



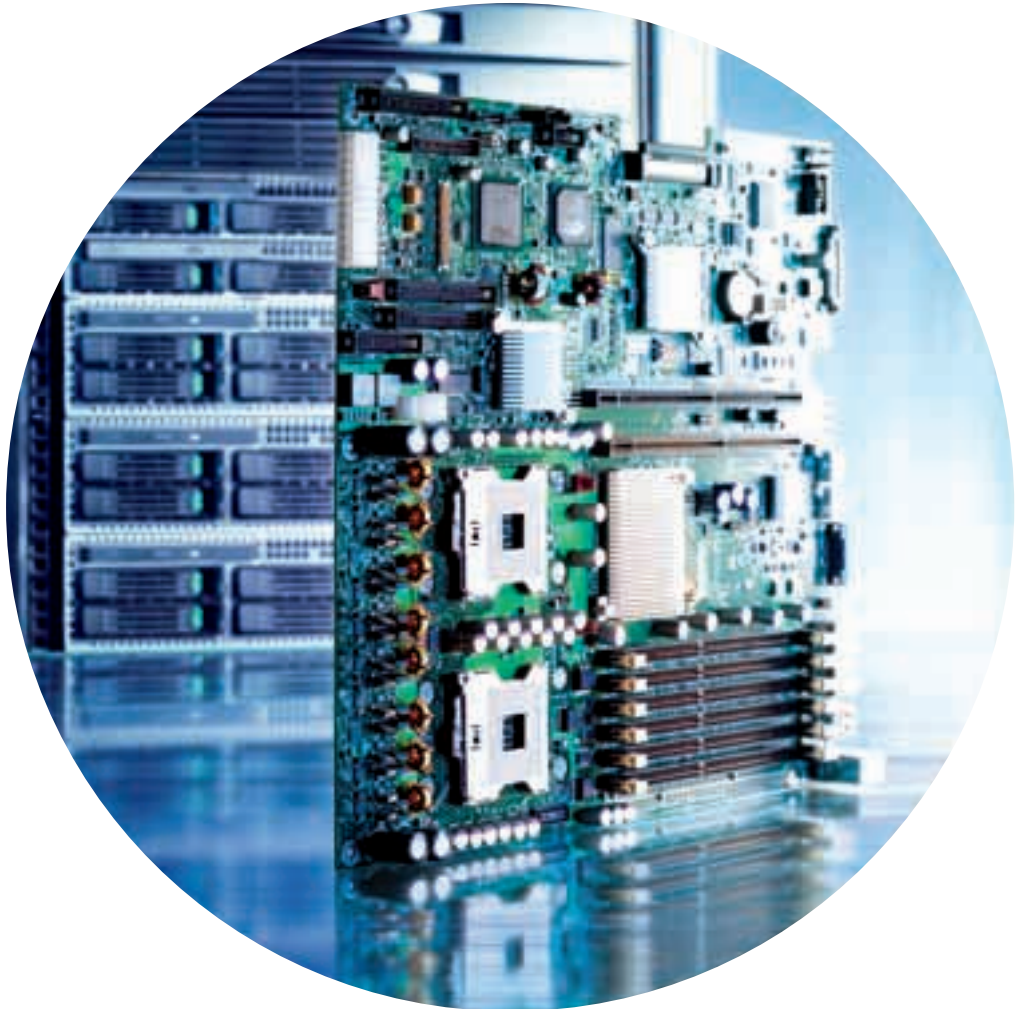
Product Brief

Intel® Server Board SE7520JR2

- Support for Dual Intel® Xeon™ Processors
- Intel® E7520 Chipset
- PCI Express® I/O Interconnect Technology

Intel® Server Board SE7520JR2

Outstanding performance, dependability, and manageability for high-density solutions



The Intel® Xeon™ processor, with up to 2MB Advanced Transfer Cache, Hyper-Threading Technology, Intel® Extended Memory 64 Technology (Intel® EM64T)¹ and Enhanced Intel SpeedStep® technology², provides remarkable levels of performance for growing businesses.

Intel® Server Board SE7520JR2

Enterprise-level computing in a space-constrained setting presents challenges in terms of processing power, memory, networking, I/O, and storage. Organizations in such environments, especially those running Internet, departmental database, datacenter, and other high-transaction applications, need a server solution addressing these challenges with high levels of performance, reliability, and manageability. For such organizations, Intel provides the Intel® Server Board SE7520JR2.

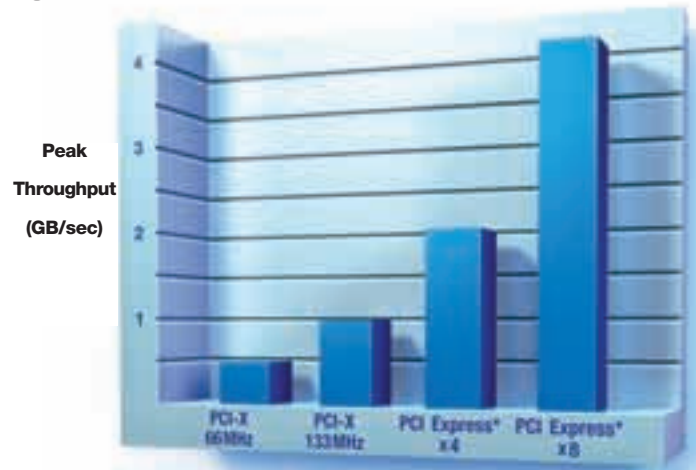
For processing performance, the Server Board SE7520JR2 supports dual Intel® Xeon™ processors with an 800MHz system bus and the purpose-built Intel® E7520 chipset. A reliable, high-capacity memory subsystem is provided through support for six dual-channel Registered Error-Correcting Code (ECC) DIMM sockets available in DDR 266/333 and DDR2 400 configurations and with memory sparing and mirroring. The Server Board SE7520JR2 also includes versatile networking through dual integrated Intel® PRO/1000 MT Server Network Connections and flexible and powerful I/O with up to two slots in a 1U system and six in a 2U system supporting next-generation PCI Express* as well as PCI and PCI-X.

In addition, the Intel Server Board SE7520JR2 provides highly reliable and scalable storage through dual-channel ATA 100 supporting up to four IDE devices, dual-channel Serial ATA supporting RAID 0 and 1, and optional integrated dual-channel Ultra320 SCSI with embedded SCSI striping and mirroring. Finally, a number of Intel server technologies supported in the Server Board SE7520JR2 help to maintain system robustness while simplifying administration, management, and maintenance.

Through an optional ATA Flash Disk drive, the Intel® Server Board SE7520JR2 provides an efficient power-cabling solution.



Through its support for Intel® Adaptive Slot technology, the Intel® Server Board SE7520JR2 provides integrators and businesses a highly flexible approach to maintaining and enhancing I/O capabilities based on PCI Express*, PCI-X*, and PCI.

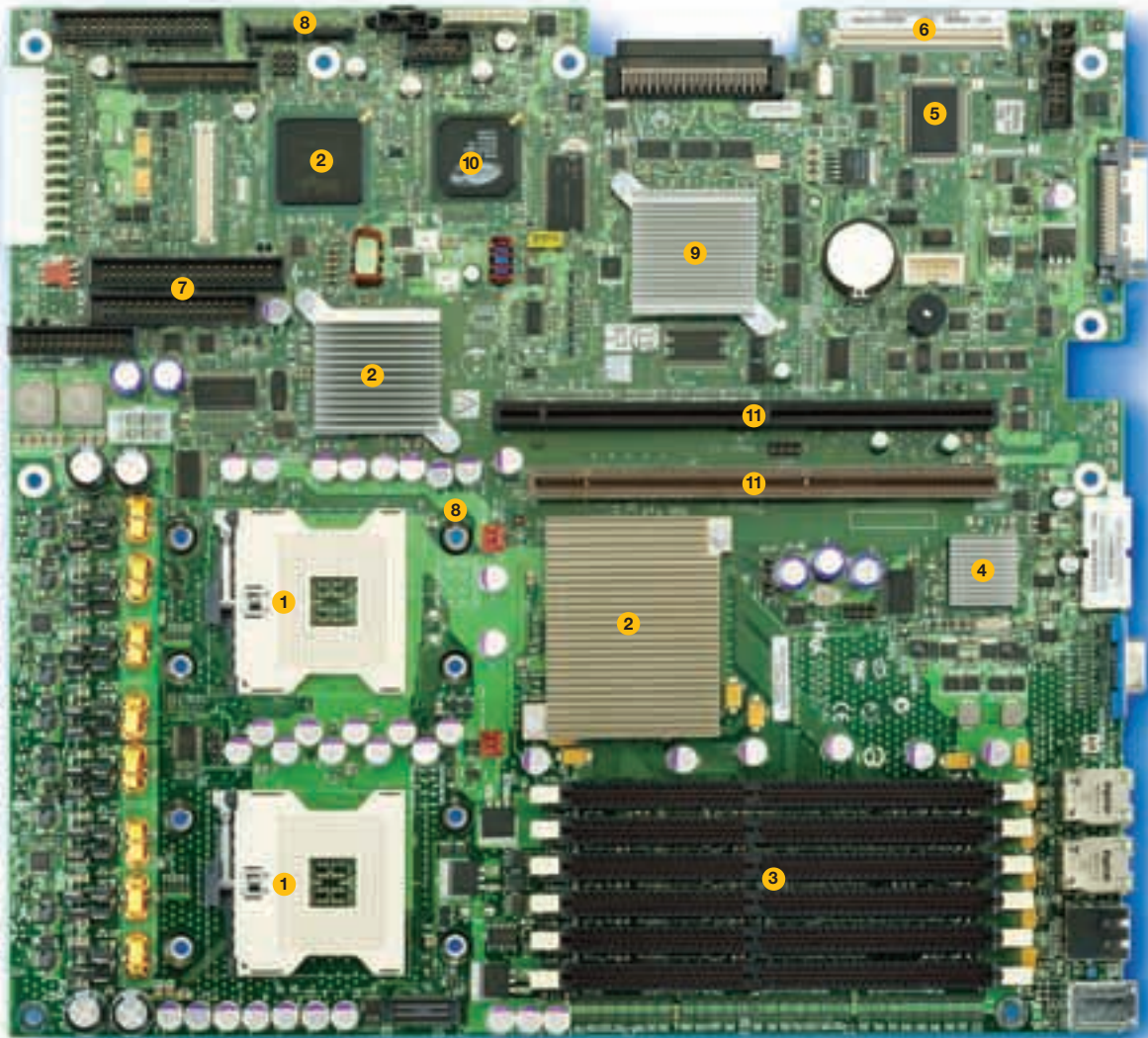


PCI Express* Offers Outstanding Data Throughput

In the Intel® Server Board SE7520JR2, the PCI Express x8 slot provides up to eight times the throughput of PCI-X 66MHz. Calculations are based on maximum theoretical throughput. Individual results may vary.*

Intel® Server Board SE7520JR2 Features and Benefits

Features	Benefits
Support for one or two Intel® Xeon™ processors with an 800MHz system bus	Exceptional processing power and scalability to meet the demanding requirements of departmental workloads
Intel® E7520 chipset	High performance and quality in a purpose-built server chipset
Dual-channel memory with support for six Registered Error-Correcting Code (ECC) DIMM sockets and memory sparing and mirroring; available in DDR 266/333 and DDR2 400 configurations	Powerful and reliable memory subsystem with the capacity to support diverse server tasks; two memory configurations for easy customization
Support for PCI Express*, PCI-X, and PCI accessed through two riser slots: two adapter slots on a 1U system and up to six adapter slots on a 2U system	Support for multiple I/O configurations spanning I/O interconnect architectures
Optional dual-channel Ultra320 SCSI supporting embedded SCSI striping and mirroring (RAID 0 and 1) and modular ROMB (RAID 0, 1, 4, 5, and 10)	Rapid data transfer with embedded RAID functionality
Two integrated Intel® PRO/1000 MT Server Network Connections (Intel® 82546GB controller)	High bandwidth with widespread compatibility, teaming capability, and redundant links



Intel® Server Board SE7520JR2

1. Support for two Intel® Xeon™ processors with 800MHz system bus
2. Intel® E7520 chipset
3. Support for up to six DIMMs of Registered ECC DDR 266/333 or DDR2 400 SDRAM
 - Support for memory sparing and mirroring
4. Two Intel® PRO/1000 MT Server Network Connections
5. Intel® Server Management 8
 - Onboard Platform Instrumentation
6. Intel® Management Module upgrade connector
 - Support for Intel® Management Module Professional Edition and Intel® Management Module Advanced Edition (optional upgrades)
7. Dual-channel ATA 100 supporting up to four IDE devices
8. Dual-channel Serial ATA supporting RAID 0 and 1
9. Optional integrated dual-channel Ultra320 SCSI supporting RAID 0 and 1
10. Integrated graphics
 - ATI® RAGE® XL SVGA PCI video controller with 8 MB of video memory
11. Four independent PCI buses supporting PCI Express®, PCI-X, and PCI, accessed through two riser slots:
 - Two adapter slots on a 1U system
 - Up to six adapter slots on a 2U system

Intel® Server Board SE7520JR2 – I/O Panel Features



1. PS/2* keyboard and mouse connectors
2. RJ45 video connector
3. Dual Ethernet connectors
4. Video connector
5. Dual USB connectors
6. Post-code diagnostic LEDs
7. System-ID LED
8. Optional external SCSI connector
9. System status LED

The Intel® Server Board SE7520JR2 Supports Technologies That Define Innovation⁵

A number of sophisticated Intel server technologies work together in the Intel Server Board SE7520JR2 to meet the needs of organizations requiring outstanding performance, dependability, and manageability in a high-density server solution. To reinforce the performance afforded by the server board's support of the Intel® Xeon™ processor and help to protect it over the long term, the Server Board SE7520JR2 features **Intel® Power and Thermal Headroom**. This technology provides sufficient power supply and thermal protection to maintain performance levels in current and next-generation servers. Of particular importance in a high-density environment is **Intel® Active Airflow Control**, which works in concert with Intel Power and Thermal Headroom to monitor temperatures and adjust fans accordingly.

In addition to supporting outstanding processing performance, the Intel Server Board SE7520JR2 supports high levels of I/O performance in a flexible, cost-effective fashion. Through **Intel® Adaptive Slot** technology, the board provides two riser slots, one supporting PCI-X and the other supporting both PCI-X and PCI Express. This enables integrators to expand their offerings without having to expand inventory and enables businesses to upgrade I/O performance without having to upgrade equipment.

Manageability is supported in the Intel Server Board SE7520JR2 through the Intel® Server Management 8 suite of hardware, software, and utilities. The capabilities of Intel Server Management 8 are bolstered by the optional **Intel® Local Control Panel**⁶, which enables monitoring and control of the server from the front panel and **Intel® Light-Guided Diagnostics**, which simplifies troubleshooting to enable easier servicing and faster recovery. Finally, the **Intel® Validation Stress Test Suite** provides a powerful foundation for all these capabilities, ensuring that the Server Board SE7520JR2 has passed some of the industry's most rigorous and extensive testing to optimize time-to-market, maximize data integrity, and minimize support costs.



Intel server technologies provide powerful capabilities designed to 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.



Intel® Power and Thermal Headroom



Intel® Active Airflow Control



Intel® Adaptive Slot



Intel® Local Control Panel



Intel® Light Guided Diagnostics



Intel® Validation Stress Test Suite

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

Intel® Server Board SE7520JR2 Boxed Contents

The Intel Server Board SE7520JR2 comes with all the board components required to help build a high-performance server in a high-density environment.

1. One Intel® Server Board SE7520JR2
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. I/O shield
5. Board-configuration label



The Intel® Server Board SE7520JR2 is Part of a Family of Server Boards⁷ for 1U and 2U Rack-Mount Applications and Supporting the Intel® Xeon™ Processor with an 800MHz System Bus.

Product	Market	Positioning	PCI Configuration ⁸	Integrated Storage	Integrated Networking	Memory Support	Management Solution	Other Innovations
SE7520JR2	Web hosting, data center, terminal services, high-performance computing (HPC)	Outstanding performance, dependability, and manageability for high-density solutions	Four independent PCI buses supporting up to PCI Express x8 and PCI-X 133MHz	Optional dual-channel Ultra320 SCSI with support for RAID 0 and 1, dual-channel SATA with support for RAID 0 and 1, two EIDE channels supporting up to four IDE devices	Dual Intel® PRO/1000 MT Server Network Connections	Six DIMMs, up to 24 GB of ECC DDR 266 or 16 GB of ECC DDR 333 or DDR2 400	Intel® Server Management 8: Support for Intel Management Module upgrade (Professional and Advanced Editions)	Support for Intel® Local Control Panel ⁹ , Intel® Cable Reduction Technology, Intel® Light-Guided Diagnostics, and Intel® Adaptive Slot technology
SE7320VP2	Entry-level Web hosting, data center, terminal services, HPC	High-density optimized server board for entry-level parallel computing and front-end solutions	Four independent PCI buses supporting up to PCI Express x4 and PCI-X 66MHz	Dual-channel SATA with support for RAID 0 and 1, two EIDE channels supporting up to four IDE devices	Dual Gigabit Ethernet connections	Six DIMMs, up to 24 GB of ECC DDR 266 or 16 GB of ECC DDR 333 or DDR2 400	Intel Server Management 8	Support for Intel® Adaptive Slot technology
SR1325TP1	Basic appliances	1U rack-optimized server platform for entry-level high-density server solutions	Three independent PCI buses (one via CSA port) supporting up to PCI-X 66MHz	Dual-channel SATA, two EIDE channels supporting up to four IDE devices	One Intel® PRO/100+ Server Network Connection, one Intel PRO/1000 Server Network Connection	Four DIMMs, up to 4 GB of ECC DDR 266/333/400	Intel Server Management v5.8	

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

Compatible Products for Comprehensive Solutions

The following table provides a list of key compatible products for the Intel® Server Board SE7520JR2.

Please see <http://support.intel.com/support/motherboards/server/se7520jr2> for the most recent and comprehensive product compatibility list.

Intel Building Block	Product Name(s)	Product Order Code(s)
Intel® Server Boards	Intel® Server Board SE7520JR2 (supporting SCSI and DDR 266/333) Intel® Server Board SE7520JR2 (supporting DDR2 400) Intel® Server Board SE7520JR2 (supporting SCSI and DDR 266/333) Intel® Server Board SE7520JR2 (supporting SCSI and DDR2 400)	SE7520JR2ATAD1 SE7520JR2ATAD2 SE7520JR2SCSID1 SE7520JR2SCSID2
Intel® Server Platforms	Intel® Server Platform SR1400JR2 (with Intel® Server Board SE7520JR2 and Intel® Server Chassis SR1400 and supporting DDR 266/333 and integrated dual-channel Ultra320 SCSI) Intel® Server Platform SR2400JR2 (with Intel® Server Board SE7520JR2 and Intel® Server Chassis SR2400 and supporting DDR 266/333 and integrated dual-channel Ultra320 SCSI) Intel® Server Platform SR2400JR2 (with Intel® Server Board SE7520JR2 and Intel® Server Chassis SR2400 and supporting DDR2 400 and integrated dual-channel Ultra320 SCSI)	SR1400SYS SR1400SYSNA SR2400SYS SR2400SYSNA SR2400SYSD2 SR2400SYSD2NA
Intel® Server Chassis	Intel® Server Chassis SR1400 Intel® Server Chassis SR2400	SR1400 SR1400NA SR2400 SR2400NA
Intel® PRO Server Adapters	Intel® PRO/1000 MT Server Adapter	PWLA8490MT
Intel® RAID Controllers	Intel® RAID Controller SRCU42E Intel® RAID Controller SRCU42X Intel® RAID Controller SRCZCRX Intel® RAID Controller SRCS16	SRCU42E SRCU42X SRCZCRX SRCS16
Intel® Management Modules	Intel® Management Module Professional Edition Intel® Management Module Advanced Edition	AXXIMMPRO AXXIMMADV

For a complete list of spares and accessories, see the Intel® Server Board SE7520JR2 Configuration Guide at <http://support.intel.com/support/motherboards/server/se7520jr2>

The Intel® Server Board SE7520JR2 provides an ideal solution for organizations requiring a high-performing rack-mount system. In 1U environments the board can be paired with the Intel® Server Chassis SR1400, and in 2U environments the board can be paired with the Intel® Server Chassis SR2400.



Intel® Server Board SE7520JR2 Specifications

Processor		Input/Output		Jumpers																															
One or two Intel® Xeon™ processors with an 800MHz system bus; for the latest processor support information, visit http://support.intel.com/support/motherboards/server/se7520jr2		PCI Four independent PCI buses, adapter slots on risers; 1U system Option 1: two PCI-X 100MHz, Option 2: one PCI Express* x8 and one PCI-X 100MHz; 2U system Option 1: six PCI-X 66/100MHz, Option 2: two PCI-X 133 MHz (active) and four PCI-X 66/100MHz, Option 3: two PCI Express* x4 and four PCI-X 66/100MHz ³		CMOS clear, password clear, BIOS recovery, BMC boot block write protect																															
System Memory		IDE Dual-channel EIDE for a total of four IDE devices (two on ATA connector, two on high-density connector to backplane)		Front-Panel Support																															
For the latest information on memory support, visit http://support.intel.com/support/motherboards/server/se7520jr2		USB Two USB 2.0 ports (rear) and two USB headers for up to four additional external USB ports		Power LED, hard-drive activity LED, two network activity LEDs, system-ID LED, system-status LED; power on/off button, system reset button, system ID button, and NMI switch; optional Intel® Local Control Panel ⁶ for monitoring and control of the server from the front panel																															
Capacity	Six DIMM sockets for up to 24 GB of Registered ECC DDR 266 or 16 GB of Registered ECC DDR 333 or DDR2 400; memory must be populated in pairs	Serial Ports One asynchronous RJ45 Serial B port with one DH10 10-pin internal Serial A header		Mechanical																															
Type	Registered ECC DDR 266/333 SDRAM 72-bit, 184-pin gold-plated DIMMs; DDR2 400	Floppy Controller 1.44 MB and 2.88 MB, 3-mode support		Board Style SSI Thin E-Bay v3.1																															
Reliability Features	Corrects single-bit errors, detects double-bit errors (using ECC memory); supports Intel® x4 Single Device Data Correction (SDDC), scrubbing, retry on uncorrectable errors, memory sparing, memory mirroring	Keyboard/Mouse Two PS/2* ports, 8240A-compatible		Board Size 12" x 13" (305 mm x 269 mm)																															
Integrated Onboard		Intel® Server Management		Environment																															
Chipset	Intel® E7520 chipset	Integrated Management Type Onboard Platform Instrumentation		Ambient Temperature Operating (system): 10°C to 35°C; non-operating/storage (system): -40°C to +70°C ambient																															
Intel® Server Network Connections	Two Intel® PRO/1000 MT Server Network Connections (Intel® 82546GB controller); supports 10BASE-T, 100BASE-TX, and 1000BASE-T, dual RJ45 outputs	Software support Intel® Server Manager 8 family of software; upgradable to support HP Unicenter*, Tivoli*, and LANDesk* Management Suite 8		Relative Humidity Non-operating 95%, non-condensing at 30°C																															
Super I/O Controller	National Semiconductor* PC87427	Intel® Management Module Support Professional and Advanced Editions		Safety and EMC Regulatory Compliance (Class A)																															
Integrated Management Controller	National Semiconductor PC87431M mini-Baseboard Management Controller	Supported Standards IPMI, DMI, CIM, SNMP, ICMB		(EMC Regulatory Compliance is based on a board configured in an Intel host system in which Intel tested the board and found it compliant.)																															
Graphics	ATI* RAGE* XL SVGA PCI video controller with 8 MB of video memory	Fully Validated Operating Systems		<table border="1"> <thead> <tr> <th>Country</th> <th>Certification Safety and/or EMC</th> <th>Regulatory Mark Safety and/or EMC</th> </tr> </thead> <tbody> <tr> <td>Australia/New Zealand</td> <td>ACA, MED</td> <td>C-Tick</td> </tr> <tr> <td>Canada</td> <td>UL / Industry Canada</td> <td>cURus / ICES</td> </tr> <tr> <td>Europe</td> <td>European Directives</td> <td>CE</td> </tr> <tr> <td>International</td> <td>CB Report / CISPR</td> <td>Not applicable</td> </tr> <tr> <td>Japan</td> <td>VCCI (Verification only)</td> <td>Not applicable</td> </tr> <tr> <td>Korea</td> <td>RRL</td> <td>MIC</td> </tr> <tr> <td>Russia</td> <td>GOST</td> <td>GOST</td> </tr> <tr> <td>Taiwan</td> <td>BSMI DOC</td> <td>BSMI</td> </tr> <tr> <td>United States</td> <td>UL / FCC (Verification only)</td> <td>cURus</td> </tr> </tbody> </table>		Country	Certification Safety and/or EMC	Regulatory Mark Safety and/or EMC	Australia/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
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Integrated Storage Support		Microsoft* Windows* Server 2003, Microsoft Windows 2000 Advanced Server, Red Hat* Linux*, SUSE* LINUX*, and Novell* NetWare*																																	
Parallel ATA	Dual-channel ATA 100 (integrated single connector and service to backplane)	System BIOS																																	
Serial ATA	Dual-channel SATA 100 (two connectors) integrated with RAID 0 and 1 support	Type AMI*																																	
Ultra320 SCSI⁹	Dual-channel Ultra320/LVD SCSI via LSI Logic* LSI53C1030 controller; connected via one internal 68-pin-wide connector and one 68-pin high-density external SCSI connector; maximum data transfer 320 MB/sec on each Ultra320/LVD channel; supports HostRAID* embedded SCSI striping/mirroring (RAID 0 and 1)	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 system setup of BIOS utilities; Save and Restore System Configuration Utility and initial Intel Server Management configuration																																	

¹ Intel® Extended Memory 64 Technology (Intel® EM64T) requires 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 The Intel® Server Board SE7520JR2 supports PCI Express* x8 in its 1U configuration and PCI Express x4 in its 2U configuration.

⁴ PCI-X bus speed depends on board model and number of PCI-X slots that are populated.

⁵ Features may vary depending on system configuration and may require the purchase and installation of an optional Intel® Management Module upgrade.

⁶ The Intel® Local Control Panel requires the purchase and installation of an optional Intel® Management Module upgrade.

⁷ Features sets may vary by board model. See <http://www.intel.com/go/serverbuilder> for more detail.

⁸ Based on PCI riser support.

⁹ SCSI support is available with product order codes SE7520JR2SCSID1 and SE7520JR2SCSID2.

For more information on how to make the Intel® Server Board SE7520JR2 part of your server environment, please contact an Intel® Channel Membership Programs participant.



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