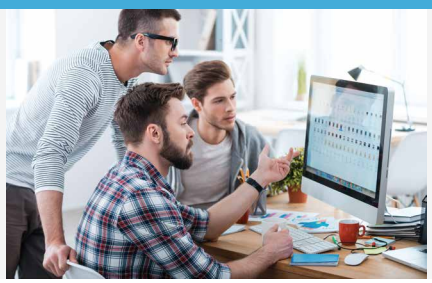
VTrak

PROMISE TECHNOLOGY

VTrak E5000 Series

16Gb Fibre Channel to 12Gb SAS/SATA

High-Availability Storage System for Big Data



DataCore SOFTWARE READY | vmware READY | CITRIX ready | VEEAM | Windows Server Hyper-V | arcserve

Benefits

- High-performance, high-bandwidth allowing more than 12.8 GB/s aggregate transfer rate
- High-Availability provides assurance of continuous operation
- Active-Active Dual Controller with ALUA for performance and access flexibility
- 80 PLUS GOLD certified PSUs, Deliver power efficiency, and Energy Star Ready
- Advanced diagnostics and reporting with persistent error log
- Virtualization Ready
- Support massive capacity by cascading up to 9 J5000 12Gb or SAS/SATA JBOD Storage Expansions

Tech Highlights

- Quad 16 Gb FC ports per Controller provides maximum bandwidth
- 12 Gb SAS backend storage interface to support the fastest HDD/SSD
- Backward compatible to 8 Gb and 4 Gb on Fibre Channel interface, and to 6 Gb on SAS/SATA interface
- Conveniently accessible persistent error logging and HTML formatted Service Report
- Online Capacity Expansion allows Volume size to grow with ease
- Software Updates without disrupting operation
- Background Data Integrity Checking and Parity Rebuild
- Predictive Data Migration (PDM) minimizes maintenance requirement

Affordable Enterprise-level Storage

- Delivers an affordable high-performance Fibre Channel to SAS Storage solution with advanced enterprise level reliability and functionality.
- Four 16Gb Fibre Channels ports and Two 12Gb SAS port (SFF-8644) per controller for connecting Host and Storage Expansion, respectively. Perfect for applications requiring huge bandwidth.
- Redundant and Active-Active components of controllers, power supplies, and cooling units providing optimal data availability for any unforeseen circumstance.
- Full featured Enterprise-level Storage System to accommodate any size of business environment.

IT/Data Center Ready

- The ability to deploy 6/12 Gb SAS/SATA hard drives and SSDs in the E5000 Series.
- Efficient power supplies provide up to 90% power efficiency that improves TCO by conserving power, reducing heat output and improving cooling costs.
- Flash arrays enable optimized speed for key enterprise applications that need High-speed transfer rate and reduced latency.
- Intel multi-cores processors allows saturation of line rate speeds for both 16Gb Fibre Channel Front-end and 12Gb SAS Backend interfaces.
- Delivers high capacity for archiving and backup
- Transport feature allows portability to move and/or store Petabytes from one location to another with data intact

Virtualization Ready

- Ready to confront any challenge in today's virtualized IT environment, the VTrak E5000 Series is certified with VMware vSphere, Citrix XenServer, Microsoft Hyper-V, Veeam, and DataCore SANsymphony.
- Virtualization enables dynamic storage allocations such that physical layers of storage can be utilized most effectively. As virtual machines continue to increase with more virtualized deployments, 16Gb Fibre Channel performance delivers the faster bandwidth needed for growing infrastructures.

VTrak E5000 Specifications

	2U/24 Bay	2U/12 Bay	3U/16 Bay	4U/24 Bay
Model and Number	 **E5320f**	 **E5300f**	 **E5600f**	 **E5800f**
Drive Support	Up to 24 2.5” drives	Up to 12 3.5” drives	Up to 16 3.5” drives	Up to 24 3.5” drives
	• 6/12 Gb SAS, 6 Gb SATA[1] HDD and SSD • Supports any mix of SAS and SATA drives simultaneously in the same enclosure			
External I/O Ports	Each SBB2.0 RAID Controller has four 16 Gb FC SFP ports for Host interface and two 12 Gb SAS standard Mini SAS HD ports (SFF-8644) for Storage Expansion, RJ45 1Gb Ethernet and RS232 for Management ports			
Operational Features				
RAID Levels	0, 1 , 5, 6, 10, 50, 60			
RAID Stripe Size Support	64K, 128K, 256K, 512K and 1MB			
Hot Spares	Global or dedicated with revertible option			
Max LUNs per Subsystem	1024			
Max Luns per array	32			
Advanced Storage Features	• Advanced Cache Mirroring over PCIe Gen3 • Simple, drag-and-drop LUN Masking and Mapping • Asymmetric LUN Unit Access (ALUA) • Volume Copy		• PerfectFlash - Non-Disruptive Software Update • I/O performance & power monitoring tools • USB Service Log • LDAP Support for central user management	
Background Activities	• Media Patrol • Background Synchronization • Foreground Initialization • Rebuild • Redundancy Check		• Disk SMART Polling • Online Capacity Expansion (OCE) • RAID Level Migration (RLM) • UPS Monitoring • Feature rich task scheduler for background activities	
PerfectRAID Features	• Predictive Data Migration (PDM) • Intelligent Bad Sector Remapping • SMART Error Handling • NVRAM Error Logging		• Disk Slot Power Control • Read/Write Check Table • Write Hole Table	
GreenRAID Features	• Four levels of advanced power management disk drive (MAID) support • Efficient 80Plus Certified power supplies			
System Management				
Management Interfaces	• Web Based management using WebPAM PROe (Ethernet) • Command Line Interface (CLI) • Third Party Management Support via SNMP, CIM			
Supported OSs	Windows Server 2008, 2012, OS X 10.x, RHEL 6.5, 6.6, 6.7, and 7.2, SLES 11, 11 SP4, and 12 SP1			
Software Certification	VMware ESXi 6.0, VEEAM Backup & Replication 9.0, Citrix Server 7.0, Data Core SANSymphony 10.0 PSP6, Windows, Arcserve UDP v6.0.3792 Update 3 Build 776, XSAN 5, StorNext v5.3			
Mechanical Specifications				
Voltage	100--240 Vac Auto--Ranging			
Current (Maximum)	9A @ 100 Vac; 4A @ 240 Vac			
Power Conversion Efficiency	>80% @ 110V (>20% load), >80% @ 240V (>20% load) Temperature Range			
Temperature Range	Operational: 5° to 35°C, Non-Operational: -40° to 60°C			
Humidity	Operational: 20% to 80% (Non-Condensing), Non--Operational: ~ 95% (Non-Condensing)			
Acoustic Noise Levels	< 60dB, 25C			
Shock	Operational: 5G, 11 ms duration, Non-Operational: 30G, 11ms duration			
Vibration	Operational: 0.2G, 5 to 500Hz (sine wave) ; 0.41G, 3-10-200-500Hz (Random) , Non-Operational: 1G, 5 to 500Hz (sine wave) ; 2.256G, 5-80-350-500Hz (Random)			
Safety and Emission Certification	EMC Class A: CE, FCC, VCCI, BSMI, RCM Safety: IEEE CB, UL/cUL and TUV			
Environmental Standards	RoHS, GreenPC, WEEE			
Power Supply	Efficient 80PLUS GOLD Certified redundant PSU			
Dimensions (H x W x D)	88mm x 446.7mm x 420mm (3.5” x 17.6” x 16.5”)	88mm x 446.7mm x 507mm (3.5” x 17.6” x 19.96”)	131mm x 446.7mm x 507mm (5.2” x 17.6” x 19.96”)	174.4mm x 446.7mm x 507mm (6.87” x 17.6” x 19.96”)
Weight	16.2Kg(35.7 lbs) w/o drives 20.5Kg (45.2 lbs) w/ drives	18.9Kg(41.7 lbs) w/o drives 26.8Kg (59.1 lbs) w/ drives	23Kg(50.7 lbs) w/o drives 33.4Kg (73.6 lbs) w/ drives	24.8Kg(54.7 lbs) w/o drives 40.5Kg (89.2 lbs) w/ drives
Warranty and Support				
Warranty	3-year full system limited warranty, optional extended warranty, onsite parts replacement program			
Support	24/7 e-mail and phone support, 24/7 access to PROMISE site-drives, firmware, and compatibility list			

[1]SATA drives require a SAS-SATA adapter