



Ultra-Efficient Ethernet-Direct HDD Storage System delivering Object storage to Cloud and Big Data Deployments

The Newisys EDA-4605 paves the way for the latest developments in Storage technology targeting Ethernet-direct Hard Disk Drive technology. Optimized for Object storage, the EDA-4605 implements an ultra-efficient storage platform for Cloud and Big Data deployments. It is ideal for scale-out and distributed storage solutions.

Unlike traditional storage boxes, the EDA-4605 provides redundant Ethernet fabrics that connect directly to the disk drives, eliminating many layers of overhead and enabling new levels of storage scalability. Whether deployed in Cloud installations, for Big Data or the traditional data center, the EDA-4605 delivers object storage at unprecedented efficiency.

The first disk product to leverage the EDA-4605 is the new Seagate Kinetic Open Storage drive.

With up to 60 x 3.5" Seagate Kinetic Open Storage drives per 4U enclosure, the industry-unique Newisys EDA-4605 is an ultra-dense, space and power saving, complexity-reducing storage solution. The Newisys EDA-4605 fits nicely into a standard 19" wide, 1m deep, rack that easily creates a 15 drives/U object storage building block. With 4TB drives, this can deliver 2.4 Petabyte per standard 42U rack, and can easily scale out beyond that.

Product Highlights

- Optimized for Ethernet-Direct HDDs, such as the novel Seagate Kinetic Open Storage Drives
- Ideal building block for Object Storage deployments
- Reduces complexity and improves efficiency for Cloud and Big Data Object Storage installations
- Full-featured, highly available, high performance Object Storage

Product Features

- Four 10GbE connections to the datacenter
- Redundant, 1GbE connections to each of the 60 HDDs
- Dual, redundant, hot-pluggable Ethernet Switch and Management (ESM) modules
- Dual, redundant, hot-pluggable, high efficiency power supply and fan units (PSU)
- Redundant hot-pluggable, system blowers implemented in the PSUs
- Modular design increases product configuration flexibility
- Standard chassis customization and branding available



EDA-4605 Dual Ethernet Switch and Management

Enterprise Class Features

- Operation up to 35°C inlet temperature
- Individual HDD power control and service action LED
- Integrated Enclosure Management providing:
 - Enclosure and HDD temperature monitoring; Fan and PSU monitoring and control
 - Event reporting (IPMI) and logging
 - Secure management access to the datacenter
 - Automatic enclosure management failover between redundant Service Processors
- Redundancy for key components:
 - Dual Ethernet paths to each HDD
 - Dual PSUs and redundant fans along with power inlets
 - Dual Ethernet Switch and Management modules (redundant Ethernet fabrics, data ports, management ports, and Service Processors)
- Hot-swap for key components:
 - HDD and interposer in the carrier
 - PSUs and fans
 - Ethernet Switch and Management modules
- Integrated cable management
- Tool-less service

Ethernet Switch and Management modules

- Two Newisys Ethernet Switch and Management modules per system, with each module supporting 60 x 1GbE HDD ports and 2 x 10GbE datacenter network ports.
- Each HDD connects to both of ESMs in the EDA-4605 enclosure via both a data-plane (SGMII) and a low-speed management plane (I2C).
- Individual drive power control, and individual drive temperature monitoring
- ESMs configurable as both active/passive for redundancy or active/active for bandwidth
- Service Processor for management

- on each Ethernet Switch and Management module
- Auto failover to other Service Processor if faults occur
- 1GbE datacenter data management connection - RJ45
- Option for secure in-band or out-of-band (independent of data plane) management connections
- Secure Socket Layer (SSL) and web-based (HTTPS) host interfaces

Capacity

- Up to 60 x Seagate Kinetic Open Storage drives or 240TB capacity per 4U enclosure (using 4TB HDDs).
- Up to 2.4 Petabyte per standard 42RU 19" rack.

Safety Standards

- IEC/EN/UL/CSA 60950-1, 2nd Edition

Environmental Protection

- RoHS and WEEE compliant

4U Rackmount Enclosure

- Compliant with EIA-310-D 19" rack specification
- System dimensions without cable management arms:
 - 6.90 in. H x 16.56 in. W x 35.1 in. D (175.3 mm H x 420.6 mm W x 891.5 mm D)
- System dimensions with cable management arms:
 - 6.90 in. H x 16.56 in. W x 39.17 in. D (175.3 mm H x 420.6 mm W x 994.9 mm D)
- Weight for Newisys EDA-4605 without HDDs Single Shipping Pack: 125 lbs (56.8 kg) max
- Weight for Newisys EDA-4605 w/ 60 HDDs Single Shipping Pack: 235 lbs (106.8 kg) typical

Disk Drives

- 60 independent Seagate Kinetic Open Storage drives with dual Ethernet interfaces
- Failover by each Ethernet Switch and Management module to each drive

- Form factor: 3.5" Seagate Kinetic Open Storage drives
- Drive interface: 2 x 1GbE, 1 x I2C
- Individual drive power control
- Individual drive service action LED

AC Power

- Input voltage: Auto ranging, 90-264V AC
- Input frequency: 47-63Hz
- Maximum system continuous DC output power rating: 1465W (20W HDDs)
- Typical system continuous DC output power rating: 865W (10W HDDs)

Monitoring and Reporting

- Monitoring for temperature, advanced power and cooling modules including blower speed control, disk drives and Ethernet Switch Module(s)
- In-band reporting of all serial number, part number and revisions of each FRU and chassis

Operating Environment

- Temperature: 5° to 35°C
- Altitude: -200 to 10,000 ft.

About Newisys

Newisys, a product division of Sanmina Corporation, provides advanced data center products including solid-state memory and disk-based storage server appliances, JBOD storage systems and other products for a variety of data center and storage applications. Visit www.newisys.com for more information.

Contact Newisys:

30 East Plumeria Drive
San Jose, CA 95134
Toll-free: 855 639 7838
International: +1 408 964 3730
www.newisys.com