

ARC-1110MI/1120MI/1212x/1222x ARC-4020MI/4030MI

(Compact Tower JBOD Box with External RAID Adapters)

Areca external SATA II RAID adapters and ARC-4020MI/ARC-4030MI are an external solution with Multi-lane (MI)/Min SAS host connectivity for use with your PC or Mac workstation. Those controllers support up to 8 SATA II peripheral devices using multi-lane box (ARC-4020MI) or Min SAS box (ARC-4030MI). These external SATA II RAID adapters have the same RAID kernel of its field-proven external SATA II RAID controllers. The ARC-4020MI/4030MI enclosure benefits fault/activity LED from these adapters serial bus enclosure management signal connector. It is a compact desktop storage system music for files, enthusiastic gamer and professional audio and video editor.



Highlights

- Supports up to 4/8 SATA II drives to external enclosure
- 300MB/s speed at each SATA II drive ports
- New external Multi-lane/Min SAS connector for maximum reliability
- Online capacity expansion, RAID level/stripe size migration
- Redundant flash image for adapter availability
- Support greater than 2TB per volume set and battery backup module (BBM)
- Broad operating system support including Windows, Linux (open source), Solaris (open source) FreeBSD (open source) and Mac

Unparalleled Performance

The external SATA II RAID adapters raise the standard to higher performance levels with several enhancements including Intel high-performance I/O Processor, a new memory architecture and high performance PCI-X/Express bus interconnection. The ARC-11x0MI default supports 256MB on-board ECC DDR333 SDRAM memory. ARC-12x2x default supports 512MB on-board DDR2-533 SDRAM with ECC protection.

Unsurpassed Data Availability

The external SATA II RAID adapters can provide RAID levels 0, 1, 1E, 3, 5, 6, 10 and JBOD RAID for maximum configuration flexibility. Its high data availability and protection derives from the following capabilities: Online RAID Capacity Expansion, Online 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, Auto Reassign Sector and Battery Backup.

With redundant flash image feature, the controller will revert back to the last known version of firmware and continue operating. This reduces the

risk of system failure due to firmware crash. 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 external SATA II RAID adapters support broad operating system including Windows® 2000/xp/2003/2008/Vista, Red Hat Linux (Open Source), SuSE Linux (Open Source), FreeBSD (Open Source), MAC, Solaris and other operating systems, along with key system monitoring features such as serial bus 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 controller. The controller firmware also contains and browser-based McRAID storage manager that can access through the Archttp proxy server in Windows, FreeBSD and Linux environment. The McRAID manager allows local and remote to create and modify RAID set, volume set, and monitor RAID status from standard web browser. The Single Admin Portal (SAP) monitor utility can support one application to scan multiple RAID units in the network.

Model Name	ARC-4020MI	ARC-4030MI
Host Interface	External SFF-8470	External SFF-8088
Host Cable	1 x SFF-8088 to SFF-8088 or 1 x SFF-8470 to SFF-8470	1 x SFF-8088 to SFF-8470 or 1 x SFF-8088 to SFF-8088
RAID Controller Inside	Combine with ARC-11x0MI/12x2x	Combine with ARC-11x0MI/12x2x
Disk Interface	4 x SATA II 3Gb/s	8 x SATA II 3Gb/s
Enclosure Management	Serial bus cable	Serial bus cable
Form Factor	Compact – 4 Disk Tower	Compact – 8 Disk Tower
Power Supply In/out	180W / 90-256V AC / +12V/4A, +5V/6A, +3.3V/4A	220W/ 90-256V AC/ +12V/16A, +5V/16A, +3.3V/14A
Dimension (W x H x D)	123 x 165.6 x 232 mm	146 x 302 x 290 mm
Weight	9.0 lbs / 4.1Kg	14.9 lbs / 6.8Kg

Adapter Architecture

- Intel IOP331/IOP348 I/O processor
- PCI-X 64bit/133MHz or PCI-Express x8 bus
- 256MB on-board SDRAM with ECC protection (ARC-11x0MI)
- 512MB on-board DDR2-533 SDRAM with ECC protection (ARC-12x2x)
- Write-through or write-back cache support
- Support up to 4/8 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 event & transaction log
- Redundant flash image for adapter availability
- Battery Backup Module(BBM) ready (Option)
- RoHS compliant

RAID Features

- RAID level 0, 1, 1E, 3, 5, 6,10 and JBOD
- Multiple RAID selection
- Online array roaming
- Online RAID level/stripe size migration
- Online capacity expansion and RAID level migration simultaneously
- Online volume set growth
- Instant availability and background initialization
- Automatic insertion/removal detection and rebuild
- Greater than 2TB per volume set
- Support intelligent power management to save energy and extend service life
- Support S.M.A.R.T, NCQ and OOB staggered spin-up capable drives





Environmental/Physical

• Electrical

Power Requirements	PCI-X	PCI-Express
+3.3V	5.5W max.	1.11W max.
+5V	4.75W max.	10.92W max.
+12V	0.72W max.	

• 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

External RAID Card	PCI-X RAID Card Comparison		PCI-Express RAID Card Comparison	
Model Name	ARC-1110MI	ARC-1120MI	ARC-1212x	ARC-1222x
Host Bus Type	PCI-X 64bit/133MHz		PCI-Express x8	
RAID Processor	Intel IOP331	Intel IOP331	Intel IOP348	Intel IOP348
Connector	1 x SFF-8470	2 x SFF-8470	1 x SFF-8088	2 x SFF-8088
Drive Support	4 x SATA II	8 x SATA II	4 x SATA II	8 x SATA II
Dimension	68(H) x 168(L) mm			
Products View				

Monitors/Notification

- System status indication through HDD activity/fault connector, LCD connector and alarm buzzer
- SMTP support email notification
- SNMP support for remote notification
- Series bus enclosure management ready

RAID Management

- Field-upgradeable firmware in flash ROM

In-Band Manager

- Hot key boot-up McBIOS RAID manager via BIOS
- Support API library for customer to write its own AP
- Support Command Line Interface (CLI)
- Browser-based storage manager via ArcHttp proxy server
- Single Admin Portal (SAP) monitor utility

Out-of-Band Manager

- Put bottom and LCD display panel (option)

Operating System

- Windows 2000/XP/Server 2003/2008/Vista/7
- Linux
- FreeBSD
- Novell Netware 6.5
- Solaris 10 x86/x86_64
- SCO UnixWare 7.x.x
- Mac OS X 10.4.x/10.5.x/10.6.x (EFI BIOS support)

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



ARC-4020MI



ARC-4030MI



More info:
starline Computer GmbH • Carl-Zeiss-Str. 27-29 • 73230 Kirchheim u. Teck • Germany
Tel.: +49 (0)7021 487 200 • <http://www.starline.de> • E-Mail: info@starline.de