

Adaptec® Serial ATA II RAID 2820SA



Highly reliable 8-port SATA II RAID controller provides high sustained read and write levels for servers and workstations

Serial ATA (SATA) is a point-to-point connection that delivers full throughput to each storage device by allowing multiple ports to be managed with a single controller. Adaptec SATA II technology delivers data transfer rates to 3Gb/s while still supporting 1.5Gb/s (SATA).

Adaptec Serial ATA II RAID 2820SA

The Adaptec 2820SA is the second-generation 8-port Adaptec Serial ATA RAID controller. Utilizing the Adaptec AIC-8210 SATA RAID-on-Chip (ROC) ASIC, running Adaptec RAID Code (ARC), the Adaptec 2820SA provides the industry's most advanced feature set and highest level of data protection.

Advanced hardware features

The Adaptec 2820SA connects to a PCI-X 64-bit/133 MHz host interface, and offers connectivity for up to eight SATA or SATA II hard disk drives. In addition to the integrated ROC ASIC, the card provides 128MB of ECC-protected DDR DRAM (256MB optional) and an optional battery unit. SATA offers point-to-point connectivity, which provides independent connectivity for all the drives, so a single drive failure cannot cause additional failures.

The industry's most widely deployed RAID code

Adaptec RAID Code (ARC) includes the industry's most advanced feature set, with standard features RAID 0, 1, 5, 10, 50, RAID Level Migration, and Online Capacity Expansion. ARC supports arrays up to 512TB, for full use of higher capacity SATA drives. Only Adaptec offers Optimized Disk Utilization, the ability to create multiple LUNs per disk and use all the space on dissimilar drive sizes.

Adaptec Advanced Data Protection Suite

The Adaptec Advanced Data Protection Suite includes a feature set that offers the industry's most complete data protection right out of the box. New data protection includes Dual Drive Failure Protection (RAID 6 and 60), survival of two drive failures; Striped Mirror (RAID 1E), mirroring over an odd number of drives; and Hot Space (RAID 5EE) which allows a hot spare while using all drives for data. Additionally, Copyback Hot Spare lets administrators designate a drive location as a hot spare. After a drive replacement, the controller migrates back to the original configuration. Optional Snapshot Backup creates point-in-time copies of an array for better data backup.

Why Adaptec Serial ATA II RAID?

Adaptec makes it easy to cost-effectively deploy, manage, scale, and protect storage. Our products and technology are based on a proven RAID core; advanced ASIC designs; tested compatibility with operating systems, motherboards, applications, and drives; RAID education; and global support.

Easy-to-use storage management

The intuitive Adaptec Storage Manager™ (ASM) tool centralizes management of all Adaptec RAID products. ASM enables remote RAID management, monitoring, and configuration through secure, encrypted communication. Pop-up tips and online help simplify RAID array creation and management.

Compatibility, reliability, and support

Adaptec has been delivering storage and I/O solutions for over 24 years, and is the undisputed RAID leader – no technology is more proven. The Adaptec 2820SA is tested thoroughly for third-party compatibility, and backed by a 3-year warranty and legendary Adaptec technical support.

Product Highlights

- Eight ports support up to eight Serial ATA or Serial ATA II hard disk drives
- PCI-X 64-bit/133 MHz host interface (3.3V only)
- SATA II compliant
- Native command queuing (NCQ)
- 3Gb/s per port
- SES2 enclosure management
- Adaptec AIC-8210 RAID-on-Chip ASIC supporting RAID 0, 1, 5, 10, 50
- Adaptec Advanced Data Protection Suite offers RAID 6, 60, 1E, 5EE, Copyback Hot Spare and optional Snapshot Backup
- 128MB ECC DDR cache memory
- Optional battery backup module
- Online applications extend feature set: Online Capacity Expansion, RAID Level Migration, Optimized Disk Utilization
- RoHS Compliant
- Operating system support for Windows, Linux, Netware, and FreeBSD

Adaptec® Serial ATA II RAID 2820SA

Adaptec Serial ATA II RAID 2820SA Ordering Part Number: 2169900-R

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| Why to buy | Unique price/performance and enhanced reliability (RAID-on-Chip based). |
| Customer needs | Ideal for supporting server and workgroup applications where high levels of sustained read and write operations are required, such as video streaming, web content, video-on-demand, security and surveillance, fixed content, and reference data storage |
| Environment | Departmental and workgroup servers and workstations |
| Device support | Up to 8 Serial ATA/Serial ATA II disk drives, 48-bit LBA supports drives larger than 137GB |
| Data transfer rates | Up to 3Gb/s per port |
| RAID levels | 0, 1, 1E, 5, 5EE, 6, 10, 50, 60 |
| Bus type | PCI-X 64-bit/133 MHz host interface (3.3V only) |
| Internal connectors | 8 SATA locking connectors |
| System requirements | Intel or AMD architecture with available 64-bit 3.3v PCI-X slot Supports EM64T and AMD64 architectures |
| Operating system support | Windows 2000, Windows XP, Windows Server 2003, and Red Hat and SuSE Linux, Netware, Free BSD (for most current Linux drivers go to www.adaptec.com) Linux driver source code available for compiling into other distributions |
| Standard features | RAID 0, 1, 5, 10, 50, hot swap, hot spares, RAID Level Migration, Online Capacity Expansion, Optimized Disk Utilization, S.M.A.R.T., SNMP support, and features from the Adaptec Advanced Data Protection Suite which include: Dual Drive Failure Protection (RAID 6, 60), Striped Mirror (RAID 1E), Hot Space (RAID 5EE), and Copyback Hot Spare |
| Optional features | Snapshot Backup Key (order number 2228200) |
| Optional battery backup | Adaptec Battery Module 500 (order number 2213700-R). 1 year warranty |
| Software in kit | Adaptec Storage Manager™, BIOS configuration utility (ACU), command line interface (ARCCONF) |
| Cables in kit | (8) - 1m straight SATA cables |
| Physical dimensions | Half-size PCI form factor 3.1 in H x 6.6 in L 7.87 cm H x 16.76 cm L |
| Operating temperature | 0 to 55 degrees C |
| Warranty | 3 years |

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