

8Gb FC / 4Gb FC / SAS / PCIe to SAS / SATA-II Raid Subsystem

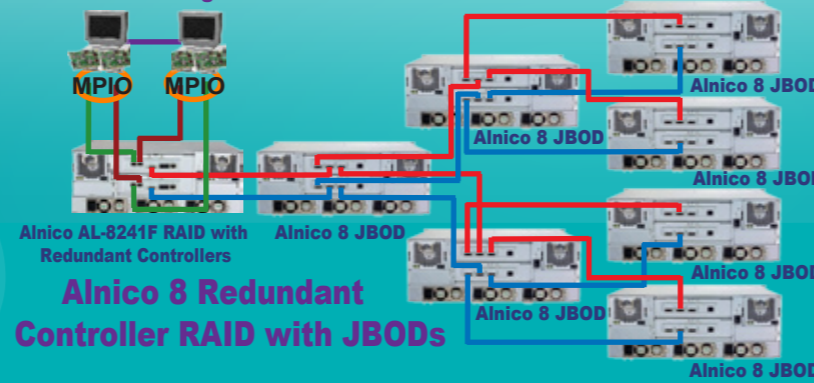
Reliability

- Dual Active-Active Failover and Failback Redundant Controller Support.
- Utilize Point to Point Serial Architecture : SAS as Disk Interface.
- Dual Ports on SAS Drive for Redundancy and with Higher MTBF Value.

Flexibility

- SATA Disk Drives are Fully Compatible with SAS Backplane.
- Wide Range Cost per GB, SATA for Basic Capability and SAS for High-end.

HA or Clustering Solution



Alnico 8 Redundant Controller RAID with JBODs



Scalability

- Support SAS Expansion Port, Allowing More JBODs Be Connected for Capacity Expansion.
- Expandable to 122 Devices with SAS JBODs.

Performance

- Deliver High Performance Based on the Varied Selections of Host Interface.
- 800MB/sec Data Throughput can be Reached with SAS Drives.

Alnico 8 RAID Series

	Alnico RAID AL-8241					Alnico RAID AL-8161					Alnico RAID AL-8121			Alnico JBOD		
Model	8241 S - S	8241 S - D	8241 F - S	8241 F - D	8241E	8161 S - S	8161 S - D	8161 F - S	8161 F - D	8161E	8121S	8121F	8121E	8241J	8161J	8121J
Controller No.	1	2	1	2	1	1	2	1	2	1	1	1	N/A			
RAID Architecture	Intel IOP81341 64bit Storage Processor. Intel RAID 6 engine to support extreme performance RAID 6 function. Up to 4GB DDR2-533 SDARM on one DIMM socket with ECC protection. NVRAM for RAID configuration and transaction log. Real time clock support. Battery backup modules ready (Option). Advanced PCI-E and 64-bit PCI-X 133Mhz bus architecture.										AL-8121J: Single expansion I/O module. AL-8241J / AL-8161J: Single or dual redundant expansion I/O module support.					
RAID Features	RAID Levels: 0, 1, 1E, 3, 5, 6, 50, 60 & JBOD. Multiple RAID selection. Online RAID level / stripe size migration. Online array roaming. Instant availability and background initialization. Online capacity expansion and RAID level migration simultaneously. Support spin down drivers for idle disk to extend service life (MAID).					Automatic drive insertion / removal detection and rebuilding. Hot spare disk / pass through disk support. Disk Scrubbing / array verify scheduling. Supports up to 122 SAS devices. Max 128 LUNs (volume set) per raid set. Online volume set growth. Scheduled Volume Checking support.										
System Type	4U Rackmount					3U Rackmount					2U Rackmount			4U Rackmount	3U Rackmount	2U Rackmount
Host Interface	Dual miniSAS (4x3Gb) ports per controller	Dual 4Gb FC ports (Optional) per controller		Single PCIe x4 port		Dual miniSAS (4x3Gb) ports per controller	Dual 4Gb FC ports (Optional) per controller		Single PCIe x4 port		Dual miniSAS (4x3Gb) ports	Dual 4Gb FC ports (Optional) / Dual 8Gb FC ports (Optional)	Single PCIe x4 port	1 x Up stream miniSAS (4x3Gb) port per expansion I/O module.		
Disk Interface	24 x SAS / SATAII drives (see note #1) 1 x miniSAS (4x3Gb) port for expansion (Up to 122 devices)					16 x SAS / SATAII drives (see note #1) 1 x miniSAS (4x3Gb) port for expansion (Up to 122 devices)					12x SAS / SATAII drives 1 x miniSAS (4x3Gb) port for expansion (Up to 122 devices)			24 / 16 / 12 x SAS / SATA-II drives 2 x miniSAS (4x3Gb) ports for expansion (Up to 122 devices)		
RAID Management	Firmware-embedded Web browser-based RAID manager via built-in 10/100 Ethernet. Firmware-embedded manager through front LCD control panel. Firmware-embedded manager via RS-232 port. Field-upgradeable firmware in flash ROM.															
Monitoring / Indicators	All system status can be monitored by firmware-embedded Web browser-based RAID manager. Firmware-embedded SNMP agent allows the remote to monitor events with no SNMP agent required. System status indication through LCD, LED and alarm buzzer. All system events can be sent to multiple user alerts via e-mails. (SMTP)										Through in-band SES (SCSI Enclosure Service)					
Operating System	Single controller: OS independent and transparent Redundant controller: MPIO driver required		Device driver required (see note #2)		Single controller: OS independent and transparent Redundant controller: MPIO driver required		Device driver required (see note #2)		Single controller: OS independent and transparent Redundant controller: MPIO driver required		Device driver required (see note #2)		OS independent and transparent			
Power Supply	Redundant by three 460 Watts Power modules with PFC. Load sharing type and cable-less design.					Redundant by dual 460 Watts Power modules with PFC. Load sharing type and cable-less design.					Redundant by dual 375 Watts Power modules with PFC. Load sharing type and cable-less design.			Redundant by three 460 Watts Power	Redundant by dual 460 Watts Power	Redundant by dual 375 Watts Power
Electrical	AC Voltage 100-240 VAC / AC Frequency 50-60Hz										AC Voltage 100-240 VAC / AC Frequency 50-60Hz					
Temperature	5 to 35 degree C. Non Operating Temperature: -40 to 60 degree C.										5 to 35 degree C. Non Operating Temperature: -40 to 60 degree C.					
Relative Humidity	20% to 80% non-condensing										20% to 80% non-condensing					
Dimension	446.5mm(W) x 550mm(D) x 4U					Single controller: 446.5mm(W) x 510mm(D) x 3U Dual controller: 446.5mm(W) x 550mm(D) x 3U					446.5mm(W) x 527mm(D) x 2U			446.5mm(W) x 550mm(D) x 4U / 3U 446.5mm(W) x 527mm(D) x 2U		
Weight	36.5KGS					20KGS / 22.5KGS					17KGS			36.5KGS / 20KGS / 17KGS		

* Specification subject to change without notice, all trademarks or registered trademarks are properties of their respective owners.

Note 1: Alnico 8 redundant controller RAID subsystem (AL-8241F-D / AL-8161F-D / AL-8241S-D / AL-8161S-D) does not support SATAII hard drives

Note 2: Device driver is required for AL-8241E / AL-8161E / AL-8121E (Support OS: Windows XP / 2000 / Server 2003 / Vista, Linux, FreeBSD, Solaris 10 X86 / X86_64, Novell Netware 6.5, SCO UnixWare 7.1.4, Mac OS X 10.x)