

PROVIGO 610 SCSI/SATA Performance RAID

Technical Specifications

General	
Product Type	Workgroup RAID system for direct connection to max. two servers
Storage Capacity	Up to 12 TB (10.9 TiB) gross capacity
Drive type	SATA-2
No. of hot-swappable drive bays	12
Scalability	none
Interface type	Ultra320 SCSI to host
Compatibility	Operating system-independent
Form Factor	19" 2U rackmount
Hard Disk Storage	
Type	SATA/300
Form Factor	3.5 inch
No. of hot-swappable drive bays	12
No. of supported disks	12
Supported models	Seagate Barracuda ES.2 - Hitachi Ultrastar A7K1000 - Western Digital Caviar RE2, RE2-GP (GreenPowered), VelociRaptor
Storage Controller	
Type	Infortrend EonStor A12U-G2130 - ASIC266 RAID Controller
Number installed	1 - cold-swap
Processor	IBM PowerPC 750CXr - 400 MHz RISC CPU - 256 KB L2 cache Hardware XOR Engine
No. of Channels	12 x SATA/300 to hard drives 2 x Ultra320 SCSI to host
Mass Storage Controller	
Bandwidth	3 Gb/s per hard drive channel 320 MB/s per host channel
RAID Level	0, 1, 0+1, 3, 5, 10, 30, 50, NRAID
Hot spare support	Dedicated global spare and dedicated spare disks Automatic rebuild in the background with configurable priority
General features	<p>Individual configurable S.M.A.R.T. policies for preventive identification and removal of break-down-threatened hard drives with modes -Detect Only (warning message), Perpetual Clone (copy data on spare drive) and clone and replace (replace hard drive with drive spare)</p> <p>Verification of hard drive write operations (verification on write) - either on initialisation, rebuild or on every write operation</p> <p>Support of disk cloning (manual) and drive roaming (within a controller generation)</p> <p>hard drive cache can be activated/deactivated for maximum security</p> <p>Periodic hard drive scans & bad block management can be controlled by time planner</p> <p>Adjustable tagged command queueing (max. 256)</p> <p>MAID support - hard drive spindown during inactivity (no I/O access) via a configurable time period</p> <p>Support for up to 8 RAID sets each with up to 4 partitions (max. 128 LUNs)</p> <p>Individually configurable hard drives, stripe size and cache policy per RAID set</p> <p>Preset configuration for optimum audio/video streaming performance - no-drop frame performance - data from unresponsive hard drives are generated without delay by controller using parity calculation</p> <p>Initialisation of RAID sets in background with configurable priority</p> <p>Online RAID set administration (store, delete, partition, mapping)</p> <p>Online capacity and volume extension</p> <p>Online stripe size and RAID level migration</p> <p>Redundant backup of system configuration and event logs in disk reserved space and configuration export/import option</p>

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Cache Memory	
Type	DDR400 ECC registered RAM
Cache per Controller	1 GB installed - max. 2 GB
Supported Settings	Write back, Write through Adaptive write policy - automatic analysis of I/O data flows and dynamic adjustment of cache configuration for maximising performance Auto data protection policy - automatic control of write through in the event of a battery, fan or power supply as well as low battery or UPS load
Cache Battery	
Technology	Lithium Ions
Number Installed	None - 1 x optional - hot-swap
Average protection time	Up to 72 hours
Management	
Local management	Front 4-key LCD display for setup, configuration & status display Firmware-embedded Command Line Utility via VT100 terminal emulation
Remote management	RAIDWatch/Conn Management Software - Java-based - with SSL encryption Telnet/SSH management access to Command Line Utility
Status LEDs	Status LEDs for LCD display (Power, Busy, Attention), hard drive slots (Power, Activity), RAID controller (Ready, Host Busy, Drive Busy, Cache Dirty, BBU Fail), Host Port (SAS Link Status), Ethernet Port (Link Status, Activity), battery module (status), fan (Status) and power supply (Status)
Alarm functions	Acoustic onboard alarm (with mute button) in the event of a breakdown of a RAID controller, fan, power supply, hard drive or battery module
Event notification	Email, SNMP Traps, LAN Broadcast Fax, MSN Messenger, ICQ, SMS
Advanced features	Central, extensive management of multiple PROVIGO 600 RAID systems via RAIDWatch/RAIDConn (requires additional installation of management software on one Windows host computer) Redundant RAIDWatch/RAIDConn installation on two Windows host computers for high-availability monitoring Three password-protected administration levels for separating unlimited access, local access, maintenance and monitoring Integration in Frameworks via SNMP traps, text messaging and SNMP 2.0 MIB support with Get/Set commands
Connectivity	
Host interfaces	2 x Ultra320 SCSI (VHDCI) - auto-terminating
Supported Topologies	Direct connection (point-to-point) Auto-negotiate of host transfer rate
Management interfaces	1 x 10/100Base-T Fast Ethernet (RJ45) 1 x serial (RS-232C, audio jack) for local management
Expansion interfaces	none
Supported operating systems	Operating system-independent
Software and System Requirements	
Included software	RAIDWatch/RAIDConn Management Software (Java-based, preinstalled in disk reserved space)
Cooling Modules	
Installed	3 modules each with one fan - redundant - hot-swap
Features	Automatic control on high or low rpm depending on load
Max. air flow	31.8 CFM / 20.1 CFM
Power	
Power Device	Internal power supplies - hot-swap - redundant

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Power supplies	
Installed	2
Power	
Voltage Required	110/230 V AC (47-63 Hz)
Power Provided	350 Watt per module +12.0 V: 25A max. +5.0 V: 25A max. +3.3 V: 20A max.
Heat dissipation (max.)	1200 BTU/h
Environmental Parameters	
Operating Temperature	0° to 30°C / 40°C (configuration with/without battery module)
Humidity Operating Range	5% to 95% - non-condensed
Maximum Operating Height	0 to 3,500 m
Dimensions and Weight	
Width	490 mm (with handles) - 446 mm (without handles) - 580 mm (packaging)
Depth	505 mm (with handles) - 490 mm (without handles) - 725 mm (packaging)
Height	88 mm (with handles) - 88 mm (without handles) - 385 mm (packaging)
Weight	up to 34 kg
Miscellaneous	
Compliant Standards	CE, FCC Class B, UL, CB
Standard scope of delivery	19" rackmount rails, quick installation guide, CD-ROM (firmware, software, manuals)
Manufacturer Warranty	
Service & Support	3-year warranty & support
Optional Service & Support	Express exchange service On-site service: Bronze (next business day), Silver (Mon-Fri, 4 hours) or Gold (7x24x4) Service & support extensions up to 5 years
Service & Support Details	Other information on our services and terms and conditions can be found on the transtec Websites