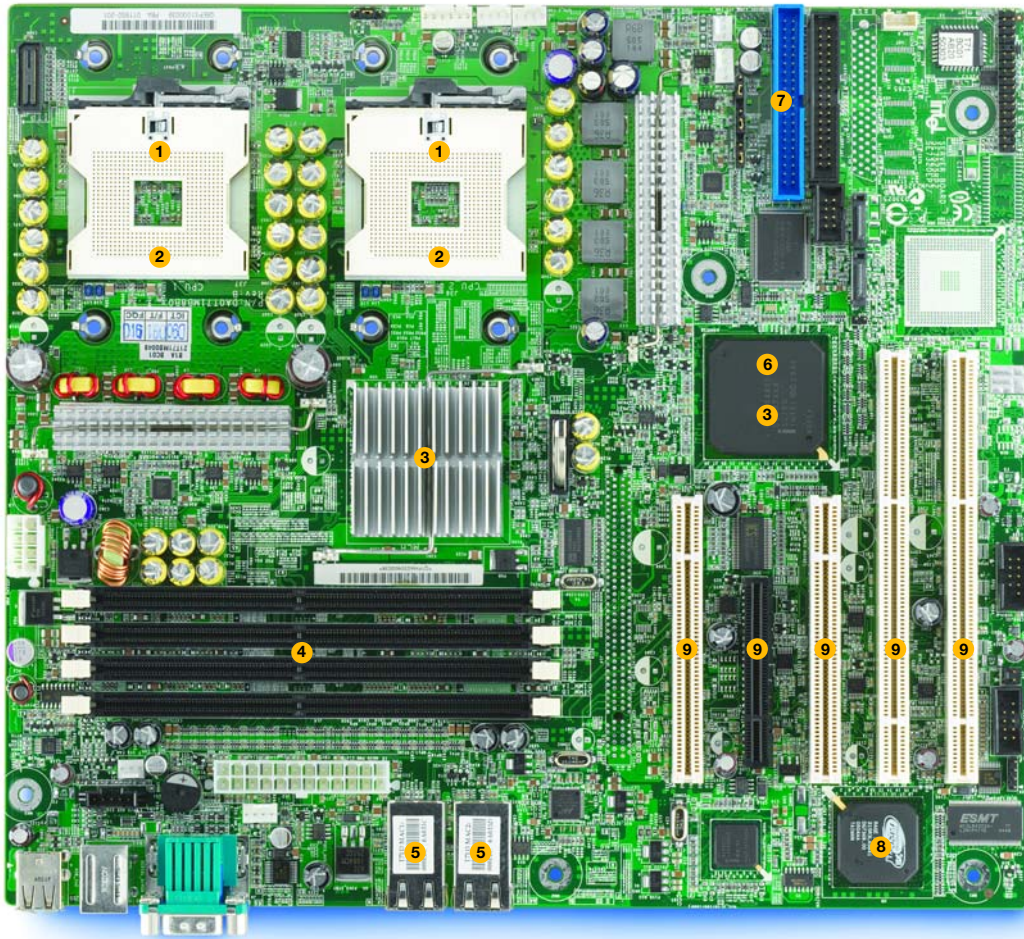


For exceptional memory performance, the Intel® Server Board SE7320EP2 provides dual memory-channel architecture with four DIMM sockets (two DIMMs per channel) supporting DDR2 400 SDRAM and memory sparing and mirroring.



Intel® Server Board SE7320EP2 Features and Benefits

Features	Benefits
Support for one or two 64-bit Intel® Xeon™ processors with an 800MHz system bus	Innovative technology for high-performance workloads
Support for Intel® EM64T ¹	Compatibility with 64-bit-capable operating systems and applications
Intel® E7320 chipset	High performance and memory reliability in a purpose-built chipset
Support for up to 8 GB of Registered ECC DDR2 400 SDRAM through four DIMM sockets	Memory capacity to support diverse server tasks, dual-interleaved for improved performance
Three independent PCI buses and five total slots: one PCI Express* x4, two PCI-X 66MHz, and two PCI 32-bit/33MHz	The bandwidth support needed for current and next-generation server applications
PCI Express I/O interconnect technology	Next-generation connectivity for servers, workstations, mobile devices, and other communications platforms
Support for multiple operating systems and third-party add-in cards, memory modules, and reference chassis	Configuration flexibility essential for growing businesses
Intel® Server Management 8	Remote monitoring and proactive notification for availability and serviceability



Intel® Server Board SE7320EP2

1. Support for two 64-bit Intel® Xeon™ processors with an 800MHz system bus
2. Support for Intel® EM64T¹
3. Intel® E7320 chipset
4. Support for up to 8 GB of Registered ECC DDR2 400 SDRAM
 - Dual-interleaved memory channels for high-speed data transfer
5. Two Gigabit Ethernet connections³
 - One Intel® 82541PI Gigabit Ethernet controller
 - One Marvell® Yukon® -EC 88E8050 PCI Express® Gigabit Ethernet Controller
6. Integrated dual-channel Serial ATA controller supporting RAID 0 and 1
7. Single-channel EIDE for a total of two devices
8. Integrated graphics
 - ATI® RAGE® XL SVGA PCI video controller with 8 MB of video memory
9. Three independent buses and five adapter slots:
 - One PCI Express® x4
 - Two PCI-X 66MHz
 - Two PCI 32-bit/33MHz

Intel® Server Board SE7320EP2 – I/O Panel Features



1. USB connectors
2. Keyboard/mouse connectors
3. Serial connector
4. Video connector
5. RJ45 Ethernet connectors

The Intel® Server Board SE7320EP2 Supports Technologies That Define Innovation⁴



Two sophisticated Intel server technologies work together in the Intel® Server Board SE7320EP2 to reinforce the board's ability to provide room-to-grow for small-business server solutions. For scalability, **Intel® Power and Thermal**

Headroom provides sufficient power supply and thermal protection to maintain performance levels in current and next-generation servers.

And the **Intel® Validation Stress Test Suite** ensures that the Server Board SE7320EP2 has passed some of the industry's most rigorous and extensive testing to optimize time-to-market, maximize data integrity, and minimize support costs—vital for growing businesses.



Intel® Power and Thermal Headroom



Intel® Validation Stress Test Suite

Intel server technologies provide powerful capabilities designed to help make server systems more reliable, more available, and easier to service. Seamlessly integrated into the latest generation of Intel® Server Products, these technologies work in concert to complement the capabilities of the most current Intel processor and chipset technologies.

For more information on these technologies, please visit: <http://developer.intel.com/design/servers/technologies/>

Intel® Server Board SE7320EP2 Boxed Contents

The Intel® SE7320EP2 comes with all the board components required to help build a general-purpose server.

1. One Intel® Server Board SE7320EP2
2. Quick Start User Guide
3. Intel® Server Management 8 CD Pack containing:
 - Intel® Server Deployment Toolkit with Intel® Express Installer, Intel® Server Maintenance and Reference Training (SMaRT) Tool Software, server product information, technical documentation, customer support information, drivers and utilities, and Web links
 - CD-ROM with Intel® Server Manager 8 family of software
4. Cable kit
5. I/O shield
6. Board-configuration label



Compatible Products for Comprehensive Solutions

The following table provides a list of key compatible products for the Intel® Server Board SE7320EP2.

Please see <http://support.intel.com/support/motherboards/server/se7320ep2> for the most recent and comprehensive product compatibility list.

Intel Building Block	Product Name(s)	Product Order Code(s)
Intel® Server Board	Intel® Server Board SE7320EP2	SE7320EP2DG SE7320EP2SA4
Intel® Server Chassis	Intel® Entry Server Chassis SC5275-E Intel® Entry Server Chassis SC5295-E	SC5275E SC5275ENA SC5295DP SC5295DPNA SC5295BRP SC5295BRPNA
Intel® RAID Controller	Intel® RAID Controller SRCS16	SRCS16



For a complete list of spares and accessories, see the Intel® Server Board SE7320EP2 Configuration Guide at <http://support.intel.com/support/motherboards/server/se7320ep2>

Two of the Intel® Server Boards SE7320EP2 bring small and medium-size businesses dual Gigabit Ethernet connections and a choice of storage options.

Product Code	Integrated Storage
SE7320EP2DG	Dual-channel Serial ATA
SE7320EP2SA4	Dual-channel Serial ATA and additional four-port Serial ATA card

The Intel® Server Board SE7320EP2 is Part of a Family of Server Boards⁵ for Pedestal Solutions and Supporting the 64-bit Intel® Xeon™ Processor with an 800MHz System Bus.

Product	Market	Positioning	PCI Configuration	Integrated Storage	Integrated Networking	Memory Support	Management Solution
SE7520AF2	Business-critical database and departmental applications	Outstanding performance, excellent data protection, and advanced management for departmental servers	Seven independent PCI buses and five total slots: 1 PCI Express* x8 1 PCI Express x4 2 PCI-X 133MHz 1 PCI-X 100MHz	Dual-channel Ultra320 SCSI with optional integrated Intel® RAID supporting RAID 0, 1, 5, 10, and 50 and support for the Intel® Portable Cache Module; also includes dual-channel SATA with support for RAID 0 and 1, single-channel IDE	Dual Intel® PRO/1000 Server Network Connections	Eight DIMMs, up to 16 GB of ECC DDR2 400	Intel® Server Management 8: support for Intel® Management Module upgrade (Professional and Advanced Editions)
SE7520BD2 (supporting DDR2)	Workgroup application, file, and messaging servers	Powerful processing, high bandwidth, and scalable management for general-purpose servers	Six independent PCI buses and up to six total slots: 1 PCI Express x8 ⁶ 1 PCI Express x4 ⁷ 1 PCI-X 133MHz 2 PCI-X 100MHz 1 PCI 32-bit/33MHz	Dual-channel SATA with support for RAID 0 and 1, dual-channel IDE; also available with single-channel Ultra320 SCSI (SE7520BD2VD2) or dual-channel Ultra320 SCSI (SE7520BD2SCSID2)	Dual Gigabit Ethernet connections	Eight DIMMs, up to 16 GB of ECC DDR2 400	Intel Server Management 8: support for Intel Management Module upgrade (Professional and Advanced Editions)
SE7525RP2	Workstations	Flexible server and workstation board with extreme I/O and graphics bandwidth support	Four independent PCI buses and six total slots: 1 PCI Express x16 1 PCI Express x4 2 PCI-X 66MHz 2 PCI 32-bit/33MHz	Dual-channel SATA with support for RAID 0 and 1, single-channel IDE	Single Intel PRO/1000 Network Connection	Four DIMMs, up to 8 GB of ECC DDR2 400	Intel Server Management 8
SE7320EP2	Entry-level general-purpose, file/print, and Web servers	Entry server board for small and medium-size businesses	Four independent PCI buses and five total slots: 1 PCI Express x4 2 PCI-X 66MHz 2 PCI 32-bit/33MHz	Dual-channel SATA with support for RAID 0 and 1, single-channel IDE; also available with one four-port SATA card (SE7320EP2SA4)	Dual Gigabit Ethernet connections ³	Four DIMMs, up to 8 GB of ECC DDR2 400	Intel Server Management 8

See <http://www.intel.com/go/serverbuilder> for details on specific Intel® Server Board configurations.

Intel® Server Board SE7320EP2 Specifications

Processor

For the latest information on processor support, visit <http://support.intel.com/support/motherboards/server/se7320ep2>

One or two 64-bit Intel® Xeon™ processors with an 800MHz system bus

System Memory

For the latest information on memory support, visit <http://support.intel.com/support/motherboards/server/se7320ep2>

Capacity Four DIMM sockets for up to 8 GB of registered ECC DDR2 400 memory (memory must be populated in pairs of equal-size DIMMs)

Type Registered ECC DDR2 400 SDRAM 72-bit, 184-pin gold-plated DIMMs

Reliability Features Corrects single-bit errors, detects double-bit errors (using ECC memory), and supports Intel® Single Device Data Correction (SDCC)

Integrated Onboard

Chipset Intel® E7320 chipset

Server Network Connections¹ One Intel® 82541PI Gigabit Ethernet controller and one Marvell® Yukon® -EC 88E8050 PCI Express® Gigabit Ethernet Controller, supporting teaming and failover, 10BASE-T, 100BASE-TX, and 1000BASE-T, RJ45 output

Super I/O Controller National Semiconductor® PC8374L

Graphics ATI® RAGE® XL SVGA PCI video controller with 8 MB of video memory

Integrated Storage Support

Serial ATA Dual-channel SATA controller supporting RAID 0 and 1; one board model with an additional four-port SATA card supporting RAID 0 and 1

Input/Output

PCI Three independent PCI buses and five adapter slots: one PCI Express® x4, two PCI-X 66MHz, and two PCI 32-bit/33MHz

IDE Single-channel EIDE; dual-channel SATA for a total of two SATA devices

USB Two USB connectors (optional header for two more)

Serial Ports External DB9 serial port and onboard internal serial header

Floppy Controller 1.44 MB, 3-mode support

Keyboard/Mouse Two PS/2 ports, 8240A-compatible

Intel® Server Management

Software Support Intel® Server Manager 8 family of software

Fully Validated Operating Systems

Microsoft® Windows® Server 2003 Enterprise Edition, Microsoft Windows 2000 Advanced Server, Red Hat® Linux® Enterprise, SUSE® LINUX® Enterprise Server, and Novell® NetWare®

System BIOS

Type 8Mb Flash EEPROM with AMI® BIOS, Multiboot BBS (BIOS Boot Specification) 1.4-compliant

Special Features Plug and Play, IDE drive autoconfigure, SMBIOS 2.3, ECC/parity support, multilingual support, enabled for rolling/online BIOS updates

Configuration Utilities Server Configuration Wizard for easy system setup of initial Intel Server Management 8 configuration

Jumpers

CMOS clear, password clear, BIOS recovery, BMC boot block write protect, BIOS code page selection

Front-Panel Support

Power LED, hard-drive activity LED, system-fault LED, power/sleep switch, network connection LED, reset switch, NMI switch

Mechanical

Board Style ATX

Board Size 12" x 10.6" (305 mm x 269 mm)

Power Requirements

+5V 3.0A maximum continuous current

+5V Standby 1.6A minimum continuous current

+12V 19A maximum continuous current

+3.3V 8.4A maximum continuous current

-5V 0.0A maximum continuous current

-12V 0.0A maximum continuous current

Environmental

Ambient Temperature 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

Safety and EMC Regulatory Compliance (Class A)

(EMC Regulatory Compliance is based on a board configured in an Intel host system in which Intel tested the board and found it compliant.)

Country	Certification Safety and/or EMC	Regulatory Mark Safety and/or EMC
Australia and New Zealand	ACA, MED	C-Tick
Canada	UL / Industry Canada	cURus / ICES
Europe	European Directives	CE
International	CB Report / CISPR	Not applicable
Japan	VCCI (Verification only)	Not applicable
Korea	RRL	MIC
Russia	GOST	GOST
Taiwan	BSMI DOC	BSMI
United States	UL/FCC (Verification only)	cURus



¹ 64-bit Intel® Xeon™ processors with Intel® EM64T require a computer system with a processor, chipset, BIOS, OS, device drivers and applications enabled for Intel EM64T. Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel EM64T-enabled OS, BIOS, device drivers and applications may not be available. Check with your vendor for more information.

² Enhanced Intel SpeedStep® technology is available on Intel® Xeon™ processors with an 800MHz system bus at operating frequencies of 3.40 GHz and above.

³ Dual Gigabit Ethernet connections are available on two models of the Intel® Server Board SE7320EP2: order code SE7320EP2DG and order code SE7320EP2SA4.

⁴ Features may vary depending on system configuration.

⁵ Feature sets may vary by board model. See <http://www.intel.com/go/serverbuilder> for more detail.

⁶ Two models of the Intel® Server Board SE7520BD2 supporting DDR2 memory (SE7520BD2SATAD2 and SE7520BD2SCSID2) support both PCI Express® x4 and PCI Express x8; a third model (SE7520BD2VD2 supporting DDR2 memory) supports only PCI Express x4.

⁷ The PCI Express x4 slot is a PCI Express x8 connector running at x4 speed.

For more information on how to make the Intel® Server Board SE7320EP2 part of your server environment, please contact an Intel® Channel Membership Programs participant.



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