PROMISE®
TECHNOLOGY, INC.

VessRAID™ 1000i Series RAID 6 Storage System

VessRAID™ 1000i Series

RAID Vess

Quad Ports iSCSI-to-SAS/SATA RAID 6 Storage System
Enjoy being Different with VessRAID

iSCSI + NAS, Exploit Storage with more Possibilities

VessRAID 1000i series provides iSCSI and NAS[1] combined features which enables users to do file and block-based data transaction on the network. iSCSI allows SCSI protocol to operate over TCP/IP and it's getting popular in various IP-based applications as you can leverage existing network infrastructure to achieve SAN connectivity. NAS devices are easy to deploy and ideal for file sharing over the network. Files on NAS are transparent to users and applications, and its access convenience greatly reduces users' learning curve on how to download and upload data to the storage. With iSCSI and NAS support, VessRAID leads user to explore broader storage applications and possibilities.

It's All about Your Security

Network Video Recorder (NVR) is an IP-based digital video recording system designed to operate 24/7, 365 days a year with non-stop A/V recording. This application demands reliable, scalable, and consolidated storage with simplified management capability. In a latest upgrade of NAS support, VessRAID 1000i series now offers a wide interoperable and flexible solution to ease the archiving complexity among heterogeneous recording platforms in a networked surveillance environment. With the upgrade users have more options to manage their storage provided by the VessRAID iSCSI system. The integration and management becomes less of an issue and you get the benefits of a either SAN or NAS with the economy and convenience of Ethernet.

ENERGY SAVING

Being green is important for business now. VessRAID features advanced hardware design using 80PLUS-certified power supplies[2], and supports complete levels of MAID2.0 that both can greatly improve system's power effectiveness in management and reduce heat generation. In addition, the power scheduling function allows users to power off the system and performs a disk-to-disk backup or restore on a scheduled basis. As the task completes, system returns to standby until the next one starts, resulting in a considerable 70% cost savings annually.

SMART MANAGEMENT

OPAS is designed to reduce maintenance complexity and streamline an easier tech support workflow as much as possible. It provides a new level of user convenience unique to Promise. With a simple USB stick plugging in, it can perform system information retrieval, firmware auto upgrading, script for quick installation and password resetting.

COMPETITIVE PRICING

Economic slowdown worldwide have caused a number of businesses to either cut their IT budgets or delay their purchasing decisions for new storage equipments, yet there is still need for inexpensive and feature-rich storage solutions as data grows on a day to day basis. The VessRAID family of products provides a reliable data protection you expect from Promise to keep data online longer through a cost-effective way for businesses to easily meet storage demands.

System Highlights and Benefits

:: 8/12/16 hot-swappable SAS/SATA 6Gb/s[3] or 3Gb/s drive bays in a robust 2U/3U chassis

:: Quad-port iSCSI 1Gb access with link aggregation and jumbo frames support

:: SMB/CIFS, NFS, FTP support

:: Microsoft Active Directory Support

:: Client-to-Host Volume Clone, Box-to-Box Replication, and NAS Fusion

:: Scale up to 112 Hard Disk Drive via VessJBOD Expansion units

:: Single or Dual hot-swap redundant power supply unit with 80PLUS Certified

:: OPAS and UPS Monitor via USB service

:: Comprehensive embedded web-based management via Ethernet – WebPAM PROe

:: Power Scheduler Operation

:: MAID 2.0 support

:: LCD Panel support (optional)

:: Wake-on-LAN support (VessRAID)

:: Wake-on-SAS support (VessJBOD)

Serial Attached SCSI

SERIAL ATA 3Gb/s

vmware READY

RoHS 2002/95/EC

[1] To enable NAS function, please update firmware to SR3 or later versions.
[2] Single PSU is 80 PLUS Bronze Certified, Redundant PSUs have 80 PLUS power efficiency
[3] Initiator still operates at 3Gbps mode

VessRAID™ 1000i Series Specifications

VessRAID System	VessRAID 1720i / 1820i	VessRAID 1730i / 1830i	VessRAID 1740i / 1840i
System and Controller Features			
Form Factor	2U	2U	3U
Drive Support	8 Drives (3.5")	12 Drives (3.5")	16 Drives (3.5")
	SAS(3Gb/s), SATAII(3Gb/s), NCQ, TCQ		
Controller	Single (Intel® IOP348 1.2GHz)		
Host Channel	Quad Ports full-duplex 1Gb iSCSI		
Promise Expansion Enclosure	N/A	One Port SAS-wide (x4) for VessJBOD series	
Max. Drives Supported	N/A	108	112
Data Cache	512MB~2GB ECC cache memory with Optional BBU (Battery Backup Unit)		
iSCSI Features	Error Recovery Level 0 Link Aggregation and Jumbo Frames w/ up to 64 Concurrent Sessions CHAP, iSNS and DHCP Microsoft iSCSI MPIO Support		
Command Queue Depth	1024		
NAS Features			
Supported Network Protocols	SMB/CIFS (Apple, Microsoft), NFS (Linux/Unix), FTP		
Data Services	Online Volume Clone, Box Replication, NAS Fusion		
Max. Size per Volume/No. per Volume	16TB/32		
Concurrent Sessions/Memory	32/512MB, 64/1GB, 128/2GB		
User Management	Microsoft ADS		
SmartNAVI Features	Backup/Restore Data, Scheduled Operation, User Management, Share Folder Administration, Auto-detect VessRAID and IP Assignment		
Operational Features			
RAID Levels	0, 1, 1E, 3, 5, 6, 10 (0+1), 30, 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		
System Management			
Supported OS	Windows 2000, XP, 2003, Vista, 2008[1] RedHat Linux, SuSE Linux, FreeBSD 7.0, CentOS VMWare ESX 4.0, ESX 4.0 U1		
Management Tools	WebPAM PROe/SNMP via Ethernet CLI/CLU via RJ-11 or Ethernet LCD Control Panel (Optional) OPAS/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)	6A (100V); 3A (240V)	6A (100V); 3A (240V)	7/8A (100V); 3.5/4A (240V)
Power Supply	Single/Dual 350W 90-264V full-ranging w/PFC 80PLUS® Bronze/80PLUS Efficiency Hot swappable and redundant (Dual)	Single/Dual 350W 90-264V full-ranging w/PFC 80PLUS® Bronze/80PLUS Efficiency Hot swappable and redundant (Dual)	Single/Dual 450W 90-264V full-ranging w/PFC 80PLUS® Bronze/80PLUS Efficiency Hot swappable and redundant (Dual)
Power Consumption	167.3 Watts (w/ SAS drives) 73.2Watts (w/o drives)	218.7 Watts (w/ SAS drives) 82.2Watts (w/o drives)	242.8 Watts (w/ SAS drives) 72.2Watts (w/o drives)
FAN	N+1 Design		
Temperature	5° ~ 40°C[2] (-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	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	10.8 / 12.6 kg (23.81 / 27.78 lbs) w/o drives 16 / 17.8 kg (35.27 / 39.24 lbs) w/ drives	11 / 12.8 kg (24.25 / 28.22 lbs) w/o drives 18.8 / 20.6 kg (41.45 / 45.41 lbs) w/ drives	13.2 / 15 kg (29.1 / 33.07 lbs) w/o drives 23.6 / 25.4 kg (52.03 / 56 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 Support			
Warranty	3 years limited warranty[3]		
Supported Hardware Options	LCD Panel, Front Bezel, Sliding Rail, Battery Backup Unit, SAS Cable		

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