

A2454E  
A2404E



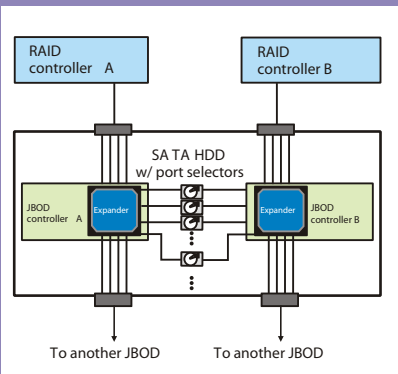
# Momentum A24 4U RAID Series

High performance density and  
flexible scalability  
for  
DAS over Multi-lane SAS

## OVERVIEW

The A24 RAID series is the first 4U-profile RAID system using the latest Serial Attached SCSI (SAS) interface technology. With the SAS end-to-end connectivity, many folds of host-side bandwidth as well as the flexibility with drive-side expansion are now possible. Similar to the trusted SCSI in the traditional direct-attached storage, cascade ports are provided with the A24S to join the computing power of multiple RAID systems over the host busses.

## HIGH AVAILABILITY



With the help of port selector mechanisms, (MUX boards), data paths are routed through redundant expanders and controller modules to ensure the optimal availability of your data.

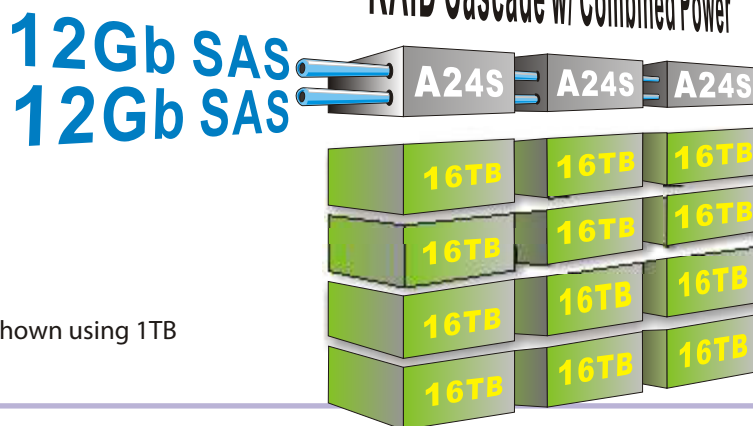
In addition to path redundancy, all components are designed to withstand harsh environments and strenuous work loads. The intelligent, sophisticated firmware algorithms ensure the enclosure can be operated with an ease of mind.

## LARGE CAPACITY

A total of 264 terabytes capacity by cascading RAID enclosures and attaching expansion enclosures.

# 264TB

RAID Cascade w/ Combined Power



\* The idea is shown using 1TB SA TA HDD.

## HIGHLIGHTS

A2454E / A2404E : Multi-lane SAS to Cost-effective SATA

- High availability dual-active or single RAID controllers and fault-tolerant hardware
- Drive interface: 3Gbps SATA-II disk drives
- Max. Scalability: redundant-controller: 1 RAID + 2 JBOD  
single-controller: 1 RAID + 4 JBOD
- 5th generation, ASIC400 architecture:
  - Hardware RAID5 + RAID6 engine
  - Dedicated, 18Gbps sync. cache channels
- EonPath Multi-pathing software
- SANWatch management suite w/ Snapshot protection
- 64-bit LBA support
- RAID and JBOD matching table:

RAID Model	3U JBOD (SA TA)	Configuration
A2454E	R1684	Dual-controller; fault-tolerant paths
A2404E	R1674	Single-controller; single path

\* SFF-8088 to SFF-8470 cables are necessary for attaching JBOD.



## AVAILABLE MODELS

Models	Controller	Host Ports	Channels	Drive Bays	Scalability	
					Exp. enclosures	RAID Cascade
A2454E	Redundant	8 (SFF-8088)	4 multi-lane	24	1 RAID + 2 JBOD (56 SATA HDD)	3 RAID + 6 JBOD (168 SATA HDD)
A2404E	Single	4 (SFF-8088)	2 multi-lane	24	1 RAID + 4 JBOD (88 SATA HDD)	3 RAID + 12 JBOD (264 SATA HDD)

A2454E



A2404E



## SPECIFICATIONS

### Subsystem Characteristics

- ASIC400 RAID engine
- Up to 2GB cache (per controller)
- SAS host ports (per controller) 4
- LCD keypad panel 1
- BBU (per controller) 1
- Default DDR cache memory (per controller) 512MB
- 10/100 Ethernet port (per controller) 1
- COM ports (per controller) 2
- PSUs 3
- Cooling modules 2
- Diagnostic LEDs on all FRUs

### Drive Interface

- No. of disk trays 24
- 3Gbps SATA-II
- Enclosure service via I<sup>2</sup>C or in-band over SAS links
- SAS multi-lane expansion port (per controller) 1

### Host Connection Ports

- Data single path bandwidth SAS: 12Gbps
- Tag command queuing 256

### RAID Configurations

- RAID levels 0, 1(0+1), 3, 5, 6, 10, 30, 50, 60
- Up to 32 logical drives (varied by memory size)
- Up to 1024 LUNs (varied by memory size)
- Multiple array configurations
- Background rebuild/scan/initialization
- Infortrend Smart fault management technologies

### High Availability

- Redundant, hot-swappable FRUs
- Subsystem self-diagnostics
- Li-Ion battery backup (standard for R2130)
- UPS status detection
- Cluster ready

### Management

- Java-based SANWatch software
- Terminal via RS-232C
- Telnet over Ethernet
- LCD keypad panel
- Event notification methods: Email/Fax/LAN broadcast/SNMP traps/SMS/MSN

### OS Support

- Microsoft Windows 2000 Server/2003 Server
- Sun Solaris ver. 9/10
- Red Hat Linux ver. 8/9, 64bit, Enterprise ver. 3
- SuSE: Linux ver. 8/9, 64bit
- Fedora 64bit
- MAC OS X (For G model)

### Requirements

- AC Input: 100-240VAC 405W with PFC
- DC Output: 12V-24A; 5V-36A; 3.3V-20A
- Consumption: 434W busy; 408.9W idle

- Relative Humidity: 5% to 95% non-condensing
- Operating Temperature: 0°C to 40°C (without BBU) 0°C to 35°C (with BBU)

### Dimensions

- With chassis ears/protrusions: 482mm W x 174.4mm H x 514mm D (19 x 6.86 x 20.2 inches)
- Without chassis ears/protrusions: 445mm W x 174.4mm H x 498mm D (17.5 x 6.86 x 19.6 inches)

### Certificates

- IEC 60068-2,
- MIL-STD-810E/883E,
- ISTA,
- ASTM-D3332,
- IPC-TM-650
- IEC 1000-4
- IEC 1000-3-2, IEC 1000-3-3
- ISO 7779/3744

- RoHS
- Microsoft WHQL- Windows Server 2003

### EMC

- CE
- EN 55022: 1998/A1: 2000/A2: 2003
- EN 61000-3-2: 2000/A2: 2005
- EN 61000-3-3: 1995/A1: 2001
- EN 55024: 1998/A1: 2001/A2: 2003
- FCC (FCC Part 15, subpart B)
- BSMI (CNS 13438)

### Safety

- UL (60950-1: 2003)
- BSMI
- CNS 14336: 1993
- IEC 60950-1, First Edition

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