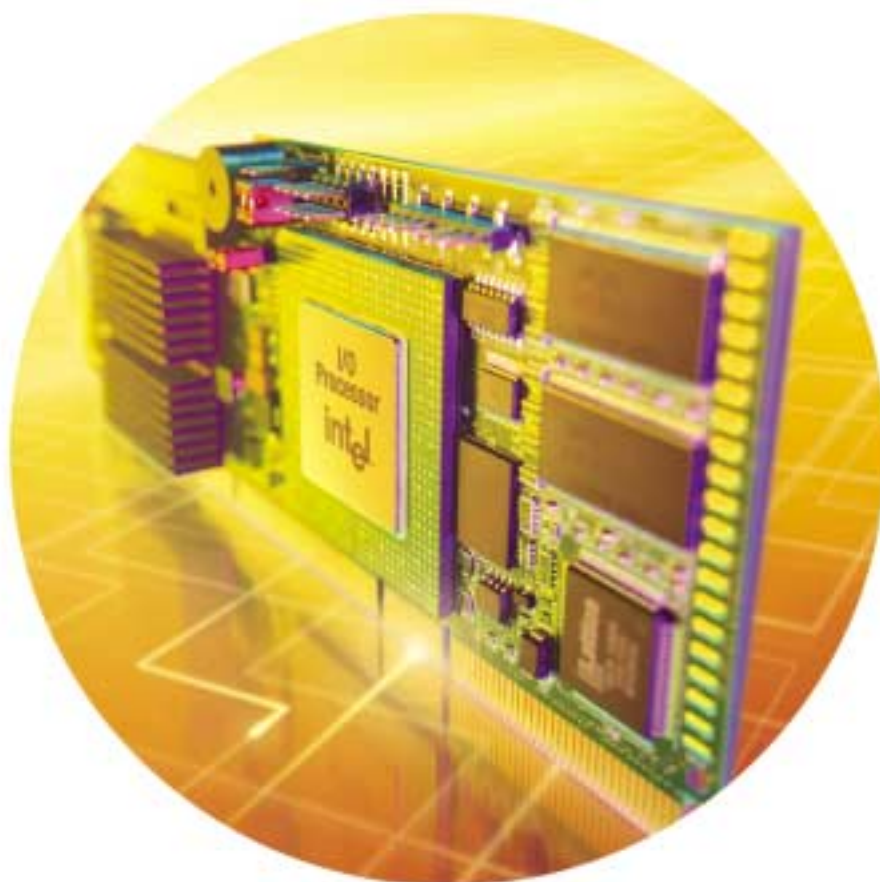




• Intel® RAID
Controller
SRCU42L
Product Brief

Can I build storage solutions that dramatically enhance server reliability and availability?



Yes. With the Intel® RAID Controller SRCU42L,
a next-generation Ultra320 SCSI RAID controller
for reliable and available storage solutions.



Intel® RAID Controller SRCU42L

No business today can tolerate server downtime or storage system failure; the associated costs of lost data and interrupted productivity are just too high. But now you can build in RAID solutions to dramatically increase the reliability and availability of your Intel-based servers.

One such solution is the Intel® RAID Controller SRCU42L, which offers the latest SCSI technology, Ultra320, in a low-profile form factor for high-density server applications. Featuring the Intel® 80303 I/O processor, the Intel RAID Controller SRCU42L includes two Ultra320 SCSI channels (one internal and one external)—supporting up to 30 SCSI devices (15 per channel). This feature-rich RAID controller enables you to deliver storage solutions with very high availability and enhanced data protection.

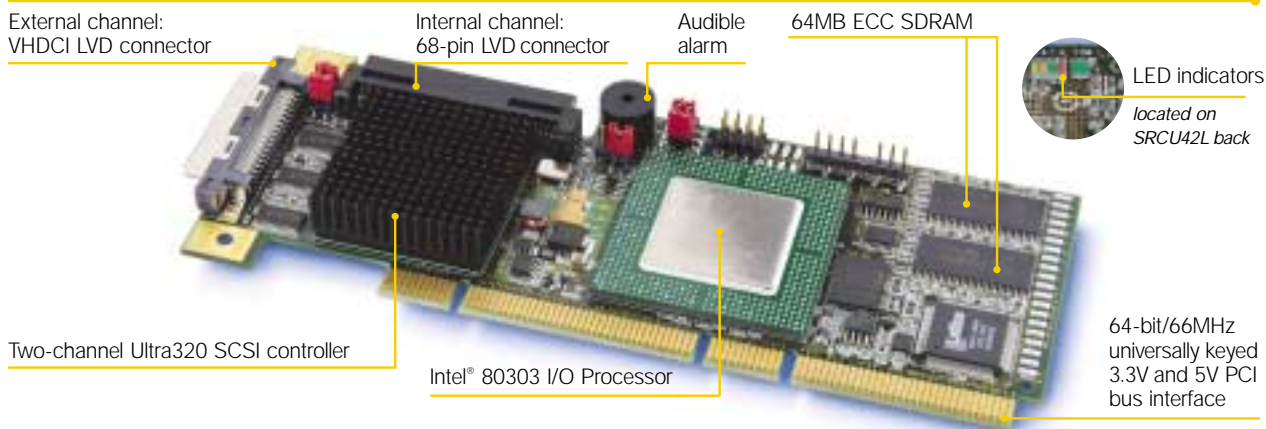


The Intel® RAID Controller SRCU42L ships with a full-height PCI bracket installed and an additional low-profile bracket included in the box.

Storage Management Made Easy

The innovative Intel® RAID Controller SRCU42L is equipped with the Intel® 80303 I/O processor, featuring a hardware XOR engine for enhanced RAID 4/5 operations and 64 MB of PC100 ECC SDRAM. In addition, the Intel® RAID software suite supports RAID levels 0, 1, 4, 5, 10, and JBOD, enabling system integrators to offer a full set of RAID options at entry-level price points and to meet a variety of requirements for performance, redundancy, and system cost.

Intel® RAID Controller SRCU42L



Features

Intel® 80303 I/O 100MHz processor
Two-channel Ultra320 SCSI with support for up to 30 drives (15 drives per channel: one internal, one external)
64-bit/66MHz PCI 2.2 interface with PCI hot-plug support, universally keyed for 3.3V and 5V PCI slots
Support for RAID levels 0, 1, 4, 5, 10, and JBOD
64MB embedded PC100 ECC SDRAM
Intel® RAID Storage Console
RAID firmware compatibility across Intel® RAID product family
Remote event notification by e-mail for Microsoft® Windows® operating systems
Background initialization and instant availability
Three-year limited warranty and Advanced Warranty Replacement

Benefits

Outstanding RAID performance
High I/O bandwidth (320 MB/sec per SCSI channel) and I/O expandability
High data-transfer rate, increased availability and flexibility
Flexibility for optimizing performance and fault tolerance in a variety of solutions
Data integrity, performance
Full-featured management, monitoring, reporting, and diagnostics utility available pre-OS or post-OS
Easy controller upgrade path without requiring a rebuild of the RAID array
Manageability and availability
Immediate accessibility to the host operating system, shorter build time
Peace of mind

Complete Your Server Platform with the Following Intel® Server Building Blocks



Intel® Server Boards are designed, tested, and validated to meet the non-stop demands of business in the Internet economy. Built-in performance, scalability, and availability make the boards ideal for e-Business.



Intel® Server Chassis are specifically designed for Intel® server boards. Intel server chassis are easy to service, versatile, and expandable, and they feature built-in monitoring to simplify server management for you and your customers alike.



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

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



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

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.

Unsurpassed quality. On average, 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. System 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® server building blocks please visit:

www.intel.com/go/serverbuilder.

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



intel®

Intel® RAID Controller SRCU42L Specifications

Hardware

Processor	Intel® 80303 I/O processor: 100MHz, RISC 64-bit core, with hardware XOR
Memory	64MB embedded 3.3V unbuffered PC100 ECC SDRAM
PCI	64-bit/66MHz PCI 2.2-compliant interface, universally keyed for 3.3V and 5V signaling, backward compatible to 33MHz
SCSI	Two-channel Ultra320 SCSI with support for up to 30 drives (15 per channel: one internal, one external)
Form Factor	Low-profile
Status Indicators	Audible alarm, LEDs

Software (RAID Storage Console and RAID Storage Console Plus)

RAID Levels Supported	0, 1, 4, 5, 10, and JBOD
Scalability	Online RAID-level migration and capacity expansion without reboot
Configuration Flexibility	Variable data stripe size—configurable per array, configurable JBOD enclosure support, support for non-hard-disk-drive SCSI devices (for example, tape, CD-ROM), and read/write controller and disk caching
Availability	Instant availability and background initialization, automatic rebuild with private (dedicated) or pooled (global) hot-fix (spare) drives, PCI hot-plug support, hot-plug drive support, and RAID array roaming

Operating-System Support^{1,2}

Fully Validated and Supported	Microsoft® Windows® 2000 Advanced Server, Service Pack 2; Novell® NetWare® 6.0; SCO OpenServer® 5.0.6a from Caldera®; Red Hat® Linux® 7.2 (2.4 kernel); Caldera OpenUnix® 8.0; SuSE Linux 7.3 Professional
Supported with Limited Compatibility and Validation	Microsoft® Windows® 2000 Server; Microsoft Windows NT® 4.0 Server and Enterprise Server, Service Pack 6a or higher; Novell® NetWare® 5.1 (support pack 2a or higher); Caldera® UnixWare® 7.1.1; Red Hat® Linux® 7.0 and 7.1; Debian® Linux 2.2r4; Caldera Linux 3.1; Mandrake® Linux 8.1; TurboLinux® 7.0 Server; FreeBSD® 4.4 and 4.5

Environmental / Electrical

Size	56mm (2.20 inches) x 167mm (6.57 inches)
Voltage Requirements	+3.3V or +5V (all ±5% tolerance)
Ambient Temperature	Operating 0°C to 55°C, non-operating -40°C to 70°C
Relative Humidity	Non-operating 50% to 85%, non-condensing (at 25°C to 70°C)
System Requirements	Intel PC or equivalent with PCI 2.2-compliant 64-bit/66MHz or 33MHz slot
Power Consumption	+5V @ 0.25A = 1.25W, +3.3V @ 2.5A = 8.25W

Safety-Compliance Regulations

Canada	CSA C22.2, No. 60950/UL 60950 (UL Recognition Mark)
Europe	EN60950, CE Mark-EU Directive 73/23/EEC
International	IEC60950
United States	CSA C22.2, No. 60950/UL 60950 (UL Recognition Mark)

EMI Verification (configured in a compatible³ Intel host system)

Australia/New Zealand	Verified to AS/NZS 3548, Class A (C-tick Mark)
Canada	Verified to ICES-003, Class A
Europe	Verified to EN55022 (Class A) and EN55024 (CE Mark—EU Directive 89/336/EEC)
International/Japan	Verified to CISPR-22/VCCI, Class A
Korea	RRL Certification to MIC Notices 1997-41 & 1997-42
Taiwan	Verified to BSMI 13438, Class A (DOC)
United States	Verified to FCC, Class A (DOC)

Product Order Code

Item	Code
Intel® RAID Controller SRCU42L	SRCU42L

More Intel® RAID Controller Products

Intel® RAID Controller	Intel® RAID Controller SRCU42L <i>Affordable high-performance Ultra320 RAID controller</i>	Intel® RAID Controller SRCU32 <i>Full-featured high-performance RAID controller with PCI hot-plug support</i>	Intel® Server RAID Controller U3-1 (SRCU31) <i>High-performance RAID controller for data-intensive applications</i>	Intel® Server RAID Controller U3-1L Low Profile (SRCU31L) <i>Affordable RAID controller for small and medium-size businesses</i>	Intel® RAID Controller SRCZCR <i>Economical Modular ROMB (RAID on mother board) controller for RAIDOS-enabled motherboards</i>
Order Code	SRCU42L	SRCU32U	BOXSRCU31A	BOXSRCU31LA	SRCZCR
Processor	Intel® 80303 IOP 100MHz	Intel® 80303 IOP 100MHz	Intel® i960 RN I/O 100MHz	Intel® i960 RS I/O 100MHz	Intel® 80303 IOP 100MHz
XOR	Hardware	Hardware	Hardware	Software	Hardware
Memory	Embedded 64 MB of PC100 ECC SDRAM	Supports 64–256 MB of unbuffered PC133 ECC SDRAM (memory not included)	Supports 32–128MB of PC100 ECC SDRAM (currently shipping with a 64MB DIMM)	Embedded 16MB of PC100 ECC SDRAM	Embedded 32MB of PC100 ECC SDRAM
PCI Bus	PCI 2.2 64-bit/66MHz	PCI 2.2 64-bit/66MHz	PCI 2.2 64-bit/33MHz	PCI 2.2 32-bit/33MHz	PCI 2.2 64-bit/66MHz
SCSI Channels	2 x Ultra320 (one internal, one external)	2 x Ultra160	1 x Ultra160	1 x Ultra160	2 x Ultra320/160 or Serial ATA
Form Factor	Low-profile PCI	Standard PCI	Standard PCI	Low-profile PCI	Low-profile PCI
RAID Levels	0, 1, 4, 5, 10, and JBOD	0, 1, 4, 5, 10, and JBOD	0, 1, 4, 5, 10, and JBOD	0, 1, 4, 5, 10, and JBOD	0, 1, 4, 5, 10, and JBOD
PCI Hot-Plug	Yes	Yes	No	No	No
Compatibility ⁴	—	—	—	—	—
Availability	Now	Now	Now	Now	Now

- For information on the latest operating-system support, please visit <http://support.intel.com>.
- Operating-system support is contingent on the operating-system support of the motherboard in which this controller is installed.
- Compatible host systems denote the systems in which Intel tested the board and found it compliant.
- For the latest server board support please visit <http://support.intel.com/support/motherboards/server>.

For the most current product information on Intel® server building blocks, visit:

www.intel.com/go/serverbuilder



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