4U60 Storage Enclosure

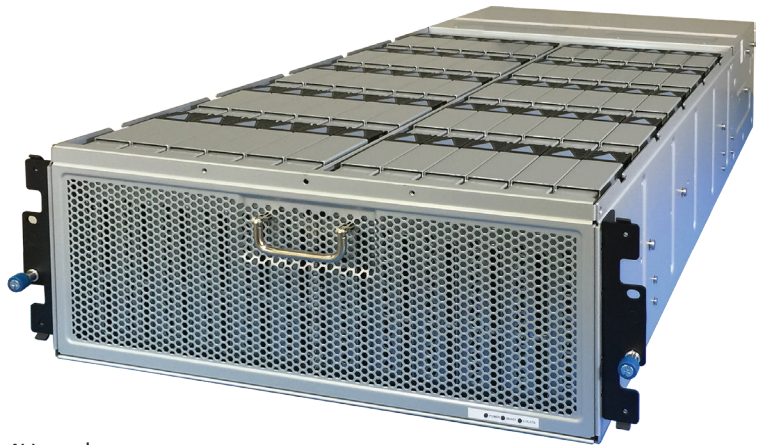## ◆ Features

- 60 integrated Ultrastar® drive modules
  - Available with 512e or 4Kn sector size (by part number)
- Host connectivity 2 x SAS QSFP+ receptacles per IO Module; optional connectivity cables are available
  - QSFP+ to HD mini SAS cables for host
  - QSFP+ to QSFP+ cables for daisy-chaining*
- Hot Swappable: two power supplies (with integrated fans), drive modules, and IO modules
- Fully compliant with SAS 3.0 specification for operation up to 12Gbps
- Cable management arm simplifies maintenance of hot-swappable CRUs
- SCSI Enclosure Services (SES-3)
- 5-year limited warranty on Ultrastar HDD modules, 3-year limited warranty on all other components

Up to 4 storage enclosures supported for daisy-chaining

The HGST 4U60 Storage Enclosure is a high-density, scalable, and cost-effective design, using 60 Ultrastar® 3.5-inch drive modules in a 4U enclosure. It offers 2x2x4-lane SAS 12GB/s performance, high availability (HA), and hot-swappable components. The design is targeted towards data centers that need a dense solution with HA capabilities, while maintaining a low power profile.

4U enclosure
60 Ultrastar drive modules
Available in 3 capacities[1]: 480TB, 360TB and 240TB

Specifications

Capacity / Physical Size

Capacity[1]	Up to 480TB
Height	174.8 mm (6.88 in.) – 4 Rack Units
Width	424 mm (16.69 in.)
Depth	983 mm (38.7 in.) – including cable management
Weight 480TB	89.81 kg (198 lbs.) – fully configured with 60 helium HDDs
360TB / 240TB	93.71 kg (207.6 lbs) – fully configured with 60 air HDDs

Power and Cooling: Operating

Two 1650W PSUs, hot-swap and redundant
200-240VAC auto-ranging, 47Hz-63Hz input (high line power only)
N+1 redundant fans (fans integrated in PSU)

Environmental

Environmental	OPERATING	NON-OPERATING
Temperature range	5° to 35°C	-30° to 60°C
Humidity	8% to 80% (non-condensing)	8% to 80% (non-condensing)
Shock	3.5g 6ms Pulse vertical shock	8g 6ms Trapezoidal
Vibration	Random 0.25 Grms, 5-10Hz 0.05 g sine wave sweep, 10-300Hz	Random 0.6 Grms 10-300Hz
Acoustics	<7.5dB LwA @ 23ºC	

[1] One MB is equal to one million bytes, one GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes) when referring to storage capacity. Accessible capacity will vary from the stated capacity due to formatting and partitioning of the hard drives, the operating system and other factors.

4U60 Storage Enclosure

Available Products

4U60 Storage Enclosure [2x2x4 SAS 12Gb/s]

Part Number	Capacity	Sector Size	Description
1ES0031	480TB	512e	SE (Secure Erase) – Includes 60 Ultrastar He^8 8TB HDD Modules
1ES0034	480TB	512e	ISE (Instant Secure Erase) – Includes 60 Ultrastar He^8 8TB HDD Modules
1ES0063	480TB	512e	TCG (Trusted Computing Group) – Includes 60 Ultrastar He^8 8TB HDD Modules
1ES0033	480TB	4Kn	SE (Secure Erase) – Includes 60 Ultrastar He^8 8TB HDD Modules
1ES0035	480TB	4Kn	ISE (Instant Secure Erase) – Includes 60 Ultrastar He^8 8TB HDD Modules
1ES0058	360TB	512e	SE (Secure Erase) – Includes 60 Ultrastar 7K6000 6TB HDD Modules
1ES0059	360TB	512e	ISE (Instant Secure Erase) – Includes 60 Ultrastar 7K6000 6TB HDD Modules
1ES0068	360TB	512e	TCG (Trusted Computing Group) - Includes 60 Ultrastar 7K6000 6TB Modules
1ES0060	360TB	4Kn	SE (Secure Erase) – Includes 60 Ultrastar 7K6000 6TB HDD Modules
1ES0061	360TB	4Kn	ISE (Instant Secure Erase) – Includes 60 Ultrastar 7K6000 6TB HDD Modules
1ES0054	240TB	512e	SE (Secure Erase) – Includes 60 Ultrastar 7K6000 4TB HDD Modules
1ES0055	240TB	512e	ISE (Instant Secure Erase) – Includes 60 Ultrastar 7K6000 4TB HDD Modules
1ES0067	240TB	512e	TCG (Trusted Computing Group) - Includes 60 Ultrastar 7K6000 4TB Modules
1ES0056	240TB	4Kn	SE (Secure Erase) – Includes 60 Ultrastar 7K6000 4TB HDD Modules
1ES0057	240TB	4Kn	ISE (Instant Secure Erase) – Includes 60 Ultrastar 7K6000 4TB HDD Modules

Cables

Part Number	Description
1EX0085	IO Cable, HD Mini-SAS to QSFP+, 2m
1EX0094	Expansion Cable, QSFP+ to QSFP+, 2m

Contact your HGST Sales representative for information on how to order.