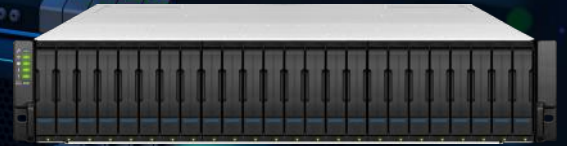# EonStor GSa Family

Wide-ranging all-flash array choices for modernized data center

Highlight

- Optimized SSD Performance with Low Latency

- Onboard 4 x 10GbE (optical) ports provide more high-speed IO connections

- EonOne-an Easy-to-use Interface for Storage Management

- Cloud Ready for Future-Proof Expansion

- Rich Selections of Host Interfaces

- Cache Backup Module (CBM) to Prevent Data Loss

- Modular Design to Lower Maintenance Complexity

Introduction

EonStor GSa storage family (GSa) is an all-flash array product family designed to deliver optimal SSD performance with low latency and extensive lifespan. Accelerate your most demanding workloads such as databases, virtualization, VDI, Microsoft Exchange mail server, and Media & Entertainment related applications.

It also offers high availability in all aspects. Its redundant controller hardware design supports SAS/SATA bridge board for compatibility with cost-effective SATA SSDs. Its firmware is embedded with Intelligent Drive Recovery (IDR) technology as well as the SSD lifespan monitoring features to ensure drive endurance.

GSa supports standard EonCloud Gateway and enterprise can according to demand to upgrade license. EonCloud Gateway connect with Amazon S3, Microsoft Azure, OpenStack Swift, Alibaba Cloud , Baidu Cloud, Google Cloud, Tencent Cloud, Wasabi Cloud etc., for future-proof support of capacity expansion or remote-backup to the cloud.

GSa provides reliable super capacitor backup unit with M.2 flash module to ensure data safety during power failure. Cache Backup Module will kick-in and use the backup power to store cache data to flash module and prevent potential data loss.

GSa family is screw-less tray design to simplify disk installation, modular field replacement units provide hassle-free and easy maintenance. It supports powers, fans, controllers, host boards, and other storage components.

PHYSICAL SPECIFICATIONS

Product Series		GSa 2000	GSa 3000 Gen2	GSa 4000 Gen2
Form Factor & Available Model	2U 24-bay	GSa 2024**R/S** GSa 2024**RT/ST**	-	-
	2U 25-bay	-	GSa 3025**R2C/S2C**	GSa 4025**R2C/S2C**
	Note: **T**: High performance **S**: Upgradable single controller **R**: Redundant controller **2**: Gen2 **C**: Super capacitor			
Controller		Redundant or Upgradable single controller		
Cache Backup Techniques		Super capacitor＋Flash module		
CPU		Intel ® Pentium® 2 or 4 core	Intel® Xeon® 4 Core	Intel® Xeon® 8 Core
Cache Memory (per system)		Default DDR4 16GB Expandable up to 128GB	Default DDR4 16GB Expandable up to 256GB	
Supported Drives		Bundle SSD		
Max. Drives Number (with expansion board)		744	896	
Max. SSD Cache Pool		3.2TB	4TB	
Onboard SAS Expansion Ports		2	4	
Onboard 10 GbE Ports (SFP＋)		0	8	
Max. Host Board Slots		4	4	
Max. Expansion Board		2	2	
	Note: The expansion board can only be installed in the HB2 slot and has 2 x 12Gb/s SAS ports only connectable with expansion enclosures.			
Host Board Options		16Gb/s FC x 4 32Gb/s FC x 2 1GbE (RJ-45) x 4 10GbE (SFP＋) x 2 10GbE (RJ-45) x 2 25GbE (SFP28) x 2 40GbE (QSFP＋) x 2 12Gb/s SAS x 2	16Gb/s FC x 4 32Gb/s FC x 2 32Gb/s FC x 4 10GbE (SFP＋) x 2 10GbE (RJ-45) x 2 25GbE (SFP28) x 2 40GbE (QSFP＋) x 2 12Gb/s SAS x 2	
	Note: 1. The two controllers must have identical slot settings. 2. Fibre channel supports point-to-point and switch mode.			
Max. 16Gb/s FC Ports		16	16	
Max. 32Gb/s FC Ports		8	16	
Max. 1GbE Ports		24	0	
Max. 10GbE Ports (RJ-45)		8	8	
Max. 10GbE Ports (SFP＋)		8	16	
Max. 25GbE Ports (SFP28)		8	8	
Max. 40GbE Ports (QSFP＋)		8	8	
Max. 12Gb/s SAS Ports		10	12	
Expansion Enclosure (JBOD)		JB 3024BA	JB 3012A, JB 3016A, JB 3025BA, JB 3060L	
Dimensions (without chassis ears/ protrusions) (W x H x D)		449 x 88 x 500 mm		
Package Dimensions (W x H x D)		780 x 338 x 588 mm		
Power Supply Unit (with fan module)	Power Supplies (Redundant/hot-swappable)	460W x 2 (80 PLUS Bronze)	530W x2 (80 PLUS Bronze)	
	AC Voltage (with PFC(auto-switching))	100VAC @ 8A to 240VAC @ 4A	100VAC @10A to 240VAC @5A	
	Frequency	50-60 Hz		
		Note: Power is also supplied in redundant mode, allowing full operation with half the resources.		
Safety Standard		• Electromagnetic Compatibility: CE, BSMI, FCC • Safety: UL, BSMI, CB		

SOFTWARE SPECIFICATIONS

Max. Logical Drives Number		32
Max. Logical Drives Capacity		512TB
Configurable Stripe Size		16KB, 32KB, 64KB, 128KB, 256KB, 512KB, or 1024KB per logical drive
Configurable Writes Policy		Write-Back or Write-Through per logical drive. This policy can be modified.
Max. Pool Size		2PB
Max. Pool Number		32
Max. Volume Size		2PB
Max. Volume Number (per pool/per system)		1024
Max. Host LUN Mapping Number		4096
Max. Reserved Tag Number per Host-LUN Connection		Up to 256
Max. iSCSI Initiators (per controller)		832
Max. Host Connection Number (per FC)		128
RAID Options		RAID 0, RAID 1, RAID 3, RAID 5, RAID 6, RAID 10, RAID 30, RAID 50, RAID 60
Protocol Support	File Level Protocol	CIFS/SMB (Version 2.0/3.0), NFS (Version 2/3/4), AFP (Version 3.1.12), FTP/FXP (vsftp 2.3.4), WebDAV (httpd package 2.4.6)
	Block Level Protocol	FC, iSCSI, SAS
	Object Level Protocol	RESTful API
File Level	Max. File System Size	2PB
	Max. Number of User Accounts	20000
	Max. Number of User Groups	512
	Max. Number of Folder Sharing	2048 (NFS/CIFS/FTP) | 255 (AFP)
	Max. Number of Rsync Jobs	1024
	Max. Number of Rsync Concurrent Processes	64
	Max. Number of Concurrent Connections (NFS/CIFS/AFP/FTP)	• 16 GB memory: 200 • 32 GB memory: 512 • 64 GB memory: 1024 • 128 GB memory: 2048
Management		• User account management • Group management • Folder management - folder access control • Quota management	• Integration with Microsoft Active Directory (AD) and LDAP • Folder encryption with AES • Web-based EonOne management software • Storage Resource Management to analyze history records of resource usage
Availability and Reliability		• Hot-swappable hardware modules • Device mapper support • Antivirus • Trunk group support	• Cache Safe technology • UPS • WORM (For file level only) • SMB Multichannel
Notification		• Email	• SNMP traps
Applications		• File explorer • Syslog server • LDAP serve • Proxy server • VPN server • Docker
Cloud Feature		EonCloud Gateway supports the integration with following cloud providers: Amazon S3, Microsoft Azure, Alibaba Cloud, OpenStack, Baidu Cloud,Google Cloud, Tencent Cloud, Wasabi Cloud, etc. For complete information about cloud provides support, please refer to EonCloud Gateway webpage
OS Support		Microsoft Windows Server ,Ret Hat Enterprise Linux, Mac OS X, VMware
		Note: For OS version support, please refer to the compatibility matrix.

DATA SERVICE

Self-encrypting Drives		Unique factory encryption secures data plus makes deletion simple and complete	
Thin Provisioning (Block-Level)(default included)		"Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space	
Local Replication	Snapshot	Snapshot images per source volume	Standard License: 64 / Advanced License: 256
		Snapshot images per pool	Standard License: 128 / Advanced License: 4096
	Volume Copy/Mirror	Replication pairs per source volume	Standard License: 4 / Advanced License: 8
		Replication pairs per system	Standard License: 16 / Advanced License: 256
		Note: Standard license is included by default and advanced is an optional license	
Remote Replication (Block level)(optional)		Replication pairs per source volume: 8	
		Replication pairs per system: 64	
		Note: 1. The maximum number of replication pair per source volume is up to 8, regardless of remote asynchronous/remote synchronous/local volume pairs. 2. 4 x 16Gb FC and 2/4 x 32Gb FC host boards do not support Remote Replication.	
Remote Replication (File Level)		Support Rsync with 128-bit SSH encryption	
Automated Storage Tiering (optional)		2 or 4 storage tiers based on drive types	
		SSD supports	
		Automated data migration with scheduling options	
Block-level SSD Cache (optional)		Accelerating data access for random read-intensive environments, such as OLTP	
		Supports up to four SSDs per controller	
		Recommended DIMM capacity per controller for SSD Cache pool for GSa 2000	
		DRAM: 8GB	Max SSD Cache Pool Size: 400GB
		DRAM: 16GB	Max SSD Cache Pool Size: 600GB
		DRAM: 32GB	Max SSD Cache Pool Size: 1,000GB
		DRAM: 64GB	Max SSD Cache Pool Size: 1,600GB
		DRAM: 128GB and up	Max SSD Cache Pool Size: 3,200GB
		Recommended DIMM capacity per controller for SSD Cache pool for GSa 3000/4000 Gen2	
		DRAM: 8GB	Max SSD Cache Pool Size: 500GB
		DRAM: 16GB	Max SSD Cache Pool Size: 1,000GB
		DRAM: 32GB	Max SSD Cache Pool Size: 2,000GB
		DRAM: 64GB and up	Max SSD Cache Pool Size: 4,000GB
File-level SSD Cache (optional)		Accelerating file operations, and data access performance for both read and write Supports up to eight SSDs per controller	

WARRANTY AND SERVICE

Service and Support	Standard Service	3-year limited hardware warranty and 8x5 phone, web, and email support (batteries are covered under warranty for 2 years)
	Upgrade or Extension Options	Warranty extension: Can extended standard service up to 5 years The following Service can be upgraded to 5 years • Upgrade: Replacement part dispatch on the next business day • Advanced service: 24x7 phone, web, and email support + onsite diagnostics on the next business day • Premium service: 24x7 phone, web, and email support + onsite diagnostics in 4 hours
		Note: Options may vary by region. For more details, please contact our sales representatives.
	Technical Support	Get information on system installation and maintenance, download technical documents and software, or issue a support ticket
	Product Services	Register products, download firmware, apply for licensing services, create product repair tickets, or check product repair status