KIOXIA

The Future of Enterprise and Data Center Storage is EDSFF is here

NVMe SSD Solutions for Dell Solutions

Benefits of EDSFF SSDs

Flexibility

EDSFF connector design is compliant to the same connector standard specification across all EDSFF configurations, and it can be used without limitation on the number of lanes and is flexible to chassis and backplane designs.

Powerful

EDSFF is design to support higher power up to 70W*, delivering superior performance, while 2.5-inch SSDs using the SFF-8639 connector typically max out at 25W.

* The design value of maximum power depends on the device.

Higher Performance

EDSFF can support up to 4x higher performance in a 4C configuration with 16 lanes and 2x higher performance in a 2C configuration with 8 lanes than a 4 lane 2.5-inch SSD (U.2 or U.3). *

* The number of lanes depends on the device. As of October 2023, KIOXIA does not support SSDs beyond PCIe® x4 lanes.

Efficient

The EDSFF is designed with efficient use of space and surface area, improving thermal dissipation and allowing for higher density chassis.

Versatile

EDSFF is designed to support other PCIe® devices, such as NICs or accelerators, that can be used in the same chassis not limited to SSDs.

KIOXIA EDSFF E3.S Offerings

KIOXIA CM7 Series Enterprise NVMe™ SSD

- PCIe® Gen5 x4 (32 GT/s x4)
- NVMe™ 2.0 specification compliant
- OCP Datacenter NVMe™ SSD 2.0 supported
- 1.6 TB to 15.36 TB capacities
- 1 and 3 DWPD endurances

KIOXIA CD8P Series Data Center NVMe™ SSD

- PCIe® Gen5 x4 (32 GT/s x4)
- NVMe™ 2.0 specification compliant
- OCP Datacenter NVMe™ SSD 2.0 supported
- 1.6 TB to 15.36 TB capacities
- 1 and 3 DWPD endurances

Models / Specifications

Family	Endurance	Platform	Data Security & Encryption Options	Capacity (GB)	Random Read (IOPS)	Random Write (IOPS)	Sequential Read (MB/s)	Sequential Write (MB/s)
CD8P E3.S/EDSFF	Read Intensive 1 DWPD (for 5 years)	PowerEdge	Instant Sanitize Erase (ISE) *	1,920	1,600,000	150,000	12,000	3,500
				3,840	1,900,000	200,000	12,000	5,500
				7,680	2,000,000	200,000	12,000	5,500
				15,360	2,000,000	200,000	12,000	5,300
	Mixed Use 3 DWPD (for 5 years)	PowerEdge PowerScale	Instant Sanitize Erase (ISE) **	1,600	1,600,000	300,000	12,000	3,500
				3,200	1,900,000	400,000	12,000	5,500
				6,400	2,000,000	400,000	12,000	5,500
				12,800	2,000,000	400,000	12,000	5,300

Family	Endurance	Platform	Data Security & Encryption Options	Capacity (GB)	Random Read IOPS	Random Write IOPS	Sequential Read (MB/s)	Sequential Write (MB/s)
CM7 E3.S/EDSFF	Read Intensive 1 DWPD (for 5 years)	PowerEdge PowerScale	Instant Sanitize Erase (ISE) **	1,920	2,000,000	155,000	14,000	3,500
				3,840	2,700,000	310,000	14,000	6,750
				7,680	2,450,000	300,000	14,000	6,750
				15,360	2,000,000	260,000	14,000	5,300
	Mixed Use 3 DWPD (for 5 years)			1,600	2,000,000	310,000	14,000	3,500
				3,200	2,700,000	600,000	14,000	6,750
				6,400	2,450,000	550,000	14,000	6,750
				12,800	2,000,000	470,000	13,000	5,300

* Self-Encrypting Drive (SED) options are available

** FIPS options are available

Please contact your sales rep for more options not shown here:

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Where to Find More on EDSFF?

KIOXIA EDSFF Solutions — https://americas.kioxia.com/en-us/business/ssd/solution/edsff.html

Open Compute Project Datacenter NVMe SSD specification — https://www.opencompute.org/wiki/Storage#Documents

SNIA SSD Form Factors Web Page — https://www.snia.org/forums/cmsi/knowledge/formfactors

E1.S & E1.L

SNIA SFF-TA-1002 – Protocol Agnostic Multi-lane High Speed Connector
SNIA SFF-TA-1006 – Enterprise and Datacenter 1U Short Device Form Factor (E1.S)
SNIA SFF-TA-1007 – Enterprise and Datacenter 1U Long Device Form Factor (E1.L)
SNIA SFF-TA-1009 – Enterprise and Datacenter Standard Form Factor Pin and Signal Specification
SNIA REF-TA-1012 – Pin Assignment Reference for SFF-TA-1002 Connectors
SNIA SFF-TA-1023 – Thermal Characterization Specification for EDSFF Devices

E3.S & E3.L

SNIA SFF-TA-1002 – Protocol Agnostic Multi-Lane High Speed Connector
SNIA SFF-TA-1008 – Enterprise and Datacenter Device Form Factor (E3)
SNIA SFF-TA-1009 – Enterprise and Datacenter Standard Form Factor Pin and Signal Specification
SNIA REF-TA-1012 – Pin Assignment Reference for SFF-TA-1002 Connectors
SNIA SFF-TA-1023 – Thermal Characterization Specification for EDSFF Devices

KIOXIA

In every mention of a KIOXIA product: Definition of capacity - KIOXIA Corporation defines a megabyte (MB) as 1,000,000 bytes, a gigabyte (GB) as 1,000,000,000 bytes and a terabyte (TB) as 1,000,000,000,000 bytes. A computer operating system, however, reports storage capacity using powers of 2 for the definition of 1GB = 2^{30} bytes = 1,073,741,824 bytes and 1TB = 2^{40} bytes = 1,099,511,627,776 bytes and therefore shows less storage capacity. Available storage capacity (including examples of various media files) will vary based on file size, formatting, settings, software and operating system, and/or pre-installed software applications, or media content. Actual formatted capacity may vary.

Drive Write(s) Per Day. One full drive write per day means the drive can be written and re-written to full capacity once a day, every day, for the specified lifetime. Actual results may vary due to system configuration, usage and other factors.

Images may differ from the actual products and services.