PROMISE®
TECHNOLOGY, INC.

It's All About Your Data

VTrak™ M200p
SATA RAID Storage System

Robust, high-availability, high-performance dual channel Ultra 320 SCSI to 8-bay Serial ATA (SATA) 3Gb/s RAID system

Low-cost, feature-rich storage for outstanding productivity

The Promise VTrak M200p is a high-performance RAID storage system optimized for organizations deploying small to medium application servers, disk-to-disk backup and direct-attach storage solutions. Dual Ultra 320 SCSI host interface channels offer the ease of management and performance required by companies running popular departmental and back-office applications. The VTrak M200p combines advanced connectivity and storage features – sophisticated functionality, exceptional performance, rock-solid reliability, and high availability – with intelligent system design for a very affordable solution

The VTrak M200p—small in price, big on capability

The VTrak M200p leverages high performance, hot-swappable SATA 3Gb/s drives—the cost-effective benchmark for high-density storage – offering an exceptional entry point for direct-attached servers and small clusters. Industry-standard SCSI host channels provide server connectivity support. Enterprise-ready features, such as fully redundant power and cooling, a battery-backed cache, and Promise's unique Predictive Data Migration™ and PerfectRAID™ technologies provide superior availability and data integrity.

High storage density for flexibility and economy

The VTrak M200p supports up to 8 off-the-shelf 3.5" SATA 3Gb/s or 1.5Gb/s drives per system in a standard 2U 19" rack space. By taking advantage of unsurpassed capacity of SATA drives, the VTrak system delivers the highest capacity levels available. Multiple VTrak systems can also be daisy chained to deliver massive storage to capacity-hungry applications such as disk-to-disk backup, media serving, video surveillance and compliance storage.
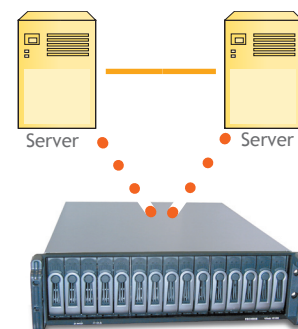
Comprehensive remote management

VTrak M-Class systems feature embedded WebPAM PROe management software, eliminating the need to install additional software on the network. With WebPAM PROe, all VTrak M-Class systems in your network can be configured and monitored through a single, easy-to-manage web-based graphic user interface. The software works through the VTrak system's Ethernet port – locally, across a LAN, or across an internet connection – to configure and monitor one or multiple VTrak system(s) and provide error reporting through pop-up messages, event logging, or email notification. The VTrak family simplifies integration with third-party management applications using industry-standard SNMP and WBEM protocols..

Storage and server consolidation delivers cost savings

The VTrak M200p incorporates advanced cluster support features such as advanced LUN Mapping and Masking. With support for up to 256 Logical Drives (LUNs) per array and 32 LUNs per physical drive, the M200p delivers a robust, flexible platform for storage and server consolidation and advanced costs savings. By sharing storage resources among multiple servers, users can take advantage of high availability configurations and employ resource sharing for cost effective storage solutions that maximize capacity utilization.
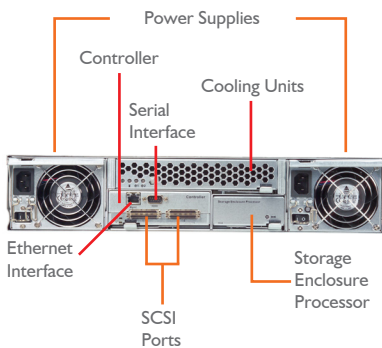
VTrak M200p Highlights

:: 8 hot-swappable SATA drive bays in a robust 2U chassis

:: Supports 3Gb/s and 1.5Gb/s Serial ATA drives – NCQ and TCQ

:: Dual Ultra 320 SCSI channels with four VHDCI ports

:: Up to 465MB/sec sustained throughput (cache hit using both ports)

:: Redundant, hot-swappable power and cooling

:: 256MB ECC shared cache (up to 512MB), with battery backup

:: Comprehensive embedded web-based management via Ethernet

:: Command Line Interface/Utility via RS232 Serial Port

:: LUN Mapping and Masking

:: Multiple global or dedicated hot-spare drives

:: PerfectRAID™ and Predictive Data Migration™ technology for robust error handling and recovery
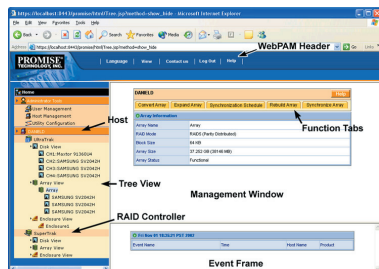

Ideal for two-node application clusters and disk-to-disk back-up

PROMISE® TECHNOLOGY, INC.

Power Supplies
Controller
Cooling Units
Serial Interface
Ethernet Interface
Storage Enclosure Processor
SCSI Ports

Sophisticated Array Monitoring Tools

WebPAM Header
Host
Function Tabs
Tree View
Management Window
RAID Controller
Management Window
Event Frame

Promise Array Management monitoring software offers professional management tools in a simple-to-use, straightforward format. The software works locally or via network TCP/IP connection to monitor arrays. Information windows appear during critical and user-specified events. The software can even be configured to send e-mail notification should an error occur.

The Leader in SATA RAID

Promise Technology, Inc., recognized as the originator and worldwide leader of ATA RAID since 1997, has offered high-performance solutions for PC storage since 1988. Today the world's biggest OEMs and resellers look to Promise for ongoing innovations in SATA RAID design as the company continues to lead with the most powerful and economical alternatives to traditional RAID controllers and subsystems.

VTrak M200p Specifications

System and Controller Features

Drive Support	8 Drives (3.5" x 1" only) – Supports 3Gb/s and 1.5Gb/s SATA drives Supports Native Command Queuing (NCQ) and Tagged Command Queuing (TCQ) Staggered physical drive spin-up
External I/O Ports	Dual Ultra 320 SCSI channels with four VHDCI ports Sustained Throughput Up to 465MB/sec (using both channels cached)
Data Cache	Shared 256MB predictive data cache (max. to 512MB) with automatic write cache destaging and 72-hour battery backup (for 256MB)
Command Queue Depth	512 commands per VTrak system (Promise RAID Engine can handle up to 1024 commands)

Operational Features

RAID Levels	RAID 0, 1, 1E, 5, 10, 50 – Any combination of these RAID levels can exist at the same time Configurable RAID stripe size: 8K, 16K, 32K, 64K, 128K, 256K, 512K and 1MB stripe size per disk. Background task priority tuning: adjustment of minimum I/O reserved for server use during all background tasks
Hot spares	Multiple global or designated dedicated hot-spare drives with revert options
Max LUNs per subsystem	256 in any combination of RAID levels and array types
Max LUNs per array	32 logical drives (LUNs); Supports LUN Carving by allowing an array to be divided into multiple logical drives; RAID level, stripe size, sector size and cache policy can be configured per LUN; Out of order logical drive deletion and re-creation
Max LUNs per Target ID	Up to 256, depending on host side driver and operating system
LUN Masking and Mapping	Supports multiple hosts compliant with SPI-4
Disk data formats	Supports Disk Data Format (DDF) for industry wide standardization and drive roaming between VTrak systems
Background Activities	Media Patrol; Background synchronizing; Foreground initialization; Rebuild; Redundancy Check; SMART condition pooling; OCE (Online Capacity Expansion); RLM (RAID Level Migration); Priority Control, Throttle Rate Control and watermarking per BGA in Disk and NVRAM
RAID Robustness	Bad sector re-mapping table; PDM (Predictive Data Migration); Read Check Table; Write Check Table; Write Hole table; NVRAM event logging
SCSI Commands	Supports extensive SCSI command set equivalent to SCSI/FC hard disk drives; Variable sector size (512Byte to 4kB) to break OS 2TB limitation; 16Byte CDB support for 64-bit LBA address

System Management

Supported Operating Systems	Windows 2000, Windows 2003, Linux (Red Hat, SuSE), Macintosh OS X, Solaris
Management Tools	Operating System independent; Localized in multiple languages; SSL Security support; WebPAM PROe via out-of-band Ethernet; Command Line Interface/ Utility via RS232 Serial Port or Ethernet (Telnet); Standard Management Protocols: SNMP, WBEM/CIM; Auto, Express and Advanced configuration support for novice and skilled users
Management Interfaces/Protocols	Ethernet, RS232 Serial Port; SNMP, SSL, WBEM/CIM, Telnet, Microsoft VDS; Email, audible (buzzer), and visible (LEDs) alarms

Mechanical Specifications

Current (Maximum)	8 A @ 100 Vac; 4 A @ 200 Vac (current rating with two power cords)
Power Consumption	260 Watts (under load)
Power Supply	Dual 360W, 100-240 Vac auto-ranging, 50-60 Hz, dual hot swap and redundant with PFC, N+1 design
Thermal Output	887 BTU/hour (max current)
Temperature/ Humidity	5° ~ 40°C (-40° ~ 60°C non operational); Maximum relative humidity = 95%
Dimensions (H x W x D)	8.9 x 44.6 x 56.1 cm (3.5 x 17.6 x 22.1 in)
Weight	23.0 kg (50.7 lbs) without drives, 28.0 kg (61.7 lbs) with 8 drives*
Safety	UL, TUV, CE, FCC Class A, BSMI, VCCI, CB, MIC, C-Tick

Warranty and Support email support (English only)	3 years complete system limited warranty and 24x7 worldwide telephone and

Check www.promise.com for the latest operating system, HBA, and hard disk drive compatibility.   * Assume each hard drive = 0.5 kg

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