Infortrend®
EonStor GSa

EonStor GSa Family

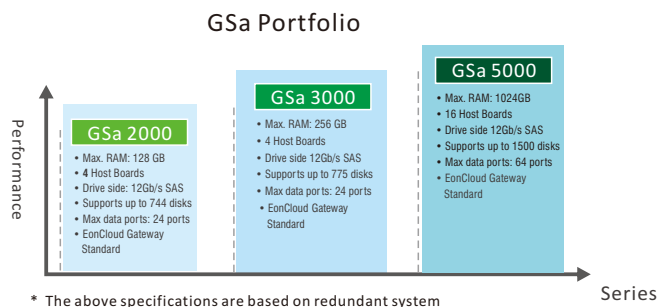## Wide-ranging all-flash array choices for modernized data center

HIGHLIGHTS

- **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 16Gb/s, FC 8Gb/s, iSCSI 40Gb/s, iSCSI 1Gb/s, iSCSI 10Gb/s, InfiniBand 56Gb/s and SAS 12Gb/s

- **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

Performance ↑ | Series →

* 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, and Alibaba Cloud 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.

700K IOPS

GSa 3025   GSa 5100/5200   GSa 2024

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PHYSICAL SPECIFICATIONS — EonStor GSa Family

Specifications (per system)	GSa 2024 GSa 2024T[*1]	GSa 3025 GSa 3025T[*1]	GSa 5100	GSa 5200
Form factor	2U 24-bay	2U 25-bay	4U (No internal bay. Expansion enclosure required.)	
Controller	Dual-redundant or Single is upgradable to redundant		Dual-redundant	Dual-redundant
Max drives	744 (with expansion board)	775 (with expansion board)	1500	1500
Cache backup techniques	Super capacitor + Flash module	Super capacitor + Flash module	BBU + Flash module	BBU + Flash module
Power supply unit — Power supplies (Redundant / hot swappable)	460W x 2 (80 PLUS Bronze)	530W x 2 (80 PLUS Bronze)	1200W x2 (80 PLUS Platinum)	1200W x2 (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	50-60Hz	47 - 63Hz	47 - 63Hz	47 - 63Hz

Note: Power is also supplied in redundant mode, allowing full operation with half the resources.

	GSa 2024 / 2024T	GSa 3025 / 3025T	GSa 5100	GSa 5200
CPU	2x Intel Broadwell-DE (Pentium) GS 2000/GS 2000T: 2 Core/4 Core	2x Intel Broadwell-DE (Xeon) GS 3000/GS 3000T: 4 Core/6 Core	2 x Intel Xeon E5 8 core	4 x Intel Xeon E5 8 core
Cache memory	Default DDR4 16GB Up to 32GB, 64GB, 128GB	Default DDR4 16GB Up to 32GB, 64GB, 128GB , 256B	Default DDR4 32GB Up to 64GB, 128GB, 256GB, 512GB	Default DDR4 64GB Up to 128GB, 256GB, 512GB, 1024GB
Max. number of host board	4	4	4	16
Onboard SAS expansion ports	2 x 12Gb/s SAS wide ports	4 x 12Gb/s SAS wide ports	0	0
Expansion board	2	2	4 (Default included)	4 (Default included)

Note: 1. The expansion board has 2 x 12Gb/s SAS ports only connectable with expansion enclosures.
2. **For GSa 2000/3000**, the expansion board can only be installed in the HB2 slot. **For GSa 5000**, the expansion board can only be installed in slot HB9 and HB10.

	GSa 2024 / 2024T	GSa 3025 / 3025T	GSa 5100	GSa 5200
Onboard iSCSI ports (10Gb RJ-45)	0	4	0	0
Onboard iSCSI ports (1Gb RJ-45)	8	4	0	0
Host board ports	4 x 16Gb/s FC ports (No Remote Replication support) 4 x 1Gb/s iSCSI ports 2 x 10Gb/s iSCSI ports (SFP+) 2 x 10Gb/s iSCSI ports (RJ-45) 2 x 25Gb/s iSCSI ports (SFP28) 2 x 40Gb/s iSCSI ports (QSFP) 2 x 56Gb/s InfiniBand ports (for Linux only, block level only) 2 x 12Gb/s SAS ports Converged host board: – 4 x 8Gb/s FC ports – 2 x 16Gb/s FC ports – 4 x 10Gb/s FCoE ports – 4 x 10Gb/s iSCSI ports (SFP+)	4 x 16Gb/s FC ports (No Remote Replication support) 4 x 1Gb/s iSCSI ports 2 x 10Gb/s iSCSI ports (SFP+) 2 x 10Gb/s iSCSI ports (RJ-45) 2 x 25Gb/s iSCSI ports (SFP28) 2 x 40Gb/s iSCSI ports (QSFP) 2 x 56Gb/s InfiniBand ports (for Linux only, block level only) 2 x 12Gb/s SAS ports Converged host board: – 4 x 8Gb/s FC ports – 2 x 16Gb/s FC ports – 4 x 10Gb/s FCoE ports – 4 x 10Gb/s iSCSI ports (SFP+)	4 x 16Gb/s FC ports (No Remote Replication support) 4 x 1Gb/s iSCSI ports 2 x 10Gb/s iSCSI ports (RJ-45) 2 x 40Gb/s iSCSI ports (QSFP) 2 x 56Gb/s InfiniBand ports (for Linux only, block level only) 2 x 12Gb/s SAS ports Converged host board: – 4 x 8Gb/s FC ports – 2 x 16Gb/s FC ports – 4 x 10Gb/s FCoE ports – 4 x 10Gb/s iSCSI ports (SFP+)	4 x 16Gb/s FC ports (No Remote Replication support) 4 x 1Gb/s iSCSI ports 2 x 10Gb/s iSCSI ports (RJ-45) 2 x 40Gb/s iSCSI ports (QSFP) 2 x 56Gb/s InfiniBand ports (for Linux only, block level only) 2 x 12Gb/s SAS ports Converged host board: – 4 x 8Gb/s FC ports – 2 x 16Gb/s FC ports – 4 x 10Gb/s FCoE ports – 4 x 10Gb/s iSCSI ports (SFP+)

Note: 1. The two controllers must have identical slot settings.
2. Fibre channel supports point-to-point and switch mode.
3. **For GSa 5100**, the host board should be installed HB7~8. **For GSa 5200**, the host boards should be installed in HB1~8.

	GSa 2024 / 2024T	GSa 3025 / 3025T	GSa 5100	GSa 5200
Host board + onboard ports (max.)	24	24	16	64
Max. 8Gb/s FC ports	16	16	16	64
Max. 16Gb/s FC ports	16	16	16	64
Max. 10 GbE FCoE ports	16	16	16	64
Max. 1 GbE/iSCSI ports	24	20	16	64
Max. 10 GbE/iSCSI (SFP+) ports	16	16	16	64
Max. 10 GbE/iSCSI (RJ-45) ports	8	12	8	32
Max. 25 GbE/iSCSI (SFP28) ports	8	8	0	0
Max. 40 GbE/iSCSI (QSFP) ports	8	8	8	32
Max. 56Gb/s InfiniBand ports	8	8	8	32
Max. 12Gb/s SAS ports	8	8	8	32
Max. number of logical drives	32			
Max. logical drive capacity	512TB			
Configurable stripe size	16KB, 32KB, 64KB, 128KB, 256KB, 512KB, or 1024KB per logical drive			
Configurable write policy	Write-Back or Write-Through per logical drive. This policy can be modified.			
Max. size of pool	2PB			
Max. number of pools	32			
Max. number of volumes (per pool/ per system)	1024			
Max. number of LUNs mappable	4000			
Max. volume size	2PB			
Number of tags reserved for each Host-LUN connection	Up to 256			
Max iSCSI Initiators (per controller)	832			
Maximum host connection (per FC)	128			
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 concurrent connections per controller (NFS/CIFS/AFP/FTP)	• 16 GB memory: 200 • 32 GB memory: 512	• 64 GB memory: 1024 • 128 GB memory: 2048		
RAID options	RAID 0, 1, (1+0), 3, 5, 6, 10, 30, 50, 60			
Protocol support	File Level Protocol: CIFS/ SMB: Version 2.0/3.0, NFS: Version 2/3/4, AFP, FTP, FXP, WebDAV Block Level Protocol: FC, FCoE, iSCSI, SAS, InfiniBand Object Level Protocol: OpenStack Swift			
EonCloud Gateway	Support the integration with following cloud providers: Amazon S3, Microsoft Azure, Alibaba Cloud, OpenStack			
Green design	• 80 PLUS power supplies delivering more than 80% energy efficiency • Intelligent multi-level drive spin-down			
Regulatory	• Electromagnetic Compatibility : CE, BSMI, FCC • Safety : UL, BSMI, CB			

1. Model name "T" means high performance

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	GSa 2024(T)	GSa 3025(T)	GSa 5100/5200
Form Factor	2U 24-bay	2U 25-bay	4U(No internal bay. Expansion enclosure required.)
Available models	GSa 2024RC/SC GSa 2024RTC/STC	GSa 3025RC/SC GSa 3025RTC/STC	GSa 5100RL GSa 5200RL
	Note: **S**: Single controller(upgradable to dual controller) **R**: Redundant controller **T**: High performance **C**: Super capacitor **L**: BBU		
Supported drives	• 2.5" SAS SSDs • 2.5" SATA SSDs	• 2.5" SAS SSDs • 2.5" SATA SSDs	• 2.5" SAS SSDs • 2.5" SATA SSDs
	Note: For the latest compatibility details, refer to our official website for the latest EonStor GSa Compatibility Matrix.		
Max. drives number	744	775	1500
Rack Support	2U, 19-inch rackmount	2U, 19-inch rackmount	4U, 19-inch rackmount
Dimensions (Without chassis ears/ protrusions)	447(W)x88(H)x500(D)mm	447(W)x88(H)x500(D)mm	447(W)x175(H)x577mm (D)
Package Dimensions	780(W)x338(H)x588(D)mm	780(W)x340(H)x588(D)mm	591(W)x295(H)x800mm (D)
Expansion enclosure(JBOD)	JB 3024BA	JB 3025BA	JB3025BA

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Data Service

Local Replication	Snapshot	Snapshot images per source volume Snapshot images per system	Standard License: 64 / Advanced License: 256 Standard License: 128 / Advanced License: 4096
	Volume Copy/Mirror	Replication pairs per source volume Replication pairs per system	Standard License: 4 / Advanced License: 8 Standard License: 16 / Advanced License: 256
	Note: Standard license is included by default and advanced is an optional license		
Thin Provisioning (default included)	"Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space		
Remote Replication(Block level)	Replication pairs per source volume: 8 Replication pairs per system: 64		
	Note: The maximum number of replication pair per source volume is up to 8, regardless of remote asynchronous/remote synchronous/local volume pairs		
Remote Replication(File Level)	Support Rsync with 128-bit SSH encryption		
EonCloud Gateway	**File‑level** Cache Mode：A copy of frequently accessed file is kept on a local storage and all files are also uploaded to cloud Sync Mode：Synchronizing files between local storage and clouod． **Block‑level** Cache Mode：A copy of frequently accessed data is kept on a local storage and all data are also flushed to cloud． Backup Mode：All data are kept on local storage and all data are also flushed to cloud. Tiering Mode: Frequently accessed data is kept on local storage and infrequently accessed data is migrated to cloud		

EonCloud Gateway Version

Feature	EonCloud Gateway Standard	EonCloud Gateway Enterprise	EonCloud Gateway Ultimate
Models applied	All Models (Standard) can be upgraded to EonCloud Enterprise or Ultimate version		
Cloud folder sync / cache	v	v	v
Max. cache settings	5 (90 days trial)	5	10
Cache policy and function parameters	(90 days trial for all) Default(LRU) No applicable Low priority Local only High priority Prepopulated Uncacheable for read Sequentially-preallocate Uncacheable for write	Default(LRU) Low priority High priority 90 days trial for others	Default(LRU) No applicable Low priority Local only High priority Prepopulated Uncacheable for read Sequentially-preallocate Uncacheable for write
Cloud volume cache	(90 days trial)	v	v
Cloud volume backup	(90 days trial)	v	v
Cloud volume tier	(90 days trial)	v	v
Max. connected folder	5	5	32
Max. connected volume	5	5	32
Cloud folder cache size	≦ 1TB	≦ 2PB	≦ 2PB
Cloud volume capacity	≦ 1TB	≦ 2PB	≦ 2PB

Service & Support

Access right management	• User account management • Group management • Folder management - folder access control • Quota management • Integration with Window® AD and LDAP • Folder encryption with AES
Availability and reliability	• Redundant, hot-swappable hardware modules • Device mapper support • Multi-pathing support • Antivirus • Trunk group support • CacheSafe technology • UPS • WORM(For file level only)
Management	• Web-based EonOne management software • Automated cache flush and caching mode operation per enclosure status • Module status LED indicators: component presence detection & thermal sensors via I2C bus • Storage Resource Management to analyze history records of resource usage • Automate repeatable management tasks by flexible workflow
Notification	Email, SNMP traps
Applications	• File explorer • Proxy server • Syslog server • VPN server • SyncCloud • LDAP server
OS support	Microsoft Windows Server 2008 / 2008 R2 / 2012 / 2012 R2 / 2016 , Windows 7 SP1 / Windows 8.1, Microsoft Windows Hyper-V, Red Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, Mac OS X, VMware, Citrix XenServer, OpenStack Cinder
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/extension options	Replacement part dispatch on the next business day (up to 5 years) Advanced service: 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) Premium service: 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) Extended standard service up to 5 years
	Infortrend Service Center	Request Support, Knowledge Base, Download Center, Licensing Service, and News