Infortrend®

Explore EonStor GSe

EonStor GSe SAS HDD Storage

Scale-out Unified Storage for SMB

Highlights

High Performance and Scalability

- Up to 600K IOPS
- Up to 8GB/s read and 5.8GB/s write in throughput
- Scale-out and scale-up expansions to easily increase performance and capacity

High-Density Design

- Reduce hardware footprint with 4U 40/60/90-bay models

Applications & Data Protection

- Essential applications designed for SMBs
- Integrated full-featured RAID protection
- Rich backup functions, including snapshot, volume copy, volume mirror, rsync, and IDR
- Crucial security features against ransomware attacks, including immutable object storage, WORM, and multi-factor authentication

Introduction

EonStor GSe SAS HDD storage, available from entry-level to high-end models, is a unified storage series that incorporates full-featured, enterprise-grade data services with RAID protection to deliver high performance and scalability without sacrificing affordability. With the feature of cloud integration, EonStor GSe allows SMBs and SMEs to integrate and expand their local SAN/NAS storage architecture into cloud services in an easy and cost-effectively manner.

Unified Storage System

Designed for SMBs, EonStor GSe allows companies to store and manage their valuable data at a reduced total cost of ownership by integrating NAS and SAN into one unified storage system.

Based on improved hardware and firmware, this series supports file-level protocols, including CIFS, NFS, AFP, and FTP, as well as block-level protocols, such as Fiber Channel, iSCSI, and SAS. By integrating these protocols and harnessing the power of Intel® multi-core CPU, EonStor GSe delivers not only outstanding flexibility but also incredible performance.

Storage Efficiency with Better TCO

EonStor GSe supports hybrid storage, and with its SSD cache and automated storage tiering, the storage system can automatically leverage the high performance I/Os of SSDs for frequently accessed data, and use HDDs for massive data archive, thereby increasing the system performance and ROI.

EonStor GSe also comes with inline compression and offline deduplication, which reduces the overall storage capacity required and thus saves costs.

Flexible Scalability with Scale-out and Scale-up

Through scale-out expansion, you can linearly increase performance and capacity for both block-level and file-level environments. When one GSe unit is no longer able to provide enough performance or capacity, you can simply add more GSe appliances to form a cluster—with a maximum of 4 GSe units.

Through scale-up expansion, each GSe unit can be connected to JBOD expansion enclosures to add up to 896 drives. Together with scale-out expansion, GSe supports more than 3000 drives with over 70PB storage capacity.

Comprehensive Business Applications

Integration with Microsoft AD and LDAP

EonStor GSe provides easy integration with existing business network environments through Microsoft® Active Directory (AD) and LDAP directory services, which allows system administrators to easily configure shared folder access permission by user account through ACL. Furthermore, EonStor GSe has perfectly integrated the LDAP Server function into the system, so customers do not need to construct additional LDAP Servers.

Essential Applications Designed for SMBs

EonStor GSe also includes essential applications for small and medium-sized businesses, such as email servers and document management software. Setting up and activating these applications can be completed with just a few clicks, even by those without a technical background. This greatly simplifies the tedious process of installing and configuring office-related tools, thus saving time.

Complete Data Protection and Backup

To minimize the risk of data loss from unexpected disk failures, natural disasters, or power outages, EonStor GSe supports various backup features, such as Intelligent Drive Recovery (IDR), snapshot, local/remote replication, and file-level rsync.

EonStor GSe can be utilized as a backup appliance, allowing you to leverage its backup server function to back up data from PC, file servers, and public cloud through a GUI interface. Additionally, you can set options such as a backup schedule and a retention period to best fit your needs.

EonStor GSe also incorporates crucial safety features to safeguard data from ransomware attacks. With immutable object storage, it retains data with WORM (write once read many) storage protection, where data gets “locked” and therefore cannot be modified, deleted, overwritten, or even encrypted by ransomware. By setting a retention period, you can easily follow government compliance requirements or company policies on data retention. To provide further security for administrative account access, multi-factor authentication (MFA) is also supported to reduce the risk of malicious attacks following password theft.

Complete Cloud Features

Integrated with the Intelligent Cloud Gateway Engine, EonStor GSe supports a wide range of both private and public cloud services, including Amazon S3 and Microsoft Azure, and offers various cloud features such as cloud tiering, cloud cache, and cloud backup to make the most out of your cloud storage. Combining local and cloud storage, these features allocate data in an automatic and optimal manner while saving setup and maintenance costs.

Availability & Reliability

EonStor GSe is equipped with dual power supplies and cooling fans to help ensure high data availability. The Cache Backup Module (CBM), which consists of a super capacitor and a flash module, prevents data loss during a power interruption or outage.

In addition, EonStor GSe offers HA service to deliver continuous availability with a near zero RTO (recovery time objective) and a zero RPO (recovery point objective). With two storage devices deployed at near sites, the HA service provides block-level active-active storage and file-level active-passive storage for business-critical applications that have an extremely low tolerance for downtime. Featuring synchronous remote replication and auto-failover, this solution ensures identical and complete copies of data are stored on both storage devices and avoids service downtime due to planned or unexpected events. Auto-failback is available in block-level HA service, allowing a storage device to resume services without switching manually.

Easy Maintenance

EonStor GSe features a modular hardware design, including hot-swappable fans and power supply units, to simplify maintenance and ensure continuous operations.

Intuitive Management Software

EonStor GSe adopts EonOne, a web-based management software tool, to assist customers in raising storage and service efficiency for increased productivity. With its intuitive interface design, IT administrators can easily manage a cluster and multiple appliances, monitor performance and capacity usage, and complete system configurations, all from one centralized interface.

PHYSICAL SPECIFICATIONS

Product Series			GSe 1000 Gen2	GSe 2000	GSe 3000 G3	GSe 4000 G3
Form Factor	2U 12-bay		GSe 1012 **2**	GSe 2012 / GSe 2012**T**	GSe 3012 **3**	GSe 4012 **3**
	3U 16-bay		GSe 1016 **2**	GSe 2016 / GSe 2016**T**	GSe 3016 **3**	GSe 4016 **3**
	4U 24-bay		-	-	GSe 3024 **3**	GSe 4024 **3**
	4U 40-bay		-	-	GSe 3040 **T3** GSe 3040 **T3C**	GSe 4040 **3** GSe 4040 **3C**
	4U 60-bay		-	-	GSe 3060 **T3** GSe 3060 **T3C**	GSe 4060 **3** GSe 4060 **3C**
	4U 90-bay		-	-	GSe 3090 **T3** GSe 3090 **T3C**	GSe 4090 **3** GSe 4090 **3C**
			Note: 2: Gen2 **3**: G3 **T**: High performance **C**: U.2 SSD cache			
Controller			Single			
Cache Backup Technology			Super capacitor + flash module (optional)			
CPU			Intel® Atom® 4-Core	Intel® Pentium® 2-Core Intel® Pentium® 4-Core (for **T** models)	Intel® Xeon® D 4-Core	Intel® Xeon® D 6-Core
Cache Memory			Default DDR3 8GB, up to 16GB	Default DDR4 8GB, up to 64GB	• 2U 12-bay/3U 16-bay/4U 24-bay: Default DDR4 8GB, up to 192GB • 4U 40-bay/4U 60-bay: Default DDR4 12GB, up to 192GB • 4U 90-bay: Default DDR4 16GB, up to 192GB	
Supported Drives			• 2.5" SAS SSD • 2.5" 12Gb/s SAS 10,000 RPM HDD • 3.5" 12Gb/s NL-SAS 7,200 RPM HDD • 2.5" SATA SSD, 3.5" 6Gb/s SATA 7,200 RPM HDD • 2.5" U.2 NVMe SSD (for U.2 SSD cache models; must be purchased from Infortrend)			
			Note: For the latest Compatibility Guide, refer to our official website.			
Max. Drive Number	Via Expansion Enclosures, per Appliance		448	896	896	896
	Via Scale-out with Other Series of Appliances, per Cluster		3136	3584	3584	3584
Max. SSD Cache Pool (Block Level)			0.6TB	1.6TB	4TB	4TB
Onboard 1GbE Ports (RJ45)			4	4	0	0
Onboard 25GbE Ports (SFP28)			0	0	2	0
			Note: All the ports must be set to the same channel type (block-level or file-level).			
Onboard SAS Expansion Ports			1	1	2	2
Host Board Slots			1	2	2	2
Host Board Options			• 16Gb/s FC x 4 • 32Gb/s FC x 2 • 1GbE (RJ45) x 4 • 10GbE (SFP+) x 2 • 12Gb/s SAS x 2	• 16Gb/s FC x 4 • 32Gb/s FC x 2 • 32Gb/s FC x 4 • 1GbE (RJ45) x 4 • 10GbE (SFP+) x 2 • 25GbE (SFP28) 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 • 12Gb/s SAS x 2	• 25GbE (SFP28) x 2, RDMA • 25GbE (SFP28) x 4, RDMA • 100GbE (QSFP28) x 1, RDMA • 100GbE (QSFP56) x 2, RDMA
			Note: 1. At least 24GB memory is required per controller to use RDMA. 2. It is strongly recommended that you refer to the latest Host Board and Memory Guide on our website for complete information, including supported combinations and important notes, before purchasing any host board for your model.			
Max. 16Gb/s FC Ports			4	8	8	8
Max. 32Gb/s FC Ports			2	8	8	8
Max. 1GbE Ports (RJ45)			8	12	0	0
Max. 10GbE Ports (SFP+)			2	4	4	4
Max. 25GbE Ports (SFP28)			0	4	10	8
Max. 100GbE Ports (QSFP28)			0	0	2	2
Max. 100GbE Ports (QSFP56)			0	0	4	4
Max. 12Gb/s SAS Ports			3	5	6	6
Expansion Enclosures (JBODs)			JB 3012**A**, JB 3016**A**, JB 3024**BA**, JB 3025**BA**, JB 3060**L**, JB 3090			
Dimensions (Without Chassis Ears and Protrusions) (W x H x D)			• 2U 12-bay: 449 x 88 x 500 mm • 3U 16-bay: 449 x 130 x 500 mm • 4U 24-bay: 449 x 174.4 x 500 mm		• 2U 12-bay: 449 x 88 x 509.8 mm • 3U 16-bay: 449 x 130 x 509.8 mm • 4U 24-bay: 449 x 174.6 x 509.8 mm • 4U 40-bay: 438 x 176 x 735.8 mm • 4U 60-bay: 438 x 175.8 x 849.8 mm • 4U 90-bay: 435 x 175.8 x 1088.8 mm	
Package Dimensions (Incl. Pallet for 4U 40/60/90-bay Models) (W x H x D)			• 2U 12-bay: 588 x 239 x 780 mm • 4U 40-bay: 620 x 485 x 1000 mm	• 3U 16-bay: 588 x 283 x 780 mm • 4U 60-bay: 630 x 477 x 1150 mm	• 4U 24-bay: 588 x 325 x 780 mm • 4U 90-bay: 620 x 585 x 1370 mm	
Power Supply Unit	Power Supplies (Redundant and Hot-swappable)	Global	460W x 2 (80 PLUS Bronze)		• 2U 12-bay/3U 16-bay/4U 24-bay: 530W x 2 (80 PLUS Bronze) • 4U 40-bay/4U 60-bay: 1200W x 2 (80 PLUS Platinum) • 4U 90-bay: 1600W x 2 (80 PLUS Titanium)	
		EU	• 2U 12-bay/3U 16-bay/4U 24-bay: 800W x 2 (80 PLUS Titanium) • 4U 40-bay/60-bay: 1300W x 2 (80 PLUS Titanium)		• 4U 90-bay: 1600W x 2 (80 PLUS Titanium)	
	AC Voltage	Global	• 2U 12-bay/3U 16-bay/4U 24-bay: 100-240VAC @10-5A • 4U 40-bay/4U 60-bay: 100-127VAC @10A, 200-240VAC @8A		• 4U 90-bay: 100-127VAC @12A, 200-240VAC @10A	
		EU	• 2U 12-bay/3U 16-bay/4U 24-bay: 100-127VAC @10A, 200-240VAC @5A • 4U 40-bay/60-bay: 100-127VAC @12A, 200-240VAC @8.5A		• 4U 90-bay: 100-127VAC @12A, 200-240VAC @10A	
			Note: Please use 200-240VAC for the 4U 40-bay, 4U 60-bay and 4U 90-bay models in both the global and EU versions.			
	Frequency		50-60 Hz			
	Safety Standards		• Electromagnetic compatibility: CE, BSMI, FCC • Safety: UL, BSMI, CB			

SOFTWARE SPECIFICATIONS

Max. Logical Drive Number		30
Max. Logical Drive Capacity		512TB
Stripe Size		16KB, 32KB, 64KB, 128KB, 256KB, 512KB, 1024KB (per logical drive)
Write Policy		Write-back or write-through (per logical drive)
Max. Pool Size		2PB
Max. Pool Number		30
Max. Volume Size		2PB
Max. Volume Number		1024
Max. Host LUN Mapping Number		4096
Max. Reserved Tag Number		256 (per Host-LUN connection)
Max. iSCSI Initiators		416
Max. Host Connection Number		128 (per FC)
RAID Options		RAID 0, RAID 1, RAID 3, RAID 5/5F, RAID 6/6F, RAID 10, RAID 30, RAID 50, RAID 60
Supported Protocols	File Level	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	FC, iSCSI, SAS, NVMe/TCP, NVMe/RDMA
		Note: NVMe/RDMA is supported only on host channels with RDMA functionality.
	Object Level	RESTful API (Amazon S3-compatible API)
	GPUDirect Storage (GDS)	Supported on NFS over RDMA (File) environments for direct GPU memory access.
File Level	Max. File System Size	2PB
	Max. Number of Local Users	20000
	Max. Number of Local Groups	512
	Max. Number of Domain Users and Groups	The number depends on the memory capacity of a single controller and the system configuration. • 8/12GB: 50,000 • 16/24GB: 100,000 • 32/48GB: 200,000 • 64GB: 400,000 • 96GB and up: 500,000
	Max. Number of Shared Folders	1024 (NFS/CIFS/FTP) | 255 (AFP)
	Max. Number of Rsync Jobs	1024
	Max. Number of Concurrent Rsync Processes	64
	Max. Number of Connections	2048 (NFS/CIFS/AFP) | 1024 (FTP)
Management		• Web-based EonOne management software • User account management • Group management • Folder management - folder access control • Quota management • Folder encryption with AES • Integration with Microsoft Active Directory (AD) and Linux LDAP • Storage Resource Management to analyze history of resource usage • Multi-factor authentication login mechanism • File-level QoS (network traffic control) • Command-line interface (CLI)
Availability and Reliability		• Immutable object storage • Hot-swappable hardware modules • Device mapper • Antivirus • Trunk group • Cache safe technology • UPS • WORM (file level only) • SMB Multichannel
Efficiency		• Block level: Offline compression, offline deduplication • File level: Inline compression, offline deduplication
Notification		• Email • SNMP traps
Applications		• Anti-virus • Backup Server • Docker • LDAP Server • Mail Server • Nextcloud • Project Server • Proxy Server • Syslog Server • VPN Server • Web Server
Supported Cloud Services		EonCloud Gateway supports integration with the following cloud providers: Amazon S3, Microsoft Azure, Alibaba Cloud, OpenStack, Baidu Cloud, Google Cloud, Tencent Cloud, Wasabi Cloud, etc.
		Note: For complete information about supported cloud providers, please refer to EonCloud Gateway webpage **https://www.infortrend.com/global/solutions/eoncloud**
Supported OS		Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, MacOS X, VMware, Citrix XenServer, OpenStack Cinder
		Note: For supported OS versions, please refer to the Compatibility Guide.

DATA SERVICES

Thin Provisioning		Block Level	Default	"Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space.	
Local Replication	Snapshot	Folder-based	Optional	Snapshot images per folder: 1024 (supported on Btrfs file system only)	
		Volume-based	Default	Snapshot images per source volume: 64	Snapshot images per system: 128
			Optional	Snapshot images per source volume: 256	Snapshot images per system: 4096
	Volume Copy/Mirror		Default	Replication pairs per source volume: 4	Replication pairs per system: 16
			Optional	Replication pairs per source volume: 8	Replication pairs per system: 256
Remote Replication		File Level	Default	Support Rsync with 128-bit SSH encryption	
		Block Level	Optional	Replication pairs per source volume: 8	Replication pairs per system: 64
				Note: The maximum number of replication pairs per source volume is 8, whether they are remote asynchronous pairs, remote synchronous pairs, or local volume pairs	
Automated Storage Tiering			Optional	Storage tiers per pool: 4	
Scale-out		File Level	Default	Appliances per cluster: 1	
			Optional	Appliances per cluster: 4	
		Block Level	Default	Appliances per cluster: 4	
HA Service		File Level	Optional	Delivering continuous availability and eliminating downtime for mission-critical workloads that require non-stop operations	
		Block Level		**Note:** HA service is available on GSe 4000/3000 G3 only.	
SSD Cache		File Level	Default	Accelerating file operations and data access performance for both read and write Max. SSD number: 8	
		Block Level	Default	Accelerating data access in random read-intensive environments (e.g. OLTP) Max. SSD number: 4	
				Recommended DIMM capacity per controller for SSD cache pool for GSe 2000, GSe 1000	
				DRAM : 8GB	Max SSD cache pool size : 0.4TB
				DRAM : 16GB	Max SSD cache pool size : 0.6TB
				DRAM : 32GB	Max SSD cache pool size : 1TB
				DRAM : 64GB	Max SSD cache pool size : 1.6TB
				DRAM : 128GB and up	Max SSD cache pool size : 3.2TB
				Recommended DIMM capacity per controller for SSD cache pool for GSe 4000/3000 G3	
				DRAM : 8GB	Max SSD cache pool size : 0.5TB
				DRAM : 12GB	Max SSD cache pool size : 0.75TB
				DRAM : 16GB	Max SSD cache pool size : 1TB
				DRAM : 24GB	Max SSD cache pool size : 1.5TB
				DRAM : 32GB	Max SSD cache pool size : 2TB
				DRAM : 48GB	Max SSD cache pool size : 3TB
				DRAM : 64GB and up	Max SSD cache pool size : 4TB

WARRANTY AND SERVICE

Service and Support	Standard Service	3-year limited hardware warranty and 8 x 5 phone, web, and email support (batteries are covered under warranty for 2 years)
	Upgrade or Extension Options	Warranty extension: Standard service can be extended up to 5 years. The following services can be upgraded to 5 years. • Upgrade: Replacement part dispatch on the next business day • Advanced service: Phone, web, and email support + onsite diagnostics on the next business day • Premium service: Phone, web, and email support + onsite diagnostics within 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

Asia Pacific (New Taipei, Taiwan)
Infortrend Technology, Inc.
Tel : +886-2-2226-0126
E-mail : sales.ap@infortrend.com

China (Beijing, China)
Infortrend Technology, Ltd.
Tel : +86-10-6310-6168
E-mail : sales.cn@infortrend.com

Japan (Tokyo, Japan)
Infortrend Japan, Inc.
Tel : +81-3-5730-6551
E-mail : sales.jp@infortrend.com

Americas (Sunnyvale, CA, USA)
Infortrend Corporation
Tel : +1-408-988-5088
E-mail : sales.us@infortrend.com

EMEA (Düsseldorf, Germany)
Infortrend Technology, Inc.
E-mail: sales.de@infortrend.com

Contact Sales

Visit Our Website