EonStor GSa Gen 1 Series

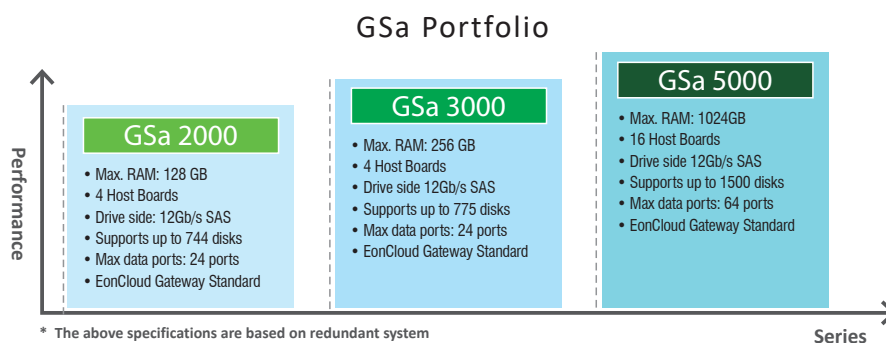*Wide-ranging all-flash array choices*
for modernized data center

Hightlight

- Powerful unified storage performace and supports both block and file-level applications.

- Optmized SSD performance with low latency that can handle more than 700K IOPS for random reads with response time of less than 0.5 milliseconds.

- High availability with redundancy achieved by no single point of failure technology. (redundant controller hardware)

- EonOne - an easy to use interface for storage management and offers web-based management interface.

- EonCloud gateway ready for future-proof expansion.

- Rich selections of host interfaces: FC 32Gb/s, 16Gb/s, iSCSI 40GbE, 25GbE, 10GbE, 1GbE and 12Gb/s SAS.

- Cache Backup Module (CBM) with backup power to store cache data to flash module and prevent potential data loss.

- Modular design lowers maintenance complexity of the power supplies, fans, controllers and host boards.

Introduction

EonStor GSa all flash unified storage is designed for enterprise to speed-up workloads with wider range of product selections in terms of performance, connectivity, and form factor choices to fit any budget constraints. Coupling with Infortrend's powerful unified storage performance, high availability design, and future-proof EonCloud gateway features, EonStor GSa family can be your best choice to modernize your data center in all aspects.

EonStor GSa family inherited company's GS line of superior unified storage performance and available in 3 series. EonStor GSa 2000 and 3000 series are the cost-performance solutions. GSa 5000 series, on the other hand, offers the highest performance all flash technology designed for extreme I/O workloads.

GSa Portfolio

GSa 2000
- Max. RAM: 128 GB
- 4 Host Boards
- Drive side: 12Gb/s SAS
- Supports up to 744 disks
- Max data ports: 24 ports
- EonCloud Gateway Standard

GSa 3000
- Max. RAM: 256 GB
- 4 Host Boards
- Drive side 12Gb/s SAS
- Supports up to 775 disks
- Max data ports: 24 ports
- EonCloud Gateway Standard

GSa 5000
- Max. RAM: 1024GB
- 16 Host Boards
- Drive side 12Gb/s SAS
- Supports up to 1500 disks
- Max data ports: 64 ports
- EonCloud Gateway Standard

* The above specifications are based on redundant system

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 data availability. In addition, GSa provides optional EonCloud gateway that connects to cloud services such as Amazon S3, Microsoft Azure, OpenStack Swift, etc. for future-proof support of capacity expansion or remote-backup application to the cloud.

These AFAs are for high performance enterprise applications such as database, virtualization, VDI, Microsoft Exchange, media/entertainment-related applications.

PHYSICAL SPECIFICATIONS

Product Series		GSa 2000	GSa 3000 Gen1	GSa 5100	GSa 5200
Form Factor	2U 24-bay	GSa 2024**R/S** GSa 2024**RT/ST**	-	-	-
	2U 25-bay	-	GSa 3025**R/S** GSa 3025**RT/ST**	-	-
	4U	-	-	GSa 5100**R**	GSa 5200**R**
	Note: 1. **T**: High performance **S**: Single controller(upgradable to dual controller) **R**: Redundant controller **C**: Super capacitor **L**: BBU(for GS 5000) 2. 4U models no internal bay, expansion enclosure required.				
Controller		Single or Dual-redundant or Single upgradable to redundant		Dual-redundant	
Cache Backup Techniques		Super capacitor+Flash module (only for upgradable single controller and dual controller models)		BBU+Flash module	
CPU		Intel® Pentium® 2 or 4 core	Intel® Xeon® D 4 or 6 Core	Intel® Xeon® E5 8 Core	
Cache Memory		Default DDR4 16GB Expandable up to 128GB	Default DDR4 16B Expandable up to 256GB	Default DDR4 16GB Expandable up to 512GB	Default DDR4 32GB Expandable up to 1024GB
Supported Drives		Bundle SSD			
Max. Drives Number (with expansion board)		744	775	750	750
Max. SSD Cache Pool		3.2TB	3.2TB	3.2TB	3.2TB
Max. Onboard SAS Expansion Ports		2	4	8	8
Max.Onboard 1GbE ports		8	4	0	0
Max. Onboard 10GbE ports (RJ-45)		0	4	0	0
Max. Host Board Slots		4	4	4	16
Max. Expansion Board		2	2	4 (Default included)	4 (Default included)
	Note: The expansion board can only be installed in the HB2 slot and has 12Gb/s SAS x 2 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 4 10GbE (RJ-45) x 2 40GbE (QSFP+) x 2 12Gb/s SAS x 2	
	Note: 1. The two controllers must have identical slot settings. 2. Fibre channel suppor ts point-to-point and switch mode. 3. For GSa 5100, the host boards should be installed in HB7~8. For GSa 5200, the host boards should be installed in HB1~8.				
Max. 16Gb/s FC Ports		16	16	16	64
Max. 32Gb/s FC Ports		8	8	8	32
Max. 1 GbE Ports		24	20	0	0
Max. 10GbE Ports (RJ-45)		8	12	8	32
Max. 10GbE Ports (SFP+)		8	8	0	0
Max. 40GbE Ports (QSFP+)		8	8	8	32
Max. 12Gb/s SAS Ports		10	12	16	40
Expansion Enclosure (JBOD)		JB 3024BA	JB 3025BA	JB 3025BA	
Dimensions (without chassis ears/ protrusions) (W x H x D)		449 x 88 x 500 mm	449 x 88 x 500 mm	449 x 175.3 x 547.7 mm	
Package Dimensions (W x H x D)		780 x 338 x 588 mm	780 x 340 x 588 mm	591 x 295 x 800 mm	
Power Supply Unit (with fan module)	Power Supplies (Redundant/hot-swappable)	460W x 2 (80 PLUS Bronze)	530W x 2 (80 PLUS Bronze)	1200W x 2 (80 PLUS Platinum)	
	AC Voltage (with PFC(auto-switching))	100VAC @8A to 240VAC @4A	100VAC @10A to 240VAC @5A	100-127VAC @12.47A, 200-240VAC @7.08A	
	Frequency	50-60 Hz	47-63Hz		
	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		512 TB
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 2.2.2), 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		• Redundant, hot-swappable hardware modules • Cache Safe technology • Device mapper support • UPS • Antivirus • WORM (For file level only) • Trunk group support • 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 2019/2016/2012R2/2012/2008R2/2008, Windows 7 SP1, Windows 8.1, Microsoft Windows Hyper-V, Ret Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, Mac OS X, VMware, Citrix XenServer, OpenStack Cinder
		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	
SSD Cache(optional)		Accelerating data access for random read-intensive environments, such as OLTP	
		Supports up to four SSDs per controller	
		Recommended DIMM capacity for SSD Cache pool:	
		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

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.
	Infortrend Technical Support	FAQ, Download Center, Licensing Service, Service Request