Infortrend®

Explore EonStor DS

EonStor DS Family

Enterprise-Class High Availablility SAN Storage

Highlights

Performance

- Up to 750K end-to-end IOPS to accelerate all storage operation
- Massive sequential throughput of up to 11 GB/s read and 5.5 GB/s write
- EonStor DS 3024B delivering an impressive and reliable performance score of 218K IOPS at an excellent IOPS per dollar ratio (US$0.24/IOPS)
- EonStor DS 4024B ranked no.1 in SPC-2 price/performance ratio (US$6.80 dollars per MB/s) in 2017

Efficiency

- SSD cache to accelerate read performance for hot data
- Offline deduplication and compression to reduce the total storage capacity required
- A super capacitor with a flash drive to ensure data integrity during power outage

Flexible Scalability

- Holding up to 448 drives with expansion enclosures
- Expansion enclosures in diverse form factors

User-Friendly Management

- Exclusive SANWatch interface for easy management via a web browser

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, modular components, and high scalability. 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.

Easy Maintenance

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.

Intuitive 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 1000 G3	DS 2000 G3
Form Factor	2U 12-bay		DS 1012**G2**	DS 2012**G2**	DS 1012**G3/R3C**	DS 2012**G3/R3C**
	2U 24-bay		-	-	DS 1024**G3B/R3CB**	DS 2024**G3B/R3CB**
	3U 16-bay		DS 1016**G2/G2NH**	DS 2016**G2**	DS 1016**G3/R3C**	DS 2016**G3/R3C**
	4U 24-bay		-	-	DS 1024**G3/R3C**	DS 2024**G3/R3C**
			Note: G: Single controller, not upgradable **R**: Dual redundant controllers **3**: G3 **2**: Gen2 **C**: Super capacitor **B**: 2.5" drive **NH**: No host board **U**: Ultra performance			
Controller			Single		Single or dual redundant	
Cache Backup Technology			Super capacitor + flash module (optional)		Super capacitor + flash module (optional for single-controller models)	
Cache Memory	Single Controller		Default DDR3 2GB, up to 16GB		Default DDR4 4GB, up to 64GB	
	Redundant Controllers		-		Default DDR4 8GB, up to 128GB	
Supported Drives			• 2.5" SAS SSD • 2.5" 12Gb/s SAS 10,000 or 15,000 RPM HDD • 3.5" 12Gb/s NL-SAS 7,200 RPM HDD • 2.5" SATA SSD, 3.5" 6Gb/s SATA 7,200 RPM HDD (for single-controller models only)			
			Note: For the latest Compatibility Guide, refer to our official website.			
Max. Drive Number			448			
Max. SSD Cache Pool (Block Level)			2TB			
Onboard 1GbE Ports (RJ45)			4	4	0	0
Onboard SAS Expansion Ports			1	1	2	2
Max. Host Board Slots			1	1	2	2
Host Board Options			• 16Gb/s FC x 4 • 32Gb/s FC x 2 • 1GbE (RJ-45) x 4 • 10GbE (SFP+) x 2 • 12Gb/s SAS x 2		• 16Gb/s FC x 4 • 32Gb/s FC x 2 • 1GbE (RJ-45) x 4 • 10GbE (SFP+) x 2 • 25GbE (SFP28) x2 • 12Gb/s SAS x 2	
			Note: It is strongly recommended that you refer to the latest Host Board and Memory Guide on our website for complete information, including supported combinations and important notes, before purchasing any host board for your model.			
Max. 16Gb/s FC Ports			4	4	8	8
Max. 32Gb/s FC Ports			2	2	4	4
Max. 1GbE Ports (RJ45)			8	8	8	8
Max. 10GbE Ports (SFP+)			2	2	4	4
Max. 25GbE Ports (SFP28)			0	0	4	4
Max. 12Gb/s SAS Ports			3	3	6	6
Expansion Enclosures (JBODs)			JB 3012, JB 3016, JB 3024**B**, JB 3060**L**			
Dimensions (Without Chassis Ears and Protrusions) (W x H x D)			• 2U 12-bay / 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 / 2U 24-bay: 588 x 239 x 780 mm • 3U 16-bay: 588 x 283 x 780 mm • 4U 24-bay: 588 x 325 x 780 mm			
Power Supply Unit	Power Supplies (Redundant and Hot-swappable)	Global	460W x 2 (80 PLUS Bronze)			
		EU	800W x 2 (80 PLUS Titanium)			
	AC Voltage	Global	100-240VAC @10-5A			
		EU	100-127VAC @10A, 200-240VAC @5A			
	Frequency		50-60 Hz			
Safety Standards			• Electromagnetic compatibility: CE, BSMI, FCC • Safety: UL, BSMI, CB			

PHYSICAL SPECIFICATIONS

Product Series			DS 3000E	DS 3000	DS 4000 Gen2	DS 4000
Form Factor	2U 12-bay		DS 3012**GEN/REC**	DS 3012**GU/RUC**	-	-
	2U 24-bay		DS 3024**GENB/RECB**	DS 3024**SUCB/RUCB**	DS 4024**S2CB/R2CB**	DS 4024**SUCB/RUCB**
	3U 16-bay		DS 3016**GEN/REC**	DS 3016**GU/RUC**	DS 4016**G2/R2C**	DS 4016**SUC/RUC**
	4U 24-bay		DS 3024**GEN/REC**	DS 3024**SUC/RUC**	DS 4024**S2C/R2C**	-
			Note: G: Single controller, not upgradable **R**: Dual redundant controllers **S**: Single upgradable to dual redundant controllers **E**: Essential **2**: Gen2 **C**: Super capacitor **N**: No super capacitor **B**: 2.5" drive **U**: Ultra performance			
Controller			Single or dual redundant	Single, dual-redundant, or single upgradable to redundant		Dual redundant or single upgradable to dual redundant
Cache Backup Technology			Super capacitor + flash module			
Cache Memory	Single Controller		Default DDR4 4GB, up to 64GB			Default DDR4 4GB, up to 128GB
	Redundant Controllers		Default DDR4 8GB, up to 128GB			Default DDR4 8GB, up to 256GB
Supported Drives			• 2.5" SAS SSD • 2.5" 12Gb/s SAS 10,000 or 15,000 RPM HDD • 3.5" 12Gb/s NL-SAS 7,200 RPM HDD • 2.5" SATA SSD, 3.5" 6Gb/s SATA 7,200 RPM HDD (for single-controller models only)			
			Note: For the latest Compatibility Guide, refer to our official website.			
Max. Drive Number			448			
Max. SSD Cache Pool (Block Level)			2TB	4TB	4TB	4TB
Onboard 1GbE Ports (RJ45)			0	8	8	4
Onboard SAS Expansion Ports			2	2	2	4
Max. Host Board Slots			2	4	4	4
Host Board Options			• 16Gb/s FC x 4 • 32Gb/s FC x 2 • 32Gb/s FC x 4 • 1GbE (RJ-45) x 4 • 10GbE (SFP+) x 2 • 25GbE (SFP28) x 2 • 12Gb/s SAS x 2			
			Note: It is strongly recommended that you refer to the latest Host Board and Memory Guide on our website for complete information, including supported combinations and important notes, before purchasing any host board for your model.			
Max. 16Gb/s FC Ports			8	16	16	16
Max. 32Gb/s FC Ports			8	16	16	16
Max. 1GbE Ports (RJ45)			8	24	24	20
Max. 10GbE Ports (SFP+)			4	8	8	8
Max. 25GbE Ports (SFP28)			4	8	8	8
Max. 12Gb/s SAS Ports			6	10	10	12
Expansion Enclosures (JBODs)			JB 3012, JB 3016, JB 3024B, JB 3060L, JB 3090			
Dimensions (Without Chassis Ears and Protrusions) (W x H x D)			• 2U 12-bay / 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 / 2U 24-bay: 588 x 239 x 780 mm • 3U 16-bay: 588 x 283 x 780 mm • 4U 24-bay: 588 x 325 x 780 mm			
Power Supply Unit	Power Supplies (Redundant and Hot-swappable)	Global	460W x 2 (80 PLUS Bronze)			530W x 2 (80 PLUS Bronze)
		EU	800W x 2 (80 PLUS Titanium)			
	AC Voltage	Global	100-240VAC @10-5A			
		EU	100-127VAC @10A, 200-240VAC @5A			
	Frequency		50-60 Hz			
Safety Standards			• Electromagnetic compatibility: CE, BSMI, FCC • Safety: UL, BSMI, CB			

SOFTWARE SPECIFICATIONS

Max. Logical Drive Number	30
Max. Logical Drive Capacity	512TB
Stripe Size	16KB, 32KB, 64KB, 128KB, 256KB, 512KB, 1024KB (per logical drive)
Write Policy	Write-back or write-through (per logical drive)
Max. Logical Volume Size	512TB
Max. Logical Volume Number	30
Max. Partition Size	512TB
Max. Partition Number	1024 (per logical volume) / 2048 (per system)
Max. Host-LUN Mapping Number	4096
Max. Reserved Tag Number	256 (per Host-LUN connection)
Max. iSCSI Sessions	416 (per controller)
RAID Options	RAID 0, RAID 1, RAID 3, RAID 5/5F, RAID 6/6F, RAID 10, RAID 30, RAID 50, RAID 60
Supported Protocols	FC, iSCSI, SAS
Management	• Web-based SANWatch management software • Embedded RAIDWatch • Terminal via RS-232C • Telnet/SSH • Command-line interface (CLI) • LCD keypad panel (DS 3000)
Availability and Reliability	• Hot-swappable hardware modules • Trunk group • Device mapper • Cache safe technology
Efficiency	• Offline compression • Offline deduplication
Notification	• Email • SNMP traps
Supported OS	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, macOS X, VMware, Citrix XenServer OpenStack Cinder
	Note: For supported OS versions, please refer to the Compatibility Guide.

DATA SERVICES

Thin Provisioning		Default	"Just-in-time" capacity allocation optimizes storage utilization and eliminates allocated but unused storage space.	
Local Replication	Snapshot	Default	Snapshot images per source partition: 64	Snapshot images per system: 128
		Optional	Snapshot images per source partition: 256	Snapshot images per system: 4096
	Volume Copy/Mirror	Default	Replication pairs per source volume: 4	Replication pairs per system: 16
		Optional	Replication pairs per source volume: 8	Replication pairs per system: 256
Remote Replication		Optional	Replication pairs per source volume: 8	Replication pairs per system: 64
			Note: The maximum number of replication pairs per source volume is 8, whether they are remote asynchronous pairs, remote synchronous pairs, or local volume pairs	
Automated Storage Tiering		Optional	Storage tiers per pool: 4	
SSD Cache		Optional	Accelerating data access in random read-intensive environments (e.g. OLTP) Max. SSD number: 4	
			DRAM : 8GB	Max SSD cache pool size : 1TB
			DRAM : 16GB	Max SSD cache pool size : 2TB
			DRAM : 32GB	Max SSD cache pool size : 4TB

WARRANTY AND SERVICE

Service and Support	Standard Service	3-year limited hardware warranty and 8 x 5 phone, web, and email support (batteries are covered under warranty for 2 years)
	Upgrade or Extension Options	Warranty extension: Standard service can be extended up to 5 years. The following services can be upgraded to 5 years. • Upgrade: Replacement part dispatch on the next business day • Advanced service: Phone, web, and email support + onsite diagnostics on the next business day • Premium service: Phone, web, and email support + onsite diagnostics within 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

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