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Datasheet

Gemini All-Flash Array

The industry-standard in multiprotocol all-flash storage

Highlights

- 100% flash memory for unrivaled performance
- Industry's best efficiency and lowest operating costs
- High availability with no single-point-of-failure
- FC, iSCSI, NFS, SRP, iSER, RDMA, and SMB protocols
- Patent-pending architecture and flash management
- Ethernet, Fibre Channel and Infiniband connectivity
- Complete data protection and optimization software
- Hot-swap everything with live expansion/upgrades

Advantages

- Performance: Up to 2 million 4K IOps
- Throughput: Up to 12 GBps (12,288 MBps)
- Latency: As low as 0.05 ms (50 µsec)
- Efficiency: As low as 7 W per raw TB
- Scalability: From 3 to 48 TB raw (up to 385 TB usable)
- Density: Up to 24 TB raw per U (1 PB per rack)
- License-free: All-inclusive HALO software
- Reliability: Up to 10 year end-to-end warranty

Leader in Multiprotocol All-Flash Storage

Server and desktop virtualization, databases, big data analytics, cloud computing, and next-generation technical applications demand high-performance, ultra-efficient storage systems. Unlike hybrid or tiered systems, Nimbus Data's Gemini all-flash arrays deliver **consistent low-latency**, **superior reliability, unmatched throughput**, and **dramatically lower data center costs**. With the patent-pending Parallel Memory Architecture and novel distributed caching design, Gemini arrays outperform commodity server-based storage systems by up to **5x in IOps**, **40x in latency**, **6x in bandwidth**, and **10x in rack density**.

Powered by the **proven HALO operating system**, Gemini all-flash arrays support **SAN**, **NAS**, and **DAS** deployments utilizing Fibre Channel, Ethernet, and Infiniband connectivity. Features include deduplication, snapshots, thin-provisioning, and the industry's best available warranty. With **complete high-availability** and **exceptional worldwide support**, Gemini arrays support mission-critical applications across all markets, including high-technology, Internet infrastructure, financial services, education, healthcare, manufacturing, and government.

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Gemini Specifications

Performance	Throughput Latency IOps	Up to 12 GBps (1 MB block size) As low as 50 µsec (4 KB block size) Up to 2 million (4 KB block size)
Controllers	**F610/F620** **F410/F420**	4 QSFP+ ports per controller (up to 8 QSFP+ ports per system) 56 / 40 / 20 Gb Infiniband (FDR / QDR / DDR) and 40 / 10 / 1 Gb Ethernet 4 SFP+ ports per controller (up to 8 SFP+ total ports per system) 16 / 8 / 4 / 2 Gb Fibre Channel and 10 / 1 Gb Ethernet
Storage	Raw Capacity (min / max) Potential Capacity Flash Type Flash Drives	3 TB / 48 TB 385 TB (after inline deduplication and compression) MLC with in-flight data protection, power hold-up circuitry Up to 24 drives in 256 GB, 512 GB, 1 TB, or 2 TB capacities
System	Software Purpose-built Architecture Redundant Hot-swap Components Common Management Ports	HALO storage operating system Parallel Memory Architecture, Distributed Cache Architecture Controllers, flash drives, power supplies, fans, and transceivers 2 x Ethernet (primary mgmt, lights-out mgmt), 1 x Mini-USB console port
Platform Support	Operating System Support Virtualization Support	Windows 7/8/2003/2008/2012, Linux, Solaris, HP/UX, AIX VMware ESX (HCL), Citrix XenServer (HCL), Microsoft Hyper-V, KVM
Dimensions	Height Width Depth Weight (maximum)	2U (3.5 in or 89 mm) 17.6 in or 447 mm 19.5 in or 495 mm 75.0 lbs or 34 kg
Power	Voltage Frequency Power Consumption (typical)	100 - 240 VAC 48 - 62 Hz 350 W (with dual controllers and 48 TB raw / 385 TB potential capacity)
Environmental	Ambient Temperature Relative Humidity Altitude Acoustics	Operating: 5 to 35 °C, Non-operating: 0 to 50 °C Operating: 10% to 80%, Non-operating: 5% to 95% (non-condensing) Operating: -50 to 3000 m, Non-operating: -100 to 12,192 m < 7.0 BA in idle state at 23 °C ambient temperature
Shock & Vibration	Operational Shock Operational Vibration Non-operational Shock Non-operational Vibration	5G for 11ms, 1/2 sine wave pulse 0.15G at 5-500 Hz 10G for 11ms, 1/2 sine wave pulse 0.5G for 5-500 Hz
Agency Approvals	CE Mark, EN55022/EN61000 Class A, FCC Class A, Canadian IECS-003, VCCI Class A, ISO 9002 manufacturing	
Warranty & Support	Up to 10 year end-to-end warranty. 24 x 7 x 365 worldwide support. Global parts depots. Premium onsite service options and spares kits available.	

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