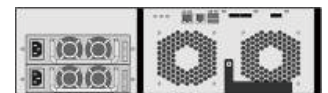
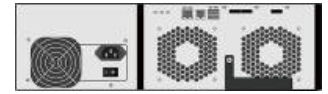
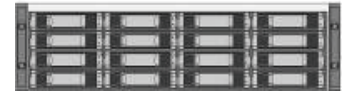


# VessRAID™ I 000s Series<sup>1</sup>

 **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™ 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<sup>®</sup> certified<sup>2</sup> power supplies. 80 PLUS<sup>®</sup> 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 TX8668<sup>3</sup> 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

- :: 16/12 hot-swappable SAS/SATA drive bays in a robust 3U/2U 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 820MB/s disk sequential throughput
- :: OPAS via USB service
- :: Comprehensive embedded web-based management via Ethernet – WebPAM PROe
- :: Power Scheduler Operation
- :: LUN Mapping and Masking
- :: 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

<sup>1</sup>VessRAID™ I 000i Series, Quad-port iSCSI-to-SAS/SATA RAID6 Storage System will be available H2, 2009

<sup>2</sup>Single PSU is 80 PLUS Bronze Certified, Redundant PSUs have 80 PLUS power efficiency

<sup>3</sup>FastTrak TX8668, Low Profile PCIe4 SAS/SATA RAID HBA with 8 external ports will be available in Q2, 2009



## VessRAID™ 1000s Series Specifications

VessRAID System	VessRAID 1730s <sup>1</sup>	VessRAID 1740s	VessRAID 1830s <sup>1</sup>	VessRAID 1840s
<b>System and Controller Features</b>				
Form Factor	2U		3U	
Drive Support	12 Drives (3.5")	16 Drives (3.5")	12 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	1024			
<b>Operational Features</b>				
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			
LUN Mapping & Masking	Dynamically change LUN ID & initiator access control			
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			
<b>System Management</b>				
Supported OS	Windows 2000, XP, 2003, Vista, 2008 <sup>2</sup> RedHat Linux SuSE Linux Novell Netware 6.5 SP6 FreeBSD 7.0 Solaris 10 Update5 Mac OS X 10.5			
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			
<b>System Information</b>				
AC Input	90 ~ 264 VAC, 47 ~ 63Hz			
Current (Maximum)	6A (100V); 3A (240V)	7A (100V); 3.5A (240V)	6A (100V); 3A (240V)	7A (100V); 3.5A (240V)
Power Supply	Single 350W 90-264V full-ranging w/PFC 80PLUS Bronze Certified	Single 450W 90-264V full-ranging w/PFC 80PLUS Bronze Certified	Dual 350W 90-264V full-ranging w/PFC 80PLUS Power Efficiency Hot swappable and redundant	Dual 450W 90-264V full-ranging w/PFC 80PLUS Power Efficiency Hot swappable and redundant
Temperature	5° ~ 40°C <sup>3</sup> (-40° ~ 60°C non operational)			
Relative Humidity	10% to 80% non-condensing			
Dimensions (H x W x D)	88.2 x 446.2 x 461 mm 3.5 x 17.6 x 18.1 in	130.1 x 446.2 x 461 mm 5.1 x 17.6 x 18.1 in	88.2 x 446.2 x 461 mm 3.5 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	TBD	11 kg (24.25 lbs) w/o drives 20.6 kg (45.41 lbs) w/ drives	TBD	13.2 kg (29.10 lbs) w/o drives 22.8 kg (50.26 lbs) w/ drives
Safety/EMI	CE, FCC Class B, VCCI, BSMI, CB, KCC, C-Tick, UL, 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)			
<b>Warranty and Option</b>				
Warranty	3 years limited warranty <sup>4</sup>			
Supported Hardware Options	LCD Panel, Front Bezel, Sliding Rail, Battery Backup Unit, SAS Cable			

<sup>1</sup>VessRAID 2U units will be available in Q2, 2009

<sup>2</sup>Microsoft® WHQL for Windows Server 2003 and 2008

<sup>3</sup>Operational Temperature between 5° ~ 35°C if BBU installed

<sup>4</sup>BBU and FAN are covered by one year limited warranty

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