GateStor
Data Systems Corporation

SP7K® Flash Series

Flash Storage Solutions

GateStor proudly offers SP7K® Flash v1.6-- *the* premiere open systems-based flash storage system solution based on the Legendary patented technology and revolutionary architecture.

The SP7K® Flash is a robust, feature-rich SAN or Direct Attached Storage appliance system in one, optimized for today's best-of-breed COTS gear.

SP7K® Flash storage management system delivers super-high performance, ease-of-use and cost-effectiveness demanded by today's storage users in a very small form factor for environments that do not have space and required minimal power consumption.

Via its native License Manager, the SP7K® Flash delivers the flexibility to serve the complete range of storage management needs – from SMB to large enterprise operations – by managing a rich set of optional and bundled features.

Historically storage vendors offered the market extremely limited Flash storage management options – low-end SAN/DASD systems, which did not scale as an organization needs grew, or high-end, expensive SAN/DASD systems, which many small and mid-size organizations were simply priced out of.

Flash SP7K® patented architecture has demonstrated for over 10 years to be the unique in the market on its Virtual Storage memory manager and broadcast technology which reduces the number of data transfers, resulting on outstanding performance many times faster than expensive high-end dedicated FLASH SAN solutions.

Today, however, GateStor proudly leads the shift, offering storage software solutions that span the full range of current storage management needs - with the features, and at the price-points, demanded by SMB's and large enterprises alike.

SP7K® FLASH Feature Highlights

- RAID on top of RAID architecture for augmenting performance and capacity (RAID 0,1,5,6,50,56,550 and 560)
- Virtual memory management Vs traditional cache
- Up to 2TB of cache memory
- Front-End Connectivity:
  - 4 InfiniBand @ 200/100 Gb/s ports
  - 4 200/100/10 Gb Ethernet ports
  - 8 32/16 Gbps FC ports

- Extensive storage Virtualization
- iSCSI, and Block level shared on any of the front-end connections
- JBOD Support for self-healing Flash modules
- Support for up to 512TB in 1U chassis
- Multiple flash failure support
- Easy capacity expansion by just adding Flash modules or trays
- Dynamic Partition Expansion
- High Availability Configurations
- GUI for Configuration and Monitoring
- UPS Support

Storage Management

- Virtualization of Flash memory into virtual drives
- User Quota management
- Local and Remote replication
- Can integrate/incorporate legacy storage devices

Basic Configurations

Head Unit Size/Weight (kg. without Flash)	2U/Net Weight: 35 lbs (15.9kg) Gross Weight: 57 lbs (25.9kg)		
Dimension（W x D x H)(mm)	17.2" (437mm)x 3.5" (89mm) x 24.8" (630mm) 26.5" (W) x 10.5" (H) x 38" (L)（package size）		
Drive Unit Size/Weight (kg. without SSDs)	4U/80 lbs (36.3 kg) gross weight		
Dimension（W x D x H)(mm)	7" (178mm) x 17.2" (437mm) x 27.5" (699mm) 26.5" (W) x 10.5" (H) x 38" (L)（package size）		
Processor	Support for two Xeon 64bit quad core processors		
RAID Levels	0, 1, 3, 5, 6, 50, 60		
Cache	16GB, up to 128GB		
Array Stripe Size	4K, 8K, 16K, 32K, 64K, 128K		
Model	SP7K Flash 20	SP7K Flash 40	SP7K Flash 60
Host Channel (Select one or combine up to the max number of ports)	InfiniBand x 2 100 GbE x 2 FC (32Gb) X 4	InfiniBand x 4 200/100 GbE x 4 FC (32Gb) X 8	InfiniBand x 8 200/100 GbE x 4 FC (32Gb) X 8
Number Of Flash Modules	32 Slots for 1TB to 16TB G3 NVMe drives	64 Slots for 1TB to 16TB G3 NVMe drives	128 Slots for 1TB to 16TB G3 NVMe drives
Number of Flash 1U trays	One	Two	Four
Connection Types	FC 32Gb, InfiniBand 200/100Gbps, 10/100/200GbE		
Protocols	iSCSI, FCP, SRP, IPoIB, CIFS, NFS, NVMeoF		
Virtualized Volume	Can be assigned to any connection types. Switching between different connection types is possible.		

Management Interface Language	English
iSCSI Port Bonding Bonding Mode	Balance-rr, Active-backup, Balance-xor, Broadcast, Balance-tlb, Balance-alb
Backplane	SAS supports SES-II, SGPIO
Flash Tray Interface	SAS / SATA3
SSD Bays	32 On head Unit
Capacity	Std. 32TB Max.2PB
Flash Tray Expansion	Up to 8 JBOD NVMe Flash trays
Write Mode	Write Back / Write Through
Copy/Mirror/Replication	Local Mirror, Remote Mirror, Remote Replication, Duplication, Volume Copy
Monitoring	Channel sampling, Volume historical read / write statistic, GUI login / logoff, log, client connections, GbE interface, HDDs status.
Alert	**Alarm type**： Mail / LED / Audio Alarm **Alarm Trigger**： HDD Failure / Fan Failure / Redundant Power Supply / Remote Mirror Broken
Expansion	Online Capacity Upgrade
Hot-swap Power Supply Head Unit	620W Gold Level hot-swappable redundant power
Hot-swap Power Supply Flash tray	200W Gold Level hot-swappable power supply
Cooling	12*hot-swappable fan
Power Source	AC 110V~240V Full Range 50-60Hz
Operating Temperature	5℃~35℃（41℉~95℉）
Non-operating Temperature	-20℃~55℃（-4℉~131℉）
Operating Humidity	35%~85%（non-condensing）
Non-operating Humidity	20%~93%（non-condensing）
OS Support	Windows 10, Windows 8, Windows 2016, Windows 2012, RedHat Linux, SuSE Linux, AIX, Solaris