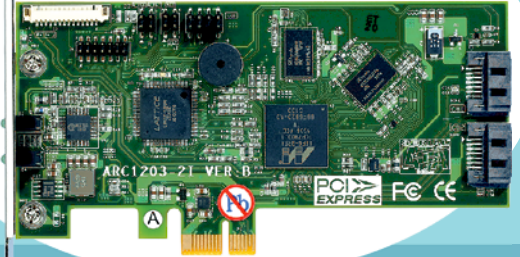


ARC-1203-2I (2-Port 6Gb/s SATA RAID Adapters)

The Areca ARC-1203-2I SATA RAID host adapter is a PCIe 2.0 x1 bus to 6Gb/s SATA disk array host adapter. It provides two SATA III ports on a single controller. It is used the same RAID kernel of its field-proven 6Gb/s, and 12Gb/s SAS RAID controller and uses the same drivers and management tools to help keep implementation and maintenance costs low. 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-1203-2I is the industry's most compelling 2-port 6Gb/s SATA 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 1066MHz storage processor, a new DDR3-1066 memory architecture, and 6Gb/s SATA III ports in a high performance PCIe 2.0 x1 bus interconnection. The ARC-1203-2I default supports on-board 512MB DDR3-1066 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-1203-2I RAID adapters can provide RAID levels 0, 1, Single Disk and JBOD RAID for maximum configuration flexibility. Its high data availability and protection derives from Areca Technology's advanced features: 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. The optional battery backup module provides power to the cache if it contains data not yet written to the drives when power is lost.

Maximum Interoperability

The Areca ARC-1203-2I is a half length low profile SATA III RAID controller. It supports broad operating system including Windows, RedHat Linux, SuSE Linux, FreeBSD, Mac OS and more, along with key system monitoring features such as SMTP, and SNMP function. It can also work with any standard Windows (10 or above), Linux (Kernel 3.10 or above), FreeBSD or VMware inbox NVMe drivers. You do not need a special driver to install the OS or data on the ARC-1203-2I.

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 ArchHTTP 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 (ArcSAP) quick manager can support one application to scan multiple RAID units in the local and remote for easy installation, configuration and operation.

Highlights

- STAT-III 600MB/s speed at each SATA drive ports
- Support RAID level 0, 1, Single Disk and JBOD
- 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
- Battery Backup Module (BBM) ready (optional)
- Web browser-based RAID manager via Archhttp Proxy Sever.
- Disk activity/fault LED on bracket
- In-box(Native) driver support for Windows, Linux, FreeBSD and more

ARC-1203-2I (2-Port 6Gb/s SATA RAID Adapters)

Adapter Architecture

- 1066MHz storage processor
- PCIe 2.0 x1 bus
- 512MB on-board DDR3-1066 SDRAM
- Write-through or write-back cache support
- Support up to 2 SATA III drives
- Support read/write cache allocation by policy
- 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 event & transaction log
- Boot support for the UEFI host BIOS
- Redundant flash image for adapter availability
- RoHS Compliant
- Battery backup module (BBM) ready (optional)
- Firmware level self-diagnosis function

RAID Features

- Support RAID level 0, 1, Single Disk and JBOD
- Configurable stripe size up to 1024KB
- 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 capacity per disk drive support
- Greater than 2TB per volume set (64-bit LBA support)
- Support for native 4K and 512 byte sector SATA devices
- Support HDD firmware update
- Support intelligent power management to save energy and extend service life
- SED (self-encrypting drives) function support
- Disk clone function
- Drive SMART status monitoring for reliability

Monitors/Notification

- System status indication through HDD activity/fault connector, LCD (optional) or bracket LED for HDD activity/fault and alarm buzzer
- SMTP support for email notification
- SNMP support for remote manager
- Enclosure management (Serial bus) ready

RAID Management

- Field-upgradeable firmware in flash ROM
- **In-Band Manager**
 - Web browser-based McRAID storage manager via ArcHTTP Proxy Server
 - Hot key "boot-up" McBIOS RAID manager via BIOS
 - Firmware built-in UEFI OS to launch McBIOS RAID manager
 - Support Command Line Interface (CLI)
 - API sample and functional code for customer to quickly customize its AP.
 - Single Admin Portal (ArcSAP) quick manager utility
- **Out-of-Band Manager**
 - Push Button and LCD display panel (optional)

Operating System

- Host Interface Mode= Areca Legacy Mode
 - Windows
 - Linux / FreeBSD / XenServer / unRAID
 - VMware (Driver 7.x/6.7 support CLI in-band management)
 - macOS

- Host Interface Mode= NVMe Mode
 - OS Native (In-box) NVMe Host Drivers

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

Environmental/Physical

- Mechanical

Form Factor	PCI Half Length/Low Profile
Dimension	64(H) x 134(L) mm
SATA Interface	2 Discrete SATA latch connector
I/O Interface	(2 x 1) header for fault LED connector (2 x 1) header for activity LED connectors (2 x 2) bracket LED for HDD activity/fault

- Environment

Operating	Temperature: +5°C to +60°C with 200 LFM airflow Humidity: 15-80%, non-condensing
Storage Temperature	Temperature: -40°C to 70°C Humidity: 5-90%, non-condensing
Regulatory Certification	CE, FCC

- Electrical

Power Requirements	PCI-Express x1
+12v	8W

Areca Internal PCI-Express x1 RAID Card

Model Name	ARC-1203-2I
Host Bus Type	PCIe 2.0 x1
RAID Level Support	0,1, Single Disk and JBOD
Cache Memory	512MB DDR3-1066 on-board
Drive Support	Up to 2 x 6Gb/s SATA HDDs/SSD
Internal Disk Connector	SATA
BBM Support	YES

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