ARC-1320-8i/4i4x/8x
(8 Ports PCIe 2.0 6Gb/s SAS Host Adapters)

ARC-1320ix-16
(24 Ports PCIe 2.0 6Gb/s SAS Host Adapter)

The ARC-1320 series is a low profile host adapter. It brings the fastest available connections to 6Gb/s and 3Gb/s SAS/SATA interface storage on any computer, workstation and server with PCI Express 2.0 interface.

Highlights

- PCIe 2.0 x8 lanes (x8, x4, and x1 lane widths)

- Up to 6Gb/s transfer rates per SAS port

- Support 1.5, 3.0 and 6 Gb/s SAS and SATA link rates

- Connects to SAS and SATA HDDs, tape drives, SSDs

- Supports SSP, SMP, STP and SATA protocols

- Supports the SATA Protocol defined in the serial ATA, Revision 2.6 specification

- Address up to 128 total end-point devices via SAS expanders

- API library for customer to write monitor utility

- Support SGPIO interface for ARC-1320ix-16

- System status indicates through global HDD activity/fault header

- Low profile form factor

Overview

SAS 2.0 is designed for backward compatibility with SAS 1.0, twice speed data transfer 6Gb/s than previous available. The SAS 2.0 interface supports both 6Gb/s SAS 2.0 disk drives for data-intensive applications, and 6Gb/s SATA drives for low-cost bulk storage of reference data. ARC-1320 series host adapters provide a blazing-fast storage connectivity solution with enhanced reliability and performance and a wide variety of internal and external connector configurations to support any application and tiered storage solution. The SAS host adapters enable large-scale direct attach storage (DAS) arrays through external 6Gb/s ports, driving up to 128 end-point devices for SFF-8088 connector. With connectivity options including 8-internal ports, 4-internal/4-external ports, 8-external ports, and 16-internal/8-external ports, ARC-1320 series 6Gb/s host adapters are ideal for large capacity external server storage RAID and no-RAID enclosure.

Unparalleled Performance - PCIe 2.0 and 6Gb/s SAS

Areca PCIe 2.0 x8 lanes 6Gb/s SAS host adapters are able to connect to both 6Gb/s and 3Gb/s SATA SAS/SATA hard disk drives, allowing for tiered storage that optimizes costs and performance. This is because SAS adapters leverage a common electrical and physical connection interface that is compatible with SATA technology. SAS drives are optimal when speed and reliability are of the utmost concern, while SATA drives are appropriate when capacity and cost are more important. Areca offers a diverse selection of SAS host adapter including a wide variety of internal and external connector configurations to support any application, from high-performance workstations to large-scale DAS arrays at high performance concerns. System integrators can use the ARC-1320 host adapters to build large-scale storage array infrastructures that support both SAS and SATA devices. The mixing drivers into servers can be felt immediately when using the ARC-1320 to develop a tiered storage solution with hard disk drives (HDDs), tape drives, tape autoloaders, solid state drives (SSDs) and removable media (DAS/JBOD).

Easy Management

A set of 8 green LEDs and 8 red LEDs are provided on the front side of the MD2 low profile board to transport activity/fault status for each of the 8 attached devices. The global state of these activity/fault indicators is also presented on two sets of header. The adapters contain a BIOS set up utility that can access via hot key at system BIOS boot-up screen. This pre-boot setup utility provides flexibility for customer to optimize the host adapter parameter. API library for customer combines the ARC-1320 series function code to its monitor utility. CLI and API code have supported a system level ATA-8 microcode download for upgrading SATA disk firmware and SES microcode download for upgrading enclosure expander firmware.

Hardware Specification

- PCIe 2.0 x8 lanes (x8, x4, and x1 lane widths)
- Up to 6Gb/s transfer rates per SAS port
- Support 1.5, 3.0 and 6 Gb/s SAS and SATA link rates
- Connects to SAS/SATA HDDs, tape drives, tape autoloaders, solid state driver (SSDs) and removable media (DAS/JBOD)
- Support a maximum 128 SAS/SATA devices using SAS expander
- Available in a low-profile form factor
- Low-profile bracket
- RoHS compliant

Serial Attached SCSI (SAS) 6Gb/s

- Serial Attached SCSI (SAS-2.0) compliant
- Supports wide port (Any combination of x1, x2, and 4x)
- Supports Serial SCSI Protocol (SSP)
- Supports SAS Management Protocol (SMP)
- Supports Serial ATA Tunneling Protocol (STP)
- Hot-plug capability
- Staggered spin-up control

Serial ATA 6Gb/s (Direct Attach Only)

- 6Gb/s compliant with speed negotiation to 3Gb/s and 1.5 Gb/s
- Support programmable SATA signal voltage levels
- Support staggered spin-up, hot-plug and Native Command Queuing (NCQ)
- Support port multiplier

Easy Management

- Legacy BIOS setup utility
- Supports Command Line Interface (CLI)
- API library for customer to write monitor utility
- Enclosure management for internal port via LED header and SES2/SGPIO
- Enclosure management for external port via SAS expander
- Support ATA-8 microcode download for upgrading SATA disk drive firmware
- Support SES microcode download for upgrading enclosure expander firmware

Operating System

- Windows 10/8/Server2012/7/2008/Vista/Server 2003/XP
- Linux (Red Hat and SuSE, ...)
- XenServer
- illumos
- unRAID
- FreeBSD
- FreeNAS
- NAS4Free
- Solaris 10/11
- Mac OS X 10.5.x or higher (EFI BIOS for bootable)

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

• Electrical

Power Dissipation	12V +3.3V
ARC-1320-8i/4i4x/8x	5.52W (5.35W+0.17W)
ARC-1320ix-16	16.22W (15.05W+1.17W)

• Environment

Operating	Temperature: +5°c to +60°c Humidity: 15-80%, non-condensing
Storage Temperature	Temperature: -40°c to 70°c Humidity: 5-90%, non-condensing

Model Name	ARC-1320-8i	ARC-1320-4i4x	ARC-1320-8x	ARC-1320ix-16
Host Bus Type	PCIe 2.0 x8 Lanes			
RAID Level	N/A			
Form Factor	MD2 Low Profile			Low Profile
Drives Support	128 X 3Gb/s and 6Gb/s SAS/SATA			
Internal Connector	2 x SFF-8087	1 x SFF-8087	N/A	4 x SFF-8087
External Connector	N/A	1 x SFF-8088	2 x SFF-8088	2 x SFF-8088
Direct Attach	Yes			No (Expander onboard)
Dimension(LxH)	167 X 64 mm			214 X 64 mm
Products View				

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