EonStor GS Family

Cloud-Integrated Unified Storage

Witness the power of consolidated file, block, and object storage

HIGHLIGHTS

UNIFIED STORAGE

- Consolidate SAN, NAS and object storage in a single system to enjoy powerful storage features and simplify deployment and management

EFFICIENCY

- Integrated object based storage reduces the cost of deploying applications from the cloud
- EonStor GS family makes efficient use of available bandwidth and greatly speeds up data extend when uploading data to the cloud with its data reduction technology
- EonStor GS has perfectly integrated the LDAP Server function into the system, so customers do not need to construct additional LDAP Servers.

EXCEPTIONAL COST PERFORMANCE

- High Block/file level Performance, it delivers up to 450K IOPS, 11,000MB/s block and 3,300MB/s CIFS bandwidth.
- Future-proof expansion solution offers ample data capacity of up to 444 drives.
- Comprehensive data services, including SSD Cache and automated storage tiering improve performance and speed up data access.
- Support for all-flash and hybrid configurations provides flexibility of choice to meet your needs.
- Select from a wide range of product series and multiple host options.

The volume of digital data currently being produced is growing at unprecedented rates, in big part due to our increasing demand for unstructured data types such as files, images and videos, which push the boundaries of storage capacity and performance. Because of this, many organizations are making cloud storage, with its cost-effective flexibility and infinite scalability, an integral part of their strategy. Now more than ever, choosing a local storage solution that can easily integrate with cloud services is a must.

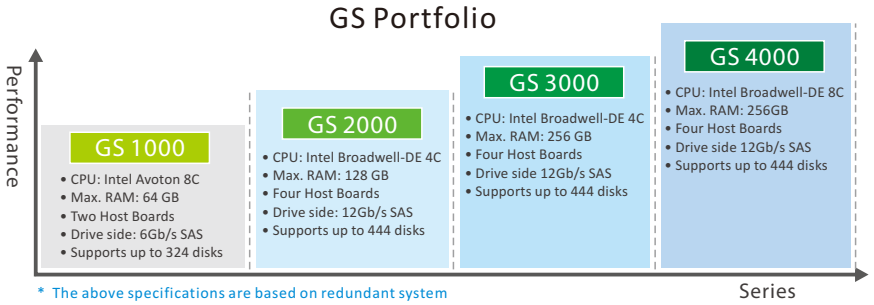
EonStor GS family is a unified storage solution that incorporates remote cloud storage into local applications to offer the best of both worlds – unlimited cloud storage and high performance local storage – as well as automatic data lifecycle management, to allow SMBs and SMEs running local SAN/NAS applications to easily and cost-effectively integrate and expand their storage architecture into cloud services.

Powerful All-around High Performance & Efficiency

Based on much improved hardware and firmware, EonStor GS family can handle file level protocols including CIFS/SMB, 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 reduces the cost of deploying applications from the cloud.

By integrating all of these protocols and harnessing the power of Intel's multicore CPU, EonStor GS family delivers not only outstanding flexibility but also incredible performance in two configurations: all-flash and hybrid. As an all-flash system, it delivers up to 450K IOPS, 11,000MB/s block and 3,300MB/s CIFS bandwidth. Moreover, by offering hybrid features such as SSD Cache, protocol translation between local NAS/SAN and cloud storage services, and automated storage tiering, EonStor GS family guarantees exceptional performance at every level of operation.

This great performance and efficiency can also be found in our cloud storage integration thanks to deduplication and compression features, which ensure the efficient use of bandwidth to effectively extend data to the cloud and lower overall costs.



* The above specifications are based on redundant system

CLOUD READY

- The EonStor GS can integrate with cloud storage, and data can be optimally allocated between EonStor GS and Cloud through our smart algorithms, so users can enjoy the best performance and the safest storage.
- EonStor GS offers comprehensive cloud integration functions for users to choose from: Cloud Tiering, Cloud Cache and Cloud Backup.
- Support for private and public cloud services enables users to choose the option that best suits their budget or data security requirements

AVAILABILITY & RELIABILITY

- SMB 3.0 transparent failover and multipathing support guarantee non-disruptive operations.
- Dual controllers and non-single-point-of-failure hardware design ensure system continuity in case of faults.
- Cache protection with Super capacitor and Flash to ensure data safety
- IDR support ensures all hard drives are healthy to prevent from rebuild

DATA PROTECTION & SECURITY

- Whether inactive or mid transfer, data is always encrypted to ensure full protection from malicious attacks

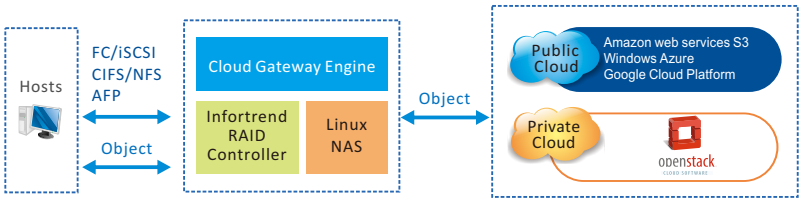
SIMPLICITY

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

Infinite Storage Capacity on Cloud

One of the key benefits of cloud storage solutions is their unlimited scalability and flexible “scale on demand” model, which allows you to expand your storage capacity as needed, without upfront investment, to fit your capacity requirements as they evolve.

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 GS 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.



Comprehensive Data Protection and Security

As security is of utmost importance when it comes to data storage in the cloud, the EonStor GS family provides AES 256bit Encryption for data-in-flight and data-at-rest, as well as self-encrypting drives (SED) compatibility, ensuring data is always protected from malicious threats. Furthermore, with integrated SSL, links between server and client are also encrypted.

Security threats are by no means the only concern when it comes to safeguarding data. Unexpected disk failures, natural disasters and power outages all up the risk of data loss. EonStor GS family ensures this risk is minimal with its integrated backup functions such as Intelligent Drive Recovery (IDR), snapshot, local replication, remote replication and file-level rsync.

In case a failure is experienced, the system's integrated SMB 3.0 transparent failover and multipathing support guarantee non-disruptive operations. Also, designed with redundant dual controllers and non-single-point-of-failure hardware components, it ensures business continuity at all times.

Integration with Windows® AD and LDAP

The EonStor GS 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 GS has perfectly integrated the LDAP Server function into the system, so customers do not need to construct additional LDAP Servers.

PHYSICAL SPECIFICATIONS

EonStor GS Series

Specifications (per system)		GS 1000 GS 1000T[*1*2]	GS 2000 GS 2000T[*1]	GS 3000	GS 4000 GS 4000T[*8] GS 4000U[*8]
Form factor	2U 12-bay	√	√	√	
	2U 24-bay	√	√ [*2]	√	√
	3U 16-bay	√	√	√	√
	4U 24-bay	√	√ [*2]	√ [*2]	
Storage controller		Dual-redundant/ Single upgradable to redundant			
Max Drives		360	444	444	444
Max SSD Cache Pool		1.6TB	3.2TB	3.2TB	3.2TB
Cache backup techniques		Super capacitor + Flash module			
Redundant Power Supply Unit[*5]		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		2x Intel Avoton 4C/ 8C	2x Intel Broadwell-DE 2C/ 4C	2x Intel Broadwell-DE 4C	2x Intel Broadwell-DE 4C/6C/8C
Cache memory[*3*6]		8GB, 16GB, 32GB,64GB	8GB, 16GB, 32GB, 64GB, 128GB	8GB, 16GB, 32GB, 64GB, 128GB, 256GB	
Max. number of host board		2	4	4	4
SAS expansion ports		2 x 6Gb/s SAS wide ports	2 x 12Gb/s SAS wide ports	4 x 12Gb/s SAS wide ports	4 x 12Gb/s SAS wide ports
Max. host channel ports		16	24	24	32
Onboard converged host ports[*7]		0	0	0	16
Onboard iSCSI ports (10Gb RJ-45)		0	0	4	8
Onboard iSCSI ports (1Gb RJ-45)		8	8	4	0
Max. 8Gb/s FC Ports[*4]		8	16	16	32
Max. 16Gb/s FC ports[*4]		4	8	8	16
Max. 1 GbE/iSCSI ports		16	24	20	16
Max. 10 GbE/iSCSI (SFP+) ports[*4]		8	16	16	32
Max. 10 GbE/iSCSI (RJ45) ports		4	8	12	8
Max. 10 GbE FCoE ports[*4]		0	16	16	32
Max. 12Gb/s SAS ports		4	8	8	8
Max. 6Gb/s SAS ports		4	0	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 logical drive per pool		128			
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		832			
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)	2048			
	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), 5, 6, 10, 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 Object Level Protocol: HTTP/HTTPS			
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. Available on Q4Y16
3. GS 4000/3000/2000 Default: DDR4 4GBx2 with ECC per controller, GS 1000 Default: DDR3 4GBx2 with ECC per controller
4. GS 4000/3000/2000 Converged host board supports 4-port 10GbE iSCSI, 4-Port 8 Gb/s FC, 2-port 16Gb/s FC and 4-port 10GbE FCoE. GS 1000 Converged host board supports 4-port 10GbE iSCSI, 4-Port 8Gb/s FC and 2-port 16Gb/s FC.
5. Power is also supplied in redundant mode, allowing full operation with half the resources.
6. 8GB is for single controller models; 256GB is for redundant controller models.
7. GS 4000 onboard converged host port supports 4-port 10GbE iSCSI, 4-Port 8 Gb/s FC, 2-port 16Gb/s FC and 4-port 10GbE FCoE
8. Available on 2017.

TECHNICAL SPECIFICATIONS

EonStor GS Series

GS 4000/4000T*1/4000U*1/3000/2000/2000T Series

Form Factor	2U 12-bay	3U 16-bay	4U 24-bay*1	2U 24-bay*1
Model*2	GS 3012R GS 3012S GS 2012R GS 2012S GS 2012RT GS 2012ST	GS 4016R GS 4016S GS 4016RT GS 4016ST GS 4016RU GS 4016SU GS 3016R GS 3016S GS 2016R GS 2016RT GS 2016S GS 2016ST	GS 3024R GS 3024S GS 2024R GS 2024RT GS 2024S GS 2024ST	GS 4024RB GS 4024SB GS 4024RTB GS 4024STB GS 4024RUB GS 4024SUB GS 2024RB GS 2024RBT GS 2024SB GS 2024SBT GS 3024RB GS 3024SB
Supported drives*3		• 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		• 2.5" 10K/15K RPM SAS HDD • 2.5" SATA/SAS SSD
Max. drives number	432	436	444	444
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount	4U, 19-inch rackmount	2U, 19-inch rackmount
Dimensions*4	447mm (W) x 88mm (H) x 500mm (D)	447mm (W) x 130mm (H) x 500mm (D)	447mm (W) x 175mm (H) x 500mm (D)	447mm (W) x 88mm (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 465mm (H) x 588mm (D)	780mm (W) x 338mm (H) x 588mm (D)
Expansion enclosure (JBOD)	JB 3012A JB 3060 JB 3060L JB 3016A JB 3060 JB 3060L		JB 3016A JB 3060 JB 3060L	JB 3024BA JB 3060 JB 3060L JB 3012A JB 3016A

GS 1000/1000T*1 Series

Form Factor	2U 12-bay	3U 16-bay	4U 24-bay*1	2U 24-bay*1
Model*2	GS 1012R GS 1012S GS 1012RT GS 1012ST	GS 1016R GS 1016S GS 1016RT GS 1016ST	GS 1024R GS 1024S GS 1024RT GS 1024ST	GS 1024RB GS 1024SB GS 1024RBT GS 1024SBT
Supported drives*3	• 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		• 2.5" 10K/15K RPM SAS HDD • 2.5" SATA/SAS SSD
Max. drives number	312	316	324	360
Rack Support	2U, 19-inch rackmount	3U, 19-inch rackmount	4U, 19-inch rackmount	2U, 19-inch rackmount
Dimensions*4	447mm (W) x 88mm (H) x 500mm (D)	447mm (W) x 130mm (H) x 500mm (D)	447mm (W) x 175mm (H) x 500mm (D)	447mm (W) x 88mm (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 465mm (H) x 588mm (D)	780mm (W) x 338mm (H) x 588mm (D)
Expansion enclosure (JBOD)	JB 2012-1 JB 2060 JB 2060L	JB 2016-1 JB 2060 JB 2060L	JB 2016-1 JB 2060 JB 2060L	JB 2024B JB 2060 JB 2060L JB 2012-1 JB 2016-1

1. GS 4000T/4000U are available on 2017, GS 3000 4U24, GS 2000 4U24, GS 2000 2U24 and GS1000T are available on Q4Y16
2. S: Single controller(upgradeable to dual controller system) R: Redundant controller T: High IOPS solution
3. For the latest compatibility details, refer to our official website for the latest EonStor GS Compatibility Matrix.
4. 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	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)[1]	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[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:32GB Max SSD Cache Pool Size: 800GB DRAM:128GB Max SSD Cache Pool Size: 3,200GB DRAM:16GB Max SSD Cache Pool Size: 400GB DRAM:64GB Max SSD Cache Pool Size: 1,600GB DRAM:256GB Max SSD Cache Pool Size: 3,200GB		
Cloud-integrated Solution[1]	• Cloud Cache	• Cloud Tiering	• Cloud Backup
Access right management	• User account management • Quota management	• Group management • Integration with Window® AD and LDAP	• Folder management - folder access control
Availability and Reliability	• Redundant, hot-swappable hardware modules • Trunk group support	• CacheSafe technology • Device mapper support	• Multi-pathing support
Management	• Web-based EonOne management software • Automated cache flush and caching mode operation per enclosure status • Telnet and SSH system monitoring via Ethernet • 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, 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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