Is there a high-performance RAID controller that can deliver data protection and high availability?

The Intel® RAID Controller SRCU42X, a PCI-X, dual-channel, Ultra320 SCSI RAID controller based on Intel® XScale® technology.
**Intel® RAID Controller SRCU42X**

High-availability, high-capacity applications require a delicate blend of power and flexibility. Embedded systems, complex networking solutions, and other I/O-intensive applications demand a storage solution delivering generous throughput rates and data protection for high-availability server environments.

That solution is the Intel® RAID Controller SRCU42X, which offers dual-channel Ultra320 SCSI technology along with the advanced I/O processing technology of the Intel® IOP321 I/O processor. This makes the RAID Controller SRCU42X one of the few RAID controllers in the industry to offer integrators the remarkably high throughput supported by a PCI-X interface as well as the performance, power efficiency, and flexibility of the Intel® XScale® technology.

With its 133MHz PCI-X interface, the RAID Controller SRCU42X achieves up to 1 GB per second maximum throughput. Its 400MHz Intel® IOP321 processor offers a maximum throughput of up to 1.6 GB per second and also supports up to 1 GB of PC1600 ECC DDR SDRAM. In addition, a new software suite based on PCI-X simplifies configuration, diagnostics, and firmware updates and enables integrators to offer a full set of RAID options at entry-level price points.

### Features

**Intel® IOP321 I/O processor**

**Two-channel Ultra320 SCSI controllers**

**64-bit/133MHz PCI-X interface**

**Internal channels: two 68-pin UHD LVD connectors**

**External channels: two 68-pin VHDC LVD connectors**

**Support for up to 1GB PC1600 ECC DDR SDRAM, ships with 128MB DIMM installed**

**Audible alarm**

### Benefits

**Outstanding RAID performance**

**High I/O bandwidth (up to 320 MB/sec per SCSI channel) and I/O expandability**

**Rapid data-transfer rate, high availability and flexibility**

**Flexibility for optimizing performance and fault tolerance in a variety of solutions**

**Data integrity, performance**

**Ease of management, monitoring, reporting, and diagnostics**

**Immediate accessibility to the host operating system, short build time**

**Availability and flexibility**

**Manageability and availability**

**Reliability with hot-plug and hot-spare support**

**High availability**

**Data reliability**

**Peace of mind**

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**Two-channel Ultra320 SCSI controllers**

**64-bit/133MHz 3.3V PCI-X bus interface**

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The Intel® RAID Controller SRCU42X ships with 128 MB of memory.

For even greater data reliability, add the optional battery-backup unit.
Intel® Server Management monitors key server components and solves many problems automatically, which helps keep your customers up and running. Intel Server Management offers several key high-availability features including: integrated remote management, event alerting and logging, and 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 Boards are designed, tested, and validated to help 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 featuring Hyper-Threading Technology, can slice through the toughest business problems facing dynamic start-ups, large enterprises, and everything in between.

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

Deliver industry-leading server technology and 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.

Unsurpassed quality. Intel spends 10,000+ hours testing and validating every piece of an Intel server stack. Uncompromising quality standards translate into high reliability, few repairs, and great 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. Integrators also have access to 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.
Intel® RAID Controller SRCU42X Specifications

### Hardware

<table>
<thead>
<tr>
<th>Processor</th>
<th>Intel® IOP321 I/O processor: based on Intel® XScale® technology, with hardware XOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>Supports 32MB-1GB of PC1600 ECC DDR SDRAM (ships with 128MB DDR DIMM installed)</td>
</tr>
<tr>
<td>PCI</td>
<td>64-bit/33MHz PCI X interface (PCI 2.3 and PCI-X 1.0 compliant), 3.3V adapter, backward compatible to 33MHz and 66MHz</td>
</tr>
<tr>
<td>SCSI</td>
<td>Two-channel Ultra320 SCSI 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 (VHDC LVD)</td>
</tr>
<tr>
<td>Form Factor</td>
<td>Half-length, full-height PCI: 175mm x 107mm (6.875&quot; x 4.2&quot;)</td>
</tr>
<tr>
<td>Status Indicators</td>
<td>Audible alarm, LEDs</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Intel® RAID BIOS Console, Intel® RAID Web Console, Intel® RAID Command Tool, Intel® RAID Diagnostics, Intel® RAID Flash Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RAID Levels Supported</strong>: 0, 1, 5, 10, 50, and JBOD</td>
</tr>
<tr>
<td><strong>Scalability</strong></td>
</tr>
<tr>
<td><strong>Configuration Flexibility</strong></td>
</tr>
<tr>
<td><strong>Availability</strong></td>
</tr>
</tbody>
</table>

### Operating-System Support

- **Standard Validation**: Microsoft® Windows 2003 Enterprise Server, Microsoft® Windows 2000 Advanced Server, Service Pack 4, Microsoft® Windows XP, Novell® NetWare® 6.0, SCO OpenServer® 5.0.7 from Caldera®; Red Hat® Linux 8.0; Red Hat Linux 9.0; Red Hat Linux Enterprise Server 2.1; Caldera UnixWare® 7.3, SuSE Linux 8.1 Professional, SuSE Linux Enterprise Server 8

### 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 RAID Controller SRCU42X subassembly guide.

<table>
<thead>
<tr>
<th>Country</th>
<th>Certification Safety and/or EMC</th>
<th>Regulatory Marks Safety and/or EMC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia and New Zealand</td>
<td>Not required / AS/NZS 3548</td>
<td>C-Tick</td>
</tr>
<tr>
<td>Canada</td>
<td>CSA/UL 60950 / IECES-003</td>
<td>ULus or NRTL Marking / IECES</td>
</tr>
<tr>
<td>Europe</td>
<td>European Directives</td>
<td>CE</td>
</tr>
<tr>
<td>International</td>
<td>IEC 60950 / CISPR</td>
<td>Not required</td>
</tr>
<tr>
<td>Korea</td>
<td>Not required / RRL</td>
<td>MIC</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Not required / BSMI CNS</td>
<td>BSMI</td>
</tr>
<tr>
<td>United States</td>
<td>CSA/UL 60950 / FCC</td>
<td>ULus or NRTL Marking / FCC</td>
</tr>
</tbody>
</table>

### Intel® RAID Controller Products

- **Intel® RAID Controller SRCU42X**: High-performance dual-channel Ultra320, PCI-X RAID controller
- **Intel® RAID Controller SRCU42L**: Affordable high-performance Ultra320 RAID controller
- **Intel® RAID Controller SRC32U**: Full-featured high-performance RAID controller with PCI hot-plug support
- **Intel® RAID Controller SRC2CR**: Economical Modular ROMB RAID on motherboard controller for RAID5 cached motherboards
- **Intel® RAID Controller SRC14L**: Full-featured four-port Serial ATA RAID controller

### Channels

- **Intel® RAID Controller SRCU42X**: 2 x Ultra320 SCSI
- **Intel® RAID Controller SRCU42L**: 2 x Ultra320 SCSI (one internal, one external)
- **Intel® RAID Controller SRC32U**: 2 x Ultra160 SCSI
- **Intel® RAID Controller SRC2CR**: 2 x Ultra320/160 SCSI
- **Intel® RAID Controller SRC14L**: 2 x Ultra320/160 SCSI

### Operating-System Support

1. For information on the latest operating-system support, please visit [http://support.intel.com](http://support.intel.com)
2. Operating-system support is contingent on the operating-system support of the motherboard in which this controller is installed.

For the most current product information on Intel® server building blocks, visit: [www.intel.com/go/serverbuilder](http://www.intel.com/go/serverbuilder)