

## DSA E-Series E4000 60-bay



- ▶ Scale-up network storage solution: controller unit with 60 internal HDDs expandable via SAS interface-connected expansion units
- ▶ Configurable hardware-based RAID/DDP protection (RAID-5, RAID-6 or DDP)
- ▶ Two 10 Gigabit Ethernet ports for high speed iSCSI connectivity
- ▶ Multipathing solution (in dual-controller systems) with proprietary IP cameras and VRM to mitigate possible network and controller failures
- ▶ Protected by NetApp services, including a 3 years next business day on-site support

DSA E4000 represents the next generation of DSA E-Series, the iSCSI-based digital video disk arrays. These are state-of-the-art platforms designed for the security industries most demanding digital video storage applications to manage relentlessly growing digital video data.

DSA E4000 is based on co-branded E4000 series from NetApp, with system performance optimized for video surveillance storage applications. The storage volumes are conveniently configured via BVMS.

### System overview

DSA E4000 is based on a 4U dual controller unit with 60 internal 3.5", 7.2 K, NL-SAS (Serial Attached SCSI), enterprise HDDs (Nearline SAS) for high-capacity and extreme performance requirements.

This storage system is a high-performance solution designed with robust flexibility that makes it a great fit for wide-ranging video surveillance requirements. Its balanced performance is designed for supporting high bandwidth and I/O intensive workloads.

The DSA E4000 fully redundant I/O paths, advanced protection features, and extensive diagnostic capabilities deliver high levels of availability, integrity, and security.

### Functions

DSA E4000 is a scale-up network storage solution that provides security, highest "in-the-box" scalability, peace-of-mind data protection, and simplified management of all your video data.

DSA E4000 60-bay dual controller configuration allows connecting up to four 60-bay expansion units (60 x HDDs per expansion shelf) connected to one dual controller base unit.

It is a fully featured hardware RAID/DDP protected disk array which provides RAID-5 protection for capacity-oriented environments and RAID-6/DDP protection for availability-oriented environments.

### High reliability and availability

DSA E4000 keeps your data safe and available with redundant hot-swappable power supplies and fans, and protects from double-disk failure and single bit errors during rebuilds with high performance RAID-6 or DDP. Its redundant components, automated path failover, and online administration keep organizations productive 24 x 7 x 365.

Further high-availability features include:

- Automatic drive failover and detection and rebuild if using global hot spare drives
- Data cache with battery backup and de-stage to flash

- **SANtricity** proactive drive health monitoring identifies problem drives before they create issues

**Monitoring**

Full SNMP support with MIB-II and NetApp custom MIBs is provided. In case of component failures SNMP, e-mail alert notifications will be generated. Additionally, an event monitor for sending alert notifications to a central major event log is available.

If the device is connected to the Internet/Intranet automatically generated **AutoSupport** messages can be sent, which helps to prevent issues before they occur.

**Management**

NetApp SANtricity storage management software combines robustness and ease of use. With its dynamic capabilities, SANtricity software supports on-the-fly expansion, reconfiguration, and maintenance without interrupting storage system I/O.

**Transceiver modules**

Dual controller system	4x 25GBASE-SR SFP (mini-GBIC, 850NM) transceiver module - IEEE 802.3ae -10Gb iSCSI - OM3 and OM4 support - LC-Duplex connection
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**Installation/configuration notes**

Storage volumes are configured via BVMS for an initial setup in a video surveillance environment. In dual controller systems the iSCSI ports with the same number are tied together for redundancy purpose, while one of the ports is a fall-back path for an iSCSI port on the other controller.

**Net capacity**

The net capacity available is shown in the following tables:

Configuration Information (RAID-5)	Net Capacity (GB)
60-bay unit (60 x 10 TB)	528886

Configuration Information (RAID-6)	Net Capacity (GB)
60-bay unit (60 x 10 TB)	510648

Configuration Information (DDP)	Net Capacity (GB)
60-bay unit (60 x 10 TB)	402309

**Performance data**

Performance data per controller unit in a 10 Gbit/s network (in a 1 Gbit/s network the available network bandwidth is the limiting factor):

Network Uplink 10 GbE			
	IP cameras	RAID-5/-6 Bandwidth Mbps (write / read)	DDP Bandwidth Mbps (write / read)
Dual port	800 (400 per port)	2250 / 1000	2250 / 1000

**(i) Notice**

Number of IP cameras refers to default software configuration (no direct replay mode).

**(i) Notice**

DSA E4000 dual controller systems support:

- BVMS version 13.0 with Cumulative patch 2 and later,
- VRM Video Recording Manager version 4.60.0028 and later,
- Configuration Manager version 7.77.89 and later,
- and corresponding camera firmware versions as indicated in the BVMS 13.0 Release notes, but not earlier than version 6.43.

**(i) Notice Hardware warranty**

The next business day on-site service level can only be provided if the respective system has been registered immediately after receipt and installation. Otherwise, service will be provided based on best effort basis.

Information about registration details is available in every shipment and from the online product catalog. Next business day services cannot be provided in every country everywhere.

**(i) Notice**

Do not use any other accessories than specified in the data sheet!

**Technical specifications**

**Electrical**

Parameter	Range
Nominal voltage	200 - 240 VAC
Frequency	50 - 60 Hz

Parameter	Range
Typical operating current	6.0 - 4.5 A
Maximum operating current	7.0 A

Parameter	Range
Nominal voltage	200 - 240 VAC
Frequency	50 - 60 Hz
Typical operating current	5.2 - 4.3 A
Maximum operating current	6.0 - 5.4 A

Power consumption 60-bay units	
Power consumption VAC (W) (typical)	898 W
Power consumption VAC (W) (maximum)	1402 W
Typical heat loss (BTU/h)	3072 BTU/h
Maximum heat loss (BTU/h)	4786 BTU/h

**Note:** For detailed information, see the latest NetApp E-Series Site Preparation Guide.

**Mechanical**

Dimensions 60-bay unit	
Dimensions (H x W x D) (cm)	17.44 cm x 44.85 cm x 96.05 cm
Dimensions (H x W x D) (in)	6.87 in x 17.66 in x 37.81 in

Dimensions shipping carton	
Dimensions (H x W x D) (cm)	64.4 cm x 64.8 cm x 113 cm
Dimensions (H x W x D) (in)	25.4 in x 25.5 in x 44.5 in

Weight controller unit	
Weight (kg)	113 kg
Weight (lb)	249.12 lb

Weight expansion unit	
Weight (kg)	112.2 kg
Weight (lb)	247.4 lb

Shipping weight	
Shipping weight (kg)	147.1 kg
Shipping weight (lb)	324.3 lb

Space requirements	
Front clearance (cooling and maintenance) (cm)	101.6 cm

Front clearance (cooling and maintenance) (in)	40.3 in
Rear clearance (cooling and maintenance) (cm)	51 cm
Rear clearance (cooling and maintenance) (in)	20.09 in

**Environmental**

Operating temperature (°C)	10 °C - 35 °C
Operating temperature (°F)	50 °F - 95 °F
Storage temperature (°C)	-40 °C - 70 °C
Storage temperature (°F)	-40 °F - 158 °F
Operating relative humidity non-condensing (%)	8 % - 80 %
Storage relative humidity (%)	10 % - 95 %
Installation altitude (m)	-30.5 m - 3000 m
Installation altitude (ft)	-100 ft - 9842 ft
Storage altitude (m)	-30.5 m - 12.192 m
Storage altitude (ft)	-100 ft - 40.000 ft
Sound pressure (normal operation)	54.8 dBA

**Trademarks:**

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**Ordering information**

**DSA-N6C4XA-60AT Dual controller unit 60x10TB**  
 High-performance and high-capacity storage system base unit with iSCSI disk arrays, dual controller.  
 DSA E4000, 60 x 10 TB HDD  
 NDAA compliant  
 Order number **DSA-N6C4XA-60AT**

**DSX-N6D4XA-60AT Expansion unit 60x10TB**  
 High-performance and high-capacity storage expansion unit with iSCSI disk arrays for DSA E4000.  
 60 x 10 TB HDD  
 NDAA compliant  
 Order number **DSX-N6D4XA-60AT**

**Accessories**  
**DSX-WDTK4-10TB HDD 10TB for 60bay**  
 Hard disk storage expansion with a capacity of 10 TB for DSA E4000 60-bay expansion units.  
 Order number **DSX-WDTK4-10TB**

## Services

**EWE-S6D4XA-4PR DSA E4060 10TB 4h Prt Repl 1yr IW**

4 hour part replacement service extension for one year, applicable to a DSA E4000 60-bay unit with 10 TB HDDs, if purchased during warranty period.

Order number **EWE-S6D4XA-4PR**

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**EWE-S6D4XA-NRD DSA E4060 10TB Non Ret DO 1yr IW**

Non-returnable disk service extension for one year, applicable to a DSA E4000 60-bay unit with 10 TB HDDs, if purchased during warranty period.

Order number **EWE-S6D4XA-NRD**

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**EWE-S6D4XA-SLP DSA E4060 10TB SES Ext 1yr IW**

Next business day on-site service extension for one additional year, applicable to a DSA E4000 60-bay unit with 10 TB HDDs, if purchased during warranty period.

Order number **EWE-S6D4XA-SLP**

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