

Intel® Server Board SAI2

Economical, Dual Intel® Pentium® III Processor-Based
Server Board for Small and Medium-Sized Businesses

Product Brief

- Intel® Pentium® III Processor with 512-KB Cache Support
- Dual Peer PCI Buses
- Up to 4 GB of PC133 SDRAM

The Intel logo is displayed in white lowercase letters on a blue background. The background of the entire page is a close-up photograph of a server board, showing various components like capacitors, a heat sink, and circuit traces.

Value and Versatility for Small and Medium-Sized Businesses

The Intel® Server Board SAI2 is an economical server board with support for two Intel® Pentium® III processors with 512-KB of L2 cache and 4 GB of PC133 ECC SDRAM memory. With their increased L2 cache, these processors help provide the performance headroom your customers require to meet a wide range of e-Business needs. The Server Board SAI2 provides the power of dual Intel® Pentium® III processors and excellent quality, without the higher cost usually associated with higher performance.

Flexibility to Meet Your Customers' Needs

The Server Board SAI2 is a highly versatile server board that can be easily configured to meet the unique needs of a variety of customers. With integrated dual ATA/100 IDE controllers and local server monitoring, the Server Board SAI2 provides just the right level of features for an emerging e-Business. A second version, including an LSI Logic* LSI20160 SCSI Adapter in the box¹, provides the flexibility and processing power of the SAI2 with the performance and reliability of a single channel Ultra160 SCSI card in an easy to order SKU.



LSI Logic* LSI20160 SCSI Adapter



The Server Board SAI2 is validated with the Intel® Server Chassis SC5100 (base configuration only) and is supported by a number of third-party reference chassis, enabling you to further customize solutions for many customer applications. Add to this an expansive list of third-party peripherals, add-in cards, and memory options, and you have a flexible server board that can support a variety of customer needs.

Features

Benefits

Supports one or two boxed Intel® Pentium® III processors with 512-KB L2 cache	Powerful processing performance for demanding server applications
Supports up to 4 GB of PC133 ECC SDRAM, four DIMM sockets	Memory capacity to support a wide range of server tasks; four DIMM slots allow you greater flexibility to configure memory to suit your customers' needs
Six available PCI slots (two 64-bit/66-MHz, four 32-bit/33-MHz)	Investment protection—room to grow with support for high-performance PCI cards
Dual Peer PCI buses	Separate PCI buses can eliminate data bottlenecks and increase bandwidth for intensive I/O needs; up to 660 MB/sec of peak data transfer throughput
Dual integrated ATA/100 IDE controllers	High-performance IDE storage
Integrated ATI® Rage® XL PCI graphics controller with 8 MB of memory	High-quality integrated video eliminates the need for a PCI video card
One integrated Intel® PRO 82559 server Ethernet controller	Excellent networking capabilities with widespread compatibility, scalable bandwidth
Integrated processor termination for uniprocessor configurations	No added expense for uniprocessor configurations
Local server monitoring	Alerts you to many potential issues with your server
Order code SAI2SCSI includes an LSI Logic* LSI20160 single channel Ultra160 SCSI adapter ¹	Two boxed product options provide easy flexibility
Three-year limited warranty	Peace of mind

¹ The Intel Server Board SAI2 with SCSI Adapter included is scheduled to be generally available in Q1 2002. Please visit www.intel.com/go/serverbuilder for additional details.

Economical Solutions for Your Server Requirements

Designed to support the needs of small and medium-sized businesses, the Server Board SAI2 is customizable for a variety of uses. With a wide assortment of validated Intel and third-party building blocks, the Server Board SAI2 can be configured to meet the unique needs of your customers. The Server Board SAI2 provides a solid foundation on which to build a wide variety of servers including: Print, File, Small business database, Firewall, Proxy, and Intranet web.

The Server Board SAI2 offers the processing power to speed many customer applications; customers requiring the remote management features offered by Intel® Server Management may want to consider other server boards from the broad family of Intel building blocks. Visit www.intel.com/go/serverbuilder for details. The following table is useful in ensuring that the proper board is selected:

Customer Requirement	Intel® Server Board SAI2 ATA	Intel® Server Board SAI2 with SCSI Adapter included ¹	Intel® Server Board SDS2 ²
Intel® Pentium® III processor with 512-KB L2 cache performance	Single or dual	Single or dual	Single or dual
Memory-intensive applications	Up to 4 GB of PC133 memory; single memory channel	Up to 4 GB of PC133 memory; single memory channel	Up to 6 GB of PC133 memory; dual memory channels
ECC memory integrity	Yes	Yes	Yes
Integrated 10/100 Ethernet	Single (server Ethernet controller)	Single (server Ethernet controller)	Dual (server Ethernet controllers)
Ultra160 SCSI	No (additional adapter required)	Yes (with included single channel adapter)	Yes, dual channel (integrated on board)
I/O performance	Dual Peer PCI with one 64-bit/66-MHz bus and one 32-bit/33-MHz bus	Dual Peer PCI with one 64-bit/66-MHz bus and one 32-bit/33-MHz bus	Triple Peer PCI with two 64-bit/66-MHz buses and one 32-bit/33-MHz bus
Advanced server management	No (basic monitoring only; no remote management)	No (basic monitoring only; no remote management)	Yes (including remote monitoring and management)

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

² The Intel Server Board SDS2 is scheduled to be generally available in Q1 2002. Please visit www.intel.com/go/serverbuilder for additional details.

Intel® Server Board SAI2 for the Intel® Pentium® III Processor

Support for two Intel® Pentium® III processors
512-KB L2 cache

Up to 4 MB PC133 ECC registered
SDRAM memory support
Four DIMM sockets

Integrated Intel® PRO 82559
server Ethernet controller

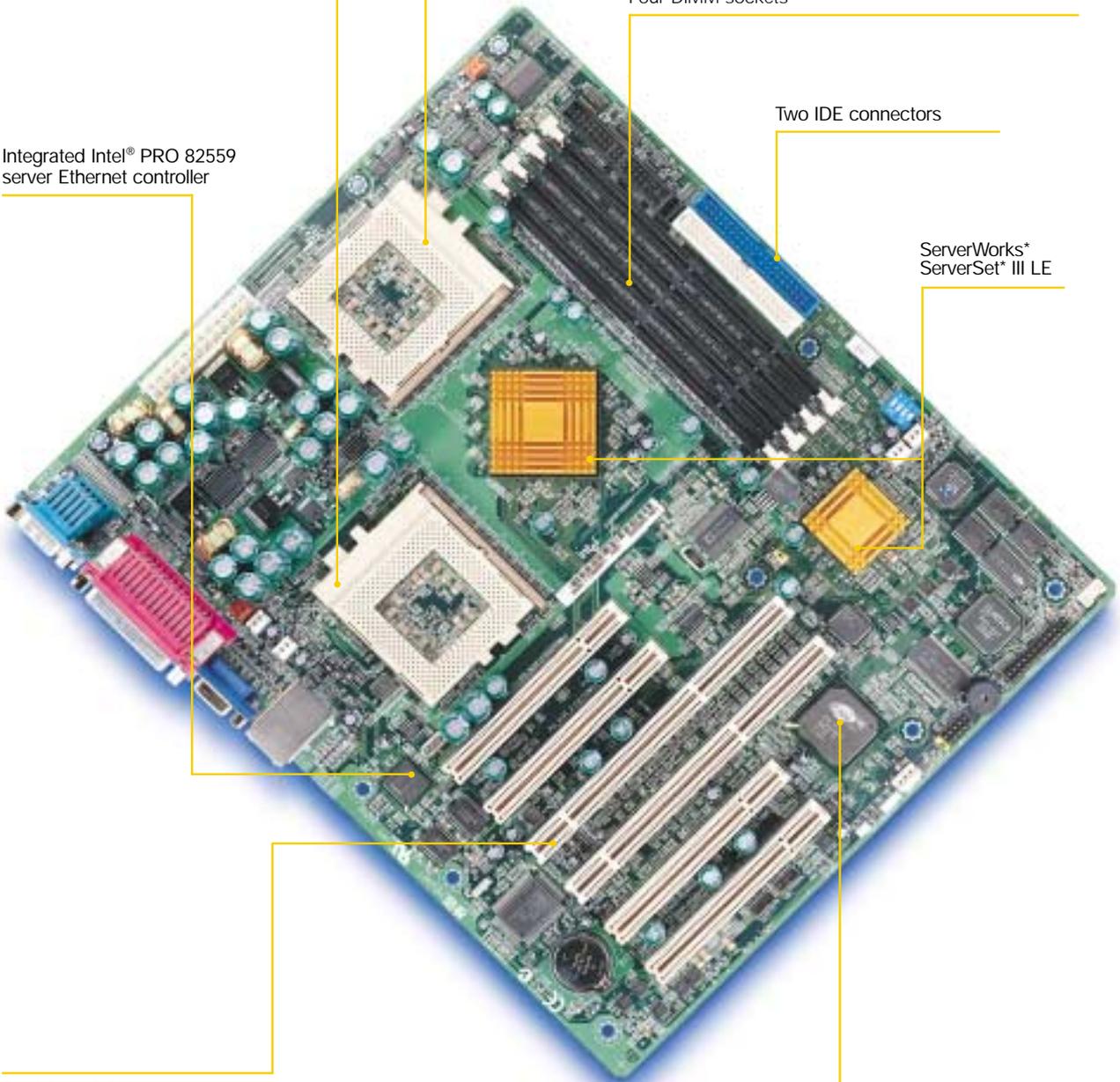
Two IDE connectors

ServerWorks®
ServerSet® III LE

Dual-Peer PCI buses,
six available PCI slots

- Bus A: two 64-bit/66-MHz PCI slots
- Bus B: four 32-bit/33-MHz PCI slots,
server Ethernet controller, video
controller

Integrated graphics
ATI® Rage® XL PCI graphics
controller with 8 MB of memory



Complete Your Intel® Server Board SAI2 with Intel® Server Building Blocks

Add the following Intel building blocks to your Intel® Server Board SAI2 to ensure a highly reliable, available, and scalable server:



Intel® Pentium® III Processors with 512-KB L2 cache provide powerful performance to meet the needs of your server customers and give them the reliability, flexibility, and headroom necessary for e-Business transaction surges.



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



Intel® Server Chassis SC5100 (base configuration) is designed to work with the Intel® Server Board SAI2. It includes:

- A base pedestal configuration with five 1-inch high fixed drive bays, three 5.25-inch peripheral bays, four fans for ample cooling, and a 300W PFC power supply
 - A rack-conversion kit that enables a 5U rack platform
- In addition, the Server Chassis SC5100 comes with extensive international safety and EMC regulatory approvals and offers the added reliability, availability, and scalability that customers demand.



For the latest information on Intel® server building blocks, please visit: www.intel.com/go/serverbuilder

The Boxed Intel® Server Board SAI2

Included for easy integration:

1. One Intel® Server Board SAI2
2. Quick-Start User Guide
3. CD-ROM with server monitoring software, configuration tools, software drivers, and technical product information
4. One termination module integrated on board for uniprocessor configurations
5. One I/O shield, ATX 2.03-compliant
6. EMI gasket
7. IDE cables
8. Floppy cable
9. Front-panel cable
10. Configuration label with board layout and back-panel I/O configurations
11. Front-panel USB port filler



Order code SAI2SCSI also includes an LSI Logic® LSI20160 SCSI Adapter and Ultra160 cable with termination.¹

- Single channel Ultra160 SCSI
- 32-bit/33-MHz low profile PCI with standard bracket

Intel® Server Board SAI2 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	Four DIMM sockets for up to 4 GB of PC133 SDRAM (64 MB to 1 GB DIMMs supported)
Memory Type	PC133 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® ServerSet® III LE
Integrated LAN	Intel® PRO Server Ethernet Controller (Intel® 82559) supports 10BASE-T and 100BASE-TX RJ45 output
Graphics	ATI® Rage® XL VGA PCI video controller with 8 MB of video memory
Super I/O Controller	National® PC87417

Input/Output	
PCI	Six total slots: Two 64-bit/66-MHz, four 32-bit/33-MHz; Dual Peer PCI Buses
IDE	Two EIDE channels for a total of four IDE devices backward compatible to provide CD-ROM drive support
USB	Two stacked USB connectors
Serial Ports	Two asynch, RS-232C, 9-pin and 10-pin
Parallel Port	IEEE 1284, 25-pin bidirectional
Floppy Controller	1.44 MB, 2.88 MB, 3-mode support
Keyboard/Mouse	PS/2, 8240A-compatible

System BIOS	
BIOS Type	4 MB 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, multilingual support

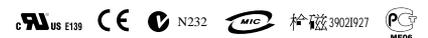
Jumpers and Front-Panel Connectors	
Front-Panel Connectors	Power LED, power on/off switch, reset
Jumpers	CMOS clear, password clear, BIOS recovery

Mechanical	
Server Board Style	ATX, fits in many ATX 2.x-compliant tower chassis
Server Board Size	12" x 10"

Server Board Power Requirements	
+5V	26.2A maximum continuous current
+5V Standby	.5A minimum continuous current
+12V	6.2A maximum continuous current
+3.3V	14.1A maximum continuous current
-12V	.02A maximum continuous current

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 / EMC Regulatory Compliance (Class A)	
Class A EMC Compliance is based on board configured in compatible ⁴ Intel host system.	
Australia/New Zealand	AS/NZS 3548
Canada	UL-CSA 60 950 / ICES-003
Europe	EN60 950 / EN55022 & EN55024
International	CISPR 22 / CISPR 24
Japan	Verified to comply with VCCI (via CISPR 22)
Korea	MIC Notice No. 1997-41 & 1997-42
Russia	GOST-R 29216-91 & 50628-95
Taiwan	BSMI CNS 13438



Order Codes

Item	Product Order Code
Intel® Server Board SAI2	SAI2
Intel® Server Board SAI2 with included Ultra160 SCSI Adapter ¹	SAI2SCSI
Intel® Server Chassis SC5100 (pedestal base configuration)	KHD2BASE300
Intel® Server Chassis SC5100 Rack Conversion Kit	AHD2RACK
Intel® Server Chassis SC5100 Spares Kit	FHD2SPRS
Intel® Server RAID Controller SRCU31	BOXSRCU31
Intel® Server RAID Controller SRCU31-L	BOXSRCU31L
Intel® RAID Controller SRCU32	SRCU32

³ Environment ambient temperature measurements are system measurements with an Intel® Server Board SAI2 installed in an Intel® Server Chassis SC5100.

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

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

Information in this document is provided in connection with Intel® products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel® products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice. All products, dates, and figures specified are preliminary based on current expectations, provided for planning purposes only, and are subject to change without notice. Availability in different channels may vary.

¹Other names and brands may be claimed as the property of others.

Intel, Intel logo, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Copyright © 2002, Intel Corporation.
0102/JL/DMW/MD/PP/15K

Intel Literature Center: 1-800-548-4725
ORDER NUMBER 298528-002