EonStor GSe Family

Cloud-Integrated Unified Storage for SMB Data Storage, Backup and Sharing

For more details

Providing a reliable, easily managed, and cloud-ready unified storage solution for SMBs and comprehensive business applications

HIGHLIGHTS

PERFORMANCE

- Consolidate SAN, NAS and cloud in a single system
- All-flash and hybrid configurations provide flexibility of choice
- Multi-core CPU for enhanced performances
- Supports up to 128GB RAM

FLEXIBLE INTERFACE OPTIONS

- Modular dual host board controller with integrated FC, SAS, iSCSI, and FCoE, InfiniBand protocols maximizes connection versatility for hosts
- Converged host board with 4 connectivity options ensures future-proof multi-channel appliances (16GB/s FC, 8GB/s FC, 10GB/s iSCSI SFP+, 10GB/s FCoE)

APPLICATIONS & DATA PROTECTION

- With various built-in services including proxy, LDAP, syslog and VPN server to assist enterprises simplify their IT environment deployment.
- Integrated full-featured RAID protection
- Integrated backup functions such as snapshot, volume copy, mirror, rsync, IDR and local / remote replication
- Supports SED hard drives for better data protection

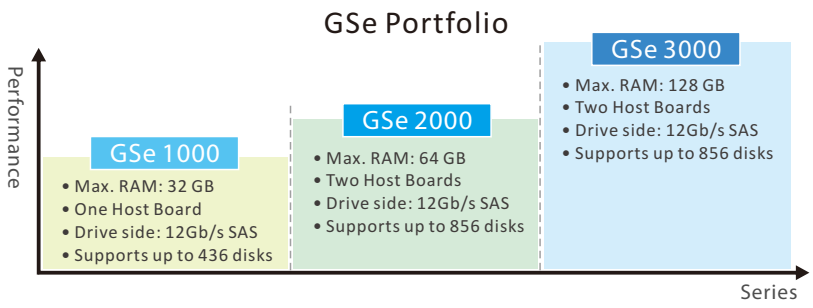
The EonStor GSe Family, including its 1000, 2000, and 3000 Series, offers unified storage solutions that incorporate full-featured NAS and SAN with enterprise level data services and RAID protection to deliver the best storage of the highest standards without sacrificing affordability. Moreover, with the option of cloud-integration, EonStor GSe Family allows SMBs and SMEs running local SAN/NAS applications to easily and cost-effectively integrate and expand their storage architecture into cloud services.

Unified Storage System

The EonStor GSe Family enables businesses to cost-effectively manage data and reduce total cost of ownership by integrating file level and block level storage into one unified storage system.

Based on improved hardware and firmware, EonStor GSe Family can handle file level protocols including CIFS, NFS, AFP and FTP; block level protocols such as Fiber Channel, iSCSI, InfiniBand, FCoE and SAS.

By integrating these protocols and harnessing the power of Intel's multi-core CPU, the EonStor GSe Family delivers not only outstanding flexibility but also incredible performance in either all-flash or hybrid configurations. It delivers up to 230K IOPS, 5800MB/s for read, and 4200MB/s for write. Moreover, by offering hybrid features such as SSD Cache, automated storage tiering to accelerate performance and optimize utilization of HDDs, SSDs, and RAID levels to enhance ROI, the EonStor GSe Family guarantees great performances at every level of operation.



CLOUD READY

- The EonStor GSe can integrate with cloud storage, and data can be optimally allocated between EonStor GSe and Cloud through our smart algorithms, so users can enjoy the best performance and the safest storage.

- EonStor GSe offers comprehensive cloud integration functions for users to choose from: Cloud Tiering, Cloud Cache and Cloud Backup.

RELIABILITY & AVAILABILITY

- Dual power supplies and cooling fans ensure constant uptime and service stability
- Super-capacitor with Flash ensure data safety

SCALABILITY

- Future-proof expansion solution offers ample data capacity of up to 856 drives

CONNECTIVITY & SIMPLE MAINTENANCE

- Modular design simplifies maintenance and ensures uninterrupted operations

WIDE PRODUCT RANGE

- Provides users with a wide range of products to choose from according to their specific needs

INTUITIVE GUI

- EonOne management interface provides a single control center for system management and resources monitoring

Comprehensive Business Applications & Data Protection

1.**Integration with Windows® AD and LDAP**

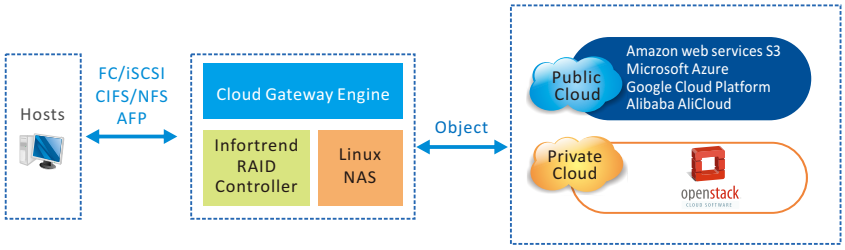
The EonStor GSe Family provides easy integration with existing business network environments through Windows® AD and LDAP directory services, which allow MIS to easily configure access rights of every user account in a share folder through ACL. Furthermore, EonStor GSe has perfectly integrated the LDAP Server function into the system, so customers do not need to construct additional LDAP Servers.

2. **Comprehensive Data Service**

The EonStor GSe Family minimizes the risk of data loss from unexpected disk failures, natural disasters and power outages thanks to its integrated backup functions such as Intelligent Drive Recovery (IDR), snapshot, local / remote replication, and file-level rsync.

3. **Complete cloud functions**

By integrating Intelligent Cloud Gateway Engine and supporting a wide range of both private cloud and public cloud services, including Amazon, Azure, and Google, the EonStor GSe offers various cloud functions such as Cloud Tiering, Cloud Cache and Cloud Backup to make the most of cloud's advantages. These functions perfectly combine local and cloud storage, automatically and optimally allocating data, while saving setup and maintenance costs in the process.



Reliability & Availability

The EonStor GSe Family has been thoroughly designed to operate with high data availability, such as dual power supplies and dual cooling fans. This design keeps data alive at all times, while Super-capacitor with Flash also ensure the data is not lost.

System Scalability

“Scale as needed” flexibility allows users to accommodate tomorrow’s applications while satisfying current needs. The EonStor GSe Family can connect with expansion enclosures to provide maximum capacity across 856 drives.

Connectivity and Simple Administration Effort

The EonStor GSe Family features a modular design, such as hot-swappable fans and power supplies, to simplify maintenance and ensure uninterrupted operations.

TECHNICAL SPECIFICATIONS

EonStor GSe Series

Specifications (per system)		GSe 1000Gen2	GSe 2000 GSe 2000T[*1]	GSe 3000 GSe 3000T[*1]
Form factor	2U 12-bay	√	√	√
	2U 24-bay	-	-	-
	3U 16-bay	√	√	√
	4U 24-bay	-	-	-
Storage controller			Single Controller	
Max drives[*5]		444	856	856
Max SSD cache pool		800GB	1.6TB	3.2TB
Cache backup techniques[*6]			Super capacitor + Flash module	
Redundant power supply unit[*4]			Power supply: Two redundant 460W; Voltage and Frequency: 100-240 Vac, 50-60Hz	Power supply: Two redundant 530W; Voltage and Frequency: 100-240 Vac, 50-60Hz
CPU		1x Intel Avoton (Atom) 4 Core	1x Intel Broadwell-DE (Pentium) 2 Core/ 4 Core	1x Intel Broadwell-DE (Xeon) 4 Core/6 Core
Memory[*2]		8GB, 16GB, 32GB	8GB, 16GB, 32GB, 64GB	8GB, 16GB, 32GB, 64GB, 128GB
Max. number of host board		1	2	2
Expansion board[*7]		0	1	1
Drive Side		12Gb/s SAS	12Gb/s SAS	12Gb/s SAS
Onboard SAS expansion ports		1 x 12Gb/s SAS wide ports	1 x 12Gb/s SAS wide ports	2 x 12Gb/s SAS wide ports
Host board ports[*3]		2 x 16Gb/s FC ports[*8] 4 x 8Gb/s FC ports[*8] 2 x 10GbE/iSCSI ports (RJ-45) 2/4 x 10GbE/iSCSI ports (SFP+) 4 x 1GbE/iSCSI ports 2 x 12Gb/s SAS ports 2 x 40GbE/iSCSI ports (QSFP)	2/4 x 16Gb/s FC ports[*8] 4 x 8Gb/s FC ports[*8] 2 x 56Gb/s InfiniBand ports[*9] 4 x 10GbE FCoE ports 2 x 40GbE/iSCSI ports (QSFP) 2 x 10GbE/iSCSI ports (RJ-45) 2/4 x 10GbE/iSCSI ports (SFP+) 4 x 1GbE/iSCSI ports 2 x 12Gb/s SAS ports	2/4 x 16Gb/s FC ports[*8] 4 x 8Gb/s FC ports[*8] 2 x 56Gb/s InfiniBand ports[*9] 4 x 10GbE FCoE ports 2 x 40GbE/iSCSI ports (QSFP) 2 x 10GbE/iSCSI ports (RJ-45) 2/4 x 10GbE/iSCSI ports (SFP+) 4 x 1GbE/iSCSI ports 2 x 12Gb/s SAS ports
Onboard iSCSI ports (10Gb RJ-45)		0	0	2
Onboard iSCSI ports (1Gb RJ-45)		4	4	2
Host board + onboard ports (max.)		8	12	12
Max. 8Gb/s FC ports		4	8	8
Max. 16Gb/s FC ports		2	8	8
Max. 56Gb/s InfiniBand ports		0	4	4
Max. 1 GbE/iSCSI Ports		8	12	10
Max. 10 GbE/iSCSI (SFP+) ports		4	8	8
Max. 10 GbE/iSCSI (RJ45) ports		2	4	6
Max. 40GbE/iSCSI (QSFP) ports		2	4	4
Max. 10 GbE FCoE ports		4	8	8
Max. 12Gb/s SAS ports		2	4	4
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		2048		
Max. volume size		2PB		
Number of tags reserved for each Host-LUN connection		Up to 256		
Max Initiators		416		
File Level	Max. file system size	2PB		
	Max. number of user accounts	20000		
	Max. number of user groups	512		
	Max. number of folder sharing (NFS/CIFS/AFP[*10]/FTP)	1024		
	Max. number of rsync jobs	1024		
	Max. number of rsync concurrent processes	64		
	Max. number of connections for a folder (NFS/CIFS/AFP[*10]/FTP)	2048 per controller		
RAID options		RAID 0, 1 (0+1), 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, WebDAV Block Level Protocol: FC, FCoE, iSCSI, SAS. InfiniBand Object Level Protocol: Openstack Swift		
Cloud gateway		Support the integration with following cloud providers: Amazon S3, Microsoft Azure, Google Cloud Platform, Alibaba AliCloud		
Green design		• 80 PLUS power supplies delivering more than 80% energy efficiency • Intelligent multi-level drive spin-down"		
Regulatory		• Electromagnetic Compatibility : CE, BSMI, FCC, KC • Safety : UL, BSMI, CB, EAC"		

1. Model name "T" means high IOPS solution
2. GSe 3000/2000 Default: DDR4 4GBx2 with ECC per controller, GSe 1000 Default: DDR3x2 with ECC 4GBx2 per controller.
3. GSe 3000/2000/1000 Converged host board supports 4-port 10Gb iSCSI, 4-Port 8 Gb FC, 2-port 16Gb FC and 4-port 10Gb FCoE.
4. Power is also supplied in redundant mode, allowing full operation with half the resources.
5. GSe 2000/3000 support expansion board to double expansion enclosure capacity.
6. Optional
7. The expansion board can only be installed in the HB2 slot and has 2 x 12Gb/s SAS ports only connectable with expansion enclosures.
8. Supports point-to-point and switch mode.
9. For Linux only, block level only.
10. AFP: Supports 255 share folders and 64 connections per folder

TECHNICAL SPECIFICATIONS

EonStor GSe Series

GSe 3000/3000T/2000/2000T/1000 Gen2 Series

Form Factor	2U 12-bay	3U 16-bay	2U 12-bay	3U 16-bay
Model[*1]	GSe 3012 GSe 3012T GSe 2012 GSe 2012T	GSe 3016 GSe 3016T GSe 2016 GSe 2016T	GSe 10122	GSe 10162
Supported drives[*2]		• 2.5" 10K/15K RPM SAS HDD • 2.5" SATA/SAS SSD	• 3.5" 7200 RPM NL SAS HDD • 3.5" 7200 RPM SATA HDD	
Max. drives number	852	856	432	436
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount	2U, 19-inch rackmount	3U, 19-inch rackmount
Dimensions[*3]	447mm (W) x 88mm (H) x 500mm (D)	447mm (W) x 130mm (H) x 500mm (D)	447mm (W) x 88mm (H) x 500mm (D)	447mm (W) x 130mm (H) x 500mm (D)
Package Dimensions	780mm (W) x 379mm (H) x 588mm (D)	780mm (W) x 423mm (H) x 588mm (D)	780mm (W) x 379mm (H) x 588mm (D)	780mm (W) x 423mm (H) x 588mm (D)
Expansion enclosure (JBOD)	JB 3012A JB 3060 JB 3060L	JB 3016A JB 3060 JB 3060L	JB 3012A JB 3060 JB 3060L	JB 3016A JB 3060 JB 3060L

1. T: High IOPS solution
2. For the latest compatibility details, refer to our official website for the latest EonStor GSe Compatibility Matrix.
3. Without chassis ears/ protrusions

Data Service & Support

Data Service

Local Replication[2] (Standard license is included by default and advanced is an optional license)	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
Thin Provisioning (default included)	" Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space		
Self-encrypting drives	Unique factory encryption secures data plus makes deletion simple and complete		
Remote Replication(Block level)[4]	Replication pairs per source volume: 8 Replication pairs per system: 64		
Remote Replication(File Level)	Rsync with 128-bit SSH encryption between Infortrend EonStor GS, GSe and EonNAS		
Automated Storage Tiering[1]	Two(2) or four(4)storage tiers based on drive types SSD supports		
SSD Cache[1]	• 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: 300GB DRAM:16GB Max SSD Cache Pool Size: 400GB DRAM:32GB Max SSD Cache Pool Size: 800GB DRAM:64GB Max SSD Cache Pool Size: 1,600GB DRAM:128GB Max SSD Cache Pool Size: 3,200GB		
Cloud-integrated Solution[1]	• Cloud Cahhe • Cloud Fully Cache • Cloud Tiering • Cloud Backup	A copy of frequently accessed data is kept on local storage and all data is also flushed to cloud All data is kept on local storage and all data is also flushed to cloud Frequently accessed data is kept on local storage and infrequently accessed data is migrated to cloud For cloud volumes, its snapshot can be backuped to cloud. When disaster occurs, you can operate disaster recovery based on the latest snapshots.	
Access right management	• User account management • Quota management	• Group management • Integration with Window® AD and LDAP	• Folder management - folder access control • Folder encyption with AES
Availability and Reliability	• Redundant, hot-swappable hardware modules • Trunk group support	• CacheSafe technology • Device mapper support	• Multi-pathing support • UPS • WORM[3]
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, LAN broadcast, 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 , 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	

1. Optional
2. Available with Standard license and optional advanced license
3. For file level only
4. The maximum number of replication pair per source volume is up to 8, regardless of remote asynchronous/remote synchronous/local volume pairs.

Asia Pacific (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 (Basingstoke, UK)
Infortrend Europe Ltd.
Tel:+44-1256-305-220
E-mail : sales.eu@infortrend.com