Intel®
Server Board
SE7501CW2
Product Brief

Can a server board give me the performance, flexibility, and value required for widely diverse applications?

The Intel® Server Board SE7501CW2 provides the processing power, memory capacity, and versatility needed to build functional and affordable servers for various applications.

The Intel® Server Board SE7501CW2 accommodates dual Intel® Xeon™ processors with up to 2MB cache and supports up to 8 GB of ECC DDR266 memory in a dual-channel architecture.

Intel Server Board SE7501CW2

The Intel Server Board SE7501CW2 harnesses the power of dual Intel Xeon processors and the Intel® E7501 chipset to deliver outstanding performance for businesses seeking a cost-effective solution for diverse server applications. With its support for dual-channel ECC DDR200 or DDR266 memory and three independent PCI buses supporting PCI-X-enabled add-in cards, the Server Board SE7501CW2 provides the memory capacity and bandwidth essential for growing businesses. The board also provides widely compatible networking capabilities, scalable bandwidth, and redundant links available through two integrated Intel® PRO Network Connections including one Intel® PRO/1000 Connection.

Advanced Performance and Value

A foundation in the innovative Intel® NetBurst™ microarchitecture of the Intel Xeon processor makes the Server Board SE7501CW2 ideally suited to applications and environments requiring advanced performance at a value price point. Hyper-Threading Technology supports multithreading and multitasking to boost the efficiency of processor resources, and a 533MHz system bus provides improved performance to meet your customers' business requirements.

Easily Customizable

The Intel Server Board SE7501CW2 is easily customizable to address a variety of customer needs. For example, with applications requiring SCSI-based storage, an Ultra320 SCSI adapter accessory is available from Intel. In addition, the Server Board SE7501CW2 is validated with the Intel® Server Chassis SC5200 (base and base redundant power configurations only), the Intel® Entry Server Chassis SC5250-E, and the Intel® Entry Server Chassis SC1350-E[7] and is supported by a number of rack-optimized and general-purpose third-party reference chassis.

The Intel Server Board SE7501CW2 provides the performance, memory capacity, and scalability you need to build servers for an ever-changing set of business applications.

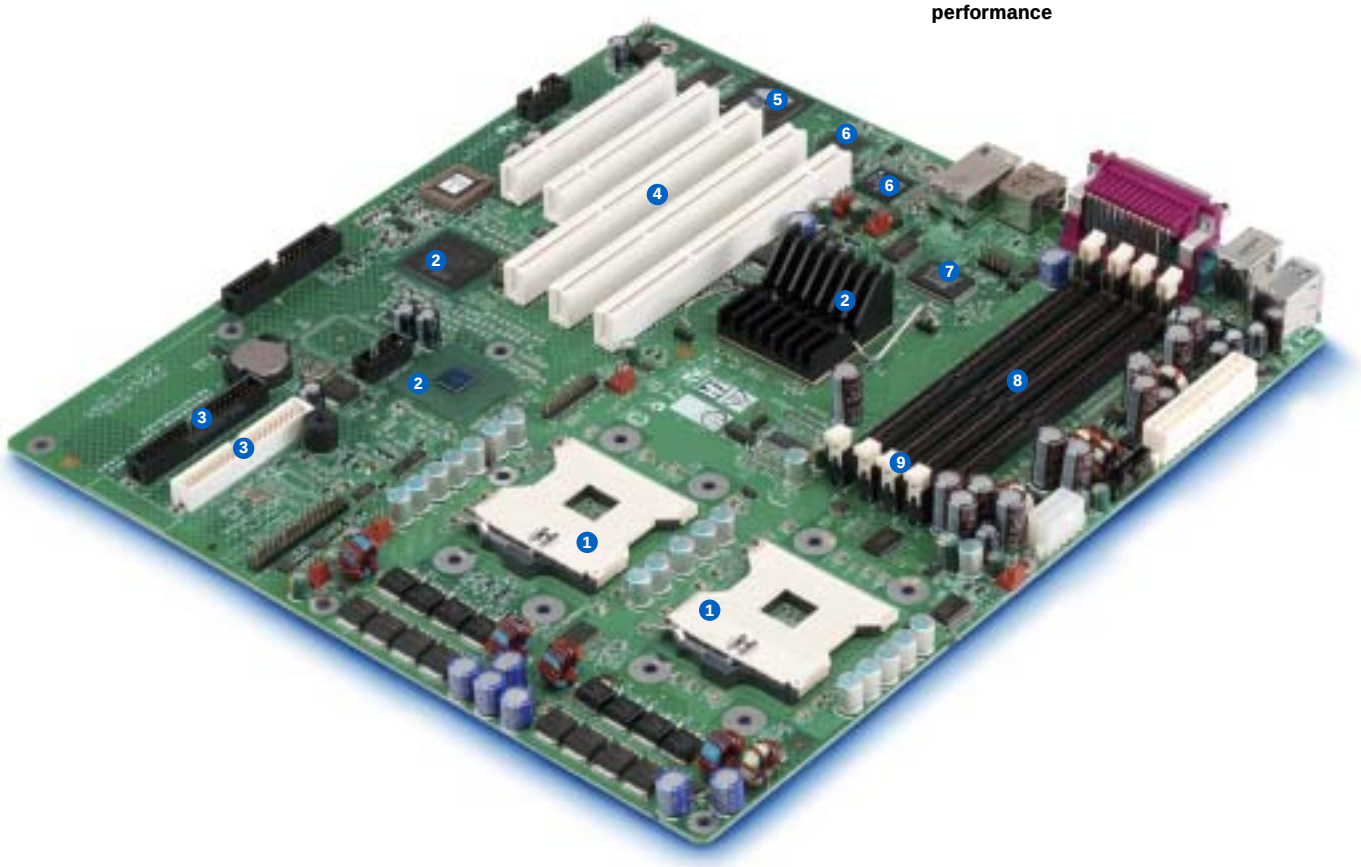
For applications requiring SCSI-based storage, an optional single-channel Ultra320 SCSI adapter accessory is also available.

Features	Benefits
Support for one or two Intel® Xeon™ processors with up to up to 2MB cache and a 400MHz or 533MHz system bus	Innovative technology to meet the requirements of high-performance server workloads
Intel® E7501 chipset	High performance, quality, and memory reliability
Support for up to 8 GB of registered ECC DDR200/266 memory through four DIMM sockets[1]	Memory flexibility with the price/performance advantage of DDR to support a wide range of solutions
Dual memory channel architecture	High-performance, high-reliability memory subsystem with an improved data transfer rate over single channel memory
Support for Intel® x4 Single Device Data Correction	Memory fault tolerance
Three independent PCI buses on five slots: one PCI-X 64-bit/133MHz, two PCI-X 64-bit/100MHz, and two 32-bit/33MHz	Distributed I/O workload for boosting overall I/O throughput flexibility and scalability
Support for an optional Ultra320 SCSI accessory (available from Intel)	Flexible storage options
Two integrated Intel® PRO Network Connections (one Intel® PRO/100+ and one Intel® PRO/1000)	Networking capabilities with widespread compatibility, scalable bandwidth, and redundant links
Integrated ATI* RAGE* XL SVGA PCI video controller with 8 MB of video memory	High-quality video without the loss of a PCI slot or the cost of adding a graphic card
LANDesk* Client Manager–based management solution[2]	Integrated in-band management, event alerting, and more for high reliability
Three-year limited warranty	Peace of mind

The Intel Server Board SE7501CW2 for the Intel Xeon Processor with up to 2MB cache

Meticulous design, thorough validation, and extensive testing mean less development work, higher quality, and lower support costs.

1. Support for two Intel Xeon processors with up to 2MB cache
2. Intel E7501 chipset
3. Two ATA/100 IDE channels
4. Triple-peer PCI buses
   - Bus A: PCI-X 64-bit/133MHz
   - Bus B: PCI-X 64-bit/100MHz
   - Bus C: 32-bit/33MHz
5. Integrated graphics
   - ATI* RAGE* XL SVGA PCI video controller with 8 MB of memory
6. Two Intel® PRO Network Connections
   - Intel® PRO/100+ Server Network Connection via 82550PM Fast Ethernet controller
   - Intel® PRO/1000 Network Connection via 82540EM Gigabit Ethernet controller
7. Server monitoring and control
   - Winbond* 83627HF controller
8. Up to 8 GB of registered ECC DDR200 or DDR266 memory
9. Dual memory channels for improved performance



The Intel Xeon processor with up to 2MB cache features Hyper-Threading Technology and the Intel NetBurst microarchitecture to deliver exceptional performance to workgroup-level computing.

intel inside XEON

The Boxed Intel Server Board SE7501CW2

The hardware, software, and documentation you need to build powerful small business servers quickly.

Included for easy integration:

1. **One Intel Server Board SE7501CW2**
2. **Quick Start User Guide**
3. **CD-ROM with Intel® SMaRT tool software, LANDesk* Client Manager software, software drivers, configuration tools, and technical product information**
4. **Cable kit**
5. **I/O shield**
6. **Board stickers (reference, I/O, and warning)**

Order code AU320SCSI is an optional accessory that includes a single-channel Ultra320 low-profile SCSI adapter and an Ultra320 SCSI cable with termination:

- **Single-channel Ultra320 SCSI**
- **64-bit/133MHz low-profile PCI-X**
- **LSI Logic* 53C1020 controller**

Deliver the most advanced server technology with world-class customer support. With Intel, you can.

Technology leadership. Take advantage of Intel's 20 years of experience designing and engineering industry-leading server building blocks such as the Intel Xeon processor. Intel Server Management and the Intel® SMaRT tool are Intel extras that contribute tremendously to server uptime, customer peace of mind, and lower ownership costs.

With Intel, you can give your customers access to the latest server technologies, exceptional quality, and highly responsive technical support.

Unsurpassed quality. Intel spends 10,000+ hours testing and validating every piece of an Intel server stack. Uncompromising quality standards translate into higher reliability, fewer repairs, and greater customer satisfaction.

World-class technical support. Intel offers 24x7 phone and Web-based technical support, Advanced Warranty Replacement, a three-year limited warranty, spares kits, and extensive technical training. Integrators also receive a wealth of sales and marketing support in the form of sales tools, videos, and high-quality images for advertising. For more information on Intel's added-value server offerings please visit: **www.intel.com/go/serverbuilder**

Complete Your Intel Server Board SE7501CW2 with Intel® Server Building Blocks

Add the following Intel building blocks to your Intel Server Board SE7501CW2 to ensure a highly reliable, available, and scalable server:

The Intel Server Chassis SC5200 is a 5U pedestal server chassis that supports Intel Server Board SE7501CW2 with a base option and a base redundant power option. A rack-conversion kit is available to enable easy rack installation and a drive-bay accessory upgrade supports up to five hot-swap Ultra320 SCSI drives.

The Intel Entry Server Chassis SC5250-E is a reduced-depth pedestal chassis designed for entry-level servers and workstations. A drive-bay accessory upgrade is available that supports up to five hot-swap Ultra320 SCSI drives.

Intel Xeon Processors, based on Intel® NetBurst™ microarchitecture and Hyper-Threading Technology, can slice through the toughest business problems facing dynamic start-ups, large enterprises, and everything in between.

Intel® RAID Controllers help to protect data, applications, and the server operating system from disk failures and are part of an affordable, high-performance line of Intel RAID products, all of them tested and validated for easy integration.

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

Intel server building blocks are validated to work together, saving you R&D, validation, and support expenses—and speeding your time-to-market.

Use the Intel® Server Board SE7501CW2 to build the right solution for your customers. For example, the Intel Server Chassis SC5200 and Entry Server Chassis SC5250-E are designed to support the Server Board SE7501CW2 and provide you with the flexibility, performance, quality, and reliability you expect from Intel.

Intel® Server Board SE7501CW2 Specifications

Processor/Cache	
One or two Intel® Xeon™ processor(s) with up to 2MB cache and a 400MHz or 533MHz system bus; for the latest processor support information, visit http://support.intel.com/support/motherboards/server	

System Memory	
Memory Capacity	Four DIMM sockets for up to 8 GB of registered ECC DDR200/266 memory[1]
Memory Type	Registered ECC DDR200 and DDR266 SDRAM 72-bit, 184-pin gold-plated DIMMs
DIMM Sizes	128 MB, 256 MB, 512 MB, 1 GB, 2 GB[1]
Memory Voltage	2.5 V only
Error Detection	Corrects single-bit errors, detects double-bit errors (using ECC memory), and provides Intel® x4 Single Device Data Correction support (using x4 DRAM devices only)

Integrated On-Board	
Chipset	Intel® E7501
Intel® PRO Network Connections	Two Intel PRO Network Connections via RJ45 connectors (one 10/100 Intel® 82550PM Fast Ethernet controller, one 10/100/1000 Intel® 82540EM Gigabit Ethernet controller)
Graphics	ATI* RAGE* XL SVGA PCI video controller with 8 MB of video memory
Super I/O Controller	Winbond* 83267HF

Input/Output	
PCI	Three independent PCI buses, up to five total slots: one PCI-X 64-bit/133MHz, two PCI-X 64-bit/100MHz, two 32-bit/33MHz
IDE	Two ATA/100 EIDE channels for a total of four IDE devices backward compatible to provide CD-ROM drive support
USB	Five USB ports: three stacked USB connectors on I/O rear panel, two via 10-pin internal header
Serial Ports	Two serial ports: one asynchronous 9-pin RS-232C, one via 10-pin internal header
Floppy Controller	1.44 MB and 2.88 MB, 3-mode support
Keyboard/Mouse	Two PS/2 ports, 8240A-compatible

Management Solution	
Hardware	Winbond* 83627HF with integrated hardware monitoring
Software	LANDesk* Client Manager 6.3
Remote Management	In-band access to system status, configuration data, and utilities, without the need for a remote-management card
Server Monitoring	To monitor temperatures, voltages, and fans
Server Troubleshooting	Event filtering and proactive alerting via LAN
Operating Systems Supported by LANDesk* Client Manager	LANDesk* Client Manager software is dependent on the operating system. See LANDesk* Client Manager documentation or http://www.landesk.com/products/ilcm/ for details.

System BIOS	
BIOS Type	Intel FWH, Flash EEPROM with Phoenix* BIOS, Multiboot BBS (BIOS Boot Specification) 1.4–compliant
Special Features	Plug and Play, IDE drive autoconfigure, SMBIOS 2.3, ECC/Parity support

Jumpers and Front-Panel Connectors	
Jumpers	CMOS clear, password clear, BIOS recovery, boot block write protect
Front-Panel Connectors	Power LED, power on/off switch, reset switch, HDD LED, NIC activity LEDs

Mechanical	
Server Board Form Factor	SSI Entry E-Bay 3.0 (fits in many ATX-compliant tower chassis)
Server Board Size	12" x 13"

Power Requirements	
+5V	19.60 A maximum continuous current
+5V Standby	1.77 A minimum continuous current
+12V	29.08 A (including fans) maximum continuous current
+3.3V	10.24 A maximum continuous current
–5V	0.00 A maximum continuous current
–12V	0.50 A maximum continuous current

Optional Ultra320 SCSI Adapter	
SCSI Controller	LSI Logic* 20320
SCSI Type	Single-channel Ultra320 SCSI
PCI	64-bit/133MHz PCI-X
Connectors	Internal 68-pin and external VHDI interfaces

Environment	
Ambient Temperature[3]	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 Compliance	
EMC regulatory compliance based on board configured in a compatible[4] Intel host system	
Australia/New Zealand	Verified to AS/NZS 3548, Class A (C-Tick Mark)
Canada	CSA 60950 / Verified to ICES-003, Class A
Europe	EN60950 / Verified to EN55022 (Class A) and EN55024 (CE Mark—EU Directive 89/336/EEC)
International	IEC60950 / Verified to CISPR 22 (Class A)
Japan	Verified to CISPR-22/VCCI (Class A)
Korea	RRL Certification to MIC Notices 1997-41 & 1997-42
Russia	GOST R 50377-92 / Verified to GOST R 29216-91, GOST R 50628-95
Taiwan	Verified to BSMI 13438 (Class A)
United States	UL 60950 / Verified to FCC (Class A)

N232 E139761 CANADA ICES-003 CLASS A ME06 D33025

Recommended Configurations and Order Codes

For the most current product updates, tested hardware, operating-system lists, and product information on Intel server building blocks, visit: www.intel.com/go/serverbuilder.

Item	Product Order Code
Intel® Server Board SE7501CW2	SE7501CW2
Optional Ultra320 SCSI accessory	AU320SCSI
Intel® Server Chassis SC5200 (base configuration, beige pedestal)[5]	KHD3BASE450 KHD3BASE450NA[6]
Intel® Server Chassis SC5200 (base redundant power configuration, beige pedestal)	KHD3RP450 KHD3RP450NA[6]
Intel® Entry Server Chassis SC5250-E (base configuration, beige pedestal)	KPTBASE450 KPTBASE450NA[6]
Intel® Entry Server Chassis SC5250-E (base configuration, black pedestal)	KPTBASE450BLK KPTBASE450BLKNA[6]
Intel® Entry Server Chassis SC1350-E (base configuration, black rack optimized)[7]	SC1350E SC1350ENA[6,7]
Intel® Server Chassis SC5200 Rack Conversion Kit	AHD2RACK[8]
Intel® Server Chassis SC5200 Spares Kit	FHD3SPRS
Intel® Server Chassis SC5200 Hot-Swap SCSI Drive Bay Accessory	AXX2HSDRVUG
Intel® PRO/1000 XT Server Adapter	PWLA8490XT
Intel® RAID Controllers	Please visit http://support.intel.com for a complete list of validated Intel RAID controllers

For the most current product updates, tested hardware, operating-system lists, and product information on Intel server building blocks, visit:
www.intel.com/go/serverbuilder

[1] The Server Board SE7501CW2 has been designed to support up to 8 GB of memory using 2GB memory modules. Please see http://support.intel.com/support/motherboards/server/se7501cw2 for the latest version of the tested memory list.

[2] LANDesk* Client Manager software is dependent on the operating system. See LANDesk* Client Manager documentation for details.

[3] Environment ambient temperature is the system-intake measurement for an Intel® Server Board SE7501CW2 installed in an Intel® Server Chassis SC5200.

[4] Compatible host system denotes the system(s) with which Intel tested the board and found it compliant.

[5] See http://support.intel.com for a complete list of Intel and third-party chassis that are compatible with the Intel® Server Board SE7501CW2.

[6] Products with codes ending in NA include a North American power cord.

[7] Available Q2 2003.

[8] Intel® Server Chassis SC5200 Base and Base Redundant Power configurations are also compatible with AHD3RACK.

0504/JL&MM/DMW&LK/MD/PDF

Intel Literature Center: 1-800-548-4725
ORDER NUMBER 283986-002