



# EonStor DS Family

## Enterprise-Class High Availability 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 3000	DS 4000 Gen2	DS 4000	
Form Factor	2U 12-bay		DS 1012G2 DS 1012R2C/R2L	DS 2012G2/R2C	DS 3012GU/RUC	-	-	
	2U 24-bay		DS 1016G2B DS 1016R2CB/R2LB	DS 2024G2B/R2CB	DS 3024SUCB/RUCB	DS 4024S2CB/R2CB	DS 4024SUCB/RUCB	
	3U 16-bay		DS 1016G2 DS 1016R2C/R2L DS 1016G2MH/R2LMH	DS 2016G2/R2C	DS 3016GU/RUC	DS 4016G2/R2C	DS 4016SUC/RUC	
	4U 24-bay		DS 1024G2 DS 1024R2C/R2L	DS 2024G2/R2C	DS 3024SUC/RUC	DS 4024S2C/R2C	-	
			<b>Note: G:</b> Single controller, not upgradable <b>R:</b> Dual redundant controllers <b>S:</b> Single upgradable to dual redundant controllers <b>2:</b> Gen2 <b>C:</b> Super capacitor <b>L:</b> BBU <b>B:</b> 2.5" drive <b>NH:</b> No host board <b>U:</b> 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 or BBU + flash module	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		Default DDR4 4GB, up to 128GB	
	Redundant Controllers		Default DDR3 4GB, up to 32GB		Default DDR4 8GB, up to 128GB		Default DDR4 8GB, up to 256GB	
Supported Drives			<ul style="list-style-type: none"> <li>• 2.5" SAS SSD</li> <li>• 2.5" 12Gb/s SAS 10,000 or 15,000 RPM HDD</li> <li>• 3.5" 12Gb/s NL-SAS 7,200 RPM HDD</li> <li>• 2.5" SATA SSD \ 3.5" 6Gb/s SATA 7,200 RPM HDD (for single-controller models only)</li> </ul>					
			<b>Note:</b> For the latest compatibility details, refer to our official website for the latest Compatibility Guide.					
Max. Drive Number			448					
Max. SSD Cache Pool (Block Level)			2TB	2TB	4TB	4TB	4TB	
Onboard 1GbE Ports (RJ45)			8	8	8	8	4	
Onboard SAS Expansion Ports			2	2	2	2	4	
Max. Host Board Slots			2	2	4	4	4	
Host Board Options			<ul style="list-style-type: none"> <li>• 16Gb/s FC x 4</li> <li>• 32Gb/s FC x 2</li> <li>• 1GbE (RJ-45) x 4</li> <li>• 10GbE (SFP+) x 2</li> <li>• 25GbE (SFP28) x 2</li> <li>• 12Gb/s SAS x 2"</li> </ul>		<ul style="list-style-type: none"> <li>• 16Gb/s FC x 4</li> <li>• 32Gb/s FC x 2</li> <li>• 32Gb/s FC x 4</li> <li>• 1GbE (RJ-45) x 4</li> <li>• 10GbE (SFP+) x 2</li> <li>• 25GbE (SFP28) x 2</li> <li>• 12Gb/s SAS x 2</li> </ul>			
			<b>Note:</b> 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	8	16	16	16	
Max. 32Gb/s FC Ports			4	4	16	16	16	
Max. 1GbE Ports (RJ45)			8	8	16	16	16	
Max. 10GbE Ports (SFP+)			4	4	8	8	8	
Max. 25GbE Ports (SFP28)			4	4	8	8	8	
Max. 12Gb/s SAS Ports			4	4	8	8	8	
Expansion Enclosures (JBODs)			JB 3012, JB 3016, JB 3024B, JB 3060L					
Dimensions (Without Chassis Ears and Protrusions) (W x H x D)			<ul style="list-style-type: none"> <li>• 2U 12-bay / 2U 24-bay: 449 x 88 x 500 mm</li> <li>• 3U 16-bay: 449 x 130 x 500 mm</li> <li>• 4U 24-bay: 449 x 174.4 x 500 mm</li> </ul>					
Package Dimensions (W x H x D)			<ul style="list-style-type: none"> <li>• 2U 12-bay: 780 x 379 x 588 mm</li> <li>• 2U 24-bay: 780 x 338 x 588 mm</li> <li>• 3U 16-bay: 780 x 423 x 588 mm</li> <li>• 4U 24-bay: 780 x 465 x 588 mm</li> </ul>					
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	2048 (per logical volume) / 1024 (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	<ul style="list-style-type: none"> <li>Web-based EonOne management software</li> <li>Embedded RAIDWatch</li> <li>Terminal via RS-232C</li> <li>Telnet/SSH</li> <li>LCD keypad panel (DS 3000)</li> </ul>
Availability and Reliability	<ul style="list-style-type: none"> <li>Hot-swappable hardware modules</li> <li>Trunk group</li> <li>Device mapper</li> <li>Cache safe technology</li> </ul>
Efficiency	<ul style="list-style-type: none"> <li>Inline compression</li> <li>Off line deduplication</li> </ul>
Notification	<ul style="list-style-type: none"> <li>Email</li> <li>SNMP traps</li> </ul>
Supported OS	Microsoft Windows Server, Red Hat Enterprise Linux, SUSE Linux Enterprise, Sun Solaris, macOS X, VMware, Citrix XenServer, OpenStack Cinder
	<b>Note:</b> 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 volume: 64	Snapshot images per pool: 128
		Optional	Snapshot images per source volume: 256	Snapshot images per pool: 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	<b>Note:</b> 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	<p>Warranty extension: Can extended standard service up to 5 years The following Service can be upgraded to 5 years</p> <ul style="list-style-type: none"> <li>Upgrade: Replacement part dispatch on the next business day</li> <li>Advanced service: 24 x 7 phone, web, and email support + onsite diagnostics on the next business day</li> <li>Premium service: 24 x 7 phone, web, and email support + onsite diagnostics in 4 hours</li> </ul> <p><b>Note:</b> Options may vary by region. For more details, please contact our sales representatives.</p>
	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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