



cLuster Guard™ HPC Backup Appliances

New cLuster Guard™ HPC Purpose Built Backup Appliances

Teradactyl® PBBA's for HPC are designed for industrial computing applications. The units are built with heavy steel chassis construction and superior vibration isolation, redundant premium power supplies, SAS enterprise HDD, SSD for OS and application space, and easy external hot swap access to your rotational media. The built in Intelligent Platform Management Interface (IPMI2) provides powerful hardware and control functions independent of OS and application operation for precision analysis of appliance operation and performance. cLuster Guard™ appliances are configurable with a full array of HBA options for optimum connectivity in virtually any environment.

Fully integrated Teradactyl Hardware and Software Solution

We built and tested cLuster Guard™ in high performance computing environments (HPC). This hardware configuration is currently supporting over 6.5 PB in our primary hardware collaboration center running several HPC file systems and a heterogeneous mixture of operating systems and research data sets. TiBS PteroStor™ Edition Full Version provides unified data protection on the cLuster Guard™ appliance line.

Industrial Backup Appliances for HPC Data Assurance

Quality software and hardware are essential for HPC operations. TiBS PteroStor™ Edition supports over 500TB of primary storage per backup appliance with a full range of storage subsystem options including SSD, HDD, Tape, and Optical. With perpetual True incremental Backup and tiered storage, HPC managers can maintain cost control while HPC system administrators can offer flexible backup strategies, retention policies, and omit rule structures to satisfy competing interests. Try Teradactyl® and gain the confidence of an end to end quality solution.



Features and Benefits

- *Designed by Teradactyl® for robust backup processing of HPC filesystems
- *Lustre®, GPFS, L-Store™ client support available
- *cLuster Guard™ blends SSD & HDD storage for backup processing
- *Redundant Power & Cooling
- *Hot Swap Enterprise SAS Drives (8TB Standard w/optional 10TB pending)
- *Intelligent Platform Management Interface
- *ALL lines Tape & Optical Storage Subsystem Ready
- *Standard and ACSLS Robotic Tape Library Support
- *Stack & Rack Capacity Growth
- *Ethernet, Fiber, SAS, and InfiniiBand Options
- *Appliance includes TiBS PteroStor™ HPC Software Stack

- *Easy Trouble Identification
- *Parallel transfer of True incremental changes over the network
- *Choose between disk, tape, an combined data storage modules
- *Multiple levels of data integrity verification
- *100% of software purchase price can be applied to Version Upgrades!
- *Wide Platform Selection: Operating Systems, Specialty File Systems, and NAS Appliances Supported
- *License more platforms, storage options, and parallel processes as needed
- *Rigorously tested and validated to provide worry free backup operations
- *Enterprise Quality Vibration Tested Chassis
- *Single Pass Restores
- *Easy Drive Bay Access
- *Easy Hot Swap Repairs
- *User Replaceable Hot and Cold Swap Drives
- *Additional Disk and Tape Storage Ready
- *SSD for OS and TiBS Application Performance
- *Dual Power Supplies
- *3 Year & 5 Year Support Plans Available
- *No Media Return Option Available



cLuster**Guard**™

PURPOSE BUILT BACKUP APPLIANCES



	cLusterGuard™ 12	cLusterGuard™ 16	cLusterGuard™ 24	cLusterGuard™ 36
Form Factor	2U	3U	4U	4U
Hot Swap 8TB 7200 RPM 128MB Cache SAS 12Gb/s 3.5" Enterprise Drives (10 TB Optional)	12	16	24	36
IPMI and Remote Management	Standard	Standard	Standard	Standard
DDR4-ECC MEM	32 GB	32 GB	48 GB	96 GB
OS & TiBS Application Space SSD	120 GB	240 GB	240 GB	480 GB
TiBS Software Stack***	Full Lite or Basic 1 ILC DLI 2PP	Full or Lite 1 ILC DLI 2PP	Full or Lite 1 ILC DLI 5PP	Full or Lite 1 ILC DLI 5PP
Tool-less Drive Tray, Covers, and Backplane	Standard	Standard	Standard	Standard
Mounting 28" tool-less slide rail	Standard	Standard	Standard	Standard
Expander Slots	7 low profile	7 low profile	7 full height	7 low profile
Front Panel	Power on/off, system Reset, 1 USB 3.0 Port	Power on/off, system Reset, 2 USB 3.0 Port	Power on/off, system Reset, 2 USB 3.0 Port	Power on/off, system Reset, 1 USB 3.0 Port
Locking Front Cover	Optional	Optional	Optional	Optional
LED indicators	System power, LAN, Drive and Alert	System power, LAN, Drive and Alert	System power, LAN, Drive and Alert	System power, LAN, Drive and Alert
Backplane	12-port 12Gb SAS backplane with 28-PHY expander and 3 SFF-8643 connectors	12-port 12Gb SAS backplane with 28-PHY expander and 3 SFF-8643 connectors	24-port 12Gb SAS backplane with 36-PHY expander and 3 SFF-8643 connectors	24-port 12Gb SAS backplane with 36-PHY expander and 3 SFF-8643 connectors AND 12-port 12Gb SAS backplane with 28-PHY expander and 3 SFF-8643 connectors
Hot-Swap & Redundancy				
Hot-Swap Disk Replacement	Standard	Standard	Standard	Standard
Hot Swap Fans	3 x 80x38mm PWM & low-power consumption	3 x 80x38mm PWM & low-power consumption	3 x 120x25mm PWM & low-power consumption	3 x 120x25mm PWM & low-power consumption
Redundant Hot Swap Power Supplies	800W 1+1 PMBus 1.2 80+ Gold	800W 1+1 PMBus 1.2 80+ Gold	1200W 1+1 80+ Platinum	1200W 1+1 80+ Platinum
Electrical & Environmental				
Universal A/C Input	100 - 240 V AC full range	100 - 240 V AC full range	100 - 240 V AC full range	100 - 240 V AC full range
Operating Environment	Temp 0° - 35°C / RH 20 - 80%	Temp 0° - 35°C / RH 20 - 80%	Temp 0° - 35°C / RH 20 - 80%	Temp 0° - 35°C / RH 20 - 80%
Non-operating Environment	Temp 0° - 50°C / RH 5 - 95%	Temp 0° - 50°C / RH 5 - 95%	Temp 0° - 50°C / RH 5 - 95%	Temp 0° - 50°C / RH 5 - 95%
Physical Specification				
Physical Dimensions (W x D x H) (w/chassis ears)	mm: 483 x 645 x 88 inches: 19 x 25.4 x 3.5	mm: 483 x 645 x 132 inches: 19 x 25.4 x 5.2	mm: 483 x 680 x 176 inches: 19 x 26.8 x 6.9	mm: 483 x 680 x 176 inches: 19 x 26.8 x 6.9
Packaging Dimensions (W x D x H)	mm : 590 x 850 x 270 inches : 23.2 x 33.5 x 10.6	mm : 590 x 850 x 335 inches : 23.2 x 33.5 x 13.2	mm : 590 x 885 x 373 inches : 23.2 x 34.8 x 14.7	mm : 590 x 885 x 373 inches : 23.2 x 34.8 x 14.7

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