

Accelerate your business operations and deliver a better experience for customers. Superior flash performance and resiliency combine with direct cloud connect for unparalleled value.

DATASHEET

Hitachi Virtual Storage Platform G Series

Hybrid Flash for Block, File and Mainframe

Businesses are under increasing pressure to stay relevant and succeed. To maintain customer interest and maximize revenue, businesses must transform their operations to be more efficient and deliver information faster. At the same time, it is critical that the infrastructure delivers enterprise reliability and operational simplicity.

Hybrid flash arrays (HFAs) can help, delivering data faster to improve customer experiences. However, few HFAs support the broad range of workloads businesses run or deliver the advanced capabilities required to keep IT operations running at maximum efficiency. With Hitachi Virtual Storage Platform (VSP) G series you no longer have to compromise.

Hybrid Flash Speed for More Workloads

Powered by Hitachi Storage Virtualization Operating System (SVOS), the VSP G series delivers up to 4.8 million IOPS of flash performance. Scalability is delivered through advanced, active-flash tiering that analyzes data streams in real time and moves data from disk to flash for rapid access by applications. This enhanced method of tiering gives organizations the ability to meet demanding service level agreements (SLAs) for performance with a cost-effective mix of flash and disk.

To ensure consistent performance over time and prevent latency spikes that could be caused by other workloads on the VSP G series, SVOS offers powerful quality of service (QoS) functionality. QoS is adaptive, activating when needed so that you get maximum leverage of system performance.

For high-end enterprise and mainframe customers, VSP G1500 delivers IBM®-tested and compatible mainframe support and scale-out resiliency, which enables businesses to deliver increased performance to mission-critical applications and faster data reduction.

Unified Storage, Global Storage Virtualization

To enable greater consolidation and operational simplicity, the VSP G series provides support for both block and file workloads. The VSP G series also delivers global storage virtualization, enabling over 100 different types of arrays to be used as VSP G series capacity. It enables administrators to use a single data management offering to control their storage infrastructure, simplifying day-to-day operations.

Best-in-Class Efficiency

VSP G series enables the seamless move to a flash-based data center with a broad range of efficiency technologies designed to deliver maximum value and more predictable ongoing costs. Adaptive data reduction services, including deduplication and compression, minimize storage footprint, enabling savings of 5:1 or greater. These

can be combined with our direct cloud connect functionality to transparently move file data to your choice of content repository or cloud service (Hitachi Content Platform, Amazon Web Services or Microsoft® Azure®). This enables unparalleled reduction in on-site storage costs and more predictable ongoing storage costs. All services are selectable and can be activated for specific workloads, giving you maximum control over efficiency and performance.

For organizations looking to control costs, the VSP G series offers linked, writable snapshot clones. With linked clones, thousands — even millions — of copies of data sets are created very rapidly while using near-zero extra capacity. For highly virtualized environments, the ability to create a standard “gold image” that can be used across virtual machines and desktops not only saves money, but also reduces support and management costs.

100% Data Availability, Guaranteed

Built on legendary Hitachi reliability, VSP G series offers complete system redundancy and is backed by the industry's only 100% data availability guarantee. Leveraging hot-swappable components, nondisruptive updates and outstanding data protection, the VSP G series is the best choice for hybrid flash storage operations that need to stay up and running.

Advanced data replication software enables robust business-continuity solutions among multiple data centers. This

includes active-active metro clustering with global-active device. This feature is available across the VSP G series for both block and file workloads, to ensure continuous operations with nonstop data access. With global-active device, IT teams can meet their disaster recovery objectives with dramatically reduced return-to-operations time.

Simple, Powerful Management

Set up VSP G series quickly and manage it at a glance using Hitachi Storage Advisor (HSA). Designed for IT generalists, HSA uses an intuitive graphical user interface (GUI) and recommended configuration practices to reduce the time to complete provisioning tasks as well as any diagnostic operations.

HDS offers scalable storage analytics via Hitachi Infrastructure Analytics Advisor (HIAA). HIAA looks across servers, virtual machines (VMs), network and storage resources to optimize performance as well as long-term storage utilization. You can quickly identify flash-performance trends and optimize resources.

IBM® Mainframe Compatibility

SVOS features compatibility with parallel access volumes (PAV), HyperPAV, dynamic volume expansion (DVE), extended address volumes (EAV), peer-to-peer remote copy (PPRC), and IBM high-performance FICON® with multitrack, FICON forward error correction, plus basic and IBM GDPS® HyperSwap®, IBM XRC, IBM FlashCopy®, IBM space-efficient FlashCopy and IBM zHyperWrite™ and IBM zHPF Extended Distance II.

Optimized Virtualized Server Infrastructure

HDS offers plugins and adapters that enhance virtual server infrastructure performance and administrator productivity. SVOS integrates VMware applications and Microsoft Windows® 2012 applications that offload storage-intensive tasks from hosts to increase virtual machine density, improve performance and reduce workload contention.

TABLE 1. HITACHI VIRTUAL STORAGE PLATFORM G SERIES SPECIFICATIONS

	VSP G200	VSP G400	VSP G600	VSP G800	VSP G1500
Maximum (Max.) Raw Internal Capacity	2,520TB	4,800TB	7,200TB	14,400TB	8,755TB
Max. Raw External Capacity	8PB	16PB		64PB	255PB
Solid State Drive Options Raw Capacity Small Form Factor (SFF)	200GB, 400GB, 480GB, 960GB, 1.9TB, 3.8TB			200GB, 400GB, 960GB, 1.9TB, 3.8TB	960GB, 1.9TB, 3.8TB
Flash Module Capacity Options	1.7TB, 3.5TB, 7TB, 14TB				
SFF Hard Disk Drive Options Raw Capacity	15K RPM: 300GB, 600GB; 10K RPM: 600GB, 1.2TB, 1.8TB				15K RPM: 600GB, 10K RPM: 600GB, 1.2TB, 1.8TB
Large Form Factor (LFF) Hard Disk Drives Options Raw Capacity	7.2K RPM: 4TB, 6TB, 10TB				7.2K RPM: 4TB, 6TB
Max. Drives	264 SFF 252 LFF 84 FMD	480 SFF 480 LFF 192 FMD	720 SFF 720 LFF 288 FMD	1,440 SFF 1,440 LFF 576 FMD	2,304 SFF, 1,152 LFF 576 FMD
Disk Expansion Trays	2U: 24 SFF (2.5"); 12 LFF (3.5"); 12 flash module drive (FMD) 4U: 60 LFF (3.5") and SFF (2.5")				16U: 192 SFF (2.5") 16U: 96 LFF (3.5") 8U: 48 FMD
Controller Tray Height	2U	4U			10U
Host Interfaces (without drives) Note: FC = Fibre Channel FCoE = Fibre Channel over Ethernet FICON = IBM® FICON®	16 FC: 8Gb/s 16Gb/s 32Gb/s 8 iSCSI: 10Gb/s 10GBase-T	64 FC: 8Gb/s 16Gb/s 32Gb/s 32 iSCSI: 10Gb/s 10GBase-T		80 FC: 8Gb/s 16Gb/s 32Gb/s 40 iSCSI: 10Gb/s 10GBase-T	192 FC: 8Gb/s 16Gb/s 176 FICON: 8Gb/s 16Gb/s/192 FCoE: 10Gb/s 88 iSCSI: 10GBase-T
Max. Cache	64GB	128GB	256GB	512GB	2,048GB
LUNs: Max. Size, Max. Number	256TB, 2,048	256TB, 4,096		256TB, 16,384	256TB, 65,280
RAID Supported	RAID-1, RAID-5, RAID-6				
External NAS Gateway Options	HNAS 4000 models				
Internal NAS Modules Options	Not available	VSP G400, VSP G600 and VSP G800 can be ordered with two internal NAS modules. Each NAS module has 6 x 10GbE ports for a total of 12 x 10GbE per system.			Not available
NAS Module Main Memory Board	Not available	96GB (8GB NVRAM)			Not available
File System Size	1PB pool, single namespace up to maximum capacity				
Max. File Systems	512				
Max. NAS Snapshots	1,024 per file system				
Protocols	NFS, SMB, FTP, iSCSI and HTTP to the cloud				

Note: 1GB equals 109 bytes or 1,000,000,000 bytes and 1TB = 1012 bytes.



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