

It's All About Your Data

VessRAID™ I000i Series



**Quad Ports iSCSI-to-SAS/SATA RAID 6 Storage System
Rediscover IP-SAN in a Click with VessRAID**

SAN with iSCSI for Broader Storage Possibilities

VessRAID I000i series provides four-port iSCSI capacity using block-level transfers over a network, a faster data throughput compared to file-based data sharing like NAS. iSCSI encapsulates SCSI CDBs into TCP/IP packets where they are used to create a SAN. This proven technology includes a variety of IP-based applications and enables you to leverage existing network infrastructure. That means IT managers don't need to install an expensive Fibre Channel fabric to obtain SAN capabilities. With an iSCSI SAN, they can have the consolidated storage space, remote and central management, and the flexibility to increase capacity on-the-fly. With the introduction of the VessRAID iSCSI series, users can easily scale storage architecture, integrate storage pools, reduce administrative load, and optimize storage utilization for a greater efficiency.

iSCSI in Surveillance

Network Video Recording (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, robust, consolidated storage with remote management capability. VessRAID I000i series in an IP SAN-based NVR system offers a more cost-effective alternative to the management complexity of a large installed DAS deployment. iSCSI technology encapsulates SCSI CDBs into TCP/IP packets enabling efficient, large block-level file transfers of sequential I/O for archiving and centralized storage management. As a result, you get the benefits of a SAN with the economy and convenience of Ethernet. NVR gives you video surveillance with central management plus consolidated archiving and storage, using proven technologies you already know.



System Highlights and Benefits

- :: 8/12/16 hot-swappable SAS/SATA drive bays in a robust 2U/3U chassis
- :: Quad-port iSCSI 1Gb access with link aggregation and jumbo frames support
- :: 3Gb/s Serial Attached SCSI and Serial ATA drives support
- :: SAS expansion for easy scalability
- :: 512MB ECC shared cache (up to 2GB), with optional battery backup 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
- :: 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



**ENERGY
SAVING**

Totally Green Power

VessRAID features advance hardware design by using 80PLUS power supply¹ and allows users to power down the system through power scheduler operation to optimize system power effectiveness and energy efficiency. Power scheduling enables the VessRAID system to do a disk-to-disk backup or restore operation on a user-scheduled basis then returns to standby mode when backup is finished, resulting in a considerable 70% cost savings annually.



**SMART
MANAGEMENT**

One-Plug-Auto-Service (OPAS)

OPAS was designed to reduce maintenance complexity as much as possible. With a simple USB stick plug-in to the system's USB port, it 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.



**COMPETITIVE
PRICING**

Designed for Cost-Sensitive Business

Current economic conditions worldwide have caused enterprises to either cut their IT budgets or slow down their planned deployment of storage facilities. There is a tremendous need of cost-effective yet feature-rich storage solutions, and the Vess family is the right marketing fit at the right time.



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

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")
Controller	SAS(3Gb/s), SATAII(3Gb/s), NCQ, TCQ		
Host Channel	Single (Intel® IOP348 1.2GHz)		
Promise Expansion Enclosure	Quad Ports full-duplex 1Gb iSCSI		
Data Cache	N/A		
iSCSI Features	One Port SAS-wide (x4) for Vess BOD series		
Command Queue Depth	512MB~2GB ECC cache memory with Optional BBU (Battery Backup Unit)		
Operational Features	Error Recovery Level 0 Link Aggregation and Jumbo Frames w/ up to 64 Concurrent Sessions CHAP, iSNS and DHCP Microsoft iSCSI MPIO Support		
RAID Levels	1024		
Hot spares	RAID 0, 1, 1E, 3, 5, 6, 10(0+1), 30, 50, 60		
Max LUNs per subsystem	Global or Dedicated w/ revertible option		
Max LUNs per array	256		
Variable Block and Sector Size	32		
Disk Data Formats	64KB ~ 1MB stripe block sizes 512B, 1KB, 2KB, 4KB sector size		
Background Activities	Supports Disk Data Format (DDF) for drive roaming between VTrak and VessRAID series systems.		
RAID Robustness	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		
System Management	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		
Supported OS	Windows 2000, XP, 2003, Vista, 2008 ¹ RedHat Linux, SuSE Linux, FreeBSD 7.0 VMWare ESX Server 4.0		
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® Beonze/80PLUS Efficiency Hot swappable and redundant (Dual)	Single/Dual 350W 90-264V full-ranging w/PFC 80PLUS® Beonze/80PLUS Efficiency Hot swappable and redundant (Dual)	Single/Dual 450W 90-264V full-ranging w/PFC 80PLUS® Beonze/80PLUS Efficiency Hot swappable and redundant (Dual)
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		

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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