Infortrend

EonStor GS Gen1 Series

Enterprise-Class Unified Storage Integrating SAN, NAS and Cloud

Hightlight

UNIFIED STORAGE

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

EFFICIENCY

- Integrated cloud 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.
- With various built-in services including proxy, LDAP, syslog and VPN server to assist enterprises simplify their IT environment deployment.

EXCEPTIONAL COST PERFORMANCE

- High Block/file level Performance, it delivers up to 700K IOPS, 23,000MB/s block and 17,000MB/s CIFS bandwidth.
- Future-proof expansion solution offers ample data capacity of up to 1792 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.

Introduction

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.

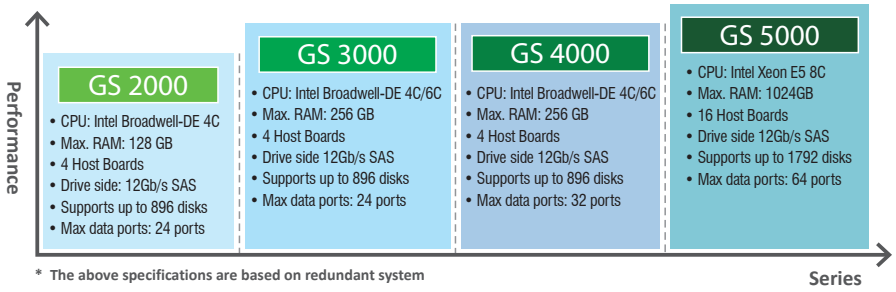
Powerful All-around HighPerformance & Efficiency

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.

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 700K IOPS, 23,000MB/s block and 17,000MB/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.

GS Portfolio



* 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 failover and multipathing support.
- 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.

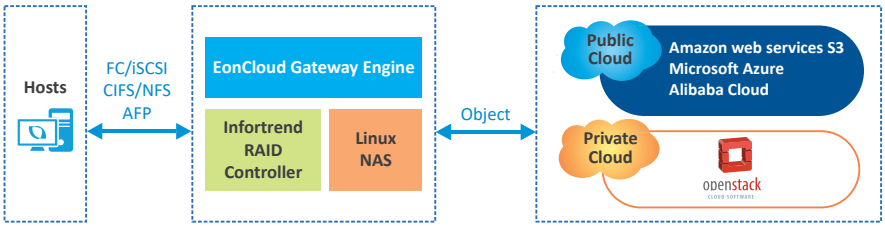
Symmetric Active-Active Controllers

- Symmetric active-active controller.
- Automatically reconnected I/O during path failure.

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 EonCloud Gateway Engine and supporting a wide range of both private cloud and public cloud services, including Amazon, Azure, and 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.

The system supports built-in SMB 3.0 failover and multipathing to handle failures. Also, designed with redundant dual controllers and non-single-point-of-failure hardware components, it ensures business continuity at all times.

Symmetric active-active controllers

EonStor GS supports symmetric active-active controller configuration to minimize administrative effort and boost operation efficiency. Hosts can access the same LUNs simultaneously via both controllers. I/O are more equally distributed across both controllers and all paths, effectively minimizing costly path management time. In the event of a path failure, I/O can automatically continue through the remaining paths with little or no failover.

PHYSICAL SPECIFICATIONS

Product Series		GS 2000	GS 3000 Gen1	GS 4000 Gen1	GS 5100	GS 5200
Form Factor	2U 12-bay	GS 2012**R/S** GS 2012**RT/ST**	GS 3012**R/S** GS 3012**RT/ST**	-	-	-
	2U 24-bay	GS 2024**RB/SB** GS 2024**RTB/STB**	GS 3024**RB/SB**	GS 4024**RB/SB** GS 4024**RTB/STB**	-	-
	2U 25-bay	-	GS 3025**RB/SB** GS 3025**RTB/STB**	-	-	-
	3U 16-bay	GS 2016**R/S** GS 2016**RT/ST**	GS 3016**R/S** GS 3016**RT/ST**	GS 4016**R/S** GS 4016**RT/ST**	-	-
	4U 24-bay	GS 2024**R/S** GS 2024**RT/ST**	GS 3024**R/S** GS 3024**RT/ST**	-	-	-
	4U 60-bay	-	GS 3060**RL/GL** GS 3060**RTL/GTL**	-	-	-
	4U	-	-	-	GS 5100**R**	GS 5200**R**
		Note: 1. **T**: High performance **G**: Single controller **S**: Single controller(upgradable to dual controller) **R**: Redundant controller **C**: Super capacitor **L**: One drawer; **B**: 2.5" form factor. 2. 4U models no internal bay, expansion enclosure required.				
Controller		Single or Dual-redundant or Single upgradable to redundant			Dual-redundant	
Cache Backup Techniques		Super capacitor+Flash module (only for upgradable single controller and dual controller models)			BBU+Flash module	
CPU		Intel® Pentium® 2 or 4 core	Intel® Xeon® D 4 or 6 Core		Intel® Xeon® E5 8 Core	
Cache Memory		Default DDR4 16GB Expandable up to 128GB	Default DDR4 16GB Expandable up to 256GB		Default DDR4 32GB Expandable up to 512GB	Default DDR4 64GB Expandable up to 1024GB
Supported Drives		2.5" SAS or SATA SSD 2.5" 12Gb/s SAS 10,000 or 15,000 RPM HDD 3.5" 12Gb/s SAS 7,200 RPM HDD 3.5" 6Gb/s SATA 7,200 RPM HDD				
		Note: For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.				
Max. Drives Number (with expansion board)		896			1792	
Max. SSD Cache Pool		3.2TB				
Max. Onboard SAS Expansion Ports		2	4	4	8	8
Max. Onboard 1GbE Ports		8	4	0	0	0
Max. Onboard 10GbE Ports (RJ-45)		0	4	0	0	0
Max. Onboard Converged Ports		0	0	16	0	0
		Note: GS 4000 onboard converged port supports 4-Port 8 Gb/s FC , 2-port 16Gb/s FC, 4-port 10GbE FCoE and 4-port 10GbE iSCSI.				
Max. Host Board Slots		4	4	4	4	16
Max. Expansion Board		2	2	2	4 (Default Included)	4 (Default Included)
		Note: The expansion board can only be installed in the HB2 slot and has 12Gb/s SAS x 2 ports only connectable with expansion enclosures.				
Host Board Options		16Gb/s FC x 4 32Gb/s FC x 2 1GbE (RJ-45) x 4 10GbE (SFP+) x 2 10GbE (RJ-45) x 2 25GbE (SFP28) x 2 40GbE (QSFP+) x 2 12Gb/s SAS x 2	16Gb/s FC x 4 32Gb/s FC x 2 32Gb/s FC x 4 1GbE (RJ-45) x 4 10GbE (SFP+) x 2 10GbE (RJ-45) x 2 25GbE (SFP28) x 2 40GbE (QSFP+) x 2 12Gb/s SAS x 2		16Gb/s FC x 4 32Gb/s FC x 4 1GbE (RJ-45) x 4 10GbE (RJ-45) x 2 25GbE (SFP28) x 2 40GbE (QSFP+) x 2 12Gb/s SAS x 2	
		Note: 1. The two controllers must have identical slot settings. 2. Fibre channel supports point-to-point and switch mode. 3. For GS 5100/5200 The expansion board can only be installed in slots HB9 and HB10. 4. For GS 5100 the host boards should be installed in HB7~8. For GS 5200, the host boards should be installed in HB1~8. 5. GS 5200 deafult memory: 64GB (32GB for each controller), it is recommended to install 8 host boards (4 in each controller). To install up to 16 host boards, 128GB is required (64GB each).				
Max. 8Gb/s FC Ports		0	0	16	0	0
Max. 16Gb/s FC Ports		16	16	24	16	64
Max. 32Gb/s FC Ports		8	16	16	16	64
Max. 10GbE FCoE Ports		0	0	16	0	0
Max. 1 GbE Ports		24	20	16	16	64
Max. 10GbE Ports (RJ-45)		8	12	8	8	32
Max. 10GbE Ports (SFP+)		8	8	24	0	0
Max. 25GbE Ports (SFP28)		8	8	8	8	32
Max. 40GbE Ports (QSFP+)		8	8	8	8	32
Max. 12Gb/s SAS Ports		10	12	12	16	40
Expansion Enclosure (JBOD)		JB 3012A , JB 3016A, JB 3025BA, JB 3024BA, JB 3060L				
Dimensions (without chassis ears/ protrusions) (W x H x D)		2U 12-bay: 449 x 88 x 500 mm 2U 24-bay: 449 x 88 x 500 mm 2U 25-bay: 449 x 88 x 500 mm	3U 16-bay: 449 x 130 x 530 mm 4U 24-bay: 449 x 174.4 x 550 mm 4U 60-bay: 447.6 x 176 x 840.9 mm		449 x 175.3 x 547.7 mm	
Package Dimensions (W x H x D)		2U 12-bay: 780 x 379 x 588 mm 2U 24-bay: 780 x 340 x 588 mm 2U 25-bay: 780 x 340 x 588 mm	3U 16-bay: 780 x 423 x 588 mm 4U 24-bay: 780 x 465 x 588 mm 4U 60-bay: 620 x 460 x 1140 mm		591 x 295 x 800 mm	
Power Supply Unit (with fan module)	Power Supplies (Redundant/hot-swappable)	460W x 2 (80 PLUS Bronze)	GS 3000/4000: 530W x2 (80 PLUS Bronze) GS 3060L: 1200W x 2 (80 PLUS Platinum)		1200W x 2 (80 PLUS Platinum)	
	AC Voltage (with PFC(auto-switching))	100VAC @ 8A to 240VAC @ 4A	GS 3000/4000: 100VAC @10A to 240VAC @5A GS 3060L: 100-127VAC @12.47A, 200-240VAC @7.08A		100-127VAC@12.47A, 200-240VAC @7.08A	
	Frequency	50-60 Hz	47-63Hz			
		Note:Power is also supplied in redundant mode, allowing full operation with half the resources.				
Safety Standard		• Electromagnetic Compatibility : CE, BSMI, FCC • Safety : UL, BSMI, CB				

SOFTWARE SPECIFICATIONS

Max. Logical Drives Number		32
Max. Logical Drives Capacity		512 TB
Configurable Stripe Size		16KB, 32KB, 64KB, 128KB, 256KB, 512KB, or 1024KB per logical drive
Configurable Writes Policy		Write-Back or Write-Through per logical drive. This policy can be modified.
Max. Pool Size		2PB
Max. Pool Number		32
Max. Volume Size		2PB
Max. Volume Number (per pool/per system)		1024
Max. Host LUN Mapping Number		4096
Max. Reserved Tag Number per Host-LUN Connection		Up to 256
Max. iSCSI Initiators (per controller)		832
Max. Host Connection Number (per FC)		128
RAID Options		RAID 0, RAID 1, RAID 3, RAID 5, RAID 6, RAID 10, RAID 30, RAID 50, RAID 60
Protocol Support	File Level Protocol	CIFS/SMB (Version 2.0/3.0), NFS (Version 2/3/4), AFP (Version 2.2.2), FTP/FXP (vsftp 2.3.4), WebDAV (httpd package 2.4.6)
	Block Level Protocol	FC, iSCSI, SAS
	Object Level Protocol	RESTful API
File Level	Max. File System Size	2PB
	Max. Number of User Accounts	20000
	Max. Number of User Groups	512
	Max. Number of Folder Sharing	2048 (NFS/CIFS/FTP) | 255 (AFP)
	Max. Number of Rsync Jobs	1024
	Max. Number of Rsync Concurrent Processes	64
	Max. Number of Concurrent Connections (NFS/CIFS/AFP/FTP)	• 16 GB memory: 200 • 32 GB memory: 512 • 64 GB memory: 1024 • 128 GB memory: 2048
Management		• User account management • Group management • Folder management - folder access control • Quota management • Integration with Microsoft Active Directory (AD) and LDAP • Folder encryption with AES • Web-based EonOne management software • Storage Resource Management to analyze history records of resource usage
Availability and Reliability		• Redundant, hot-swappable hardware modules • Device mapper support • Antivirus • Trunk group support • Cache Safe technology • UPS • WORM (For file level only) • SMB Multichannel
Notification		Email, SNMP traps
Applications		• File explorer • Proxy server • Syslog server • VPN server • LDAP serve • Docker
Cloud Feature		EonCloud Gateway supports the integration with following cloud providers: Amazon S3, Microsoft Azure, Alibaba Cloud, OpenStack, Baidu Cloud,Google Cloud, Tencent Cloud, Wasabi Cloud, etc. For complete information about cloud provides support, please refer to EonCloud Gateway webpage
OS Support		Microsoft Windows Server 2019/2016/2012R2/2012/2008R2/2008, Windows 7 SP1, Windows 8.1, Microsoft Windows Hyper-V, Ret Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, Mac OS X, VMware, Citrix XenServer, OpenStack Cinder
		Note: For OS version support, please refer to the compatibility matrix

DATA SERVICE

Self-encrypting Drives		Unique factory encryption secures data plus makes deletion simple and complete	
Thin Provisioning (Block-Level) (default included)		"Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space	
Local Replication	Snapshot	Snapshot images per source volume	Standard License: 64 / Advanced License: 256
		Snapshot images per pool	Standard License: 128 / Advanced License: 4096
	Volume Copy/Mirror	Replication pairs per source volume	Standard License: 4 / Advanced License: 8
		Replication pairs per system	Standard License: 16 / Advanced License: 256
		Note: Standard license is included by default and advanced is an optional license	
Remote Replication (Block level)(optional)		Replication pairs per source volume: 8	
		Replication pairs per system: 64	
		Note: 1. The maximum number of replication pair per source volume is up to 8, regardless of remote asynchronous/remote synchronous/local volume pairs 2. 4 x 16Gb FC and 2/4 x 32Gb FC host boards do not support Remote Replication	
Remote Replication(File Level)		Support Rsync with 128-bit SSH encryption	
Automated Storage Tiering(optional)		2 or 4 storage tiers based on drive types	
		SSD supports	
		Automated data migration with scheduling options	
SSD Cache(optional)		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: 400GB
		DRAM: 16GB	Max SSD Cache Pool Size: 600GB
		DRAM: 32GB	Max SSD Cache Pool Size: 1,000GB
		DRAM: 64GB	Max SSD Cache Pool Size: 1,600GB
		DRAM: 128GB and up	Max SSD Cache Pool Size: 3,200GB

WARRANTY AND SERVICE

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 or Extension Options	Warranty extension: Can extended standard service up to 5 years The following Service can be upgraded to 5 years • Upgrade: Replacement part dispatch on the next business day • Advanced service: 24x7 phone, web, and email support + onsite diagnostics on the next business day • Premium service: 24x7 phone, web, and email support + onsite diagnostics in 4 hours
		Note: Options may vary by region. For more details, please contact our sales representatives.
	Infortrend Technical Support	FAQ, Download Center, Licensing Service, Service Request

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