

ARC-1200/1201 (PCIe x1 to SATA RAID Adapters)

The Areca ARC-1200/1201 SATA RAID host adapter is a PCI-Express x1 bus to SATA Disk Array host adapter. The ARC-1200 provides two SATA II ports on a single controller. The ARC-1201 can provide up to 8 SATA II peripheral devices. It is used the same RAID kernel of its field-proven external RAID controller. When properly configured, the SATA RAID adapter can provide a high degree of performance and fault tolerance with data mirroring for maximum protection. The ARC-1200/1201 is the industry's most compelling PCIe x1 to SATA II RAID solution which economically delivers full-featured true hardware RAID to desktop and workstations as well as entry-level servers.



Unparalleled Performance

The SATA RAID controllers raise the standard to higher performance levels with several enhancements including high-performance 500MHz storage Processor, a new DDR2 memory architecture (DDR400), 3Gb/s SATA II ports, and NCQ support in a high performance PCI-Express x1 bus interconnection. The ARC-1200/1201 default supports on-board DDR2-400 SDRAM memory. The test result is against overall performance compared to other standard SATA host Adapter.

Unsurpassed Data Availability

With Areca Entry-level RAID controllers incorporate onboard storage processors to deliver true hardware RAID. Hardware RAID cards have their own local RAID processor onboard, plus dedicated onboard cache for full hardware offloading of RAID-processing functions. The ability of hardware RAID controllers to rebuild an array in the event of a drive failure is superior to what software RAID controllers offer.

The ARC-1201 RAID adapters can provide RAID levels 0, 1, 10, 3, 5, 6, Single Disk and JBOD RAID for maximum configuration flexibility. Its high data availability and protection derives from the following capabilities: Online RAID Capacity Expansion, Array Roaming, Online RAID Level / Stripe Size Migration, Global Online Spare, Automatic Drive Failure Detection, Automatic Failed Drive Rebuilding, Disk Hot-Swap, Online Background Rebuilding, Instant Availability/Background Initialization and Auto Reassign sector.

During the adapter firmware upgrade flash process, it is possible for a problem to occur resulting in corruption of the

controller firmware. With our Redundant Flash image feature the adapter will revert back to the last known version of firmware and continue operating. This reduces the risk of system failure due to firmware crash. Areca greater than 2TB support allows for very large volume set application in 64-bit environment such as data-mining and managing large databases.

Maximum Interoperability

The Areca ARC-1200/1201 is a half length low profile SATA II RAID controller. It supports broad operating system including Windows Vista, Windows® Server 2003, Windows XP, Windows 2000, Red Hat Linux (Open Source), SuSE Linux (Open Source), FreeBSD, Solaris, Mac and more, along with key system monitoring features such as I2C & SGPIO enclosure management, and SNMP function.

Easy RAID Management

The BIOS contains an embedded McBIOS RAID manager that can access via hot key at BIOS boot-up screen. This pre-boot RAID manager can use to simplify the setup and management of RAID adapter. The adapter firmware also contains and browser-based McRAID storage manager that can access through the Http Proxy server. The McRAID manager allows local and remote to create and modify RAID set, volume set, and monitor RAID status from standard web browser. API software components and CLI also support for the RAID manager. The Single Admin Portal (SAP) monitor utility can support one application to scan multiple RAID units in the network. The Disk Stress Test utility kicks out disks meeting marginal spec before the RAID unit is actually put on-line for real business.

HIGHLIGHTS

- Supports up to 8 SATA II on a single host adapter(ARC-1201)
- STAT-II 300MB/s speed at each SATA II drive ports
- Support RAID level 0, 1 and JBOD (ARC-1200)
- Support RAID level 0, 1, 10, 3, 5, 6, Single Disk and JBOD (ARC-1201)
- True hardware RAID protection for all your valuable data
- Online Capacity expansion, RAID level/stripe size migration
- Hot-swap and Hot-spare function for data availability
- Redundant flash image for adapter availability
- Support Greater than 2TB Volume set
- Web browser-based RAID manager via Archhttp Proxy Sever.

ARC-1200/1201(2 Ports PCIe x1 to SATA RAID Adapters)

Adapter Architecture

- 500MHz Storage processor
- PCI-Express x1 bus
- DDR2 400 SDRAM
- Write-through or write-back cache support
- Support up to 2/8 SATA II drives
- Multi-adapter support for large storage requirements
- BIOS boot support for greater fault tolerance
- BIOS PnP (plug and play) and BBS (BIOS boot specification) support
- NVRAM for RAID configuration & transaction log
- Redundant flash image for adapter availability
- RoHS Compliant

RAID Features

- Support RAID level 0, 1 and JBOD (ARC-1200)
- RAID level 0, 1, 10, 3, 5, 6, Single Disk and JBOD(ARC-1201)
- Multiple RAID selection
- Online Array roaming
- Online RAID level/stripe size migration
- Online capacity expansion and RAID level migration simultaneously
- Instant availability and background initialization
- Automatic drive insertion / removal detection and rebuilding
- Greater than 2TB per volume set (64-bit LBA support)
- S.M.A.R.T disk drive monitoring for reliability

Monitors/Notification

- System status indication through HDD activity/fault connector, LCD/I2C connector and alarm buzzer
- SMTP support for email notification
- SNMP support for remote Manager
- I2C & SGPIO Enclosure management ready

Environmental/Physical

Mechanical

Form Factor	PCI Half Length/Low Profile
Dimension	ARC-1200/1201: 64mm x 168 mm
SATA Interface	ARC-1200 2 Discrete SATA latch connector ARC-1201 2 x SFF-8087 Connector
I/O Interface	(2 x 1) header for fault LED connector (2 x 1) header for activity LED connector (2 x 4) header for LCD & enclosure management connector (1xRJ45) for Ethernet port (ARC-1201)

RAID Management

- Field-upgradeable firmware in flash ROM

In-Band Manager

- Web browser-based McRAID Storage manager via Http Proxy Server
- Hot key "boot-up" McBIOS RAID manager via BIOS
- Support Command Line Interface (CLI)
- Support controller's API library for customer to write its own AP
- Single Admin Portal (SAP) monitor utility
- HDD Stress Test (HST) utility for production

Out-of-Band Manager

- Firmware-embedded Browser-based RAID manager, SMTP manager, SNMP agent and Telnet function via Ethernet port (ARC-1201)
- Support controller's API library for customer to write its own AP(ARC-1201)
- Push Button and LCD display panel

Operating System

- Windows Vista/Server 2003/XP/2000
- RedHat Linux
- SuSE Linux
- FreeBSD
- Novell Netware 6.5
- Solaris 10/11 x86/x86_64
- Mac OS X 10.X (EFI BIOS support)

For more information & latest supported OS listing visit www.areca.com.tw

Electrical

Power Requirements	PCI-Express x1
+3.3v	1.32W
+12v	3.6W

Environment

Operating	Temperature: +5°C to +50°C Humidity: 15-80%, non-condensing
Storage Temperature	Temperature: -40°C to 70°C Humidity: 5-90%, non-condensing

Areca Internal PCI-Express x1 RAID Card Comparison

Model Name	ARC-1200	ARC-1201
Host Bus Type	PCI-Express X1	
RAID Level Support	0,1 and JOB D	0,1,10, 3, 5, 6, Single Disk and JOB D
Cache Memory	on-board	on-board
Driver Support	2 x SATA II	8 x SATA II
Internal Disk Connector	SATA	2 x SFF-8087
Lan Port	N/A	Yes

