



# EonStor GSe Family

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

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



For more details

### HIGHLIGHTS

#### PERFORMANCE

- Consolidate block, file and object level storage 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 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

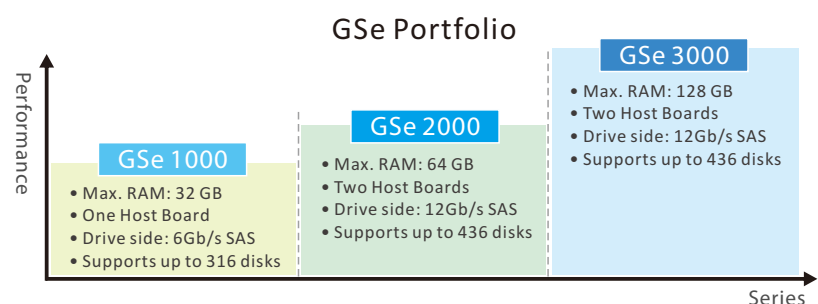
*The EonStor GSe Family, including its 1000, 2000, and 3000 Series, offers unified storage solutions that incorporate full-featured NAS and SAN with enterprise level data services and RAID protection to deliver the best storage of the highest standards without sacrificing affordability. Moreover, with 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 and SAS; and object level protocols, which allow users to access files directly via browsers through the file's unique URL and extend or backup data to cloud.

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 436 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

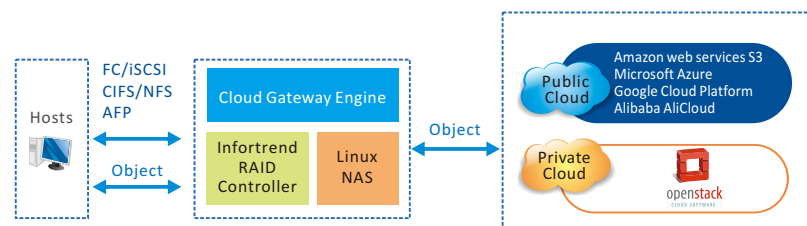
The EonStor GSe Family provides easy integration with existing business network environments through Windows® AD and LDAP directory services, which allow MIS to easily configure access rights of every user account in a share folder through ACL. Furthermore, EonStor GSe has perfectly integrated the LDAP 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 436 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.

Specifications (per system)	GSe 1000 GSe 1000T <sup>*1</sup>	GSe 2000 GSe 2000T <sup>*1</sup>	GSe 3000 GSe 3000T <sup>*1</sup>
Form factor	2U 12-bay 2U 24-bay 3U 16-bay 4U 24-bay	√ - √ -	√ - √ -
Storage controller		Single Controller	
Max drives	316	436	436
Max SSD cache pool	800GB	1.6TB	3.2TB
Cache backup techniques		Super capacitor + Flash module	
Redundant power supply unit <sup>4</sup>	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/ 8 Core	1x Intel Broadwell-DE (Pentium) 2 Core/ 4 Core	1x Intel Broadwell-DE (Xeon) 4 Core/6 Core
Cache memory <sup>2</sup>	8GB, 16GB, 32GB	8GB, 16GB, 32GB, 64GB	8GB, 16GB, 32GB, 64GB, 128GB
Max. number of host board	1	2	2
SAS expansion ports	1 x 6Gb/s SAS wide ports	1 x 12Gb/s SAS wide ports	2 x 12Gb/s SAS wide ports
Host board ports <sup>3</sup>	2 x 16Gb/s FC ports 4 x 8Gb/s FC ports 2 x 10GbE/iSCSI ports (RJ-45) 2/4 x 10GbE/iSCSI ports (SFP+) 4 x 1GbE/iSCSI ports 2 x 6Gb/s SAS ports 2 x 12Gb/s SAS ports		2/4 x 16Gb/s FC ports 4 x 8Gb/s FC ports 2 x 56Gb/s InfiniBand ports 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 6Gb/s SAS 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	0	4	4
Max. 10 GbE FCoE ports	0	8	8
Max. 12Gb/s SAS ports	2	4	4
Max. 6Gb/s SAS ports	2	0	0
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/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/FTP)		2048 per controller	
RAID options	RAID 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60		
Protocol support	File Level Protocol Block Level Protocol Object Level Protocol	CIFS/ SMB: Version 2.0/3.0, NFS: Version 2/3/4, AFP, FTP, WebDAV FC, FCoE, iSCSI, SAS Openstack Swift	
Cloud gateway	Support the integration with following cloud providers: Amazon S3, Microsoft Azure, Google Cloud Platform, Alibaba AliCloud		
Green design	<ul style="list-style-type: none"> <li>• 80 PLUS power supplies delivering more than 80% energy efficiency</li> <li>• Intelligent multi-level drive spin-down*</li> </ul>		
Regulatory	<ul style="list-style-type: none"> <li>• Electromagnetic Compatibility : CE, BSMI, FCC, KC</li> <li>• Safety : UL, BSMI, CB, EAC*</li> </ul>		

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 Converged host board supports 4-port 10Gb iSCSI, 4-Port 8 Gb FC, 2-port 16Gb FC and 4-port 10Gb FCoE. GSe 1000 Converged host board supports 4-port 10Gb iSCSI, 4-Port 8 Gb FC and 2-port 16Gb FC

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

GSe 3000/2000/2000T/3000T Series

Form Factor	2U 12-bay	3U 16-bay
Model <sup>1</sup>	GSe 3012 GSe 3012T GSe 2012 GSe 2012T	GSe 3016 GSe 3016T GSe 2016 GSe 2016T
Supported drives <sup>2</sup>	<ul style="list-style-type: none"> <li>• 2.5" 10K/15K RPM SAS HDD</li> <li>• 2.5" SATA/SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 3.5" 7200 RPM NL SAS HDD</li> <li>• 3.5" 7200 RPM SATA HDD</li> </ul>
Max. drives number	432	436
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount
Dimensions <sup>3</sup>	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)
Expansion enclosure (JBOD)	JB 3012A JB 3060 JB 3060L	JB 3016A JB 3060 JB 3060L

GSe 1000/1000T Series

Form Factor	2U 12-bay	3U 16-bay
Model <sup>1</sup>	GSe 1012 GSe 1012T	GSe 1016 GSe 1016T
Supported drives <sup>2</sup>	<ul style="list-style-type: none"> <li>• 2.5" 10K/15K RPM SAS HDD</li> <li>• 2.5" SATA/SAS SSD</li> </ul>	<ul style="list-style-type: none"> <li>• 3.5" 7200 RPM NL SAS HDD</li> <li>• 3.5" 7200 RPM SATA HDD</li> </ul>
Max. drives number	312	316
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount
Dimensions <sup>3</sup>	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)
Expansion enclosure (JBOD)	JB 2012-1 JB 2060 JB 2060L	JB 2016-1 JB 2060 JB 2060L

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 <sup>2</sup> <small>(Standard license is included by default and advanced is an optional license)</small>	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	Source volumes per system Replication pairs per source volume Replication pairs per system	Standard License: 16 / Advanced License: 32 Standard License: 4 / Advanced License: 8 Standard License: 64 / 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) <sup>1</sup>	Replication per source volume: 16 Replication pairs per source volume: 4 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 <sup>1</sup>	Two(2) or four(4) storage tiers based on drive types SSD supports		
SSD Cache <sup>1</sup>	<ul style="list-style-type: none"> <li>• Accelerating data access for random read-intensive environments, such as OLTP</li> <li>• Supports up to four SSDs per controller</li> <li>• 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</li> </ul>		
Cloud-integrated Solution <sup>1</sup>	<ul style="list-style-type: none"> <li>• Cloud Cache</li> <li>• Cloud Tiering</li> <li>• Cloud Backup</li> </ul>		
Access right management	<ul style="list-style-type: none"> <li>• User account management</li> <li>• Quota management</li> <li>• Group management</li> <li>• Integration with Window® AD and LDAP</li> <li>• Folder management - folder access control</li> </ul>		
Availability and Reliability	<ul style="list-style-type: none"> <li>• Redundant, hot-swappable hardware modules</li> <li>• Trunk group support</li> <li>• CacheSafe technology</li> <li>• Device mapper support</li> <li>• Multi-pathing support</li> <li>• UPS</li> <li>• WORM</li> </ul>		
Management	<ul style="list-style-type: none"> <li>• Web-based EonOne management software</li> <li>• Automated cache flush and caching mode operation per enclosure status</li> <li>• Module status LED indicators: component presence detection &amp; thermal sensors via I2C bus</li> <li>• Storage Resource Management to analyze history records of resource usage</li> <li>• Automate repeatable management tasks by flexible workflow</li> </ul>		
Notification	Email, Fax, LAN broadcast, SNMP traps, SMS		
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		

<sup>1</sup> optional    <sup>2</sup> Available with Standard license and optional advanced license

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