



## Next Generation Compute Blade Featuring Dual Intel® Xeon™ Processors with 800 MHz System Bus and Improved Storage and I/O



The Intel® Server Compute blade SBX82 is powered by the Intel® Xeon™ processor with 800 MHz system bus for greater performance, memory addressability, and I/O bandwidth.

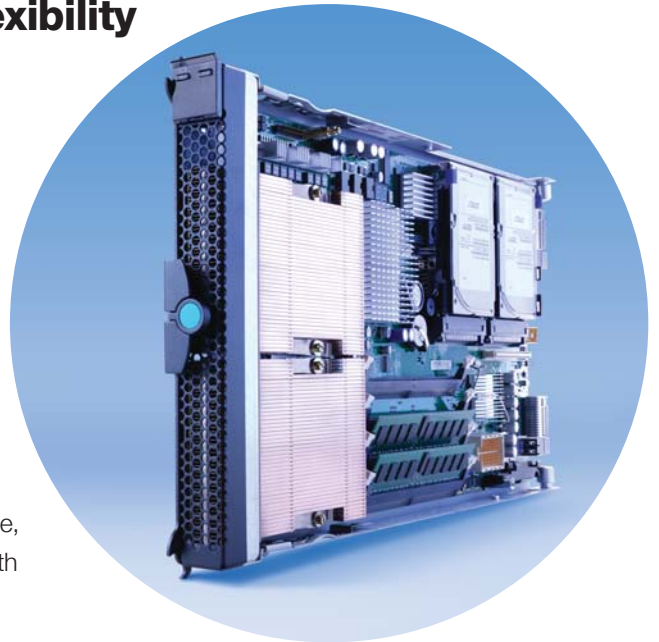
## Outstanding Performance and I/O Flexibility

The Intel® Server Compute Blade SBX82 gives busy IT professionals a way to further compress data center space and simplify infrastructure management by moving their highest performance, most data-intensive applications to a blade form-factor. This new server blade accommodates two Intel® Xeon™ processors running on an 800 MHz system bus and features up to 8 gigabytes (GB) of addressable memory and flexible I/O and storage expandability. You can add Gigabit Ethernet cards without moving the hard drives, and you can add a storage expansion module that will give you more Fibre Channel and Gigabit Ethernet storage choices.

### A Look Inside

The Intel Server Compute Blade SBX82 is designed for high-performance, I/O-intensive applications that require fast response times, high-bandwidth memory, flexible I/O, and abundant storage. This dual-processor server blade features:

- Support for one or two Intel Xeon processors with 800 MHz system bus starting at 3.20 GHz with 1 MB cache
- 800 MHz front-side bus
- Intel® EM64T allows greater application flexibility with 64-bit memory addressability
- Intel® E7520 chipset support: up to 8 GB memory, two-way interleaved DDR2 memory
- Two 1-Gigabit Ethernet channels
- Up to two integrated 2.5" SCSI drives: HW RAID (1), Ultra 320 HDDs, two HDDs, and simultaneous I/O card
- New blade storage expansion module
- Hot-plug connection for fast, easy service



**The Intel® Server Compute Blade SBX82 provides high-end dual-processor performance, plenty of storage, and flexible I/O in a thin, easily deployed module.**



### Powered by the Intel® Xeon™ Processor

The new Intel Xeon processor with 800 MHz system bus provides greater performance, memory addressability, and I/O bandwidth than earlier Intel Xeon processors—providing faster response times, support for more users and data, and reduced costs per transaction. It features Intel® Extended Memory 64 Technology, which offers compatibility with today's vast ecosystem of IA-32 software, support for increased system memory addressability, and a pathway to upcoming 64-bit-enabled applications. Enhanced Intel® SpeedStep® Technology reduces average power consumption while maintaining application performance.

### Features

**Support for one or two Intel® Xeon™ processors starting at 3.20 GHz with 1 MB cache running at 800 MHz front-side bus**

**Intel® E7520 chipset with support for up to 8 GB memory, and two-way interleaved DDR2**

**Intel® Extended Memory 64 Technology**

**Dual 1 Gigabit Ethernet channels**

**Up to 2 integrated 2.5 SCSI drives**

**Blade storage expansion module (optional)**

### Benefits

More power, bandwidth, and processing performance to meet the demanding requirements of departmental workloads

Maximizes use of Intel® NetBurst® microarchitecture and Hyper-Threading Technology to deliver world-class performance for peak server workloads

Provides compatibility with IA-32 applications plus pathway to future 64-bit-enabled applications

Ethernet I/O for demanding, data-intensive applications

High performance small form factor SCSI hard drives (RAID 1 with 2 HDDs)

Ability to easily add hotswappable SCSI hard drives, and additional Ethernet, or Fibre Channel I/O for increased application performance (RAID 1E requires use of the HDDs on the SBX82 as well as the HDDs on the SBESCSI)

# Intel® Server Compute Blade SBX82

## I/O Flexibility to Support Your Business Needs

The Intel Server Compute Blade SBX82 comes with two integrated 1-Gigabit Ethernet channels. This new compute blade has the ability to add two more Gigabit Ethernet channels or two Fibre Channel ports without loss of redundant hard drive capacity.

## Storage and I/O Expansion Module

When you combine the Intel Server Compute Blade SBX82 with the new Intel® Blade Storage Expansion Module SBESCSI, you can add two hot-swap SCSI hard drives plus additional I/O ports. The ability to easily add I/O capacity to the storage expansion module allows you to accommodate more data and provide increased overall system performance.

Upgrade to Fibre Channel connectivity by installing the Intel® Blade Server Fibre Channel Expansion Card SBFEFCM, a 2-Gigabit Fibre Channel Host Bus Adapter, and the Intel® Blade Server Fibre Channel Switch Module SBCEFCSW.

Add additional high-speed Ethernet connections by using the Intel® Blade Server Ethernet Switch Module and Intel® Blade Server Ethernet Expansion Card.

## More Storage on the Blade

The Intel Server Compute Blade SBX82 comes with two integrated SCSI hard drives. These two SCSI drives provide plenty of high-speed storage for applications requiring fast, local access to hard drive data. The new storage expansion module provides the flexibility to add two hot-swap SCSI drives as well as Ethernet and Fibre Channel connectivity. The compute blade and expansion module accommodate four additional Gigabit Ethernet channels or four additional Fibre Channel ports or a combination of two Gigabit Ethernet and four Fibre Channel ports.

## Convenient Blade Management

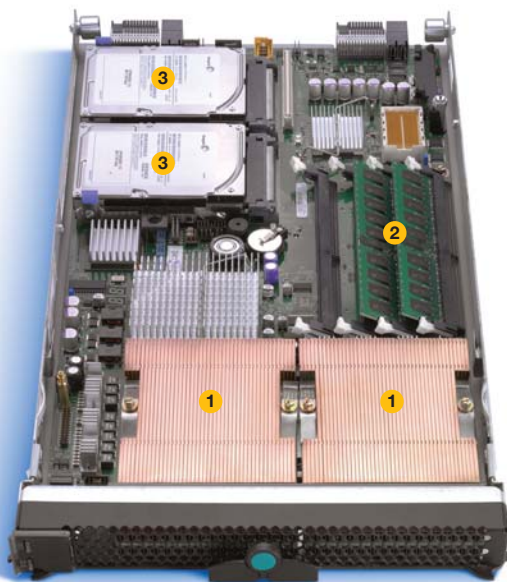
The Intel Server Compute Blade SBX82 contains a service processor that provides monitoring and control functionality as well as access to sensor information, server event logs, and field replaceable units (FRU) catalog information.

The Intel® Server Management Module SBCECMM, integrated into the Intel® Server Chassis SBCE, streamlines and simplifies the management of all 14 server blades in a single Intel chassis. The management module allows you to configure multiple Intel Server Compute Blades in one easy step via an easy-to-use Web browser-based user interface. Additionally, it provides standards-based interfaces for ease of integration into today's enterprise management consoles.

The Intel® Server Compute Blade SBX82 provides exceptional I/O and storage flexibility in a dual-processor blade.



The new Intel® Blade Storage Expansion Module SBESCSI allows you to add two hot-swap SCSI drives plus two I/O cards.



## Intel® Server Compute Blade

- 1 Intel® Xeon™ processors with 800 MHz system bus
- 2 Intel® E7520 chipset with support for up to 8 GB memory, two-way interleaved DDR2 memory
- 3 Up to 2 integrated 2.5 SCSI drives

# Intel® Server Compute Blade SBX82 Specifications

Microprocessor	
Supports up to 2 microprocessors	Intel® Xeon™ with 800 MHz system bus at 3.20 GHz, 1MB L2 cache or faster
Memory	
Four double data rate (DDR2)	
Memory Capacity	Support for 512 MB to 8 GB
DIMM Sizes	256 MB, 512 MB, 1 GB, 2 GB
Memory Type	2-way interleaved, DDR2-400, PC3200, ECC SDRAM registered DIMMs only
Drives	
Support for up to two internal 2.5-inch hard disk drives	
Support for up to two Ultra320 SCSI hot-swap hard disk drives (80-pin, SCA-2 connectors) available in an optional blade storage expansion module which connects to the server blade. Maximum data transfer: 320MB/sec on each Ultra 320 LVD channel. Supports RAID-1 or RAID-1E with the blade storage expansion module.	
Size	
Height	24.5 cm (9.7 inches)
Depth	44.6 cm (17.6 inches)
Width	2.9 cm (1.14 inches)
Maximum weight	6.8 kg (15 lbs.)
Integrated Functions	
Two Gigabit Ethernet controllers support full duplex, Wake on LAN <sup>1</sup> , teaming and failover	
ATI Rage 7000M video controller	
Local service processor provides interface for communication with the Intel® Server Blade Chassis and the management module, system and environmental monitoring, event recording and alert capability	
Light-Guided Diagnostics (LED lights indicate failing component) Embedded diagnostics	
USB buses for communication with keyboard, mouse, diskette drive, and CD-ROM drive <sup>1</sup>	
Intel® E7520 Chipset	
Front Panel Buttons	
Keyboard/mouse	This button is for associating the keyboard port and mouse port with this blade server; the LED on this button flashes while the request is being processed, then is steady when ownership has been transferred to the blade server
Power Control Button	This button is located behind the control panel door; press this button to manually turn the blade server on or off
Video	This button is for associating the video port with this blade server; the LED on this button flashes while the request is being processed, then is steady when ownership has been transferred to the blade server

Front Panel LEDs	
Blade-error LED	When this amber LED is lit, it indicates that a system error has occurred in the blade server
Information LED	When this amber LED is lit, it indicates that information about a system error for the blade server has been placed in the system Error log
Location LED	When this blue LED is lit, it has been turned on remotely by the system administrator to aid in visually locating the blade server; the location LED on the SBCE unit will be on as well
Activity LED	When this green LED is lit, it indicates that there is a hard-disk-drive or network activity
Power-on LED	This green LED indicates the power status of the blade server in the following manner: <ul style="list-style-type: none"> <li>Flashing rapidly—the service processor on the blade server is handshaking with the SBCE management module</li> <li>Flashing slowly—the blade server has power but is not turned on</li> <li>Steady—the blade server has power and is turned on</li> </ul>

Input/Output	
Power, cooling, removable-media drives, external ports, and advanced system management are provided by the Intel® Server Chassis SBCE.	

Environment	
Air Temperature	Operating (system): 10°C to 35°C (50°F to 95°F); 0 to 914m (2998.69 ft) altitude Operating (system): 10°C to 32°C (50°F to 89.6°F); 914m to 2134m (2998.69 to 7000 ft.) altitude Non-operating (system): -40° to +60°C (-40° to +140°F)
Humidity	Operating: 8% to 80% Non-operating: 5% to 80%

Electrical Input	
Input Voltage	12 V dc

Safety Compliance	
USA:	UL 60950 – 3rd Edition/CSA 22.2. No. 60950
Canada:	cUL certified – 3rd Edition/CSA 22.2. No. 60950- for Canada (product bears the single cUL mark for U.S. and Canada)
Europe:	Low Voltage Directive, 73/23/EEC TUV/CB to EN60950 3rd Edition TUV/CB – EMKO-TSE (74-SEC) 207/94
International:	TUV/CB to IEC 60950 3rd Edition plus all international deviations
Australia/New Zealand:	CB Report to IEC 60950, 3rd Edition plus international Australia/New Zealand deviations

Electromagnetic Compatibility (EMC)	
USA:	FCC CFR 47 Part 2 and 15, Verified Class A Limit
Canada:	IC ICES-003 Class A Limit
Europe:	EMC Directive, 89/336/EEC EN55022, Class A Limit, Radiated & Conducted Emissions EN55024 ITE Specific Immunity Standard EN61000-4-2 ESD Immunity (Level 2 Contact Discharge, Level 3 Air Discharge) EN61000-4-3 Radiated Immunity (Level 2) EN61000-4-4 Electrical Fast Transient (Level 2) EN61000-4-5 AC Surge EN61000-4-6 Conducted RF EN61000-4-8 Power Frequency Magnetic Fields EN61000-4-11 Voltage Dips and Interrupts
Japan:	VCCI Class A ITE (CISPR 22, Class A Limit) IEC 1000-3-2 Limit for Harmonic Current Emissions EN61000-3-3 Voltage Flicker
Australia/New Zealand:	AS/NZS 3548, Class A Limit
Taiwan:	BSMI Approval
Korea:	RRL Approval
Russia:	Gost Approval

<sup>1</sup> The operating system in the blade server must provide USB support for the blade server to recognize and use the keyboard, mouse, CD-ROM drive, and diskette drive. The SBCE unit uses USB for internal communications with these devices.

For the most current product information on the Intel® Enterprise Blade Server Family, visit:  
<http://www.intel.com/go/enterpriseblades>



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