

# PROVIGO 550 RAID

## Technical Specifications

General	
Product Type	Scalable workgroup RAID system for integration in one FC SAN or direct connection to up to two servers
Storage Capacity	Up to 60 TB (54.5 TiB) gross capacity
Drive type	SAS & SATA (dual mode)
No. of hot-swappable drive bays	12
Scalability	Supports up to 60 SAS/SATA-2 hard drives
Interface type	4 Gbit Fibre Channel to host
Compatibility	Windows, Linux
Form Factor	19" 2 U rackmount
Hard Disk Storage	
Type	SAS/300 & SATA/300
Form Factor	3.5 inch
No. of hot-swappable drive bays	12
No. of supported disks	60
Supported capacities	SAS (15,000 rpm): 73 GB / 67 GiB, 146 GB / 135 GiB, 300 GB / 279 GiB, 450 GB / 419 GiB SAS (10,000 rpm): 400 GB / 372 GiB Nearline SAS (7200 rpm): 1 TB / 0.9 TiB Enterprise SATA (7200 rpm): 750 GB / 698 GiB, 1 TB / 0.9 TiB
Storage Controller	
Type	Xyratex F5412 RAID
Number installed	2 - redundant - active/active - hot-swap
Processor	Intel® IOP331 - 800 MHz CPU - 32 KB L2 cache Hardware XOR engine
No. of Channels	12 x SAS/300 zu den Festplatten 4 x 4 Gbit Fibre Channel to the host 2 x multilane SAS for connection to extension JBODs (EBOD)
Mass Storage Controller	
Bandwidth	3 Gb/s per hard drive channel 400 MB/s per host channel 1200 MB/s per extension channel
RAID Level	0, 1, 5, 6, 10, 50
Hot spare support	Dedicated global spare and dedicated spare disks Automatic rebuild in the background with configurable priority
General features	Supports dual SAS/SATA mode (column by column) Activated background hard drive scans & bad block management Manual configuration of RAIDView Storage Assistant for Wizard-assisted setup Support for up to 64 RAID sets each with up to 16 hard drives and 8 partitions (max. of 512 logical drives) Individual chunk/strip size and cache policy per RAID set Background RAID initialisation and parity check with configurable priority Administration of RAID sets and logical drives (system, extension, deleting) Statistics of I/O access, logical drives, controller efficiency and cache usage for optimising performance Backup for system configuration and event logs in disk reserved space and file export option LUN masking and mapping Support for up to 256 hosts (512 LUNs) and cluster connection Up to 64 point-in-time, copy-on-write snapshots per logical drive as an option - for up to 8 logical drives Microsoft Virtual Shadow Copy Service (VSS) Support Snapshot data recovery for point-in-time data restore Note: Servers and applications without VSS support should be in backup/quiet mode and the controller cache empty to ensure consistent snapshots (write through)

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Cache Memory	
Type	DDR2-400 ECC SDRAM
Cache per Controller	1 GB installed (max.)
Supported Settings	Write back, write through, read, adaptive read ahead - selectable per volume
Cache Battery	
Technology	Lithium Ions
Number Installed	2 - hot-swap
Average protection time	Up to 72 hours
Management	
Local management	Firmware-embedded utility (CLI) via VT100 terminal emulation Serial or in-band FC management access
Remote management	RAIDView Global Manager Software - HTML-based - on embedded management processor/ Web server Management access via Internet Browser (Firefox, IE) or Telnet SMI-S support (external CIMOM)
Status LEDs	Front panel with alarm reset switch, power LED, system status LED, logical fault LED and blue diagnostic box identification LED Front activity and status LED per hard drive slot Rear LEDs per power supply module (1x power, 1x status), fan module (1x status) and controller (2x activity, 1x cache, 1x controller status, 1x battery status, 1x Ethernet status, 2x FC activity host 0, 2x FC activity host 1, 4x SAS expansion activity)
Alarm functions	Acoustic alarm in the event of voltage surges, overheating, system errors, logical faults and fan or power supply breakdown
Event notification	E-mail, SNMP traps, network messaging (SYSLOG Daemon), SMI-S
Connectivity	
Host interfaces	4x 4/2/1 Gbit Fibre Channel (SFP ports)
Supported Topologies	Direct connection (point-to-point), FC Arbitrated Loop (FC-AL) or Fibre Channel switched (FC-SW) Auto negotiate of host transfer rates and topologies
Management interfaces	Each controller: 1x 10/100BASE-T Fast Ethernet (RJ45) for remote management and 1x serial (USB on DB9) for local management
Expansion interfaces	2x 4x SAS (SFF-8470)
Supported operating systems	Windows, Linux
Software and System Requirements	
Included software	RAIDView Global Manager Software (Embedded) RAIDView Path Manager for Microsoft Windows Server 2003/2008, SuSE Linux and RedHat Linux
Cooling Modules	
Installed	Module with two axial fans - redundant - hot-swap
Features	Automatic rpm control depending on thermal load
Max. air flow	48 CFM
Power	
Power Device	Internal power supplies - hot-swap - redundant
Power supplies	
Installed	2
Power	
Voltage Required	85-264 V AC (47-63 Hz)
Power Provided	300 Watt (average) - 350 Watt (max.) +12.0 V: 20.1 A max. +5.0 V: 15.7 A max.
Heat dissipation (max.)	1190 BTU/h

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Power Supply	
Product Certifications	RoHS (R5), CE, UL, cUL, CCC, BSMI, FCC class A
Environmental Parameters	
Operating Temperature	5° to 30°C
Humidity Operating Range	10% to 80% - non-condensed
Maximum Operating Height	0 to 2,100 m
Dimensions and Weight	
Width	443.7 mm
Depth	550 mm
Height	87.9 mm
Weight	up to 33 kg
Manufacturer Warranty	
Service & Support	3-year warranty & support
Optional Service & Support	Express exchange service Bronze on-site service (next business day) Silver on-site service (7x24, 8-hour response time) Gold on-site service (7x24, 4-hour response time) 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