



# EonStor DS 3000 Series

High speed flexible storage delivers robust reliability and management

## Turbo charged storage – DS 3000T Gen2

- **Up to 1.3M read IOPS and 5,500 MBps read throughput**
- **High IOPS solutions ideal for database and VDI applications, while bandwidth enhances media editing and surveying jobs**

### SSD optimized

- SSD Cache and automated storage tiering
- Small form factor models for all-SSD arrays
- SSD drive wear indication

### Data services

- Optional secure remote replication backs up data to offsite locations to ensure disaster recovery readiness
- Snapshot, volume copy/mirror, thin provisioning and more
- Compatible with self-encrypting drives (SED)
- Intelligent Drive Recovery (IDR) technology, including RAID 6, smart media scan and detect-clone-replace

### High availability

- Dual controllers and redundant power supplies
- Fast failover performance and assured high data availability

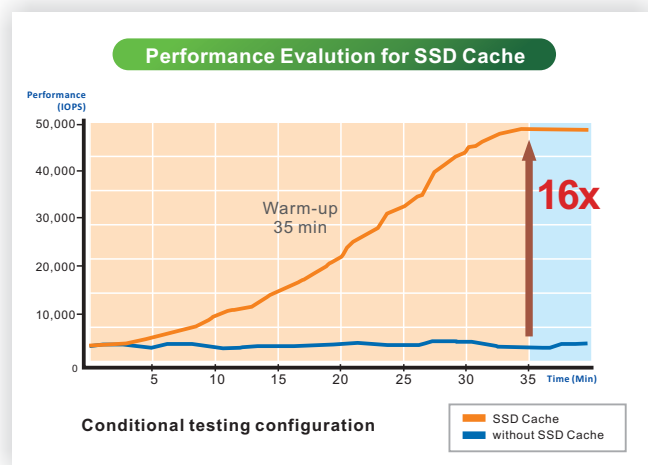
### Multiple host options

- Choose from 8Gb/s or 16Gb/s Fibre Channel, 1Gb/s or 10Gb/s iSCSI or 6Gb/s or 12Gb/s SAS based on your needs and budget
- Hybrid host interfaces for diverse environments on one system lead to greater utility
- Optional onboard iSCSI ports can be added to any host interface type
- Modular components mean easy maintenance and future-proof upgrades

Fully featured storage systems for SAN and DAS environments, offered in diverse form factors from compact 2U to high density 4U. Make the most of high availability with dual controller models, and grow with powerful yet simple to deploy SMB and enterprise services. Fast performance, modular components, strong data integrity, friendly management, and extensive software bundles make these truly total solutions.

### Ready for an SSD future

EonStor DS 3000 systems are designed for all-SSD storage and support large high speed SSD cache pools. SSD Cache speeds up read performance for priority data, and boosts cache pool capacities up to 3.2TB. As many as four SSDs per controller can be used, including SATA disks. In addition to faster read speeds, SSD Cache reduces performance impact compared to spin-drive caches with rapid warm up and less drive wear. Configuring and managing SSD Cache pooling is easy via the intuitive SANWatch UI.



\* SSD Cache speeds up read performance by up to 16 times for frequently-accessed data stored in the cache pool.  
\* Actual performance gains can vary depending on customer applications.

Automated storage tiering optimizes storage performance and increases ROI by leveraging high speed SSD for expedited access to hot data while using affordable drives such as NL-SAS for archiving purposes.

To protect SSDs and the vital data they store, EonStor DS 3000 systems offer SSD wear level indication that provides users with accurate real time SSD health info.

# DS 3000 Series



- Converged host board with 3 connectivity options to choose from (16Gb/s FC, 8Gb/s FC, and 10Gb/s iSCSI SFP+)

## Intuitive system messages

- Tiered and easily actionable system notifications keep you informed and in control

## User friendly management

- Exclusive SANWatch 3.0 browser-based interface makes management accessible from a single front end
- Proprietary RAIDWatch 3.0 provides RAID protection and powerful best practice facilities
- Support for intricate CLI editing

## Energy saving design

- Efficient 80 PLUS power supplies
- Intelligent drive spin-down reduces energy draw by up to 60% while extending drive lifespan

## High speed performance and flexible scalability

Discover new standards of storage performance with up to 1.3M IOPS and 5,500 MB/s throughput. EonStor DS 3000 systems are excellent platforms for database and VDI applications thanks to ample computing power, and their massive bandwidth serves to enhance media editing and surveying jobs, freeing you from bottlenecks. When looking to expand storage, up to an extra 360 drives can be connected easily using Infortrend JB 2000 or JB 2000-1 enclosures.

## Advanced backup data integrity and storage services

Every EonStor DS 3000 system arrives with a full suite of premium data services. Thin provisioning augments your storage utilization from an average 30% to 80% so you get more room on your disk drives. For on demand backups, 128-target snapshot is included (upgradable to 4096 targets), alongside 64 replication pair volume mirror/copy (upgradable to 256). Remote replication ensures prompt and secure disaster recovery to offsite backup locations.

Infortrend IDR technology detects and repairs faulty sectors on drives before they progress into serious media errors, so that disastrous failures are avoided before they can potentially take down an entire storage network.

## Easy upgrade modular host interface

Based on your needs and budget, select from 8Gb/s or 16Gb/s Fibre Channel, 1Gb/s or 10Gb/s iSCSI, or 6Gb/s or 12Gb/s SAS host interfaces. The wide choice offers great performance in more applications, with hybrid host interfaces available to deliver support for diverse environments on one system, for example Fibre Channel/SAS and onboard iSCSI. Host interface modules can be easily swapped and upgraded, making EonStor DS 3000 systems very future-proof.

## User friendly 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 close tabs on your data to ensure its integrity.

## Effortless management with exclusive tools

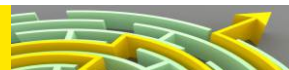
Proprietary SANWatch 3.0 browser-based user interface gives you a consolidated and highly accessible storage management front end. It is complemented by RAIDWatch 3.0, another exclusive Infortrend utility that allows you to implement best practices to enhance RAID array performance. Systems also ship with extensive CLI and command editing to ensure you get full supervision and oversight capabilities.



[www.caeneng.com](http://www.caeneng.com)



# High IOPS Solutions



Model name	DS 3012RT DS 3012GT	DS 3016RT DS 3016GT	DS 3024RT DS 3024GT	DS 3024RTB DS 3024GTB								
<b>Form factor</b>	2U 12-bay LFF	3U 16-bay LFF	4U 24-bay LFF	2U-24bay SFF								
<b>Storage controller</b>	Single or dual-redundant											
<b>Host connectivity (per controller)</b>	2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports <sup>7</sup> 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+)		4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports									
<b>Onboard GbE ports (per controller)</b>	4 x 1Gb iSCSI ports (Optional)											
<b>Cache memory (per controller)</b>	2GB, 4GB, 8GB or 16GB											
<b>Max drives (per system)</b>	12	16	24	24								
<b>Max drives (via expansion enclosure)</b>	312	316	324	360								
<b>Expansion enclosure (JBOD)</b>	JB 2012-1 JB 2048 JB 2060	JB 2016-1 JB 2048 JB 2060	JB 2016-1 JB 2048 JB 2060	JB 2024B JB 2048 JB 2060 JB 2012-1 JB 2016-1								
<b>SAS expansion ports (per controller)</b>	1 x 6Gb/s SAS 4x wide port											
<b>Cache backup technologies</b> <sup>1</sup>	BBU + Flash module											
<b>Supported drives</b> <sup>2</sup>	• 2.5" SATA/SAS SSD • 2.5" 10K RPM SAS HDD • 2.5" 15K RPM SAS HDD	• 3.5" 15K RPM SAS HDD • 3.5" 7200 RPM NL SAS HDD • 3.5" 7200 RPM SATA HDD		• 2.5" SATA/SAS SSD • 2.5" 10K RPM SAS HDD • 2.5" 15K RPM SAS HDD								
<b>Power &amp; Cooling</b>	Power supply: Two redundant 530W; Voltage and Frequency: 100-240VAC, 50-60Hz		Power supply: Three redundant 530W; Voltage and Frequency: 100-240VAC, 50-60Hz	Power supply: Two redundant 530W; Voltage and Frequency: 100-240VAC, 50-60Hz								
	Power consumption - DS 3012RT: 332W - DS 3012GT: 285W Heat dissipation: 1148BTU/hour	Power consumption - DS 3016RT: 416W - DS 3016GT: 416W Heat dissipation: 1186BTU/hour	Power consumption - DS 3024RT: 573W - DS 3024GT: 504W Heat dissipation: 2426BTU/hour	Power consumption - DS 3024RTB: 308W - DS 3024GTB: 276W Heat dissipation(BTU/hour): 1186BTU/hour								
<b>Green design</b>	80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down											
<b>RAID configurations</b>	RAID level 0, 1(0+1), 3, 5, 6, 10, 30, 50, 60 Up to 32 logical drives and 64 partitions per logical volume Up to 2048 LUNs											
<b>Regulatory</b> <sup>4</sup>	• Safety : UL, BSMI, CB, EAC • Electromagnetic Compatibility : CE, BSMI, FCC, KC											
<b>Local replication</b> <sup>3</sup>	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									
<b>Data services</b>	Thin provisioning	" 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 <sup>6</sup>	Replications per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64										
	Automated storage tiering <sup>6</sup>	Two (2) or four (4) storage tiers based on drive types SSD support Automated data migration with scheduling options										
	SSD Cache (optional license)	<ul style="list-style-type: none"> <li>Accelerating data access for random read-intensive environments, such as OLTP</li> <li>Supports up to four SSDs per controller</li> <li>Recommended DIMM capacity per controller for SSD Cache pool:</li> </ul> <table border="0"> <tr> <td>DRAM:2GB</td> <td>Max. SSD Cache Pool Size:150GB</td> <td>DRAM:4GB</td> <td>Max. SSD Cache Pool Size: 400GB</td> </tr> <tr> <td>DRAM:8GB</td> <td>Max. SSD Cache Pool Size: 800GB</td> <td>DRAM:16GB</td> <td>Max. SSD Cache Pool Size: 1,600GB</td> </tr> </table>			DRAM:2GB	Max. SSD Cache Pool Size:150GB	DRAM:4GB	Max. SSD Cache Pool Size: 400GB	DRAM:8GB	Max. SSD Cache Pool Size: 800GB	DRAM:16GB	Max. SSD Cache Pool Size: 1,600GB
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DRAM:8GB	Max. SSD Cache Pool Size: 800GB	DRAM:16GB	Max. SSD Cache Pool Size: 1,600GB									
<b>Availability and reliability</b>	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath), device mapper support CacheSafe technology: protects cached data during power outages by flushing data into flash memory Port trunking / link aggregation (IEEE 802.3ad), failover, jumbo frame											
<b>Management</b>	SANWatch management suite, embedded RAIDWatch, terminal via RS-232C, Telnet/SSH, LCD keypad panel											
<b>Notification</b>	Email, fax, LAN broadcast, SNMP traps, SMS											
<b>OS support</b> <sup>2</sup>	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, HP-UX, IBM AIX, VMware, Citrix XenServer, OpenStack Cinder											
<b>Service and Support</b> <sup>5</sup>	Standard service	3-year limited hardware/software 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) <b>Advanced service:</b> 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) <b>Premium service:</b> 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) Extended standard service up to 5 years										

1. EonStor DS 3000G models: BBU + flash module optional and not included by default.

2. For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.

3. Standard functions come default with EonStor DS systems. Advanced functions are available with optional licenses.

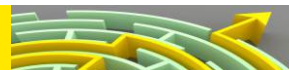
4. Check with your local sales representative for complete details.

5. All EonStor DS systems ship with standard service. Extended service terms may vary by region.

6. Remote replication and automated storage tiering functions are available with optional license.

7. 4-port 10Gb FCoE will be released in Q1, 2016.

# High IOPS Solutions



Model name	DS 3048RT DS 3048GT	DS 3060RT DS 3060GT		
Form factor	4U 48-bay LFF	4U 60-bay LFF		
Storage controller	Single or dual-redundant			
Host connectivity (per controller)	2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports <sup>7</sup> 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+) 4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports			
Onboard GbE ports (per controller)	2 x 1Gb iSCSI ports			
Cache memory (per controller)	2GB, 4GB, 8GB or 16GB			
Max drives (per system)	48	60		
Max drives (via expansion enclosure)	336	360		
Expansion enclosure (JBOD)	JB 2048	JB 2060		
SAS expansion ports (per controller)	1 x 6Gb/s SAS 4x wide port			
Cache backup technologies <sup>1</sup>	BBU + Flash module			
Supported drives <sup>2</sup>	<ul style="list-style-type: none"> <li>• 2.5" SAS SSD</li> <li>• 2.5" SATA SSD (DS 3048GT/3060GT only)</li> <li>• 2.5" 10K RPM SAS HDD</li> </ul>	<ul style="list-style-type: none"> <li>• 2.5" 15K RPM SAS HDD</li> <li>• 3.5" 7200 RPM NL SAS HDD</li> <li>• 3.5" 7200 RPM SATA HDD (DS 3048GT/3060GT only)</li> </ul>		
Power & Cooling	Power supply: Three redundant 530W Voltage and Frequency: 100-240VAC, 50-60Hz  Power consumption - DS 3048RT: 775W - DS 3048GT: 645W Heat dissipation: 2938BTU/hour	Power supply: Two redundant 1600W Voltage and Frequency: 200-240VAC, 47-63Hz  Power consumption - DS 3060RT: 977W - DS 3060GT: 891W Heat dissipation(BTU/hour): 2590BTU/hour		
Green design	80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down			
RAID configurations	RAID level 0, 1(0+1), 3, 5, 6, 10, 30, 50, 60 Up to 32 logical drives and 64 partitions per logical volume Up to 2048 LUNs			
Regulatory <sup>4</sup>	<ul style="list-style-type: none"> <li>• Safety : UL, BSMI, CB, EAC</li> <li>• Electromagnetic Compatibility : CE, BSMI, FCC, KC</li> </ul>			
Data services	Local replication <sup>3</sup>	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	" 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 <sup>6</sup>	Replication per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64		
	Automated Storage Tiering <sup>6</sup>	Two (2) or four (4) storage tiers based on drive types SSD supports Automated data migration with scheduling options		
	SSD Cache (optional license)	<ul style="list-style-type: none"> <li>• Accelerating data access for random read-intensive environments, such as OLTP</li> <li>• Supports up to four SSDs per controller</li> <li>• Recommended DIMM capacity per controller for SSD Cache pool:</li> </ul> DRAM:2GB Max. SSD Cache Pool Size:150GB      DRAM:4GB Max. SSD Cache Pool Size: 400GB DRAM:8GB Max. SSD Cache Pool Size: 800GB      DRAM:16GB Max. SSD Cache Pool Size: 1,600GB		
	Availability and reliability	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath), device mapper support CacheSafe technology: protects cached data during power outages by flushing data into flash memory Port trunking / link aggregation (IEEE 802.3ad), failover, jumbo frame		
	Management	SANWatch management suite, embedded RAIDWatch, terminal via RS-232C, Telnet/SSH, LCD keypad panel		
	Notification	Email, fax, LAN broadcast, SNMP traps, SMS		
OS support <sup>2</sup>	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, HP-UX, IBM AIX, VMware, Citrix XenServer, OpenStack Cinder			
Service and Support <sup>5</sup>	Standard service	3-year limited hardware/software 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. EonStor DS 3000G models: BBU + flash module optional and not included by default.

2. For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.

3. Standard functions come default with EonStor DS systems. Advanced functions are available with optional licenses.

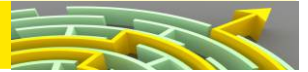
4. Check with your local sales representative for complete details.

5. All EonStor DS systems ship with standard service. Extended service terms may vary by region.

6. Remote replication and automated storage tiering functions are available with optional license.

7. 4-port 10Gb FCoE will be released in Q1, 2016.

# Technical Specifications



Model name	DS 3012R DS 3012G	DS 3016R DS 3016G	DS 3024R DS 3024G	DS 3024RB DS 3024GB								
<b>Form factor</b>	2U 12-bay LFF	3U 16-bay LFF	4U 24-bay LFF	2U 24-bay SFF								
<b>Storage controller</b>	Single or dual-redundant											
<b>Host connectivity (per controller)</b>	2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports <sup>7</sup> 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+)		4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports									
<b>Onboard GbE ports (per controller)</b>	4 x 1Gb iSCSI ports (Optional)											
<b>Cache memory (per controller)</b>	2GB, 4GB, 8GB or 16GB											
<b>Max drives (per system)</b>	12	16	24	24								
<b>Max drives (via expansion enclosure)</b>	312	316	324	360								
<b>Expansion enclosure (JBOD)</b>	JB 2012-1 JB 2048 JB 2060	JB 2016-1 JB 2048 JB 2060	JB 2016-1 JB 2048 JB 2060	JB 2024B JB 2012-1 JB 2060 JB 2016-1								
<b>SAS expansion ports (per controller)</b>	1 x 6Gb/s SAS 4x wide port											
<b>Cache backup technologies<sup>1</sup></b>	BBU + Flash module											
<b>Supported drives<sup>2</sup></b>	<ul style="list-style-type: none"> <li>• 2.5" SATA/SAS SSD</li> <li>• 2.5" 10K RPM SAS HDD</li> <li>• 2.5" 15K RPM SAS HDD</li> </ul>		<ul style="list-style-type: none"> <li>• 3.5" 7200 RPM NL SAS HDD</li> <li>• 3.5" 7200 RPM SATA HDD</li> <li>• 3.5" 15K RPM SAS HDD</li> </ul>									
<b>Power &amp; Cooling</b>	Power supply: Two redundant 530W; Voltage and Frequency: 100-240VAC, 50-60Hz Power consumption - DS 3012R: 332W - DS 3012G: 285W Heat dissipation: 1148BTU/hour		Power supply: Three redundant 530W; Voltage and Frequency: 100-240VAC, 50-60Hz Power consumption - DS 3024R: 573W - DS 3024G: 504W Heat dissipation: 2426BTU/hour									
<b>Green design</b>	80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down											
<b>RAID configurations</b>	RAID level 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60 Up to 32 logical drives and 64 partitions per logical volume Up to 2048 LUNs											
<b>Regulatory<sup>4</sup></b>	<ul style="list-style-type: none"> <li>• Safety : UL, BSMI, CB, EAC</li> <li>• Electromagnetic Compatibility : CE, BSMI, FCC, KC</li> </ul>											
<b>Data services</b>	Local replication <sup>3</sup>	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	"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 <sup>6</sup>	Replications per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64										
	Automated storage tiering <sup>6</sup>	Two (2) or four (4) storage tiers based on drive types SSD support Automated data migration with scheduling options										
	SSD Cache (optional license)	<ul style="list-style-type: none"> <li>• Accelerating data access for random read-intensive environments, such as OLTP</li> <li>• Supports up to four SSDs per controller</li> <li>• Recommended DIMM capacity per controller for SSD Cache pool:</li> </ul> <table border="0"> <tr> <td>DRAM:2GB</td> <td>Max. SSD Cache Pool Size: 150GB</td> <td>DRAM:4GB</td> <td>Max. SSD Cache Pool Size: 400GB</td> </tr> <tr> <td>DRAM:8GB</td> <td>Max. SSD Cache Pool Size: 800GB</td> <td>DRAM:16GB</td> <td>Max. SSD Cache Pool Size: 1,600GB</td> </tr> </table>			DRAM:2GB	Max. SSD Cache Pool Size: 150GB	DRAM:4GB	Max. SSD Cache Pool Size: 400GB	DRAM:8GB	Max. SSD Cache Pool Size: 800GB	DRAM:16GB	Max. SSD Cache Pool Size: 1,600GB
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<b>Availability and reliability</b>	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath), device mapper support CacheSafe technology: protects cached data during power outages by flushing data into flash memory Port trunking / link aggregation (IEEE 802.3ad), failover, jumbo frame											
<b>Management</b>	SANWatch management suite, embedded RAIDWatch, terminal via RS-232C, Telnet/SSH, LCD keypad panel											
<b>Notification</b>	Email, fax, LAN broadcast, SNMP traps, SMS											
<b>OS support<sup>2</sup></b>	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, HP-UX, IBM AIX, VMware, Citrix XenServer, OpenStack Cinder											
<b>Service and Support<sup>5</sup></b>	Standard service	3-year limited hardware/software 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) <b>Advanced service:</b> 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) <b>Premium service:</b> 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) Extended standard service up to 5 years										

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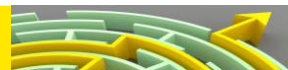
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5. All EonStor DS systems ship with standard service. Extended service terms may vary by region.

6. Remote replication and automated storage tiering functions are available with optional license.

7. 4-port 10Gb FCoE will be released in Q1, 2016.

# Technical Specifications



Model name	DS 3048R DS 3048G	DS 3060R DS 3060G									
Form factor	4U 48-bay LFF	4U 60-bay LFF									
Storage controller	Single or dual-redundant										
Host connectivity (per controller)	2 x 16Gb FC ports 4 x 8Gb FC ports 4 x 10Gb FCoE ports <sup>7</sup> 2 x 10Gb iSCSI ports (RJ-45) 2/4 x 10Gb iSCSI ports (SFP+)	4 x 1Gb iSCSI ports 2 x 6Gb SAS ports 2 x 12Gb SAS ports									
Onboard GbE ports (per controller)	2 x 1Gb iSCSI ports										
Cache memory (per controller)	2GB, 4GB, 8GB or 16GB										
Max drives (per system)	48	60									
Max drives (via expansion enclosure)	336	360									
Expansion enclosure (JBOD)	JB 2048	JB 2060									
SAS expansion ports (per controller)	1 x 6Gb/s SAS 4x wide port										
Cache backup technologies <sup>1</sup>	BBU + Flash module										
Supported drives <sup>2</sup>	<ul style="list-style-type: none"> <li>• 2.5" SAS SSD</li> <li>• 2.5" SATA SSD (DS 3048G/3060G only)</li> <li>• 2.5" 10K RPM SAS HDD</li> </ul>	<ul style="list-style-type: none"> <li>• 2.5" 15K RPM SAS HDD</li> <li>• 3.5" 7200 RPM NL SAS HDD</li> <li>• 3.5" 7200 RPM SATA HDD (DS 3048G/3060G only)</li> </ul>									
Power & Cooling	Power supply: Three redundant 530W Voltage and Frequency: 100-240VAC, 50-60Hz  Power consumption - DS 3048R: 775W - DS 3048G: 645W Heat dissipation: 2938BTU/hour	Power supply: Two redundant 1600W Voltage and Frequency: 200-240VAC, 47-63Hz  Power consumption - DS 3060R: 977W - DS 3060G: 891W Heat dissipation: 2590BTU/hour									
Green design	80 PLUS power supplies delivering more than 80% energy efficiency Intelligent multi-level drive spin-down										
RAID configurations	RAID level 0, 1 (0+1), 3, 5, 6, 10, 30, 50, 60 Up to 32 logical drives and 64 partitions per logical volume Up to 2048 LUNs										
Regulatory <sup>4</sup>	<ul style="list-style-type: none"> <li>• Safety : UL, BSMI, CB, EAC</li> <li>• Electromagnetic Compatibility : CE, BSMI, FCC, KC</li> </ul>										
Data services	Snapshot	Snapshot images per source volume Snapshot images per system	Standard license: 64 / advanced license: 256 Standard License: 128 / advanced license: 4096								
	Local replication <sup>3</sup>	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	"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 <sup>6</sup>	Replications per source volume: 16 Replication pairs per source volume: 4 Replication pairs per system: 64									
	Automated storage tiering <sup>6</sup>	Two (2) or four (4) storage tiers based on drive types SSD support Automated data migration with scheduling options									
SSD Cache (optional license)	<ul style="list-style-type: none"> <li>• Accelerating data access for random read-intensive environments, such as OLTP</li> <li>• Supports up to four SSDs per controller</li> <li>• Recommended DIMM capacity per controller for SSD Cache pool:</li> </ul> <table border="0"> <tr> <td>DRAM:2GB</td> <td>Max. SSD Cache Pool Size:150GB</td> <td>DRAM:4GB</td> <td>Max. SSD Cache Pool Size: 400GB</td> </tr> <tr> <td>DRAM:8GB</td> <td>Max. SSD Cache Pool Size: 800GB</td> <td>DRAM:16GB</td> <td>Max. SSD Cache Pool Size: 1,600GB</td> </tr> </table>			DRAM:2GB	Max. SSD Cache Pool Size:150GB	DRAM:4GB	Max. SSD Cache Pool Size: 400GB	DRAM:8GB	Max. SSD Cache Pool Size: 800GB	DRAM:16GB	Max. SSD Cache Pool Size: 1,600GB
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DRAM:8GB	Max. SSD Cache Pool Size: 800GB	DRAM:16GB	Max. SSD Cache Pool Size: 1,600GB								
Availability and reliability	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath), device mapper support CacheSafe technology: protects cached data during power outages by flushing data into flash memory Port trunking / link aggregation (IEEE 802.3ad), failover, jumbo frame										
Management	SANWatch management suite, embedded RAIDWatch, terminal via RS-232C, Telnet/SSH, LCD keypad panel										
Notification	Email, fax, LAN broadcast, SNMP traps, SMS										
OS support <sup>2</sup>	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, HP-UX, IBM AIX, VMware, Citrix XenServer, OpenStack Cinder										
Service and Support <sup>5</sup>	Standard Service	3-year limited hardware/software 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) <b>Advanced service:</b> 24x7 phone, web, and email support + onsite diagnostics on the next business day (up to 5 years) <b>Premium service:</b> 24x7 phone, web, and email support + onsite diagnostics in 4 hours (up to 5 years) Extended standard service up to 5 years									

1. EonStor DS 3000G models: BBU + flash module optional and not included by default.

2. For the latest compatibility details, refer to our official website for the latest Compatibility Matrix.

3. Standard functions come default with EonStor DS systems. Advanced functions are available with optional licenses.

4. Check with your local sales representative for complete details.

5. All EonStor DS systems ship with standard service. Extended service terms may vary by region.

6. Remote replication and automated storage tiering functions are available with optional license.

7. 4-port 10Gb FCoE will be released in Q1, 2016.

