

# SAN/DAS Storage Solutions Optimized for SATA performance

# **Highlights**

# Reliability & Availability

- Complete SAN/DAS solutions with 8Gb/s FC, GbE iSCSI and 6Gb/s SAS host interface
- High Availability modular design achieves high fault-tolerance through redundant & hotswappable components
- Multiple hardware RAID levels to protect against drive failure
- CacheSafe technology protects cached data during unscheduled power outages

## Performance

 Leverage 2.5" drives to achieve optimal performance density

#### Scalability

Supports up to 112 drives through expansion enclosures

#### Management

 User-friendly SANWatch interface enables easy configuration, management and monitoring of your system

#### Green

- Energy-efficient power supplies
- Dynamic cooling mechanism
- Intelligent multi-level drive spindown









Powered by Infortrend's next-generation RAID engine and designed for users seeking the best performing SATA-based storage, the EonStor Series provides reliable and easy-to-manage SAN/DAS solutions. Featuring robust availability, advanced technology and scalable to up to 112 drives – the EonStor Series empowers users with the best possible SATA solution.

#### Performance & Scalability

The EonStor was designed to provide high performance storage solutions for SATA drive users. With scalability up to 112 drives, the EonStor Series provides enough room to expand your storage capacity as necessary.

### Robust Availability & Reliability

The EonStor Series is based on High Availability (HA) modular design. All redundant hardware modules, including controllers, power supplies, and cooling fans, are hotswappable to achieve high fault-tolerant capability. The EonStor Series also provides comprehensive RAID functions to protect data against drive failure. If one or two drive(s) fail(s), you can still enjoy continuous accessibility to the data of full integrity while the hot spare is used to restore the data volume back to its RAID-protected state. To better safeguard cached data, the EonStor arrays also come with new CacheSafe technology. In the event of an unscheduled power outage, the BBU will automatically supply power to write cached data into flash memory for permanent retention, which eliminates the common 72-hour battery power limitation that can cause data loss.

#### **Easy Management**

Through the feature-rich management suite, SANWatch, users can centrally manage multiple EonStor subsystems locally or remotely over the LAN/WAN. In the portal window, an overview of all subsystems is displayed to provide status summary and event info. With only a few clicks, you can easily access the functions necessary to configure, manage, and monitor the arrays. Besides providing all firmware features through a user-friendly GUI, SANWatch also supports script-based configuration of multiple subsystems at a time. When critical events happen, the system would automatically notify you through various configurable methods for proactive handling. With SANWatch, initializing EonStor arrays for applications and monitoring their real-time status changes are all easy to realize.

#### **Green Technologies**

Aware of the important role green IT plays in environmental sustainability, Infortrend equips all its EonStor models with advanced power-saving designs. Coming with power supplies delivering high energy efficiency, dynamic cooling mechanism and intelligent multi-level drive spin-down technology; the EonStor achieves outstanding energy efficiency. While benefitting the environment, the green initiative Infortrend takes also enhances business advantages with cut-down energy expenses.



	ES S12F-G2840	ES S16F-R2840 ES S16F-G2840	
Hardware Configurations			
Storage Controller	Single	Dual redundant or single	
Host Connectivity (per controller)	4 x 8Gb/s FC ports		
Cache Memory (per controller)	Default 1GB <sup>1</sup> , up to 4GB		
Drive Connectivity	6Gb/s SAS		
Max. Drives (per system)	12	16	
Max. Drives (via JBOD)	84	112	
Expansion Enclosure (JBOD)	JB 2012S	JB 2016R JB 2016S	
SAS Expansion Port	1 x 6Gb/s SAS 4x wide port pe	er controller	
Supported Drives <sup>2</sup>	2.5" 10K RPM SAS drives – 300GB, 450GB, 600GB, 900GB, 1.2TB 3.5" 15K RPM SAS drives – 300GB, 450GB, 600GB 3.5" 7,200 RPM Nearline SAS drives – 2TB, 3TB or 4TB 3.5" 7,200 RPM SATA drives – 2TB, 3TB, 4TB		
Power Supplies	Two redundant 350W	Two redundant 530W	
Form Factor <sup>3</sup>	2U, 19-inch rackmount	3U, 19-inch rackmount	
Green	80 PLUS-certified power supplies <sup>4</sup> 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 1024 LUNs		
Availability and Reliability	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath); Device mapper support CacheSafe technology: protects cached data during power outage by flushing data into flash memory		
Management	SANWatch management suite; Embedded RAIDWatch; Terminal via RS-232C; Telnet/SSH; LCD keypad panel		
Notification	Email, Fax, LAN broadcast, SNMP traps, SMS, Skype		
OS Support <sup>2</sup>	Windows Server 2003 / 2008 / 2008 R2 / 2012 (including Hyper-V), Red Hat Enterprise, Linux, SUSE Linux Enterprise Sun Solaris, Mac OS X, HP-UX, IBM AIX, VMware, Citrix XenServer		
Service and Support <sup>5</sup>			
Standard Service	3-year limited hardware/software warranty and 8x5 phone,	web and email support	
Upgrade/Extension Options <sup>6</sup>	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		

 $<sup>{\</sup>bf 1.\,Default\,capacity\,may\,vary\,by\,region.}$ 

**Technical Specifications** 

8Gb/s FC to 6Gb/s SAS Models

 $<sup>2.</sup> For the \ latest \ compatibility \ details, please \ contact \ our \ sales \ representatives.$ 

 $<sup>3.\,</sup>For\,detailed\,dimensions,\,please\,check\,the\,Infortrend\,website.$ 

<sup>4.</sup> On the ES S16F-R2840 and ES S16F-G2840.

<sup>5.</sup> All EonStor systems are shipped with Standard Service.

<sup>6.</sup> Options may vary by region.

Technical Specificatio	ns	1GbE iSCSI to 6Gb/s SAS models	
	ES S12E-G2140	ES S16E-R2140 ES S16E-G2140	ES S16E-R2149 <sup>7</sup> ES S16E-G2149 <sup>7</sup>
Hardware Configurations			
Storage Controller	Single	Dual redundant or single	Dual redundant or single
Host Connectivity (per controller)		4 x 1GbE iSCSI ports	
Cache Memory (per controller)		Default 1GB <sup>1</sup> , up to 4GB	
Drive Connectivity		6Gb/s SAS	
Max. Drives (per system)	12	16	16
Max. Drives (via JBOD)	84	112	112
Expansion Enclosure (JBOD)	JB 2012S	JB 2016R JB 2016S	JB 2016R JB 2016S
SAS Expansion Port		1 x 6Gb/s SAS 4x wide port	
Supported Drives <sup>2</sup>	2.5" 10K RPM SAS drives – 300GB, 450GB, 600GB, 900GB, 1.2TB 3.5" 15K RPM SAS drives – 300GB, 450GB, 600GB 3.5" 7,200 RPM Nearline SAS drives – 2TB, 3TB or 4TB 3.5" 7,200 RPM SATA drives – 2TB, 3TB, 4TB		
Power Supplies	Two redundant 350W	Two redundant 530W	Two redundant 530W
Form Factor <sup>3</sup>	2U, 19-inch rackmount	3U, 19-inch rackmount	3U, 19-inch rackmount
Green	80 PLUS-certified power supplies <sup>4</sup> 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		
Availability and Reliability	Redundant, hot-swappable hardware modules Multi-pathing support (EonPath); Device mapper support CacheSafe technology: protects cached data during power outage by flushing data into flash memory		
Management	SANWatch management suite; Embedded RAIDWatch; Terminal via RS-232C; Telnet/SSH; LCD keypad panel		
Notification	Email, Fax, LAN broadcast, SNMP traps, SMS, Skype		
OS Support <sup>2</sup>	Windows Server 2003 / 2008 / 2008 R2 / 2012 (including Hyper-V), Red Hat Enterprise, Linux, SUSE Linux Enterprise Sun Solaris, Mac OS X, HP-UX, IBM AIX, VMware, Citrix XenServer		
Service and Support <sup>5</sup>			
Standard Service	3-year limited hardware/software	warranty and 8x5 phone, web and em	ail support
Upgrade/Extension Options <sup>6</sup>	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		

<sup>1.</sup> Default capacity may vary by region.

 $<sup>2. \</sup> For the \ latest \ compatibility \ details, please \ contact \ our \ sales \ representatives.$ 

<sup>3.</sup> For detailed dimensions, please check the Infortrend website. 4. On the ES S16E-G2140 and ES S16E-G2149.

 $<sup>5. \</sup> All \ Eon Stor \ systems \ are \ shipped \ with \ Standard \ Service.$ 

<sup>6.</sup> Options may vary by region.

<sup>7.</sup> Only available in Asia Pacific and China region.

ES \$12S-G2240

ES \$16S-G2240

	ES 3123-G2240	E2 2102-G2240	
Hardware Configurations			
Storage Controller		Single	
Host Connectivity (per controller)		Two (2) 6Gb/s SAS 4x wide ports	
Cache Memory (per controller)		Default 1GB <sup>1</sup> , up to 4GB	
Drive Connectivity		6Gb/s SAS	
Max. Drives (per system)	12	16	
Max. Drives (via JBOD)	84	112	
Expansion Enclosure (JBOD)	JB 2012S	JB 2016S	
SAS Expansion Port		1 x 6Gb/s SAS 4x wide port	
Supported Drives <sup>2</sup>	2.5" 10K RPM SAS drives – 300GB, 450GB, 600GB, 900GB, 1.2TB 3.5" 15K RPM SAS drives – 300GB, 450GB, 600GB 3.5" 7,200 RPM Nearline SAS drives – 2TB, 3TB or 4TB 3.5" 7,200 RPM SATA drives – 2TB, 3TB, 4TB		
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- 1. Default capacity may vary by region.
- 2. For the latest compatibility details, please contact our sales representatives.
- 3. For detailed dimensions, please check the Infortrend website.
- 4. On the ES S16S-G2240.
- 5. All EonStor systems are shipped with Standard Service.
- ${\it 6.\ Options\ may\ vary\ by\ region.}$

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