VTrak J5960

Data Sheet

Features

- **High-Density Storage, Expansion up to 8 Petabytes**
  - 60 Bay Enterprise Storage Platform
  - Massive capacity, cascade up to eight 4U60 JBOD enclosures
- **Optimized for High-Performance Datacenter**
  - Huge bandwidth with six 12 Gb SAS ports per IOM; more than 15GB/s aggregate transfer rate from 60pcs SAS HDDs
  - Dual-port SAS drive for high availability or single-port SATA drive for cost efficiency
  - Six multipurpose SAS ports (SFF-8644) per controller for connecting upstream or downstream multiple cascaded JBODs
  - SCSI Enclosure Services (SES) enclosure management based on ANSI T10 standard
- **JBOD with Green DNA**
  - 80 Plus Platinum PSUs, superior power efficiency, Energy Star Ready
  - Energy efficient SAS expander chip
  - Less total power consumption
  - Less heat emission
  - Excellent thermal management
  - Long life span of FAN and PSU
  - Green Design, Green Production, and Green Commitment to The Environment
- **Maintainability**
  - Cable-less hot-swappable IOM, power supply, fans and drives
  - Work-efficient modular cable-less design
  - SCSI Enclosure Services (SES) management via in-band SAS, out-of-band Serial console (RJ11), or out-of-band 1G network (RJ45)
  - Auto sensing and auto optimizing for cable lengths and types
  - Compatible with leading HBAs and RAID controllers
  - Advanced diagnostics and reporting with persistent error log

High-Density Storage, Expansion up to 8 Petabytes

The VTrak J5960 high-density SAS enterprise JBOD storage solution balances high performance and high capacity in a robust, quiet, energy efficient, cool running system. Each unit supports a Petabyte of storage capacity in a compact form factor with scalability potential to over 8 Petabytes per 8-unit cascade. To meet rapidly increasing demand for very high capacity storage, VTrak J5960 provides extremely high density. The SAS zoning feature enables simultaneous sharing of the giant JBOD storage enclosure among multiple connected server nodes. VTrak J5960 features fully redundant I/O modules, power supplies, and cooling units – in an all hot-swappable design - for constant high availability in enterprise environments, even in the event of component failure.

Optimized for High-Performance Datacenter

The VTrak J5960 is designed for enterprise environments that require very large capacity, high bandwidth and high speed. VTrak J5960 features six external 12Gb/s SAS ports per input/output (I/O) module; a total of twelve 12Gb/s SAS ports on each dual I/O module chassis, delivering the extremely high performance required for modern data centers. Optimized for high-speed computing applications, cloud platforms and enterprise applications with up to 15GB/s aggregate transfer rate with 60 HDDs for heavy workload scenarios.

A JBOD with Green DNA

VTrak J5960 continues our record of using green technologies, incorporating green design (such as tiered power management), green production methods, and a commitment to environmental protection. In addition to green design, VTrak J5960 PSUs are certified 80 Plus Platinum and Energy Star Ready for high power conversion efficiency at different loads: 91% efficiency for 20% loads, 94% efficiency for 50% loads, and 91% efficiency for 100% loads.

Maintainability

The cable-less innovative mechanical design of the VTrak J5960 enclosure and sliding rail system make it easy to service and maintain. The compact enclosure depth of 666 mm is ideal for data center with equipped racks of 1000 mm depth. It features a sliding top and sturdy sliding rail system that enables easy access to all HDDs and the interior while remaining safely mounted in the rack. SAS IO modules are accessible for replacement from the front while SAS data ports remain at the back for host connectivity. The VTrak J5960 is unbeatable when it comes to physical maintenance of the system and accessibility of components.

Technical Specifications

	VTrak J5960
Model	 PROMISE High Density JBOD
General Information	
Form Factor	4U60 Bays JBOD storage chassis
Number of Drives	60
Drive Support	Dual IOM : 12 Gb SAS HDD and SSD drives Single IOM : 12 Gb SAS , or 6 Gb SATA HDD and SSD drives
IO Module	Dual or Single
Expansion	Up to 8 sets of J5960 4U60 JBODs
Host Interface/ External IO Port - SAS Port - Ethernet Port - Serial Port	 - 6 Mini SAS HD connectors (SFF-8644) for upstream or downstream each IOM - 1 Gigabit Ethernet each IOM (management port) - 1 RJ11 each IOM (management port)
Features	
Hot Swappable FRU	HDD, IO Module, Power Supply Module, Fan
SAS Expander	Self-configuring expander supports full SAS domain topology management T-10 based zoning support End Device Frame Buffering (aggregate bandwidth over multiple slow devices e.g. SAS 6G drive) Smart cable support to detect cable type and tune PHY automatically for maximum reliability SMP – SAS Management Protocol In-band access to Expander and PHY information Statistic counters SES EM – SES Enclosure Management (ANSI T10 SES Compliant) SCSI SES command set over virtual SSP device
System Management	
Management interfaces & tools	Command Line Interface (CLI) via Serial Port, Ethernet Port (SSH, Telnet)
System Management Protocol	ANSI T10 SES, SMP (SES over in-band SAS) Persistence Error Logging with NVRAM, VPD (Vital Product Data) on Chassis and FRUs
LED indictor	LED status indicator supports for Enclosure, IOM, PSU and Fan: System Power Status LED, Global Enclosure Status LED, IOM1 Activity LED, IOM1 Status LED, IOM1 Heart Beat LED, IOM2 Activity LED, IOM2 Status LED, IOM2 Heart Beat LED, Fan status LED, Ethernet pairs Link/Activity LED, 6 SAS Wide Port LED, PSU Status LED.
Physical Inforamtion	
Dimension (H x W x D, mm)	177mm x 445mm x 666mm
Weight	Net Weight without HDD : 35Kg (Estimation) Net Weight with HDD : 70Kg (Estimation)
Fan	2 * (50 x 80mm) Hot-Swappable Fan Modules
Power Supply	80 PLUS Platinum 1200W Redundant Power Supply
Voltage	100-127Vac, 200-240Vac
Current (Maximum)	<15A@100-127Vac @full load <10A@200-240Vac @full load
Power Conversion Efficiency	Load 10% Eff 86% , Load 20% Eff 91% , Load 50% Eff 94% , Load 100% Eff 91% Eff for 230Vac
Environment	
Operational Environment	Temperature : 5ºC to 35ºC Humidity : 10% to 80%
Non-Operational Environment	Temperature : -40ºC to 60ºC Humidity : 10% to 95%
Environment Standard	RoHS & WEEE
Warranty and Support	
Warranty	3-year standard limited warranty, optional extended warranty, optinal on-site parts replacement program (PSP)
Support	24/7 Promise eSupport portal and phone support

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