Intel® Server Board SCB2

Powerful, Rack-Optimized Server Board for
Reliable High-Density Solutions

- Dual Intel® Pentium® III
  Processors with 512-KB
  Cache Support

- Triple Peer PCI Buses

- Advanced Intel® Server
  Management

intel®

Performance and High Availability for e-Business

High-density rack-mount (HDRM) servers are emerging as one of the strongest segments in the entry-level server space. Their thin, rack-mount design saves space and simplifies the installation, operation, and maintenance of co-located systems. For dependable, manageable rack-mount servers, be sure to use Intel® server building blocks, including the new Intel® Server Board SCB2.

Powerful, Rack-Optimized Server Board

The Intel Server Board SCB2 accommodates up to two Intel® Pentium® III processors with 512-KB L2 cache, providing powerful performance for demanding server workloads. Two independent 64-bit/66-MHz buses, one independent 32-bit/33-MHz bus, and a Triple Peer PCI architecture enable high, balanced I/O throughput. Six DIMM sites allow for up to 6 GB ECC SDRAM for memory-intensive applications. All component locations and design are thermally optimized for 1U and 2U rack systems.

Designed for Reliable High-Density Solutions

The Intel Server Board SCB2 delivers outstanding reliability for high-density solutions such as the following:

- Application hosting
- Messaging
- Proxy
- Security
- Voice Over IP (VOIP)
- Cache
- Multimedia
- Search Engine
- Virtual Private Networks (VPN)
- Web hosting

Features	Benefits
Supports one or two Intel® Pentium® III processors with up to 512-KB L2 cache	Processing performance for demanding server applications
1U system: one full-length 64-bit/66-MHz and one low-profile 64-bit/66-MHz PCI slot on two independent PCI buses	Room for two high-throughput adapter cards operating on separate buses
2U system: up to three full-length 64-bit/66-MHz and three low-profile 64-bit/66-MHz PCI slots on two independent PCI buses	Room for six high-throughput adapter cards with I/O balanced across multiple buses
Supports up to 6 GB of PC133 ECC SDRAM memory with six DIMM sockets	Memory flexibility to support a wide range of server solutions
Dual (two-way) interleaved memory	High-performance memory subsystem with up to 2.1 GB/sec of data transfer
Triple Peer PCI buses	Bandwidth for intensive I/O needs
Two integrated Intel® PRO/100+ Server Adapters (Intel® 82550PM controller)	Excellent networking capabilities with widespread compatibility, scalable bandwidth, and redundant links
Option of dual-channel Ultra160 SCSI or dual-channel ATA/100 RAID	Option of advanced SCSI technology or high-quality ATA RAID controller
Integrated ATI* Rage* XL video controller with 8 MB of video memory	High-quality video without the need for a video adapter card
Advanced Intel® Server Management	Integrated remote management, event alerting, and proactive fault management
Three-year limited warranty	Peace of mind

Intel® Server Board SCB2 for the Intel® Pentium® III Processor with 512-KB Cache

Support for two Intel® Pentium® III processors
with 512-KB cache

Up to 6 GB of 133 ECC
registered SDRAM
Dual interleaving for up to
2.1 GB/sec data transfer

ServerWorks* Enterprise
ServerSet* III HE-SL

Two Intel® Pro/100+
Server Adapters
Intel® 82550PM Controller

Triple Peer PCI, up to
six PCI slots on risers in
a 2U system:
• Bus A: 32-bit/33-MHz
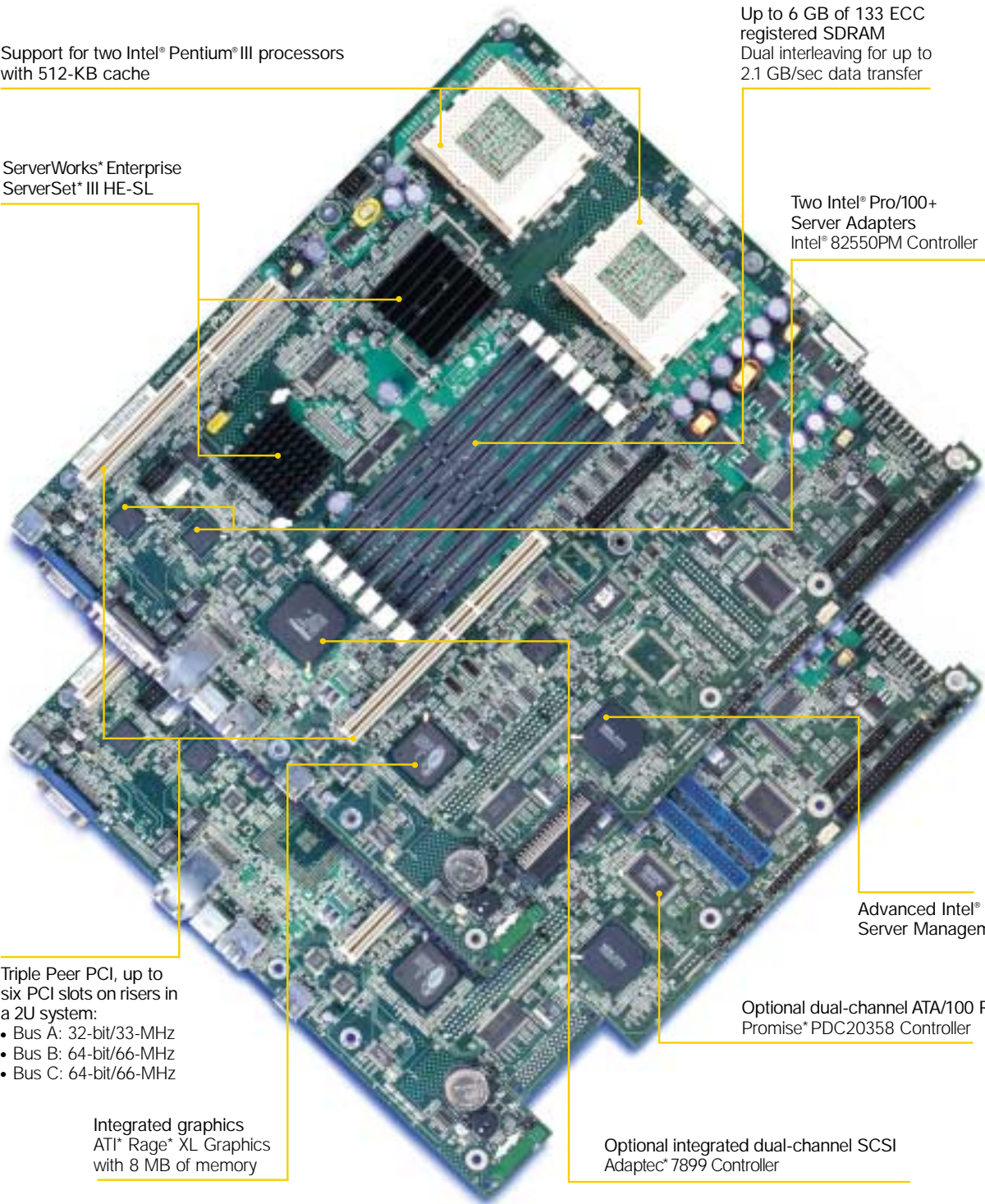• Bus B: 64-bit/66-MHz
• Bus C: 64-bit/66-MHz

Advanced Intel®
Server Management

Optional dual-channel ATA/100 RAID
Promise* PDC20358 Controller

Integrated graphics
ATI* Rage* XL Graphics
with 8 MB of memory

Optional integrated dual-channel SCSI
Adaptec* 7899 Controller

The Boxed Intel® Server Board SCB2

Included for easy integration:

1. One Intel® Server Board SCB2

2. Quick-Start User Guide

3. CD-ROM with server management tools, software drivers, configuration tools, and technical product information

4. One termination card for uni-processor configuration

5. Cable kit

6. SSI Thin E-Bay-compliant I/O Shield

7. Board layout sticker

Build Value with Intel: Server Products, Programs, and Support

Intel is committed to providing industry-leading server building blocks, programs, and support services to help system integrators successfully compete in the evolving Internet economy. Get the high-value server solutions you need to succeed by taking advantage of the outstanding value Intel provides its system integrators:

- High-quality server building blocks
- Extensive breadth of server building blocks
- Solutions and tools to enable e-Business
- Comprehensive training services
- Worldwide 24x7 technical support
- World-class service, including a three-year limited warranty and Advanced Warranty Replacement

For more information on Intel's added-value server offerings please visit:

www.intel.com/go/serverbuilder

Complete Your Intel® Server Board SCB2 with Intel Server Building Blocks

Add the following Intel building blocks to your Intel Server Board SCB2 to ensure a highly reliable, available, and scalable server:

Intel® Server Chassis SR1200 is a 1U rack chassis designed specifically for the Intel® Server Board SCB2. The high-density Server Chassis SR1200 delivers:

- Two PCI risers with two total 64-bit/66-MHz slots
- Three 1-inch hot-swap SCSI or cold-swap ATA drive bays
- 250W PFC AC power supply (non-redundant), -48V DC option

Intel® Server Chassis SR2200 is a 2U rack chassis designed specifically for the Intel® Server Board SCB2. The high-density Server Chassis SR2200 delivers:

- Two PCI risers with six total 64-bit/66-MHz slots
- Seven 1-inch hot-swap SCSI drive bays
- 350W PFC AC power supply (redundant module optional), -48V DC option

Intel® Pentium® III Processors provide powerful performance to meet the needs of your server customers and gives them the reliability, flexibility, and headroom necessary for e-Business transaction surges.

Intel® Server Management monitors key server components and fixes many problems automatically, keeping your customers up and running. It offers key high-availability features including:

- Integrated remote management
- Event alerting and logging
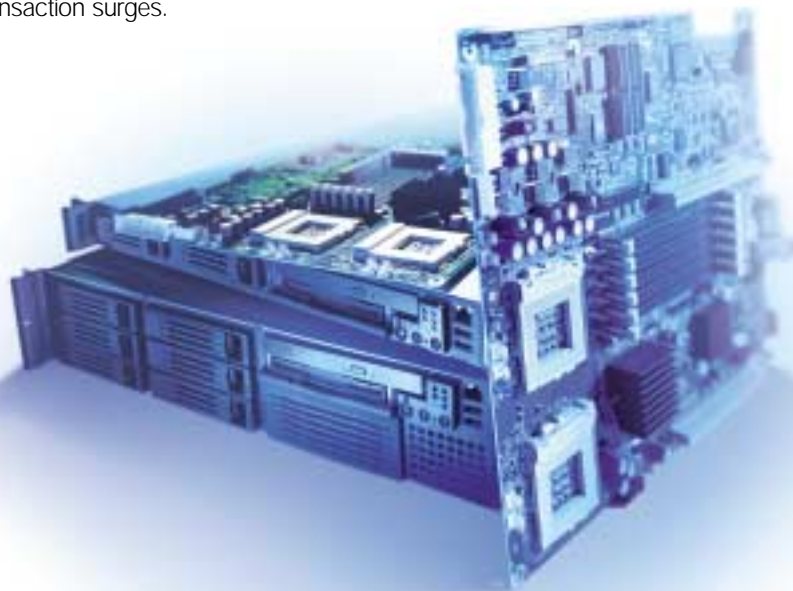- Proactive fault management

Intel® Server Management is included with every boxed Intel® Server Board SCB2 at no additional cost.

Intel® RAID Controllers are designed to protect data, applications, and the server operating system from disk failures. Intel offers an affordable high-performance line of RAID products, which are tested and validated for easy integration with Intel server building blocks.

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

Intel® Server Board SCB2 Specifications

Processor/Cache

Processors Supported
Intel® Pentium® III processors with up to 512-KB of integrated L2 cache.

For the latest processor support, visit: http://support.intel.com/support/motherboards/server

System Memory

Memory Capacity
Six DIMM sockets for up to 6 GB of PC133 SDRAM (64 MB to 1 GB DIMMs supported; memory must be populated in pairs)

Memory Type
PC/133 registered SDRAM 72-bit ECC, 168-pin gold-plated 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 On Board

Chipset
ServerWorks* Enterprise ServerSet*III HE SL

Ultra160 SCSI Controller
Adaptec* AIC7899 Dual Channel—two Ultra160/LVD channels (connect via one internal 68-pin wide connector, and one 68-pin high-density external SCSI connector)

Maximum data transfer: 160 MB/sec on each Ultra160/LVD channel

ATA/100 RAID Controller
Promise Technologies* PDC20267 ATA/100 IDE RAID controller provides two channels of ATA/100 IDE that can be configured into either RAID level 0 or RAID level 1

Maximum data transfer: 100 MB/sec on each ATA/100 channel.

Intel® Server Adapter
Two Intel® PRO/100+ Fast Ethernet Controllers (Intel® 82550PM)

Supports 10BASE-T and 100BASE-TX, RJ45 output

Graphics
ATI* Rage* XL SVGA PCI video controller with 8 MB of video memory

Super I/O Controller
National* PC97317*

Input/Output Features

PCI
Triple Peer PCI, up to six PCI slots on risers in a 2U system
- Bus A: 32-bit/33-MHz
- Bus B: 64-bit/66 MHz
- Bus C: 64-bit/66-MHz

IDE
One EIDE channel for a total of two IDE devices

USB
Two stacked USB connectors

Serial ports
External RJ45 serial, Internal COM1 header

Floppy Controller
1.44 MB, 2.88 MB, 3-mode support

Keyboard/Mouse
PS/2, 8240A-compatible

Server Management Features[1]

Remote Management
Remote access to system status, logs, configuration data, and utilities–without a remote management card

Event filtering and alerting through proactive LAN and mobile devices

System Monitoring and Auto-recovery
System health indicators and corrective actions including:
- Automated power cycling
- OS watchdog timer
- Fault-resilient booting

Server Troubleshooting
Continuous health monitoring, text console redirection, and error logs

Operating Systems Supported
Microsoft* Windows* 2000, Microsoft* Windows NT*, Red Hat* Linux*, SCO UnixWare*, and Novell* NetWare*

System BIOS

BIOS Type
8 MB Flash EEPROM with AMI* BIOS, Multi-boot BBS (BIOS Boot Specification) 1.4-compliant

Special Features
Plug and Play, IDE drive auto-configure, SMBIOS 2.3, ECC/Parity support, multilingual support

Configuration Utilities
System Set-up Utility (SSU) enables easy system setup of BIOS and utilities, Plug and Play

Jumpers and Front Panel Connectors

Front Panel Connectors
Power LED, power on/off switch, reset

Jumpers
CMOS clear, password clear, BMC boot write protect, BIOS recovery

Mechanical

Server Board Style
SSI Thin E-Bay

Server Board Size
12" x 13"

Server Board Power Requirements

+5V	7.06A maximum continuous current
+5V standby	1.54A minimum continuous current
+12V	5.0A maximum continuous current
+3.3V	12.0A maximum continuous current
-5V	0 maximum continuous current
-12V	0.25A maximum continuous current

Environment

Ambient Temperature[2]
Operating (system): 10°C to +35°C
Non-operating/storage (system): -40°C to +70°C ambient

Relative Humidity
Non-operating: 95%, non-condensing @ 30°C

Product Regulations

Safety Compliance:

	UL/CUL 950-CSA 950 (UL Recognition Mark)
Europe/Russia	EN60950; CE Mark–EU Directive 73/23/EEC; GOST-R Mark
International	IEC60950

EMI Verification—configured in a compatible[3] Intel host system

U.S.	Verified to FCC, Class A
Canada	Verified to ICES-003, Class A
Europe/Russia	Verified to EN55022 (Class A) and EN55024 (CE Mark—EU Directive 89/336/EEC)/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)

Recommended Configurations and Order Codes

The following table provides several suggested configurations for 1U and 2U systems. Please visit www.intel.com/go/serverbuilder for the most recent product updates.

	1U System with Integrated SCSI	1U System with Integrated ATA/100 RAID	2U System with Integrated SCSI	2U System with Integrated ATA/100RAID
Intel® Server Board SCB2	SCB2SCSI	SCB2ATA	SCB2SCSI	SCB2ATA
Intel® Server Chassis SR1200 (1U rack) or SR2200 (2U rack)[4]	KCR[5]	KCR[5]	KSN[5]	Reference Chassis only[4]
Chassis Backplane (required)	BCR1USBPWB	BCR1UABPWB	Included with chassis	—
Redundant Power Module (optional)	N/A	N/A	AXX2PSMODL350	—
Sliding Rails (optional)	AXX1U2URAIL	AXX1U2URAIL	AXX1U2URAIL	—
CD-ROM/Floppy Module (optional)	AXXCDFLOPPY	AXXCDFLOPPY	AXXCDFLOPPY	—
Locking Bezel (optional black or beige)	ACRBEZBLACK or ACRBEZBEIGE	ACRBEZBLACK or ACRBEZBEIGE	ASNBEZBLACK or ASNBEZBEIGE	—
ICMB Board Assembly (optional)	AXX2ICMBKIT	AXX2ICMBKIT	AXX2ICMBKIT	AXX2ICMBKIT
RJ45 to DB9 Serial Connector Converter	AXXRJ45DB9	AXXRJ45DB9	AXXRJ45DB9	AXXRJ45DB9
Chassis Spares Kits	FCRSPRKIT	FCRSPRKIT	FSNSPRKIT	—
Intel® RAID Controller SRCMR (modular ROMB)[6]	SRCMR	—	SRCMR	—
Intel® Server RAID Controller SRCU31L (low profile)[6]	—	SRCU31L	—	SRCU31L
Intel® PRO/1000 XT Server Adapter (low profile)[6]	PWLA8490XTL	PWLA8490XTL	PWLA8490XTL	PWLA8490XTL

1. Full utilization of some server management features is dependent on the use of an Intel® server chassis.
2. Environment ambient temperature is the system intake measurement for an Intel® Server Board SCB2 installed in an Intel® Server Chassis SR1200.
3. Compatible host system denotes the system(s) with which Intel tested the board and found it compliant.
4. See http://support.intel.com for a complete list of Intel and third-party compatible chassis.
5. The order code listed is for a chassis with an AC power supply. See www.intel.com/go/serverbuilder for ordering information with respect to the –48V DC power supply.
6. See http://support.intel.com for a complete list of validated Intel and third-party adapter cards.

For the most current product information on Intel server building blocks, visit: www.intel.com/go/serverbuilder

Intel Literature Center: 1-800-548-4725
ORDER NUMBER 283951-001

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