



EonStor GSe Family

A Scalable and Converged Unified Storage for SMBs

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

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

- Easy integration with existing environments through Windows® AD & LDAP
- 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, 4200MB/s for read, and 3900MB/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.

RELIABILITY & AVAILABILITY

- Dual power supplies and cooling fans ensure constant uptime and service stability
- BBU/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

CLOUD READY

- EonStor GSe Family can be configured as a cache of cloud to maximize flexibility, scalability and availability
- Support for private and public cloud services enables users to choose the option that best suits their budget or data security requirements
- Whether inactive or mid transfer, data is always encrypted to ensure full protection
- With data reduction technology, EonStor GSe Family makes efficient use of available bandwidth and greatly speeds up data extension with deduplication and compression.

INTUITIVE GUI

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

Comprehensive Business Applications & Data Protection

1. 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.

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. Expand storage capacity to cloud

One key benefit of cloud archive is its unlimited scalability and “pay as needed” flexibility, which allows users to expand on premise storage capacity without an upfront investment, and meet ever-evolving capacity requirements. Moreover, our Cloud Gateway Engine can automatically cache hot data on premise and migrate cold data to the cloud for long term archive.

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 backup Battery Unit (BBU) / 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.

Intuitive and Flexible Workflow Management

Thanks to EonOne, the EonStor GSe Family’s management interface, users can enjoy improved productivity by automating repeatable manual storage management processes via its Workflow Automation GUI. Moreover, with EonOne’s Storage Resource Management, IT administrators are able to easily analyze and optimize system resources to improve ROI.

Model name	GSe 1012 GSe 1012T ¹	GSe 1016 GSe 1016T ¹
Form factor	2U 12-bay LFF	3U 16-bay LFF
Storage controller	Single Controller	
Host connectivity ²	2 x 16Gb FC ports 4 x 8Gb FC ports 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports	
Onboard iSCSI ports (per controller)	4 x 1Gb iSCSI ports	
Protocol Support	<ul style="list-style-type: none"> • File Level Protocol • Block Level Protocol • Object Level Protocol 	CIFS/ SMB, AFP, NFS, FTP FC, iSCSI, SAS REST API
Cloud Gateway	Support the integration with following cloud providers: <ul style="list-style-type: none"> • Amazon S3 • Alibaba AliCloud • Google Cloud Platform • Microsoft Azure 	
Cache memory (per controller)	8GB (Default: DDR3 4GBx2), 16GB, 32GB	
Supported drives	<ul style="list-style-type: none"> • 2.5" SATA/SAS SSD • 2.5" 10K/15K RPM SAS HDD • 3.5" 7200 RPM NL SAS HDD • 3.5" 7200 RPM SATA HDD 	
Drive side	6Gb/s SAS	
Max. drives (per system)	12	16
Max. drives (via expansion enclosures)	312	316
Expansion enclosure (JBOD)	JB 2012-1 JB 2024B JB 2060 JB 2060L	JB 2016-1 JB 2024B JB 2060 JB 2060L
SAS expansion ports (per controller)	1 x 6Gb/s SAS wide port	
Cache backup techniques ³	Super capacitor + Flash module or BBU (hot-swappable) + Flash module	
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount
Power & Cooling	Power supply: Two redundant 460W; Voltage and Frequency: 100-240 Vac, 50-60Hz	
Dimensions ¹	448mm (W) x 88mm (H) x 500mm (D)	448mm (W) x 130mm (H) x 500mm (D)
Package Dimensions	770mm (W) x 350mm (H) x 580mm (D)	780mm (W) x 423mm (H) x 588mm (D)
RAID Functionality	RAID levels supported : RAID 0, 1 (0+1), 5, 6, 10, 50, 60	
Green design	<ul style="list-style-type: none"> • 80 PLUS power supplies delivering more than 80% energy efficiency • Intelligent multi-level drive spin-down 	
Regulatory	<ul style="list-style-type: none"> • Electromagnetic Compatibility : CE, BSMI, FCC, KC • Safety : UL, BSMI, CB, EAC 	

1. Model name "T" means high IOPS solution

2. Converged host board supports 4-port 10Gb iSCSI, 4-Port 8 Gb FC, 2-port 16Gb FC and 4-port 10Gb FCoE, 4-port FCoE will be released in Q3, 2016

3. BBU/super capacitor and flash module not included by default.

Model name	GSe 2012 GSe 2012T ¹	GSe 2016 GSe 2016T ¹
Form factor	2U 12-bay LFF	3U 16-bay LFF
Storage controller	Single Controller	
Host connectivity ²	Host board 1: 2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports	Host board 1 + Host board 2: 2 x 16Gb FC ports + 2 x 16Gb FC ports 2 x 12Gb SAS ports + 2 x 12Gb SAS ports 2/4 x 10Gb iSCSI ports (SFP+) + 2 x 16Gb FC ports 4 x 8Gb FC ports + 4 x 8Gb FC ports 2/4 x 10Gb iSCSI ports (SFP+) + 2/4 x 10Gb iSCSI ports(SFP+) 4 x 10Gb FCoE ports + 4 x 10Gb FCoE ports 2/4 x 10Gb iSCSI ports (SFP+) + 4 x 8Gb FC ports
Onboard iSCSI ports (per controller)	4 x 1Gb iSCSI ports	
Protocol Support	<ul style="list-style-type: none"> File Level Protocol Block Level Protocol Object Level Protocol 	CIFS/ SMB, AFP, NFS, FTP FC, FCoE, iSCSI, SAS REST API
Cloud Gateway	Support the integration with following cloud providers: <ul style="list-style-type: none"> Amazon S3 Alibaba AliCloud Google Cloud Platform Microsoft Azure 	
Cache memory (per controller)	8GB (Default: DDR4 4GBx2), 16GB, 32GB, 64GB	
Supported drives	<ul style="list-style-type: none"> 2.5" SATA/SAS SSD 2.5" 10K/15K RPM SAS HDD 3.5" 7200 RPM NL SAS HDD 3.5" 7200 RPM SATA HDD 	
Drive side	12Gb/s SAS	
Max. drives (per system)	12	16
Max. drives (via expansion enclosures)	432	436
Expansion enclosure (JBOD)	JB 3012A JB 3024BA JB 3060 JB 3060L	JB 3016A JB 3024BA JB 3060 JB 3060L
SAS expansion ports (per controller)	1 x 12Gb/s SAS wide port	
Cache backup techniques ³	Super capacitor + Flash module or BBU (hot-swappable) + Flash module	
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount
Power & Cooling	Power supply: Two redundant 460W; Voltage and Frequency: 100-240 Vac, 50-60Hz	
Dimensions ¹	448mm (W) x 88mm (H) x 500mm (D)	448mm (W) x 130mm (H) x 500mm (D)
Package Dimensions	770mm (W) x 350mm (H) x 580mm (D)	780mm (W) x 423mm (H) x 588mm (D)
RAID Functionality	RAID levels supported : RAID 0, 1 (0+1), 5, 6, 10, 50, 60	
Green design	<ul style="list-style-type: none"> 80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down 	
Regulatory	<ul style="list-style-type: none"> Electromagnetic Compatibility : CE, BSMI, FCC, KC Safety : UL, BSMI, CB, EAC 	

1. Model name "T" means high IOPS solution

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

3. BBU/super capacitor and flash module not included by default.

Model name	GSe 3012 GSe 3012T ¹	GSe 3016 GSe 3016T ¹
Form factor	2U 12-bay LFF	3U 16-bay LFF
Storage controller	Single Controller	
Host connectivity ²	Host board 1: 2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports	Host board 1 + Host board 2: 2 x 16Gb FC ports + 2 x 16Gb FC ports 2 x 12Gb SAS ports + 2 x 12Gb SAS ports 2/4 x 10Gb iSCSI ports (SFP+) + 2 x 16Gb FC ports 4 x 8Gb FC ports + 4 x 8Gb FC ports 2/4 x 10Gb iSCSI ports (SFP+) + 2/4 x 10Gb iSCSI ports(SFP+) 4 x 10Gb FCoE ports + 4 x 10Gb FCoE ports 2/4 x 10Gb iSCSI ports (SFP+) + 4 x 8Gb FC ports
Onboard iSCSI ports (per controller)	2 x iSCSI 1G & 2 x 10G (Rj45)	
Protocol Support	<ul style="list-style-type: none"> File Level Protocol Block Level Protocol Object Level Protocol 	CIFS/ SMB, AFP, NFS, FTP FC, FCoE, iSCSI, SAS REST API
Cloud Gateway	Support the integration with following cloud providers: <ul style="list-style-type: none"> Amazon S3 Alibaba AliCloud Google Cloud Platform Microsoft Azure 	
Cache memory (per controller)	8GB (Default: DDR4 4GBx2), 16GB, 32GB, 64GB, 128GB	
Supported drives	<ul style="list-style-type: none"> 2.5" SATA/SAS SSD 2.5" 10K/15K RPM SAS HDD 3.5" 7200 RPM NL SAS HDD 3.5" 7200 RPM SATA HDD 	
Drive side	12Gb/s SAS	
Max. drives (per system)	12	16
Max. drives (via expansion enclosures)	432	436
Expansion enclosure (JBOD)	JB 3012A JB 3024BA JB 3060 JB 3060L	JB 3016A JB 3024BA JB 3060 JB 3060L
SAS expansion ports (per controller)	2 x 12Gb/s SAS wide port	
Cache backup techniques ³	Super capacitor + Flash module or BBU (hot-swappable) + Flash module	
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount
Power & Cooling	Power supply: Two redundant 530W; Voltage and Frequency: 100-240 Vac, 50-60Hz	
Dimensions ¹	448mm (W) x 88mm (H) x 500mm (D)	448mm (W) x 130mm (H) x 500mm (D)
Package Dimensions	770mm (W) x 350mm (H) x 580mm (D)	780mm (W) x 423mm (H) x 588mm (D)
RAID Functionality	RAID levels supported : RAID 0, 1 (0+1), 5, 6, 10, 50, 60	
Green design	<ul style="list-style-type: none"> 80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down 	
Regulatory	<ul style="list-style-type: none"> Electromagnetic Compatibility : CE, BSMI, FCC, KC Safety : UL, BSMI, CB, EAC 	

1. Model name "T" means high IOPS solution

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

3. BBU/super capacitor and flash module not included by default.

Data Service

Local Replication ² <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 ¹	Replication per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64																		
Automated Storage Tiering ¹	Two(2) or four(4) storage tiers based on drive types SSD supports																		
SSD Cache ¹	<ul style="list-style-type: none"> Accelerating data access for random read-intensive environments, such as OLTP Supports up to four SSDs per controller Recommended DIMM capacity per controller for SSD Cache pool: <table border="0" style="width: 100%; margin-top: 5px;"> <tr> <td>DRAM:2GB</td> <td>Max SSD Cache Pool Size:150GB</td> <td>DRAM:4GB</td> <td>Max SSD Cache Pool Size: 400GB</td> </tr> <tr> <td>DRAM:8GB</td> <td>Max SSD Cache Pool Size: 800GB</td> <td>DRAM:16GB</td> <td>Max SSD Cache Pool Size: 1,600GB</td> </tr> <tr> <td>DRAM:32GB</td> <td>Max SSD Cache Pool Size: 3,200GB</td> <td>DRAM:64GB</td> <td>Max SSD Cache Pool Size: 6,400GB</td> </tr> <tr> <td>DRAM:128GB</td> <td>Max SSD Cache Pool Size: 12,800GB</td> <td></td> <td></td> </tr> </table> 			DRAM:2GB	Max SSD Cache Pool Size:150GB	DRAM:4GB	Max SSD Cache Pool Size: 400GB	DRAM:8GB	Max SSD Cache Pool Size: 800GB	DRAM:16GB	Max SSD Cache Pool Size: 1,600GB	DRAM:32GB	Max SSD Cache Pool Size: 3,200GB	DRAM:64GB	Max SSD Cache Pool Size: 6,400GB	DRAM:128GB	Max SSD Cache Pool Size: 12,800GB		
DRAM:2GB	Max SSD Cache Pool Size:150GB	DRAM:4GB	Max SSD Cache Pool Size: 400GB																
DRAM:8GB	Max SSD Cache Pool Size: 800GB	DRAM:16GB	Max SSD Cache Pool Size: 1,600GB																
DRAM:32GB	Max SSD Cache Pool Size: 3,200GB	DRAM:64GB	Max SSD Cache Pool Size: 6,400GB																
DRAM:128GB	Max SSD Cache Pool Size: 12,800GB																		
Availability and Reliability	<ul style="list-style-type: none"> Redundant, hot-swappable hardware modules CacheSafe technology Multi-pathing support (EonPath) Device mapper support 																		
Management	<ul style="list-style-type: none"> Web-based EonOne management software RS232 serial port for local access to firmware-embedded utility Automated cache flush and caching mode operation per enclosure status Telnet and SSH system monitoring via Ethernet Platform-independent firmware management GUI 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, Fax, LAN broadcast, SNMP traps, SMS																		
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, HP-UX, IBM AIX, 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																	

¹ optional

² Available with Standard license and optional advanced license

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