



Product Brief

Intel® RAID Controller SRCS28X

- Intel® IOP331 I/O Processor Operating at 250 MHz
- Eight Serial ATA II Ports
- Support for RAID 0, 1, 5, 10, and 50

Intel® RAID Controller SRCS28X
An eight-port Serial ATA II RAID solution
for applications requiring high performance
and reliability



Intel® RAID Controller SRCS28X

Growing businesses need storage solutions that can help to protect critical data with RAID technology while enabling enhanced performance, reliability, and scalability in the server itself. These solutions must support a high-performance bus, extensive memory, and a flexible and accessible approach to system setup and management. Intel provides exactly such a solution in the Intel® RAID Controller SRCS28X.

Engineered around the Intel® IOP331 I/O processor operating at 250 MHz and designed to deliver a bus speed of up to 3.0 Gb/sec over point-to-point thin-cable connections, the Intel RAID Controller SRCS28X provides small and medium-size businesses an ideal way to help protect mission-critical data while maintaining excellent performance and reliability.

For example, the RAID Controller SRCS28X delivers the flexibility to meet expanding storage needs by including 128 MB of embedded ECC SDRAM and supporting up to eight hot-swap drives and RAID 0, 1, 5, 10, and 50. Through its support for background initialization and instant availability, the controller helps to provide immediate access to the host operating system and quick RAID 5 setup. The controller also simplifies long-term server operation and maintenance with the help of such capabilities as auto resume during array reconstruction, online capacity expansion and RAID-level migration, and browser-based management of the RAID array over a network through the Intel® RAID Web Console.

Finally, to offer these benefits to businesses at a price they can afford, the Intel RAID Controller SRCS28X supports Intel® Extended Memory 64 Technology (Intel® EM64T)¹ to provide efficient data protection for both 32-bit and 64-bit applications.



For a complete RAID solution, the Intel® RAID Controller SRCS28X can be combined with the Intel® Six-Drive SATA Hot-Swap Drive Bay (order code AXX6SATADB).

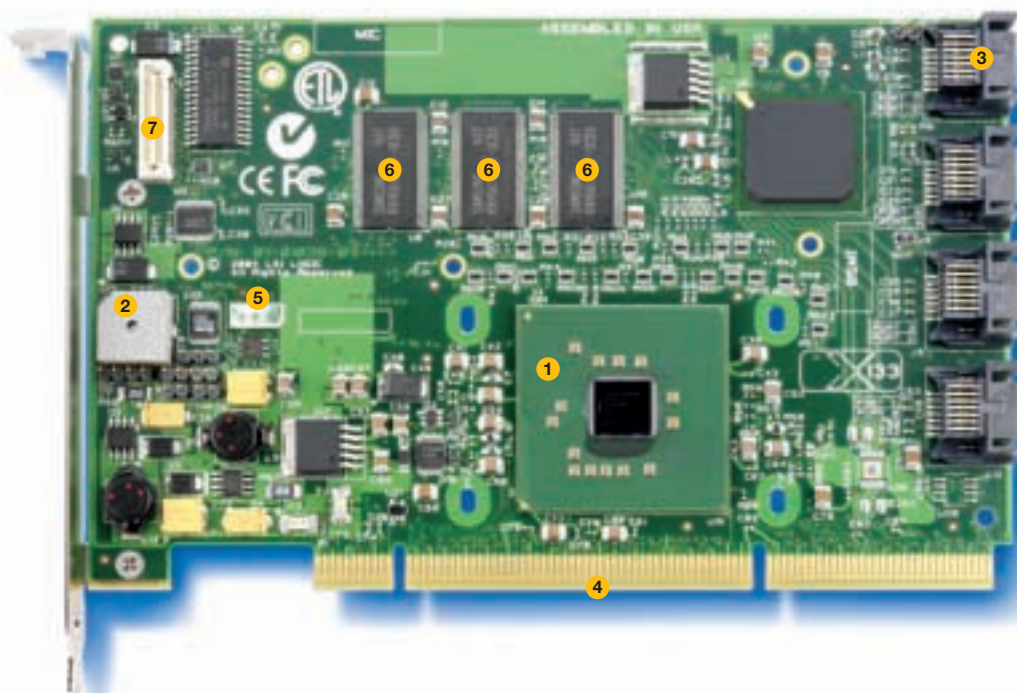


The Intel® RAID Controller SRCS28X is compatible with Intel® Server Management, a set of hardware, software, and utilities available with select Intel® server boards and providing centralized RAID monitoring, alerting, and delivery of configuration details.



Intel® RAID Controller SRCS28X Features and Benefits

Features	Benefits
Intel® IOP331 I/O processor operating at 250MHz	Outstanding RAID performance
Eight independent Serial ATA ports supporting SATA II connections at 1.5 Gb/sec and 3.0 Gb/sec	High data-transfer rate, increased availability and flexibility
128 MB of embedded ECC DDR SDRAM	Data integrity and performance
Optional battery-backup unit providing up to 72 hours of data retention for cache memory	Data reliability
Support for RAID 0, 1, 5, 10, and 50	Flexibility for optimizing performance and fault tolerance in a variety of solutions
SATA II extensions and SAF-TE enclosure-management support	Hot-swap drive support and drive status/identification for SATA II drives
Intel® RAID Software: Intel® RAID BIOS Console, Intel® RAID Web Console, and Intel® RAID Flash Utilities	Ease of management and monitoring



An optional battery-backup unit provides backup power to cache memory for up to 72 hours.



The Intel® RAID Controller SRCS28X is an eight-port Serial ATA II RAID solution for applications requiring high performance and reliability.

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|---------------------------------------|--|
| 1. Intel® IOP331 250MHz I/O processor | 5. I ² C connector |
| 2. Audible alarm | 6. 128MB ECC DDR SDRAM (with one SDRAM for parity) |
| 3. Serial ATA II ports 0–7 | 7. Connector for optional battery-backup unit |
| 4. PCI-X 133MHz interface | |

The Intel® RAID Controller SRCS28X is Part of a Family of Intel® RAID Controllers Supporting Enhanced Storage Performance and Data Protection.

Product	Market	Positioning	PCI Interface	Disk-Drive Support	Raid Levels	Memory Support	Management Solution
Intel® RAID Controller SRCU42E	Enterprise, department, workgroup, medium-size to large business	Full-featured, high-end dual-channel Ultra320 RAID controller with PCI Express* interface	PCI Express x8	Dual-channel Ultra320 SCSI with support for up to 30 drives (15 per channel)	0, 1, 5, 10, and 50	Up to 512 MB of ECC DDR 333	Intel® Server Management
Intel® RAID Controller SRCU42X	Enterprise, department, workgroup, medium-size to large business	High-performance dual-channel Ultra320 PCI-X RAID controller	PCI-X 133MHz	Dual-channel Ultra320 SCSI with support for up to 30 drives (15 per channel)	0, 1, 5, 10, and 50	Up to 512 MB of ECC DDR 200	Intel Server Management
Intel® RAID Controller SRCU41L	Small to medium-size business	High-performance single-channel Ultra320 RAID controller	PCI 64-bit/66MHz	Single-channel Ultra320 SCSI with support for up to 15 drives	0, 1, 5, 10, and 50	64 MB of embedded ECC DDR SDRAM	Intel Server Management
Intel® RAID Controller SRCZCRX	Small to medium-size business, high-density servers	PCI-X modular ROMB controller providing RAID on up to two Ultra320 SCSI channels	PCI-X 133MHz	Single- or dual-channel Ultra320 SCSI with support for up to 30 drives (15 per channel)	0, 1, 5, 10, and 50	Includes 128 MB of embedded ECC DDR 333	Intel Server Management
Intel® RAID Controller SRCS28X	Small business or graphic design	High-performance eight-port Serial ATA II RAID controller with SATA II enclosure-management support	PCI-X 133MHz	Support for up to eight independent SATA ports	0, 1, 5, 10, and 50	128 MB of embedded ECC DDR SDRAM	Intel Server Management
Intel® RAID Controller SRCS16	Small business or graphic design	High-performance six-port Serial ATA RAID controller with SATA II enclosure-management support	PCI 64-bit/66MHz	Support for up to six independent SATA ports	0, 1, 5, 10, and 50	64 MB of embedded ECC DDR SDRAM	Intel Server Management

See <http://www.intel.com/go/serverbuilder> for details on specific Intel® RAID Controller configurations.

Intel® RAID Controller SRCS28X Specifications

Hardware	
Processor	Intel® IOP331 I/O processor operating at 250 MHz and with hardware XOR
Memory	128MB embedded ECC DDR SDRAM
PCI Interface	PCI-X 133MHz or 100MHz, PCI 66MHz, or PCI 32-bit/33MHz; PCI 2.2 interface backward-compatible to 33MHz, with support for 3.3V and 5V PCI signaling
Serial ATA	Eight SATA ports that support Serial ATA II extensions for hot-plug and enclosure management
Form Factor	Full-height, half-length PCI: 6.9" x 4.2" (175 mm x 107 mm)
Status Indicators	Audible alarm, I ² C connector (enclosure management)
Key RAID Features	
RAID Levels Supported	0, 1, 5, 10, and 50
Reliability	Optional battery-backup unit for up to 72 hours of cache data retention
Scalability	Online RAID-level migration and capacity expansion without the need for reboot
Configurability	Variable stripe size, variable cache options, drive coercion, array spanning, variable rebuild rate
Availability	Auto hot-spare, auto rebuild, auto rebuild resume, drive roaming, controller migration, online capacity expansion, remote monitoring and management

Operating System Support ^{2,3}	
Microsoft® Windows Server® 2003 Enterprise Edition, Microsoft Windows 2000 Advanced Server, Novell® NetWare®, Red Hat® Enterprise Linux®, SCO® OpenServer®, SCO UnixWare, SUSE® LINUX® Professional, SUSE LINUX Enterprise Server	
Power Requirements	
DC Power Supply	11W
+5V	0.85A maximum continuous current (with load-sharing enabled) 1.63A maximum continuous current (with load-sharing disabled)
+3.3V	1.20A maximum continuous current (with load-sharing enabled) 0.00A maximum continuous current (with load-sharing disabled)
Environmental	
Ambient Temperature	Operating (dry bulb): 0°C to 45°C
Relative Humidity	20% to 80% non-condensing
System Requirements	Intel®-based server or equivalent with PCI 2.2-compliant, PCI-X 133MHz, PCI-X 100MHz, PCI 64-bit/66MHz, or PCI 32-bit/33MHz slot

Safety and EMC Regulatory Compliance (Class A) ⁴		
Country	Certification Safety and/or EMC	Regulatory Mark Safety and/or EMC
Australia/ New Zealand	Not applicable / AS/NZS 3548 Class B	C-Tick
Canada	CSA60950 / ICES-003 Class B	ETL / ICES
Europe	European Directives	CE
International	IEC60950 / CISPR 22 Class B	Not applicable
Japan	Not applicable / Class B (Verification only)	VCCI
Korea	Not applicable / RRL	MIC
Taiwan	Not applicable / CNS 13438 Class B	BSMI
United States	UL60950 / FCC Class B	ETL / FCC

Intel® RAID Controller SRCS28X – Ordering Information

Product	Order Code(s)
Intel® RAID Controller SRCS28X	SRCS28X
Optional Battery-Backup Unit	AXXRIBBU1

¹ Intel® Extended Memory 64 Technology (Intel® EM64T) requires a computer system with a processor, chipset, BIOS, OS, device drivers and applications enabled for Intel EM64T. **Processor will not operate (including 32-bit operation) without an Intel EM64T-enabled BIOS.** Performance will vary depending on your hardware and software configurations. **Intel EM64T-enabled OS, BIOS, device drivers and applications may not be available.** Check with your vendor for more information

² For information on the latest operating-system support, visit <http://support.intel.com>.

³ Operating-system support is contingent on the operating-system support of the motherboard in which the controller is installed.

⁴ EMC regulatory compliance is based on integration with a validated Intel server board and configuration as outlined in the Intel® RAID Controller SRCS28X subassembly guide.

For more information on how to make the Intel® RAID Controller SRCS28X part of your server environment, please contact an Intel® Channel Membership Programs participant.



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