

It's All About Your Data

VessRAID™ I 000s Series

 **Dual Ports SAS-to-SAS/SATA RAID 6 Storage System**
Enterprise Level Features at an Entry Level Price



VessRAID™ Your Data and Your Money

Powered by the field proven PROMISE enterprise RAID engine, the VessRAID™ series provides a data storage solution that is commercially affordable yet without compromise. VessRAID™ offers a flexible, full-featured system that can function as direct attached storage (DAS), in a storage area network (SAN), and with JBOD expansion.

VessRAID™ includes a complete selection of RAID and subsystem management tools. These include WebPAM PROe, a full-featured browser based application, a Command Line Interface and Command Line Utility, available over Serial or Ethernet connections, and an optional LCD monitor on the front of the enclosure for immediate system monitoring and management without using a PC.

VessRAID™ provides RAID robustness features such as Media Patrol, Predictive Data Migration (PDM), Perfect RAID™ advanced error handling plus user notification to secure your data and keep you informed about what is happening. Combined with a full selection of RAID levels and options, finding a safer data storage solution at any price would be a tremendous challenge.

Totally Green Power

VessRAID™ allows users to power down the entire system when the disk drives have not been accessed or are not scheduled to be accessed for some time. Periodically, the system performs a disk-to-disk backup or restore operation on a user-scheduled basis. When the operation is finished, the VessRAID™ returns to standby mode. Meanwhile, the Wake-on-LAN feature provides added flexibility, enabling authorized hosts to access the VessRAID™ over a network or over the Internet at anytime.

VessRAID™ I 000s uses 80 PLUS® certified power supplies. 80 PLUS® power supplies lower energy consumption through greater efficiency, as well as reducing of heat output, maintenance costs, and total cost of ownership.

Total Green Power results in a dramatic reduction of idle spinning time of disk drives, extending their service life, reducing the probability of failure, lowering the amount of heat the subsystem generates, and cutting the amount of power the subsystem consumes. All of these mean significant cost savings for your business as well as a more environmentally friendly workplace.

One-Plug-Auto-Service (OPAS)

With its USB port, VessRAID™ users can collect system historic status log information simply by plugging in a USB stick. The VessRAID™ automatically records a full report of system status, firmware version, event logs, setup, array configuration, and other essential information. You can collect a full system profile without using a host PC, laptop, network or serial connections. OPAS literally helps to shorten the turnaround time of conventional system diagnostic flow, and will come with more advanced applications like firmware upgrade, event log history, system setup restore, and array configuration scripts installation as a full service release.

Your Comprehensive Storage Partner

PROMISE storage solutions comprise various combinations of host bus adapter, Vess system and enclosure series connection. A VessRAID™ storage system can be direct attached with the FastTrak TX8668² adapter as host channel, and downlinks secondary VessJBOD™ expansion enclosures up to 80TB. A VessJBOD™ enclosure supports IOP based RAID adapter like SuperTrak™ EX8654, SuperTrak™ EX8658, and SuperTrak™ TX8658 as a massive disk storage pool.



System Highlights and Benefits

- ⌘ 16 hot-swappable SAS/SATA drive bays in a robust 3U chassis
- ⌘ 3Gb/s Serial Attached SCSI and Serial ATA drives support
- ⌘ 5 12MB ECC shared cache (up to 2GB), with optional battery backup units
- ⌘ Single or Dual hot-swap redundant power supply unit with 80PLUS Certified
- ⌘ Up to 880MB/s disk sequential throughput
- ⌘ OPAS via USB service
- ⌘ Comprehensive embedded web-based management via Ethernet – WebPAM PROe
- ⌘ Power Scheduler Operation
- ⌘ Multiple global or dedicated hot-spare drives
- ⌘ PerfectRAID™ and Predictive Data Migration™ technology for robust error handling and recovery
- ⌘ LCD Panel support (optional)
- ⌘ Wake-on-LAN support

Quick Selection Guide		
	HBA	System
A	FastTrak TX8668	VessRAID series
B	SuperTrak EX8654	VessJBOD series
C	SuperTrak EX8658	VessJBOD series
D	SuperTrak TX8658	VessJBOD series

¹Single PSU is 80 PLUS Bronze Certified, Redundant PSUs have 80 PLUS power efficiency

²FastTrak TX8668, Low Profile PCIe4 SAS/SATA RAID HBA with 8 external ports will be available in Q2, 2009



VessRAID™ 1000s Series Scifications

VessRAID System	VessRAID 1740s	VessRAID 1840s
System and Controller Features		
Form Factor	3U	3U
Drive Support	16 Drives (3.5")	16 Drives (3.5")
Controller	SAS(3Gb/s), SATAII(3Gb/s), NCQ, TCQ	
Host Channel	Single (Intel® IOP348 800MHz)	
Host Channel	Dual Ports SAS-wide (x4) over SFF-8088	
Promise Expansion Enclosure	One Port SAS-wide (x4) for VessJBOD 1740 or VessJBOD 1840	
Data Cache	512MB~2GB ECC cache memory with Optional BBU (Battery Backup Unit)	
Command Queue Depth	512	
Operational Features		
RAID Levels	RAID 0, 1, 1E, 5, 6, 10, 50, 60	
Hot spares	Global or Dedicated w/ revertible option	
Max LUNs per subsystem	256	
Max LUNs per array	32	
Variable Block and Sector Size	64KB ~ 1MB stripe block sizes 512B, 1KB, 2KB, 4KB sector size	
Disk Data Formats	Supports Disk Data Format (DDF) for drive roaming between Vtrak™ and VessRAID™ series systems.	
Background Activities	Media Patrol Background Synchronizing; Initialization Rebuild; Redundancy Check SMART Condition Pooling OCE (Online Capacity Expansion)/RLM (RAID Level Migration) Priority Control; Throttle Rate Control and watermarking per BGA (background activities) in Disk and NVRAM	
RAID Robustness	PDM (Predictive Data Migration) PerfectRAID™ advanced error handling Array Error Recovery Read/Write Check Table, Write Hole Table, Bad Sector Re-map Table NVRAM event logging	
System Management		
Supported OS	Windows 2000, XP, 2003, Vista, 2008 ¹ RedHat Linux SuSE Linux FreeBSD 7.0	
Management Tools	WebPAM PROe via Ethernet CLI/CLU via RJ-11 or Ethernet SNMP via Ethernet LCD Control Panel (Optional) OPAS via USB service UPS Monitor via USB service Power Scheduler Control	
Management Interfaces/Protocols	Ethernet, RJ-11 Serial Port, USB SNMP, SSL, Telnet, SLP	
Event Notification	Email, SNMP, NETSEND, Buzzer, LEDs, LCD Control Panel	
System Information		
AC Input	90 ~ 264 VAC, 47 ~ 63Hz	
Current (Maximum)	7A (100V); 3.5A (240V)	8A (100V); 4A (240V)
Power Supply	Single 450W 90-264V full-ranging w/PFC 80PLUS Bronze Certified	Dual 450W 90-264V full-ranging w/PFC 80PLUS Power Efficiency Hot swappable and redundant
Power Consumption	220.1 Watts (w/ SAS drives); 41.8 Watts (w/o drives)	
FAN	80 x 80 x 25.4 mm, N+1 design	
Temperature	5° ~ 40°C (-40° ~ 60°C non operational)	
Relative Humidity	10% to 80% non-condensing	
Dimensions (H x W x D)	130.1 x 446.2 x 461 mm 5.1 x 17.6 x 18.1 in	130.1 x 446.2 x 461 mm 5.1 x 17.6 x 18.1 in
Weight	14 kg (30.86 lbs) w/o drives 23.6 kg (52.03 lbs) w/ drives	16 kg (35.27 lbs) w/o drives 25.6 kg (56.44 lbs) w/ drives
Safety/EMI	CE, FCC Class B, VCCI, BSMI, CB, KCC, C-Tick, UL/cUL, TUV	
Base Configuration	VessRAID 2U/3U Unit w/ Drive Carrier RJ11-to-DB9 Serial Data Cable, Power Cord (Single PSU: 1; Dual PSU: 2) Quick Start Guide, Set of Screws, CD (Product Manual, SNMP files, QSG)	
Warranty and Option		
Warranty	3 years limited warranty ²	
Supported Hardware Options	LCD Panel, Front Bezel, Sliding Rail, Battery Backup Unit, SAS Cable	

¹Microsoft® WHQL for Windows Server 2003 and 2008 ²Operational Temperature between 5° ~ 35°C if BBU installed ³BBU is covered by one year limited warranty
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