

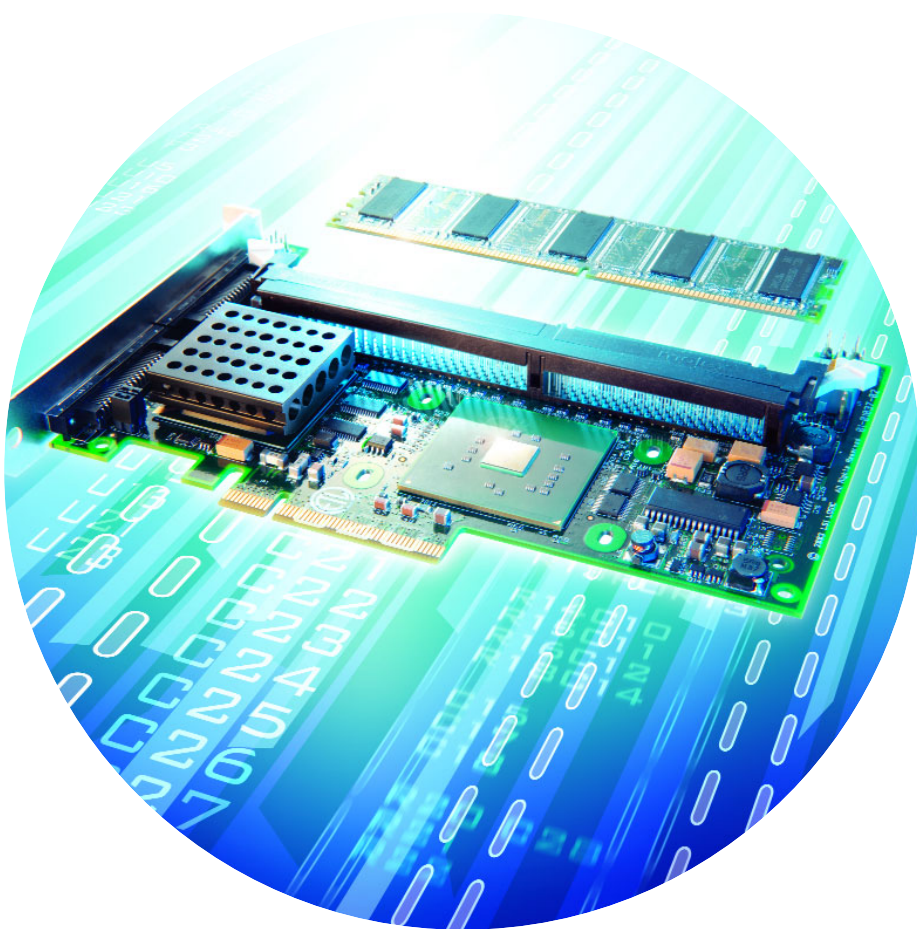


#### Product Brief

- Intel® RAID Controller SRCU42E
- Intel® IOP332 500MHz I/O Processor
- Up to Two Ultra320 SCSI Channels
- Support for RAID 0, 1, 5, 10, and 50

## Intel® RAID Controller SRCU42E

A full-featured, high-end, dual-channel  
Ultra320 RAID Controller with  
PCI Express\* x8 interface



# Intel® RAID Controller SRCU42E

Enterprises and workgroups need server storage solutions that can protect critical data while helping to maintain server performance and availability. They need such solutions to be easily expandable, to support multiple levels of RAID, and to provide the I/O throughput essential for large, mission-critical server systems. To address these needs Intel offers the Intel® RAID Controller SRCU42E.

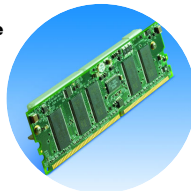
Engineered around the Intel® IOP332 500MHz I/O processor based on Intel® XScale® technology, the Intel RAID Controller SRCU42E provides an intelligent storage solution for mission-critical servers by protecting vital data while offloading RAID processing from the server. The RAID Controller SRCU42E provides an extensive selection of RAID capabilities, including support for RAID 0, 1, 5, 10, and 50 and for RAID management software through the Intel® RAID Web Console. This GUI-based tool provides a central, unified environment for simplifying the management of remote servers on a network and other critical monitoring and management activities.

The RAID Controller SRCU42E also helps to ensure overall server reliability, availability, and flexibility through its support for drive migration, online capacity expansion, and an optional intelligent battery-backup DIMM<sup>1</sup>. In addition, as the world's first RAID controller based on the next-generation PCI Express\* x8 interface, the RAID Controller SRCU42E can provide up to four times<sup>2</sup> the I/O throughput of RAID controllers based on PCI-X 133MHz.

Finally, to provide enterprises and data centers advanced performance at an affordable price, the Intel RAID Controller SRCU42E supports Intel® Extended Memory 64 Technology (Intel® EM64T)<sup>3</sup> and Microsoft\* Server Clustering. Support for these technologies makes the RAID Controller SRCU42E an ideal solution for high-end servers requiring sophisticated RAID features, high-performance I/O throughput, and reliable data protection.



For additional reliability, the Intel® Portable Cache Module (an optional intelligent battery-backup DIMM) can be swapped between Intel® RAID Controllers SRCU42E and will retain stored data in cache memory for up to 72 hours.

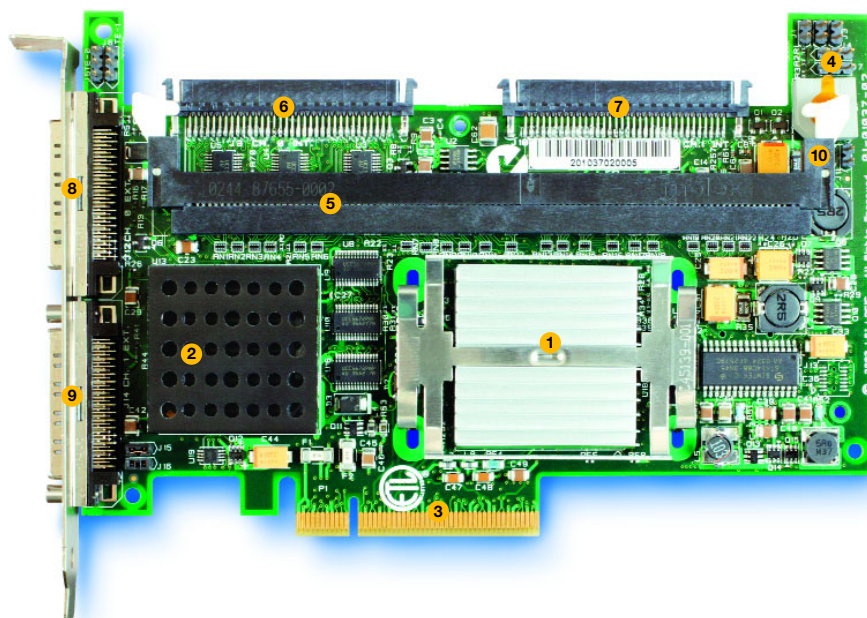


The Intel® RAID Controller SRCU42E is compatible with Intel® Server Management, providing centralized RAID monitoring, alerting, and configuration details.



## Intel® RAID Controller SRCU42E Features and Benefits

Features	Benefits
Intel® 80332 500MHz I/O processor	Outstanding RAID for high overall system performance
Dual-channel Ultra320 SCSI with support for up to 30 hard drives	Up to 320 MB/sec I/O bandwidth (per SCSI channel) and I/O expandability
PCI Express* x8 interface	Outstanding data-transfer rates and increased performance and bandwidth as compared with RAID controllers based on PCI-X
Support for up to 512 MB of ECC SDRAM	Data integrity and performance
Optional Intel® Portable Cache Module (128MB DIMM with battery)	Data reliability
Support for RAID 0, 1, 5, 10, and 50	Flexibility for optimizing performance and fault tolerance in a variety of solutions
Intel® RAID Software: Intel® RAID BIOS Console, Intel® RAID Web Console, and Intel® RAID Flash Utilities	Ease of management and monitoring
Support for Microsoft* Server Clustering	High availability



**The Intel® RAID Controller SRCU42E is a high-performance intelligent RAID solution for mission-critical servers.**

- |   |                       |
|---|-----------------------|
| 1. Intel® IOP332 500MHz I/O processor                                   | 6. Internal channel 0 |
| 2. LSI Logic* LSI53C1030 PCI-X to Dual-Channel Ultra320 SCSI Controller | 7. Internal channel 1 |
| 3. PCI Express* x8 interface  | 8. External channel 0 |
| 4. I <sup>2</sup> C connector   | 9. External channel 1 |
| 5. DIMM connector   | 10. Audible alarm     |

**The Intel® RAID Controller SRCU42E is Part of a Family of Intel® RAID Controllers Based on the Intel® IOP332 I/O Processor and 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 (compliant with PCI 1.0 and 2.2)	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 SRCZCRX	Small and 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 SRC516	Small business or graphic design	High-performance six-port Serial ATA RAID controller with SATA II enclosure-management support	PCI 2.2 64-bit/66MHz	Support for up to six independent SATA ports	0, 1, 5, 10, and 50	64 MB of embedded ECC SDRAM	Intel Server Management

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

# Intel® RAID Controller SRCU42E Specifications

## Hardware

Processor	Intel® IOP332 I/O processor operating at 500 MHz and with hardware XOR
Memory	Support for up to 512 MB of DDR 333 (product code SRCU42E ships with 128MB DIMM installed; product code SRCU42EBLK ships without DIMM)
PCI Express* Interface	PCI Express x8
SCSI	LSI Logic* LSI53C1030 PCI-X to Dual-Channel Ultra320 SCSI Controller with support for up to 30 drives (15 per channel); each channel has one internal 68-pin connector (UHD LVD) and one external 68-pin connector (VHD LVD)
Form Factor	Half-length, full-height PCI: 6.9" x 4.2" (175 mm x 107 mm)
Status Indicators	Audible alarm, FC connector (enclosure management)

## Key RAID Features

RAID Levels Supported	0, 1, 5, 10, and 50
Reliability	Optional Intel® Portable Cache Module for up to 72 hours of cache data retention
Scalability	Online RAID-level migration and capacity expansion without the need for reboot
Configuration Flexibility	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 <sup>4,5</sup>

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	25W
+3.3 V	1.5A maximum continuous current
+12V	1.4A maximum continuous current (without battery) 1.6A maximum continuous current (when battery is charging)

## Environmental

Ambient Temperature	Operating (dry bulb): 0°C to 55°C; non-operating (dry bulb): -40°C to +105°C
Relative Humidity	5% to 90% non-condensing
System Requirements	Intel®-based server or equivalent with PCI Express* x8 slot

## Safety and EMC Regulatory Compliance (Class A)

(EMC regulatory compliance is based on integration with a validated Intel server board and configuration as outlined in the Intel® RAID Controller SRCU42E subassembly guide.)

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	EN60950 / CE Directive 73/23/EEC/EN5022 Class B / EN5024 / CE Directive 89/336/EEC	CE
International	IEC60950 / CISPR 22 Class B	Not applicable
Korea	Not applicable / MIC 1997-41/42	MIC
Japan	Not applicable / Class B (Verification only)	VCCI
Taiwan	Not applicable / CNS 13438 Class B	BSMI
United States	UL60950 / FCC Class B	ETL / FCC



## Intel® RAID Controller SRCZCRX – Ordering Information

Product	Order Code(s)
Intel® RAID Controller SRCU42E	SRCU42E (ships with 128MB DIMM) SRCU42EBLK (ships without DIMM)
Optional Intel® Portable Cache Module	AXXRPCM1

<sup>1</sup> The Intel® Portable Cache Module (intelligent battery-backup DIMM) can be swapped between Intel RAID Controllers SRCU42E and will retain stored data in cache memory for up to 72 hours.

<sup>2</sup> Based on theoretical maximum peak bandwidths of 4 GB/sec for PCI Express\* x8 and 1 GB/sec for PCI-X 133MHz.

<sup>3</sup> 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.

<sup>4</sup> For information on the latest operating-system support, please visit <http://support.intel.com>.

<sup>5</sup> Operating-system support is contingent on the operating-system support of the motherboard in which this controller is installed.

**For more information on how to make the Intel® RAID Controller SRCU42E part of your server environment, please contact an Intel® Channel Membership Programs participant.**



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