Intel® Server Board SBT2
for the Intel® Pentium® III Xeon™ Processor

High-Performance, Dual-Processing Server Board for Departmental and e-Business Infrastructure

Product Brief

- Supports Dual Pentium® III Xeon™ Processors for High Performance
- Integrated Ultra160 SCSI, Graphics, and Intel® Server Adapter
- Three-year Limited Warranty

Performance and High Availability for e-Business

High Performance

The Intel® Server Board SBT2 is a high-performance dual Intel® Pentium® III Xeon™ processor-based server board designed for departmental and e-Business infrastructure. Engineered for medium-sized business and workgroup environments, the SBT2 is highly expandable. It is an excellent choice for high-availability e-Business applications such as Web, database, departmental, and messaging servers.

Equipped for e-Business Growth Using Intel Server Technology

The SBT2 is a scalable server board that provides the performance needed for today's Internet economy. It supports up to two Intel® Pentium® III Xeon™ processors with a 133 MHz system bus for higher performance and reliability. For increased I/O performance, the SBT2 has seven PCI slots. Two are on a 64-bit, 66 MHz PCI bus, and one is configured for 64-bit/33 MHz[1] to provide added I/O throughput and accommodate faster peripherals. Additional server technologies such as the Intel® PRO/100+ Server Adapter, built-in server management, Ultra160 SCSI storage support, and up to 4 GB of PC133 ECC Registered SDRAM memory complete the SBT2 and help you stay ahead in the e-Business economy.

Service, Support, and Three-year Limited Warranty

Intel provides service options to system integrators and dealers on all Intel server building blocks[2], including a three-year, limited warranty and next-business-day replacement of in-warranty Intel server products and optional server spares kits to enable same-day service. In addition, Intel provides access to support personnel for assistance with technical questions, and dedicated Web sites such as support.intel.com and www.intel.com/go/serverbuilder.

Features	Benefits
Supports one or two boxed Intel® Pentium® III Xeon™ processors operating on a 133 MHz system bus. See http://support.intel.com/support/motherboards/server for additional details.	Provides peak performance and scalability for the most demanding server applications
Supports up to 4 GB of PC133 ECC Registered SDRAM memory, four DIMM sockets	Memory capacity to support a wide range of server tasks
Seven available PCI slots: two 64-bit/66 MHz, one 64-bit/33 MHz[1], and four 32-bit/33 MHz	Investment protection—room to grow with support for high-performance PCI cards
Two Independent PCI buses	Separate PCI buses eliminate data bottlenecks and increase bandwidth for data-intensive I/O
Two integrated 66 MHz SCSI channels: one Ultra160 LVD SCSI, and one Ultra Wide SE SCSI	Maximum data throughput due to independent SCSI channels
Integrated ATI Rage* IIC PCI graphics controller with 4 MB of memory	High-quality integrated video eliminates the need for a PCI video card
Integrated Intel® PRO/100+ Server Adapter (Intel® 82559 controller)	Excellent networking capabilities with widespread compatibility, scalable bandwidth and redundant links when teamed with another Intel server adapter
Advanced Intel® Server Management System **• ISC—Intel® Server Control software**	Reliability and server management capability that ensures maximum server availability
Three-year limited warranty	Peace of mind with Intel technology

[1] When 64-bit/33 MHz slot is used, all 64-bit slots and SCSI channels function at 33 MHz.
[2] Some restrictions apply. Not available in all countries.

Reliability, Availability, and Scalability

The Intel® SC5000 Server Chassis

The Intel® Server Board SBT2 was designed to work in tandem with the redundant hot-swap power supply configuration of the Intel SC5000 Server Chassis (Intel Order Code KHDHSRPU). With a 350-watt 1+1 power supply, six fans for ample cooling, up to ten hot-swap Ultra160 SCSI drive bays, and extensive international safety and EMC regulatory approvals, the SC5000 offers the added reliability, availability, and scalability that customers demand. The Intel® SC5000 server chassis can be installed in either pedestal or 5U rack form factor (rack upgrade kit is optional).

SC5000 Server Chassis Features

1. Five Ultra160 SCSI hard drive bays standard (with the Redundant Power configuration)
2. Ten Ultra160 SCSI hard drive bays with optional upgrade kit (Intel Order Code AHD2HSDRVUGU)
3. Redundant hot-swap 350-watt PFC power supplies
4. Six fans with EPAC ducting to channel air flow for system cooling
5. Robust security features with two locks and two intrusion sensors

The Boxed Intel® Server Board SBT2 Includes:

1. One SBT2 server board
2. Two retention mechanisms
3. One termination card for uni-processor configurations
4. One I/O shield, ATX 2.03-compliant
5. One hardware kit assembly
6. IDE cable and floppy cable
7. SBT2 adapter cable
8. Quick-Start Guide
9. One software kit assembly
10. CD-ROM with Intel Server Control software, configuration tools, software drivers, and technical product information
11. Two 80mm fans
12. Two fan brackets
13. One pair of EPAC air ducts

Complete Your Intel® Server Board SBT2 with Intel Server Building Blocks

Intel® Pentium® III Xeon™ Processors

The Pentium® III Xeon™ processor provides peak performance and scalability for the most demanding server applications and gives your customers the reliability, flexibility, and headroom necessary for e-Business transaction surges.

Intel® Server Management.

Intel® Server Control (ISC) monitors key server components and fixes many problems automatically, keeping your customers up and running.

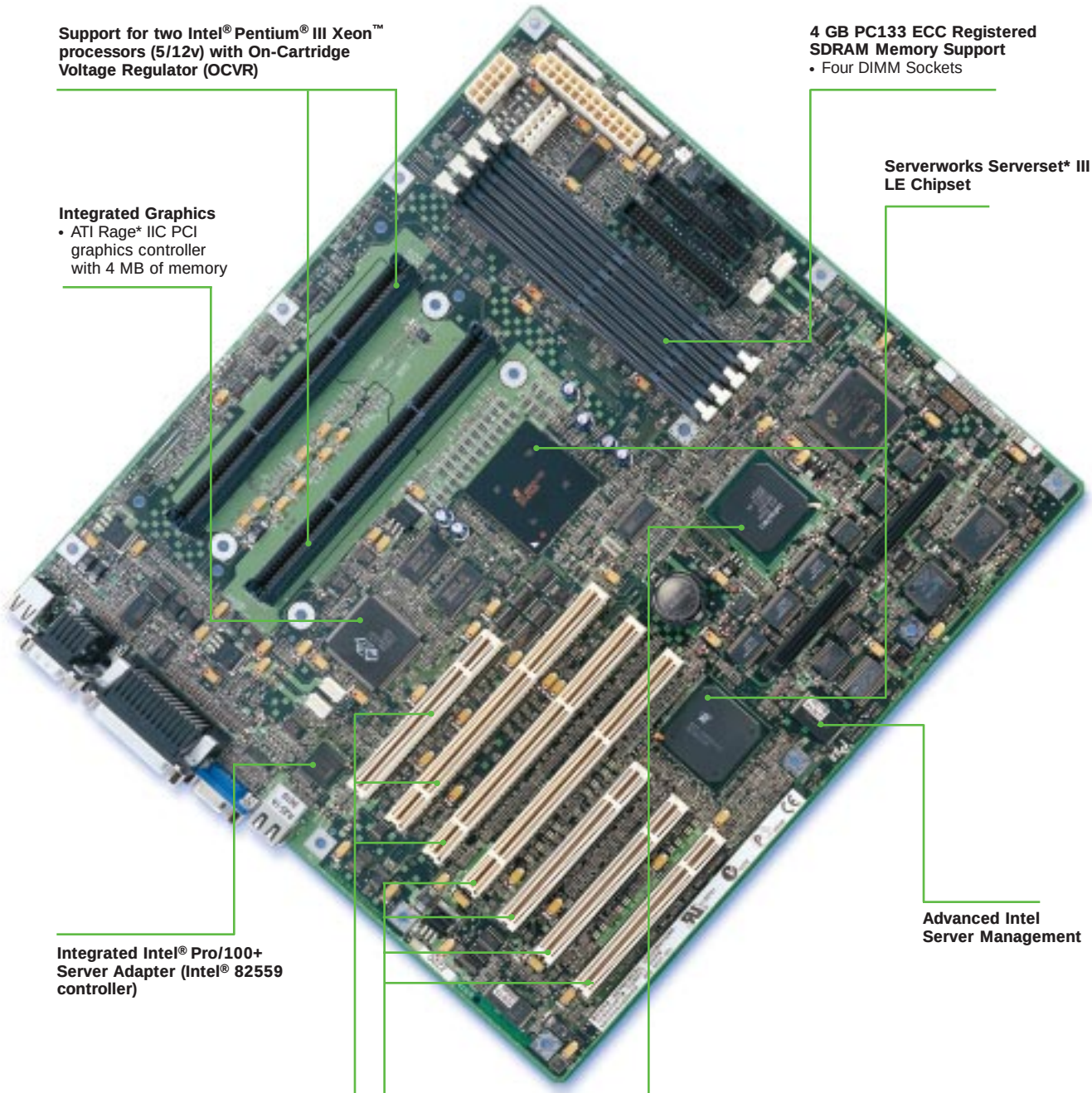
Intel® Server RAID Controllers.

Intel® Server RAID Controllers help protect data, applications, and the server operating system from disk failures. Equipped with RAID Levels 0, 1, 5, and 10, Intel Server RAID Controllers are well suited for applications that require high availability.

Intel® Server Adapters.

Maximize server availability, increase serviceability, and reduce bottle-necks with Intel® Server Adapters.

Intel® Server Board SBT2 for Intel® Pentium® III Xeon™ Processor



Support for two Intel® Pentium® III Xeon™ processors (5/12v) with On-Cartridge Voltage Regulator (OCVR)

4 GB PC133 ECC Registered SDRAM Memory Support
- Four DIMM Sockets

Serverworks Serverset* III LE Chipset

Integrated Graphics
- ATI Rage* IIC PCI graphics controller with 4 MB of memory

Advanced Intel Server Management

Integrated Intel® Pro/100+ Server Adapter (Intel® 82559 controller)

Two PCI buses and seven available PCI slots
- Two 64-bit/66 MHz PCI slots
- One 64-bit/33 MHz PCI slot
- Four 32-bit/33 MHz PCI slots

Integrated SCSI
- Adaptec* AIC7899 dual-channel SCSI controller
- One Ultra160 channel
- One Ultra Wide channel

Intel® Server Board SBT2 Specifications

Processor & Chipset

Processors Supported Intel® Pentium® III Xeon™ processors (5/12v) operating on the 133 MHz system bus only (600+MHz) with OCVR (SC330.1)

866 MHz/256k Cache	BX80526KB866256
933 MHz/256k Cache	BX80526KB933256
1000 MHz/256k Cache	BX80526KB001256

For the latest processor support go to: **http://support.intel.com/support/motherboards/server/**

Chipset Serverworks Serverset* III LE

System Memory

Memory Capacity Four DIMM sockets for up to 4 GB of ECC Registered PC133 SDRAM: (64 MB minimum, using one 64 MB module)

Memory Type PC/133 133 MHz SDRAM meeting the JEEDEC Spec with CAS latency of 3, 72-bit, 168-pin gold-plated registered DIMMs

DIMM Sizes 64 MB, 128 MB, 256 MB, 512 MB, 1 GB

Memory Voltage 3.3V only

Error Detection Corrects single-bit errors, detects double-bit errors (using ECC memory)

Integrated Onboard

SCSI Controller Integrated Adaptec* AIC7899 Dual-Channel, one Ultra160/LVD channel, one Ultra Wide channel. Two 68-pin "wide" SCSI connectors. Max data transfer: 160 MB /sec on Ultra160/LVD channel

Network Adapter Integrated Intel® Server Adapter. One Intel® PRO/100+ Controller (Intel® 82559). Supports 10BASE-T and 100BASE-TX, RJ45 output.

Graphics ATI Rage* IIC SVGA PCI video controller with 4 MB of video memory

Super I/O Integrated National Semiconductor* PC973177 Super I/O with support for: two asynch, RS-232C, 9-pin serial ports, and one IEEE 1284, 25-pin bi-directional parallel port

Floppy controller 1.44 MB, 2.88 MB, 3-mode support keyboard/mouse PS/2, 8259A IO PIC interface

Integrated Input/Output

PCI Seven total: two 64-bit/66 MHz, one 64-bit/33 MHz, four 32-bit/33 MHz

IDE One enhanced IDE channel supporting two IDE devices

USB Two stacked USB connectors

System BIOS

BIOS Type 1 Mb Flash EEPROM with Intel Phoenix* BIOS, Multi-boot BBS (BIOS Boot Specification) 1.0-compliant

Special Features Plug and play, IDE CD-ROM drive recognition, SMBios 2.3, ECC/parity support, and CMOS multilingual support

Configuration Utilities System Setup Utility (SSU) enables easy system setup of BIOS and utilities

Jumpers and Front Panel Connectors

Connectors Reset, power LEDs, power on/off

Jumpers Processor frequency, Boot recovery, CMOS clear, password protect

Mechanical

Server Board Style Designed for the Intel® SC5000 Server Chassis

Server Board Size 12" x 13"

Server Board Power Requirements

+5V	7.96A maximum continuous current (includes 1.5A for mouse, keyboard, and USB; does not include processor or memory power requirements)
+5V stby	.5A maximum continuous current
+12V	0 maximum continuous current
+3.3V	4.24A maximum continuous current
-5V	0 maximum continuous current
-12V	0 maximum continuous current

Server Management Instrumentation[3]

Failure Detection Voltage, thermal, operating-system, watchdog, fan failure, processor status, ECC memory, fan status

Event Logging Non-volatile storage to prevent loss of logs in the event of system failure

Security Chassis intrusion detection, video blanking, password protection .

Intel® Server Control (ISC), Version 2.4

Managed Server Operating systems supported:
Microsoft Windows* 2000 Advanced Server
Microsoft Windows* NT* Server 4.0 SP6A
Novell NetWare* 4.2, 5.0
SCO UnixWare* 7.1
Red Hat* Linux 6.1

Management Consoles Supported ISC integrates into the leading management consoles: Intel® LANDesk® Server Manager 6.10, HP OpenView* Network Node Manager 5.02 for Microsoft Windows* NT, CA Unicenter TNG* Framework 2.02 for Microsoft Windows* NT

Alert Notification Network broadcast, SNMP trap, writing into server OS log, writing into system event log (non-volatile storage), message box

Critical Event Actions Graceful operating system shutdown with reboot or power-off at administrator's discretion. Immediate power-off reset, or NMI

Environment

Ambient Temperature	
Operating	+10°C to +35°C
Non-operating/storage	-40°C to +70°C ambient
Relative Humidity	
Non-operating	95% @ 30°C non-condensing

Product Regulations

Safety Compliance:	
U.S. & Canada	UL/CUL 950-CSA 950 (UL Mark)
Europe	EN60950 (CE Mark—EU Directive 73/23/EEC)
Russia	EN60 950 (GOST-R Mark)
International	IEC60 950

EMI Verification—configured in a compatible[4] Intel host system

U.S.	Verified to FCC, Class A
Canada	Verified to ICES-003, Class A
Europe	Verified to EN55022 and EN55024 (CE Mark—EU Directive 89/336/EEC)
Russia	Verified to EN55022, EN55024 (GOST-R Mark)
International/Japan	Verified to CISPR-22/VCCI, Class A
Australia/New Zealand	Verified to AS/NZS 3548, Class A (C-tick Mark)

Intel Product Ordering Codes

Server Board SBT2	**SBT2**
SC5000 Redundant Power	**KHDHSRPU**
SC5000 Rack Upgrade Kit	**AHDRACK**
SC5000 10 Hot-swap Drive Bay Upgrade Kit	**AHD2HSDRVUGU**
Boxed Processors supported:	
866 MHz/256k Cache	**BX80526KB866256**
933 MHz/256k Cache	**BX80526KB933256**
1000 MHz/256k Cache	**BX80526KB001256**

For the most current product information on all of Intel's server building blocks, visit Intel's Web site at:
www.intel.com/go/serverbuilder

[3] Full utilization of some Server Management features is dependent on the use of an Intel® server chassis.
[4] Compatible host system denotes the system(s) Intel tested the board in and found compliant. Regulatory Certifications are obtained by reference to "SBT2" and/or "133-659719-X-XX-XXX."

0800/JL /DMW/MD/PP/23K

Intel Literature Center: 1-800-548-4725
ORDER NUMBER 283259-001