www.fel.fujitsu.com

*i*mageRAID

Ultra320 JBOD and RAID System

- Ultra320/Ultra160
- 2U (3.5") Rackmount Enclosure (Tower Option)
- 12 Bay Enclosure delivering up to 1.75TB (12 X 147GB)
- Scalable up to 5.3TB in 10.5" (6U)
- Dual Bus (standard) or Single Bus (with optional Single Bus Module)
- Dual RAID Controllers with up to 1GB of Memory
- Storage Management Software for configurating and monitoring (Global option)
- Redundant/Hot Swap Power, Cooling and Storage
- Redundant HBA, Raid Cntroller and Storage Management Software Options

FUJITSU

THE POSSIBILITIES ARE INFINITE

FEATURES AND BENEFITS

Availability

- Supports fault-tolerant, integrated active /active Ultra160 RAID controllers

- Compatible with server-based PCIx U320 RAID controllers

- Automatic controller failover/failback transparent to host w/o additional software

- Redundant hot-swap cooling fans

- Redundant hot-swap disk drives

- Redundant hot-swap load sharing power supplies

- Integrated battery backup unit for write cache protection

- Supports multiple, dedicated, pool and dynamic hot spares for complete disk drive protection

- Industry standard SAF-TE chassis design monitors and reports status of all components

Performance

- Ultra320 SCSI JBOD and RAID architecture

- Data storage transfer speeds up to 320 MB/s per bus

- Supports 10k RPM and 15k RPM disk drives 512MB cache per RAID controller

Scalability

- User-friendly upgrade path from JBOD to RAID

- Easy to configure several RAID groups and separate data partitions

- Scale to multi-terabyte solutions on a single RAID controller

- Dynamic on-line RAID expansion enables instant storage growth with no storage downtime

- Dual or single (optional) bus configurations within the same JBOD enclosure

Size Does Matter!

The Fujitsu IRS Ultra320 Series delivers high-performance and high-availability in a single 3.5" information storage system. This innovative product is designed to meet all entry-level to mid-range storage requirements. With 12 drive slots and the ability to scale to an industry-leading 1.7TB in 3.5" (2U), the Fujitsu IRS Series combines the current generation of SCSI performance (320 MB/s) with an upgrade path to complete active/active RAID in the same storage system, and is available in two models to fit into any direct server connection environment.

The IRS-JBOD is the foundation for any SCSI host connectivity and is optimised for performance oriented high-definition editing/rendering, scientific calculations and streaming data applications.

The IRS-1U160Nxx-xx (single controller) and IRS-2U160Nxx-xx (dual controller) products are created simply by adding one or two RAID controllers to an existing IRS-JBOD. These RAID systems offer scalability up to 5.3TB in 10.5" (6U) of data centre space. The IRS-1U160Nxx-xx and IRS-2U160Nxx-xx add controller-level data protection to applications that require the ability to scale storage capacity, maintain high-performance and build fault-tolerance, as required in video, seismic, medical imaging, and scientific/technology markets.

The Fujitsu IRS Series redefines versatility. Built on a single foundation, three different product options are created, delivering unparalleled performance and redundancy in enclosures designed to meet the demands of any storage application.

	imageRAID IRS-JBOD	imageRAID IRS-2U160xx-xx
Technical System Specifications		
Host Interface	Ultra320, Ultra160 or Ultra2 LVD SCSI	Ultra160 or Ultra2 LVD SCSI
Drive Capacity	18, 36, 73 or 146GB (7,200, 10k and 15k RPM)	
Maximum Cap/Enclosure	1.7TB (12 x 146GB)	
Maximum Cap/Daisy Chain Expansion	Up to 1.7TB on a single solution	Up to 5.3TB on a single solution by adding 2 imageRAID IRS-JBOD expansion enclosures
Number or RAID Controllers	1 or 2 SCSI RAID controllers can be integrated (Compatible with U320 PC1/PC1x RAID controllers)	2 SCSI RAID controllers. Also available as the imageRAID IRS-1U160xx-xx
System Architecture	Ultra320, Ultra160 or Ultra2 LVD SCSI	
SCSI Bus Configuration	Dual bus (standard) or single bus (with optional single bus module)	
Hot-Swap Components	Hard drives, RAID controllers, power supplies and cooling fans	
Redundant Components	Hard drives, RAID controllers, power supplies and cooling fans	
Error Notification 9SES/SEI)	Audible alarm, status LEDs, in-band SAF-TE, and network messaging	
SAT-TE Compliance	Yes	
Integrated RAID Controller		
RAID Levels	0, 1, 3, 4, 5, 0+1, 10 50 and Volume Set/JBOD	
Cache Memory	Up to 1GB or memory	
Drive Interface	Ultra160	
LUN Support	Up to 24 arrays with a maximum of 64 LUNs	
Power Requirements for the Fujitsu IRS-JBOD Series Storage Solutions		
Input Voltage	85 – 240 VAC (auto-sensing, load balancing)	
Input Frequency	50 – 60Hz	
Maximum Input Current	3.0 Amperes at 110v, 1.5 Amperes at 220v	
Power Supply Rating	Redundant 350 watt (425 watt peak) hot-swappable power supply units with Power Factor Correction (PFC)	
Maximum BTUs per Hour	1,194 BTUs per system	
Power Source	2 US standard independent power cords	
Certification Compliance		
Emissions	FCC Part 15 Class A, CISPR 22 EN550WW-A, BSMI, VCCI, C-TICK, NOM	
Agency Certification	CAN/CSA C22.22 #60950-00, UL 60950 3rd Edition, CB IEC 60950 Edition 3, NOM	
CE Compliance (EMC)	89/336/EEC EMC Directive, EN 55024	
Physical Characteristics		
	Rackmount	**Deskside Tower**
Width	17.65" (44.8cm)	8.0" (20.3cm)
Length	20.25" (51.4cm)	21.5" (54.6cm)
Height	3.47" (8.8cm) (2U)	20.0" (50.8cm)
Weight	39lbs (17.5kg) (without disk drives)	48.5lbs (22kg) (without disk drives)
Storage Management		
	AdminiStor RAID Configuration Utility for local in-band monitoring and management (IRS-1U/2U160xx-xx series only)	
	AdminiStor Plus Global storage management software (optionsl) for local and remote in-band GUI management and alert notification	
	VT-100 Command Line Interface for local out of band CLI configuration only (IRS-1U/2U160xx-xx series only)	

FUJITSU

THE POSSIBILITIES ARE INFINITE