



## Vess R3000 Data Sheet





## Features

- Dynamic storage solution optimized for virtualized environments
- Unified FC & iSCSI connections for SAN and/or NAS in the same storage
- Support for on demand expansion, ideal for today's growing data centers
- Advanced Storage Services included at no extra cost
- Designed to meet the growing challenge of unstructured data

- Enterprise design with cutting edge redundancy, reliability and high capacity
- Flexible 1/10Gbe and optional 8/16GFC, with 12G/6G SAS and 6G SATA backward compatible
- Fully tuned RAID expansion
- CacheGuard Data Protection & Predictive Data Migration (PDM) keep you safe
- Scale up to 208 hard disk drives via Vess J3000 series expansion units

Agility, Reliability and **Ultimate in Value**  The Vess R3000 Series unified storage appliance consolidates both block and file protocols onto a single hardware platform, providing today's SMB IT operations with cost-effective ways to be flexible, meet performance goals while simplifying storage administration. High availability features design with active-active configuration, the Vess R3000 Series storage solutions can be used in data-intensive environments such as virtualized, cloud data centers. From Terabytes to Petabytes and beyond with support for on-demand expansion capability plus advanced storage services features bundled, the Vess R3000 Series offerings are the most cost-effective solutions that all SMB's can afford.

Efficient, Intelligent and **Highly Scalable for Your Business Needs**  Future proof your storage investment, the Vess R3000 Series supports up to 208 hard drives with online expansion capability. Over-allocating of storage leveraging Thin-Provisioning feature helps take the worry out of planning and testing when additional capacity is required in the future. The included Read/Write Flash Cache Acceleration feature provides additional performance boost while lowering the latency. PROMISE intelligent data caching automatically promotes hot data to cache in real time, so you get the full benefit of flash performance. An additional layer of data protection with the use of the Snapshot feature aides with Point-in-Time content recovery when your business needs it most.

Simplifying Management and Support Simplicity and ease of use are absolutely crucial for SMBs with limited IT resources. The Vess R3000 is designed specially with SMBs in mind as it features One Plug Auto Service (OPAS) to reduce maintenance complexity and streamline an easier tech support workflow. Simply plug in a USB drive and the user can retrieve information about the system for tech support, upgrade firmware, reset passwords and much more. Embedded web storage management with intelligence Wizard technology helps reduce the learning curve for setup and configuring of the storage solution in your environment.

Going the Extra Mile to **Protect Your Data** 

The Vess R3000's new CacheGuard Data Protection features, Advanced Battery Flash Backup, go that extra mile to ensure your data is safe in case of power loss. Delivering protection of RAID controller write cache content beyond the standard 72-hour window, you can rest assured knowing your data is protected even when disaster strikes. Predictive Data Migration (PDM) proactive and predictive analytics keep your data safe with self healing technology.





## **Technical Specifications**

Models *S: Single Controller / D: Dual Controller	1 E 2000 11	Vess R3600xiS*/ R3600xiD*	Vess R3604fiS* / R3604fiD	Vess R3600tiS*/ R3600tiD*		
89	• Up to 16 3.5" drives					
Drive Support	• 6/12 Gb SAS, 6 Gb SATA HDD <sup>2</sup> and SSD					
	Supports any mix of SAS and	I SATA drives simultaneously	in the same enclosure			
Memory	8GB x 1 per ctrl (up to 64GB)		V			
Host Connectivity per Ctrl	1x Quad nort 1GhE	1x Quad port 1GbE 1x Dual port 10GbE SFP+	1x Quad port 1GbE 1 X Quad port 16GB FC	1x Quad port 1GbE 1x Dual port 10GBASE-T		
Capacity/Expansion	Online Capacity/Volume Expa	nsion up-to 12 JBOD's, 208	drives			
Operational Features		•	A Marian			
RAID Levels	0, 1, 5, 6, 10, 50, 60					
RAID Stripe Size Support	64K, 128K, 256K, 512K and 1M	IB .				
Hot Spares	Global or dedicated with reve	rtible option				
Max pool per System	Advance pool: 32	<ul><li>Standard pool: 32</li></ul>				
Max Volumes per System	Advance pool: 1024	• Standard pool: 991				
Max Volumes per Pool	Advance pool: 256	Advance pool: 256     Standard pool: 31				
Advanced Storage Features	- Advanced Cache Mirroring over PCle Gen3 - I/O performance & power monitoring tools - Asymmetric LUN Unit Access (ALUA) - LUN Masking and Mapping - PerfectFlash - Non-Disruptive Software Update - USB Service Log					
Data Services¹(Advanced Pool)	• Thin Provision • Snapshot • Thin Clone • Thick Clone • SSD Cache					
	Media Patrol     Background Synchronization					
Dankara un d A ativitai an	• Foreground Initialization • Rebuild					
Background Activities	Redundancy Check		Disk SMART Polling			
	Feature rich task scheduler fe	or background activities	• UPS Monitoring			
	Predictive Data Migration (P)	Predictive Data Migration (PDM)     Disk Slot Power Control				
Perfect RAID Features	Intelligent Bad Sector Remag	oping				
	SMART Error Handling					
SAN Protocol	8/16G FC; Max 256 Sessions per port     1/10G ISCSI; Max 1024 Sessions per controller					
Storage Expansion per Ctrl	1 x one 12Gb SAS Mini-SAS (SFF-8644)					
Management per Ctrl	1 x RJ-45 1Gb Ethernet and 1x	1 x RJ-45 1Gb Ethernet and 1x RJ11 Serial Port				
GreenRAID Features	• Four levels of advanced pow	er management disk drive (	MAID) support • Efficient 80	Plus Certified Power Supply		
NAS Features <sup>1</sup>	- 10 - 10					
Supported Network Protocols	SMB/CIFS (Windows, MAC), NFS (Linux/Unix), FTP, WebDAV					
Max. NAS Share	1024 per pool					
NAS Share Size	1PB					
Max. no. of Concurrent Sessions	4096					
Max. Account	10K					
Supported Domain	Microsoft Active Directory, LD	AP, Apple Open Directory	Microsoft Active Directory, LDAP, Apple Open Directory			
Max. Domain Account	100k					
Data Managomont	Permission Management, Quota Management, Online Expansion					
	Permission Management, Que	ota Management, Online Exp	pansion			
System Management						
System Management	Permission Management, Que     Web Based management usi     Third Party Management Sup	ing WebPAM PROe (Etherne		Line Interface (CLI)		
System Management Management Interfaces	Web Based management usi     Third Party Management Sup	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m	t) • Command	l Line Interface (CLI) 3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs	Web Based management usi     Third Party Management Sup     Windows Server 2008R2 SP1 2	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m	t) • Command			
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System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply	Web Based management usi     Third Party Management Sup     Windows Server 2008R2 SP1 2     VMWare ESXI 6.0, 6.5, 6.7, 7.0,	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe	command acOS Sierra 10.12.6, Ventura 1 R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR			
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage	Web Based management usi     Third Party Management Sup     Windows Server 2008R2 SP1 2     VMWare ESXI 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging	t) • Command acOS Sierra 10.12.6, Ventura 1 sR, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply			
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current	Web Based management usi     Third Party Management Sup     Windows Server 2008R2 SP1 2     VMWare ESXI 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU     AC: 100-240VAC; DC: 180-320	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa	t) • Command acOS Sierra 10.12.6, Ventura 1 SR, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply			
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System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320 < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8 Operational: 5° to 35°C, Non-C	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa 80% @ 240V (>20% load) Ten Operational: -40° to 60°C	t) • Command acOS Sierra 10.12.6, Ventura 1 SR, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
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System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320 < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8 Operational: 5° to 35°C, Non-COperational: 20% to 80% (Nor	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa 30% @ 240V (>20% load) Ten Operational: -40° to 60°C n-Condensing), NonOperat	command cacOS Sierra 10.12.6, Ventura 1 SR, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels Shock	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320 < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8 Operational: 5° to 35°C, Non-C Operational: 20% to 80% (Nor < 60dB, 25C	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS 5 Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full load 80%@240V (>20% load) Ten Operational: -40° to 60°C n-Condensing), NonOperat on, Non-Operational: 30G, 11 (sine wave); 0.41G, 3-10-200	t) Command accOS Sierra 10.12.6, Ventura 1 5R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing 1ms duration 0-500Hz (Random),	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels Shock Vibration	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320  < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8  Operational: 5° to 35°C, Non-C  Operational: 20% to 80% (Nor  < 60dB, 25C  Operational: 5G, 11 ms duration Operational: 0.2G, 5 to 500Hz Non-Operational: 1G, 5 to 500	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS 5 Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full load 80%@240V (>20% load) Ten Operational: -40° to 60°C n-Condensing), NonOperat on, Non-Operational: 30G, 11 (sine wave); 0.41G, 3-10-200	t) Command accOS Sierra 10.12.6, Ventura 1 5R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing 1ms duration 0-500Hz (Random),	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels Shock Vibration Environmental Standards	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320  < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8  Operational: 5° to 35°C, Non-C Operational: 20% to 80% (Nor < 60dB, 25C  Operational: 5G, 11 ms duratic Operational: 0.2G, 5 to 500Hz Non-Operational: 1G, 5 to 500  RoHS, WEEE	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa 30% @ 240V (>20% load) Ter Derational: -40° to 60°C n-Condensing), NonOperation, Non-Operation, Non-Operation, Non-Operation, Sine wave); 0.41G, 3-10-20(Hz (sine wave); 2.256G, 5-86)	t) Command accOS Sierra 10.12.6, Ventura 1 5R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing 1ms duration 0-500Hz (Random),	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels Shock Vibration Environmental Standards Dimensions (H x W x D)	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320  < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8  Operational: 5° to 35°C, Non-C  Operational: 20% to 80% (Nor  < 60dB, 25C  Operational: 5G, 11 ms duration Operational: 0.2G, 5 to 500Hz Non-Operational: 1G, 5 to 500	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa 30% @ 240V (>20% load) Ter Derational: -40° to 60°C n-Condensing), NonOperation, Non-Operation, Non-Operation, Non-Operation, Sine wave); 0.41G, 3-10-20(Hz (sine wave); 2.256G, 5-86)	t) Command accOS Sierra 10.12.6, Ventura 1 5R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing 1ms duration 0-500Hz (Random),	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
System Management Management Interfaces Supported OSs  Mechanical Specifications Power Supply Voltage Current Power Conversion Efficiency Temperature Range Humidity Acoustic Noise Levels Shock Vibration Environmental Standards Dimensions (H x W x D) Warranty and Support	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320  < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8  Operational: 5° to 35°C, Non-C Operational: 20% to 80% (Nor < 60dB, 25C  Operational: 5G, 11 ms duratic Operational: 0.2G, 5 to 500Hz Non-Operational: 1G, 5 to 500  RoHS, WEEE	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Powe VDC Auto-Ranging < 8A@180-320VDC@full loa 30% @ 240V (>20% load) Ter Derational: -40° to 60°C n-Condensing), NonOperation, Non-Operation, Non-Operation, Non-Operation, Sine wave); 0.41G, 3-10-20(Hz (sine wave); 2.256G, 5-86)	t) Command accOS Sierra 10.12.6, Ventura 1 5R, 7.1 LTSR, 8.0, 8.1, 8.2 LTSR r Supply d nperature Range cional: ~ 95% (Non-Condensing 1ms duration 0-500Hz (Random),	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		
Data Management  System Management  Management Interfaces  Supported OSs  Mechanical Specifications  Power Supply  Voltage  Current  Power Conversion Efficiency  Temperature Range  Humidity  Acoustic Noise Levels  Shock  Vibration  Environmental Standards  Dimensions (H x W x D)  Warranty and Support  Warranty  Supported Hardware Options	• Web Based management usi • Third Party Management Sup Windows Server 2008R2 SP1 2 VMWare ESXi 6.0, 6.5, 6.7, 7.0,  CRPS 550W; Efficiency 80PLU AC: 100-240VAC; DC: 180-320 < 8A@100-240VAC@full load; >80% @ 110V (>20% load), >8 Operational: 5° to 35°C, Non-C Operational: 5° to 35°C, Non-C Operational: 5G, 11 ms duration Operational: 1G, 5 to 500Hz Non-Operational: 3 years limited warranty	ing WebPAM PROe (Etherne pport via SNMP 2012 R2, 2016, 2019, 2022, m 8.0, Citrix Hypervisor 7.0 LTS S Certified Redundant Power VDC Auto-Ranging < 8A@180-320VDC@full loa: 80% @ 240V (>20% load) Ten 20perational: -40° to 60°C n-Condensing), NonOperation, Non-Operation, Non-O	command (Command (Com	3.1, RHEL 7.2, SLES 11 SP4, 12 SP1,		

## Note

- \* 32GB DRAM is required for NAS Feature and Data Services.
- <sup>2</sup> SATA drives require a SAS-SATA adapter.



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