



• Intel® RAID
Controller
SRCZCR
Product Brief

Can I build modular RAID solutions that are reliable, available, and affordable?



Yes. With the Intel® RAID Controller SRCZCR, a modular RAID on motherboard solution where reliability, availability, and affordability is a must.



Intel® RAID Controller SRCZCR

Full-featured RAID data protection is becoming a standard feature in businesses of almost any size, thanks to the increasing affordability of implementing a RAID solution. A case in point is the highly economical and modular Intel® RAID Controller SRCZCR, which enables system integrators to implement robust hardware RAID solutions while optimizing their server motherboard investment. The RAID Controller SRCZCR utilizes existing connectors and components by interfacing with the SCSI I/O controller integrated on the motherboard through the RAIDIOS¹ (RAID I/O Steering) connector, keeping implementation costs to a minimum. As a result, this modular RAID on motherboard (ROMB) controller gives system integrators an ideal hardware RAID solution for servers requiring the optimum combination of reliability, availability, and affordability.

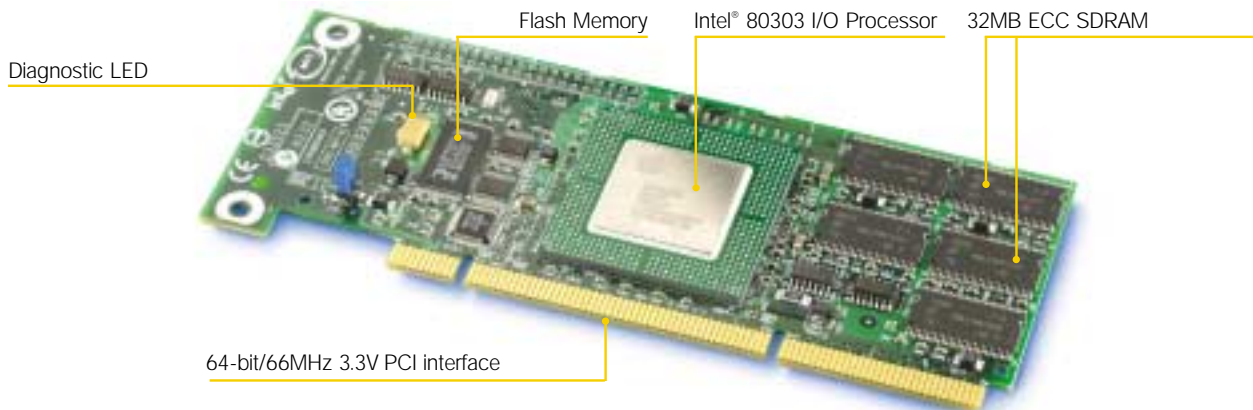


The Intel® RAID Controller SRCZCR ships with a full-height PCI bracket installed and an additional low-profile bracket included in the box.

A Full Set of RAID Options

The Intel® RAID Controller SRCZCR is equipped with the Intel® 80303 I/O processor, featuring a hardware XOR engine for enhanced RAID level 4 or 5 operations and 32 MB of embedded PC100 ECC SDRAM. Throughout its design is a focus on flexibility—enabling system integrators to offer a full set of RAID options at entry-level price points and meet a variety of performance, redundancy and system-cost requirements. For example, the controller is designed for installation into a PCI 2.2 64-bit/66MHz 3.3V RAIDIOS slot and is backward-compatible to 32-bit/33MHz slots. It supports up to two SCSI channels or serial ATA drives using the onboard SCSI or serial ATA controller. Moreover, the Intel® RAID software suite that ships with the controller supports RAID levels 0, 1, 4, 5, 10, and JBOD.

Intel® RAID Controller SRCZCR



Features

- Intel® 80303 I/O 100MHz processor
- RAID support for up to two SCSI channels or two Serial ATA (SATA) drives
- Designed for 64-bit/66MHz PCI 2.2 interface 3.3V RAIDIOS slot with backward compatibility to 32-bit/33MHz PCI
- Support for RAID levels 0, 1, 4, 5, 10, and JBOD
- 32MB embedded PC100 ECC SDRAM
- 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

Benefits

- Outstanding RAID performance
- Versatile full-featured RAID support
- 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, 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 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.



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Intel® RAID Controller SRCZCR Specifications

Hardware

Processor	Intel® 80303 I/O processor: 100MHz, RISC 64-bit core, with hardware XOR
Memory	32MB embedded 3.3V unbuffered PC100 ECC SDRAM
PCI	64-bit/66MHz PCI 2.2-compliant interface, universally keyed for 3.3V, backward compatible to 32-bit/33MHz
SCSI	Support for up to two Ultra320/160 SCSI channels or two Serial ATA (SATA) drives
Form Factor	Low-profile PCI

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, hot-plug drive support, and RAID array roaming

Operating-System Support^{2,3}

Fully Validated and Supported	Microsoft® Windows® 2000 Advanced Server, Service Pack 2; Novell® NetWare® 6.0; SCO OpenServer® 5.0.6a; Red Hat® Linux® 7.2 (2.4 kernel); SCO UnixWare® 8.0; SuSE Linux 7.3 Professional
Supported with Limited Compatibility and Validation	Microsoft® Windows® 2000 Server; Microsoft® Windows NT® Server 4.0 and Enterprise Server, Service Pack 6a or higher; Novell® NetWare® 5.1 (support pack 2a or higher); Linux 2.4 kernel (Red Hat® Linux® 7.0; Debian® Linux 2.2r6; Caldera® Linux 3.1; Mandrake® Linux 8.1; TurboLinux® 7.0 Server); SCO® UnixWare® 7.1.1; FreeBSD® 4.4 and 4.5; Linux 2.2 kernel (Red Hat Linux 7.0)

Environmental / Electrical

Size	56mm (2.20 inches) x 167mm (6.57 inches)
Voltage Requirements	+5V or +3.3V (±5% tolerance)
System Requirements	Intel PC or equivalent with a RAIDIOS-enabled PCI 2.2 compliant slot
Power Consumption	+5V @ 0.25 Amps = 1.25W +3.3V @ 2.5 Amps = 8.25W
Operating Temperature and Voltage Shmoo	0°C to 55°C, and ±5% Vcc Shmoo
Thermal: Non-operating	Cycle: -40°C to 70°C for 50 hours Soak: 70°C for 22 hours
Humidity: Non-operating	50% to 85%, non-condensing at 25°C to 70°C for 168 hours

Safety-Compliance Regulations

Canada	CSA C22.2, No. 60950/UL 60950 3rd Edition
Europe	EN60950
International	IEC60950
United States	CSA C22.2, No. 60950/UL 60950 3rd Edition

EMI Verification (configured in a compatible⁴ Intel host system)

Australia/New Zealand	AS/NZS 3548, Class A Emissions
Canada	ICES-003, Class A Emissions
Europe	EN55022 (Class A Emissions) and EN55024 (1998, Immunity), CE-EMC Directive 89/336/EEC
International	CISPR-22 3rd Edition, Class A Emissions
Japan	VCCI, Class A Emissions
Korea	RRL MIC Notices 1997-41 (EMC) & 1997-42 (EMI)
Taiwan	BSMI CNS13438, Class A Emissions
United States	FCC/ICES-003, Class A Emissions

Product Order Code

Item	Code
Intel® RAID Controller SRCZCR	SRCZCR



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® RAID Controller SRC14L <i>Full-featured four-port Serial ATA RAID controller</i>	Intel® RAID Controller SRCZCR <i>Economical Modular ROMB (RAID on mother board) controller for RAIDIOS-enabled motherboards</i>
Order Code	SRCU42L	SRCU32U	SRC14L	SRCZCR
Processor	Intel® 80303 IOP 100MHz	Intel® 80303 IOP 100MHz	Intel® 80303 IOP 100MHz	Intel® 80303 IOP 100MHz
XOR	Hardware	Hardware	Hardware	Hardware
Memory	Embedded 64 MB of PC100 ECC SDRAM	Supports 64–256 MB of unbuffered PC133 ECC SDRAM (memory not included)	Embedded 64MB of unbuffered 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/66MHz	PCI 2.2 64-bit/66MHz
Channels	2 x Ultra320 SCSI (one internal, one external)	2 x Ultra160 SCSI	4 x Serial ATA	2 x Ultra320/160 or Serial ATA
Form Factor	Low-profile 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, and 10	0, 1, 4, 5, 10, and JBOD
PCI Hot-Plug	Yes	Yes	Yes	No
Compatibility ⁵	—	—	—	—
Availability	February 2003	Now	Now	Now

- For more information on RAIDIOS please visit <http://www.intel.com/design/storage/raid/designex/273724.htm>
- 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 information on 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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