kStore 4684

KloudStor kStore advanced storage array is a petabyte-scale, rack- mounted block storage enclosure with self-healing technology, advanced data protection, and software value delivering super efficient mass-capacity storage for conventional data centres and cloud infrastructure.

Product Highlights

- Self-healing storage technology, ADAPT and ADR
- Deliver unfettered data access with dual redundant controllers capable of achieving superior sequential read and write performance
- Expand a data centre seamlessly with flexible SSD, HDD, and hybrid configuration options
- Efficiently manage hot and cold data with real-time data tiering
- Save space and maximise capacity by stacking 4 enclosures for 336 drives of data storage

Key Advantages

Reliable and Self-healing

kStore incorporates self-healing storage capabilities, including technologies like Advanced Distributed Autonomic Protection Technology (ADAPT) and Autonomous Drive Regeneration (ADR). Designed for reliability, it delivers 99.999% (five nines) availability in the field. ADAPT erasure coding significantly reduces the overhead of array rebuilds, while ADR minimizes manual intervention and electronic waste by automatically renewing drives in place and in real time.

Built for speed and resilience

Achieves up to 2x the performance of the previous generation, driven by redundant active-active controllers built on the ASIC-based VelosCT architecture. Enhances throughput, streamlines management, and speeds up recovery to minimize operational overhead.

Easy to Set Up, Maintain, and Expand

Every system element — from the enclosure and controller to the firmware and drives — is purpose-built and fine-tuned by our engineering team for seamless integration. The modular design allows for easy component interchangeability across systems, while standardized FRUs, PCMs, controllers, and software simplify upgrades.

Maximum Capacity and Consistent High Performance

The kStore 4684 accommodates up to 84 drives within a single 5U enclosure, delivering high availability along with exceptional sequential read and write performance. To keep up with growing data demands, the system can be scaled by linking up to four 5U84 enclosures, providing a total of 336 drive slots.

Build In Security at the Foundation of the Data Life Cycle

Protect your most valuable business assets with built-in security measures and intelligent firmware, including SFTP, SED support, and administrator access controls, ensuring secure and reliable file access, transfer, and management.

Reduce power consumption

80 PLUS Titanium and 80 PLUS Platinum power supply options with certified adaptive cooling technology.

ABOUT KLOUDSTOR

With extensive experience in enterprise data protection and storage management, KloudStor focuses on serving and meeting the growing data needs of customers with innovative and highly scalable 'On-Premise as-a-Service' solutions. With a flexible pay-per-consumption monthly subscription model, we provide the best of on-premise performance and security with cloud flexibility.

KloudStor's fully managed solutions are supported by a team of highly skilled and experienced data management experts. Our partnerships with Quantum and Seagate, leading technology companies in the field of data storage and backup, enable us to provide proven, robust and trusted as-a-Service solutions for our customers ensuring that their operations and businesses are running continuously without compromise.

KloudStor
www.kloudstor.asia
enquiry@kloudstor.asia

133 New Bridge Road #08-03
Chinatown Point
Singapore 059413

TECHNICAL SPECIFICATIONS

SPECIFICATIONS	
Controller Model	4006 VELOSCT (2 per enclosure)
Controller Performance	Up to 12 GB/s read throughput, 10 GB/s write throughput, 725K IOPS (Random Read)
Advanced Software Features	Auto-tiering, Snapshots, Asynchronous Replication
Base Array Software Features	Virtual pools, Thin provisioning, ADAPT, SSD read cache, Encryption
High-Availability Features	Redundant hot-swap controllers, Redundant hot-swap drives, fans, power, Dual power cords, Hot standby spare, Automatic failover, Multi-path support
Device (Drive) Support	SAS HDD, NL-SAS HDD, SAS SSD (2.5 or 3.5 Form Factors)
Data Protection	ADAPT and RAID levels supported: 0, 1, 5, 6, 10
Self Healing Technology	Autonomous Drive Regeneration (ADR)
System Maximum Expansion	2U12 Arrays, Up to 12 drives per enclosure, 10 enclosures maximum including the master, totalling 120 Drives 2U24 Arrays, Up to 24 drives per enclosure, 10 enclosures maximum including the master, totalling 240 Drives 5U84 Arrays, Up to 84 drives per enclosure, 4 enclosures maximum including the master, totalling 336 Drives
Physical	5U: Height: 222.3 mm/8.75 in | Width: 444.5 mm/17.5 in | Depth: 981 mm/38.63 in | Width w/ear mounts: 483 mm/ 19.01 in | RBOD weight: 82 kg/180 lb | RBOD weight (with drives): 135 kg/298 lb | EBOD weight: 80 kg /175 lb | EBOD weight (with drives): 130 kg/287 lb
Hosts	
External Ports	4 per Controller, 8 per System
Fibre Channel Models	Host speed: 32/16 Gb/s Fibre Channel, Interface type: SFP+/SFP28
iSCSI Models	Host speed: 10 Gb/s, 25 Gb/s iSCSI, Interface type: SFP+/SFP28
Ethernet Models	10GBASE-T (auto-negotiation to 1Gb)
SAS Models	Host speed: 12 Gb/s, 6 Gb/s SAS, Interface type: HD Mini-SAS
System Configurations	
System Memory	48 GB per system
Volumes per System	1,024
Cache	Mirrored cache, Supercapacitor cache backup, Cache backup to flash – non-volatile
Management	
Interface Types	10/100/1000 Ethernet, Micro USB
Protocols Supported	SNMP, SSL, SSH, SMTP, HTTP(S), REDFISH
Management Consoles	Web GUI, CLI
Management	Storage management console, Remote diagnostics, Non-disruptive updates, Volume expansion
Power Requirements — AC Input	
Input Power Requirements	200 VAC - 240 VAC, 50 Hz-60 Hz
Max Power Output per PSU	2200W
Environmental/Temperature Ranges	
Operating/Non-operating Temperature	ASHRAE A2, 5°C to 35°C (41°F to 95°F), derate 1°C/300m above 900m, 20°C/hr max rate of change / -40°C to 70°C (-40°F to 158°F)
Operating/Non-operating Humidity	-12°C DP and 8% RH to 21°C DP and 80% RH, max DP 21°C/5% to 100% non-condensing
Operating/Non-operating Shock	3 Gs, 11 ms, half sine pulses/15 Gs, 7 ms, half sine pulses
Operating/Non-operating Vibration	0.18 Gs rms 6 Hz to 500 Hz random/0.5 (Z-axis) and 0.25 (X&Y-axis) Gs rms 6 Hz to 200 Hz random
Standards/Approvals	
Standard Marks/Approvals	United States, Canada, European Union (EU), Australia/New Zealand, Japan, China (PRC), Russia, Mexico, Germany, South Korea, Taiwan, India
Safety Certifications	UL 62368-1 | CAN/CSA-C22.2 No.62368-1- 19 | CE to EN 62368-1 | CB IEC 62368-1 | Power Supplies CCC & BIS
Emissions (EMC)	FCC CFR 47 Part 15 Subpart B Class A | ICES/NMB-003 Class A | EN 55032:2015 Class A |AS/NZS CISPR 22/CISPR 32 Class A | VCCI Class A | KN 32/KN 35 Class A | CNS 15936 Class A
Harmonics & Flicker	EN 61000-3-2 | EN 61000-3-3
Immunity	EN 55032 | KN 32/KN 35
Environmental Standards	The RoHS Directive (2011/65/EU) | The WEEE Directive (2012/19/EU) | The REACH Directive (EC) No. 1907/2006 and WFD Directive (EU) 2018/815
Power Supply Units	
Power Supply	Ecodesign (Part UD-PCM2-2200-AC/ Model SGT-S-2200ADE00) – Titanium Power Efficiency: 230 VAC/50 Hz 10% Load = >90%; 20% Load =>94%; 50% Load = >96%; 100% Load =>91% Power Factor Conditions (PFC): 10% Loading = 0.80; 20% Loading = >0.95; 50% Loading = >0.95; 100% Loading = >0.95
Power Supply	Ecodesign (Part UD-PSU01-2200-AC/ Model FS2K2HS180-xx) – Platinum Power Efficiency: 230 VAC/50 Hz 10% Load = >81%; 20% Load =>89%; 50% Load = >93%; 100% Load =>90% Power Factor Conditions (PFC): 10% Loading = 0.80; 20% Loading = >0.90; 50% Loading = >0.95; 100% Loading = >0.95