Infortrend®

EonStor DS Family

Enterprise-Class High Availablility SAN Storage

Highlight

PERFORMANCE

- Up to 750K end-to-end IOPS to accelerate all storage operation.
- Massive sequential throughput of up to 11,000MB/s read and 5,500MB/s write.
- EonStor DS 3024B has the excellent IOPS per dollar ratio (US$0.24/IOPS) by delivering an impressive and reliable performance score of 218K IOPS.
- EonStor DS 4024B is ranked no.1 in SPC-2 price/performance ratio (US$6.80 dollars per MB/s) in 2017.

EFFICIENCY

- SSD cache accelerates read performance for hot data.
- A super capacitor with a flash drive ensures data integrity during power outage.

FLEXIBLE SCALABILITY

- Holding up to 448 drives with expansion enclosures.
- Expansion enclosures come in diverse form factors (e.g. SFF 2U 24-bay, LFF 3U 16-bay, and LFF 4U 60-bay) to simplify storage expansion.

USER-FRIENDLY MANAGEMENT

- The exclusive SANWatch web-based interface allows easy management via a web browser
- Proprietary RAIDWatch provides RAID protection and powerful management.

Introduction

EonStor DS is a high-availability SAN storage solution designed for enterprises. Its hardware design features multiple form factors, symmetric active-active controllers, flexible host boards to choose from, and reliable modular design with high expandability. The management software comes with complete data services and an easy-to-use management interface. EonStor DS is ideal for all SAN environments and enterprise applications (e.g. database, virtualization, video editing, backup, and surveillance) to meet your performance or budget needs.

Smart data protection against power failures

EonStor DS has a built-in smart data-saving mechanism that reacts immediately to power failures. When a power failure strikes, EonStor DS continues being powered on by the super capacitor, a long-enduring electricity container that requires no maintenance, and immediately writes unsaved data to a flash drive module to avoid potential data loss. Once the power supply is back, the system starts retrieving and integrating data from the flash drive, ensuring maximum data integrity and availability.

Intuitive management interface

Clear and easy-to-act-upon system status messages make troubleshooting simple even without elaborate IT support. Additionally, integrated smart media scan prevents data errors and corruption. It works in the background at all times without affecting system performance, keeping a close tab on your data to ensure its integrity.

Effortless management with proprietary tools

SANWatch is the proprietary web-based management interface that gives you full control over EonStor DS and its storage environment. You can directly access the system configurations and information just with a web browser. RAIDWatch is another proprietary utility application that allows you to enhance the RAID performance of EonStor DS.

Furthermore, with a complete set of command lines, you can reach the system's lower layer and fine-tune its configurations and behavior for optimal efficiency.

PHYSICAL SPECIFICATIONS

Product Series		DS 1000 Gen2	DS 2000 Gen2	DS 3000U	DS 4000 Gen2	DS 4000U
Form Factor	2U 12-bay	DS 1012**G2** DS 1012**R2C/R2L**	DS 2012**G2/R2C**	DS 3012**GU/RUC**	-	-
	2U 24-bay	DS 1024**G2B** DS 1024**R2CB/R2LB**	DS 2024**G2B/R2CB**	DS 3024**SUCB/RUCB**	DS 4024**S2CB/R2CB**	DS 4024**SUCB/RUCB**
	3U 16-bay	DS 1016**G2** DS 1016**R2C/R2L** DS 1016**G2NH/R2LNH**	DS 2016**G2/R2C**	DS 3016**GU/RUC**	DS 4016**G2/R2C**	DS 4016**SUC/RUC**
	4U 24-bay	DS 1024**G2** DS 1024**R2C/R2L**	DS 2024**G2/R2C**	DS 3024**SUC/RUC**	DS 4024**S2C/R2C**	-
		Note: **G:** Single controller **S:** Single controller(Upgradable to dual controller) **R:** Redundant controller **C:** Super capacitor **L:** BBU **B:** 2.5" form factor **NH:** non host board **2:** Gen2 **U:** Ultra performance				
Controller		Single or Dual-redundant		Single or Dual-redundant or Single upgradable to redundant		Dual-redundant or Single upgradable to redundant
Cache Backup Techniques		Super capacitor+ Flash module or BBU+Flash module	Super capacitor+Flash module			
Cache Memory		Default DDR3 2GB Expandable up to 16GB		Default DDR4 4GB Expandable up to 64GB		Default DDR4 4GB Expandable up to 128GB
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. Drive Number		448				
Max. SSD Cache Pool		2TB	2TB	4TB	4TB	4TB
Max. Onboard SAS Expansion Ports		2	2	2	2	4
Max. Onboard 1GbE Ports		8	8	8	8	4
Max. Host Board Slots		2	2	4	4	4
Host Board Options		16Gb/s FC x 4 32Gb/s FC x 2 1GbE (RJ-45) x 4 10GbE (RJ-45) x 2 10GbE (SFP+) 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 (RJ-45) x 2 10GbE (SFP+) 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.				
Max. 16Gb/s FC Ports		8	8	16	16	16
Max. 32Gb/s FC Ports		4	4	16	16	16
Max. 1 GbE Ports		16	16	24	24	20
Max. 10GbE Ports (RJ-45)		4	4	8	8	8
Max. 10GbE Ports (SFP+)		4	4	8	8	8
Max. 25GbE Ports (SFP28)		4	4	8	8	8
Max. 40GbE Ports (QSFP+)		4	4	8	8	8
Expansion Enclosure (JBOD)		JB 3012, JB 3016, JB 3024B, JB 3025B, JB 3060L				
Dimensions (without chassis ears and protrusions) (W x H x D)		2U 12-bay: 449 x 88 x 500 mm 2U 24-bay: 449 x 88 x 500 mm 3U 16-bay: 449 x 130 x 500 mm 4U 24-bay: 449 x 174.4 x 500 mm				
Package Dimensions (W x H x D)		2U 12-bay: 780 x 379 x 588 mm 2U 24-bay: 780 x 338 x 588 mm 3U 16-bay: 780 x 423 x 588 mm 4U 24-bay: 780 x 465 x 588 mm				
Power Supply Unit	Power Supplies (Redundant and hot-swappable)	460W x 2 (80 PLUS Bronze)				530W x 2 (80 PLUS Bronze)
	AC Voltage (with PFC (auto-switching))	100Vac @10A to 240Vac @5A				
	Frequency	50-60 Hz				
		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 Drive Number	32
Max. Logical Drives Capacity	512TB
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. Logical Volume Number	32
Max. Logical Volume Size	512TB
Max. Partition Number (per logical volume/per system)	2048/1024
Max. Partition Size	512TB
Max. Host LUN Mapping Number	4096
Max. Reserved Tag Number Per Host-LUN Connection	Up to 256
Max. iSCSI Sessions (per controller)	416
RAID Options	RAID 0, RAID 1, RAID 3, RAID 5, RAID 6, RAID 10, RAID 30, RAID 50, RAID 60
Protocol Support	FC, iSCSI, SAS
Management	• Web-based SANWatch management software • Embedded RAIDWatch • Terminal via RS-232C • Telnet/SSH • LCD keypad panel (DS 3000U)
Availability and Reliability	• Redundant, hot-swappable hardware modules • Trunk group support • Device mapper support • Cache Safe technology
Notification	• Email • SNMP traps
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 logical volumne	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.	
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: 1,000GB
		DRAM: 16GB	Max SSD Cache Pool Size: 2,000GB
		DRAM: 32GB and up	Max SSD Cache Pool Size: 4,000GB

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.
	Technical Support	Get information on system installation and maintenance, download technical documents and software, or issue a support ticket
	Product Services	Register products, download firmware, apply for licensing services, create product repair tickets, or check product repair status

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(0)-1256-305-220
E-mail : sales.eu@infortrend.com