

EonStor® S16E-R1130
EonStor® S16E-G1130



EonStor® S16E 3U iSCSI RAID Series

High performance density and
SAS scalability for IP SAN



iSCSI HIGHLIGHTS

- LUN access control, enable the storage resource to be shared over the network
- Compliant with IETF iSCSI standards
- CHAP authentication (mutual and one-way) and Access Control List for better security
- Jumbo Frame support for overall throughput enhancement
- Level 0 error recovery
- Device discovery: SLP (Service Location Protocol) and IETF RFC-4171 iSNS(Internet Storage Name Service)
- Header Digest mode
- Multiple connections per TCP session (ports into a logical channel), achieve leading-edge performance
- EonPath driver for path redundancy and load balancing

RAID-RELATED HIGHLIGHTS

- Dual-active controller S16E-R1130 or single controller S16E-G1130
- Fault-tolerant hardware modules ensure high availability
- Maximum expansion of 4 JBODs over multi-lane SAS links (SFF-8088)*, up to 80 HDDs in total (1 RAID + 4 JBODs)
- Support SAS or 3Gbps SATA-II disk drives, enabling flexible mixture for tiered storage
- 5th generation ASIC400 architecture, boosting performance and enhancing availability
- SANWatch storage management suite, enables simple administration and advanced data protection features, including snapshot and multi-pathing (EonPath)

* SFF-8088 to SFF-8470 cables are necessary for attaching JBOD.

The S16E series are the world's first iSCSI to SAS/SATA RAID arrays with four Gigabit Ethernet (GbE) ports on each controller. They can achieve best-in-class performance while benefiting from the affordability and straightforward management of IP SANs.

- Best-in-class performance**

Combining multiple host channels into a portal group increases the applicable bandwidth of each iSCSI session. In an end-to-end RAID5 configuration with four host channels combined into a portal group, the S16E single controller can achieve 420MBps reads and 310MBps writes; for S16E redundant model, the performance can be further improved to 700MBps reads and 320MBps writes.
- Flexibility with low cost of ownership**

The S16E is a perfect choice for budget-conscious companies, as it leverages any existing investment in an Ethernet network. Moreover, users have the flexibility to populate the S16E with a mix of SAS and SATA drives in order to build a tiered storage environment: SAS drives for often-accessed, business-critical data and SATA drives for backup or archives.
- Easy installation and management**

The S16E series are intelligent storage arrays that enable rapid installation, simple management and seamless expansion. They can be configured and monitored by the latest SANWatch, Infortrend's proprietary storage management platform, through an easy-to-manage, java-based graphic user interface. This platform also provides data service features, such as snapshot and multi-pathing (EonPath), for optimal level of fault tolerance.

RAID and JBOD matching table:

RAID Model	3U JBOD	Configuration
S16E-R1130	S16S-J1000-R	Dual-controller; fault-tolerant paths
S16E-G1130	S16S-J1000-S	Single-controller; single path

AVAILABLE MODELS

Models	Controller	Host Ports	Expansion Ports	Drive Bays	Scalability
S16E-R1130	Redundant	8 (GbE)	2/SAS multi-lane (SFF-8088)	16	1 RAID + 3 JBOD (64 SAS or SATA HDD)
S16E-G1130	Single	4 (GbE)	1/SAS multi-lane (SFF-8088)	16	1 RAID + 4 JBOD (80 SAS or SATA HDD)

S16E-R1130



S16E-G1130



SPECIFICATIONS

Subsystem Characteristics

- ASIC400 RAID engine
- Up to 2GB cache (per controller)
- iSCSI host ports (per controller) 4
- LCD keypad panel 1
- BBU (per controller) 1
- Optional for S16E-G1130
- Default DDR cache memory (per controller) 512MB
- 10/100BaseT management port (per controller) 1
- COM ports (per controller) 2
- PSUs 2
- Cooling modules 2
- Diagnostic LEDs on all FRUs
- SAS multi-lane expansion port (per controller) 1
- *SFF-8088

Drive Interface

- No. of disk trays SAS or 3Gbps SATA-II 16
- Enclosure service via I²C or in-band over SAS expansion links

Host Connection Ports

- Gigabit Ethernet (Per controller) 4
- Tag command queuing

RAID Configurations

- RAID levels 0, 1(0+1), 3, 5, 6, 10, 30, 50, 60
- Up to 32 logical drives & 64 partitions per logical drive (varied by memory size)
- Up to 1024 LUNs (varied by memory size)
- Multiple array configurations
- Background rebuild/scan/initialization
- Infortrend Smart fault management technologies

High Availability

- Redundant, hot-swappable FRUs
- Subsystem self-diagnostics
- Li-Ion battery backup (standard for R1130)
- UPS status detection
- Windows clustering support
- EonPath (Multi-pathing)

Management

- Java-based SANWatch software
- Web-based embedded RAIDWatch
- Terminal via RS-232C
- Telnet/ SSH
- LCD keypad panel
- Event notification methods: Email, Fax, LAN broadcast, SNMP traps, SMS, MSN

OS Support

- Microsoft Windows Server 2003/2008
- Windows clustering
- Sun Solaris ver.10
- Red Hat Linux Enterprise ver. 4, 32/64 bit
- SuSE Linux Enterprise ver.10, 32/64 bit; ver. 9.1, 64bit
- Fedora 64bit
- MAC OS X (For G model)
- VMware
- * Microsoft WHQL-Windows Server 2003

Requirements

- AC Input: 100-240VAC 530W with PFC
- DC Output: 12V-32A; 5V-32A; 3.3V-30A
- Relative Humidity: 5% to 95% non-condensing
- Operating Temperature:
 - 0°C to 40°C (without BBU)
 - 0°C to 35°C (with BBU)

Dimensions

- With chassis ears/protrusions: 482.6mm W x 131mm H x 504.3mm D (19 x 5.2 x 19.8 inches)
- Without chassis ears/protrusions: 445mm W x 130mm H x 486.7mm D (17.5 x 5.1 x 19.2 inches)

Certificates

- IEC 60068-2
- MIL-STD-810E/883E
- ISTA
- ASTM-D3332
- IPC-TM-650
- IEC 1000-4
- IEC 1000-3-2, IEC 1000-3-3
- ISO 7779/3744

EMC

- CE
- EN 55022: 2006
- EN 61000-3-2: 2006
- EN 61000-3-3: A1: 2001/A2: 2005
- EN 55024: 1998/A1: 2001/A2: 2003
- FCC (FCC Part 15, subpart B)
- BSMI (CNS 13438)

Safety

- UL (60950-1: 2006)
- BSMI
- CNS 14336: 1993
- IEC 60950-1, First Edition
- CB IEC 60950-1: 2001
- GOST-R: GOST 60950

RoHS Compliance

Asia Pacific

Tel: +886-2-2226-0126
 Fax: +886-2-2226-0020
<http://www.infortrend.com>

China

Tel: +86-10-63106168
 Fax: +86-10-63106188
<http://www.infortrend.com/china>

Americas

Tel: +1-408-988-5088
 Fax: +1-408-988-6288
<http://www.infortrend.com/americas>

Japan

Tel: +81-3-5730-6551
 Fax: +81-3-5730-6552
<http://www.infortrend.com/japan>

Europe

Tel: +44 (0)1256-707700
 Fax: +44 (0)1256-707889
<http://www.infortrend.com/europe>

Germany

Tel: +49 (0) 89 45 15 18 7 - 0
 Fax: +49 (0)89 45 15 187 - 65
<http://www.infortrend.com/germany>