The Astek A42412-ENC JBOD has state of the art Gen3 Serial Attached SCSI (SAS) expanders that work with either SAS (Up to 12Gbps) or SATA (up to 6Gbps) protocol and with SSD (Solid State Drives) or HDD (Hard Disk Drives) drives. The compact JBOD can hold twenty-four 2.5" SATA or SAS drives ranging in thickness from 6 to 14.5mm.

The A42412-ENC is a very flexible JBOD that can be configured with either one SAS Expander Controller (Single Controller Configuration) or two SAS Expander Controllers (Dual Controller Configuration). The dual controller configuration allows testing of a High Availability (HA) architecture with dual ported SAS drives. A key feature of the JBOD is the flexibility to change the configuration by simply adding/removing SAS Expander Controllers, reconnecting the SAS internal cables from the SAS Expander Controllers to the storage backplane, or using "Hard" zoning via firmware to direct the data paths. The A42412-ENC Crypto Key Erase and Block Erase option allows secure storage of sensitive data when using SED FIT SSDs. The Key Erase/Block Erase sequence can be activated through a front panel push button or through scripted CLI commands.

Each Gen3 SAS Expander controller board can provide up to 28.8GBytes/sec of data bandwidth through six Mini-SAS HD external x4 connectors (SFF-8644). The external ports on each controller board can be configured anywhere from a single x16 wide port providing 19.2GBytes to a single server, to six x4 ports providing 4.8GByte/sec of bandwidth to 6 separate servers. Each x4 port connector can support both passive copper cables (up to 3M in length) or Active Optical Cables (AOCs up to 100M in length). A typical configuration is using six standard Mini-SAS HD (SFF-8644) Gen3 SAS Cables connected to six different servers

KEY APPLICATIONS
- Secure Storage of sensitive data
- Lab and test systems
- Easy customization of data paths for unique architectures
- Cascade vertically and horizontally for large archive pools

PRODUCT FEATURES
- ANSI T10 SAS 3.0 Bus Expander
- 12Gbps SAS Technology
- Six External SAS expander ports per controller board
- SFF-8644 External Mini-SAS HD
- JBODs can be cascaded vertically or in parallel to increase the number of drives in a drive pool set
- Supports multi-lane aggregation for wide-port configurations
- Supports passive, active copper and optical (AOC) cabling
- Fits in standard 19" Datacenter Rack (Rails included)
- SCSI Enclosure Services (SES)
- LEDs on Drive Chassis indicating drive activity
- Thermal and chassis fan monitoring
- Device slot mapping and VPD
- Supports Key Erase and Block Erase SAS Commands
- 1-year limited warrant

Ordering Information

A42412-ENC-02	24-bay 12Gb/s SAS storage enclosure, Single Controller, HBA or RAID Controller controls Drive LEDs (SGPIO)
A42412-ENC-03	24-bay 12Gb/s SAS storage enclosure, Dual Controller, Drives control Drive LEDs (No SGPIO)
A42412-ENC-01-60-60A	24-bay 12Gb/s SAS storage enclosure, Dual Controller, Crypto Key Erase/Block Erase, Drives control Drive LEDs (No SGPIO)
A42412-ENC-02-60-60A	24-bay 12Gb/s SAS storage enclosure, Single Controller, Crypto Key Erase/Block Erase, HBA or RAID Controllers control Drive LEDs (SGPIO)

Technical Specifications

Compliance	ANSI T10 SAS specification 3.x		
Available Data Rate Bandwidth	Single Controller Configuration - Up to 28GB/s Dual Controller Configuration – Up to 56GB/s		
Modes	Cascade vertically and horizontally, Crypto Key Erase and Block Erase for SED FITs SSDs		
Supply Voltage	Universal input from 100-240 VAC @ 47/63Hz		
Supply Power	500W Hot-Plug, Redundant, Failover Power Supply		
SAS Bus	24 Dual-Ported Gen3 SAS/SATA Drive ports (Gen3 12G SAS and Gen3 6G SATA)		
SAS Bandwidth	@3Gb/s	@6Gb/s	@12Gb/s
X4 Wide Port	1200 MB/s	2400 MB/s	4800 MB/s
X8 Wide Port	2400 MB/s	4800 MB/s	9600 MB/s
X16 Wide Port	4800 MB/s	9600 MB/s	**19200 MB/s**
Connectors	6 SFF-8644 Mini-SAS HD per controller, Two DB9 UARTs, 1G Ethernet		
Form Factor	Standard 2U Form Factor – 19" wide x 23" long x 3.47" high (2U) Fits in standard 19" Datacenter Rack, Comes with sliding Rails		
Weight	40.8 lbs. (18.6Kg)		
Protocols	SAS 3GB/sec, 6GB/sec, 12GB/sec SATA 3.0Gbps, 6.0Gbps		
Device Support	Hard Disk Drives, Solid State Drives, SED FIT, SAS, or SATA		
Agency Approval	RoHS Compliant (lead-free)		
Environments **Temperature** **Relative Humidity**	**Operating** 15° to 45° C 5 to 90% non-condensing Airflow: 200 LFM	**Storage** -10° to +85° C 5 to 90% non-condensing	

March 2021

Dual SAS Expander Controller Configuration