# 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.



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 PCle® x4 lanes.



### **Efficient**

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



EDSFF is designed to support other PCle® 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<sup>™</sup> SSD**

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

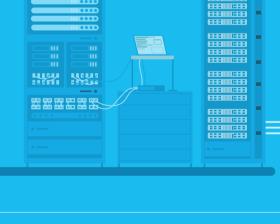
## **Models / Specifications**

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
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	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

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

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John Salcido: John.Salcido@KIOXIA.com





## **KIOXIA EDSFF Solutions**

Where to Find More on EDSFF?

https://americas.kioxia.com/en-us/business/ssd/solution/edsff.html

**NVMe SSD specification** 

**SNIA SSD Form Factors Web Page** 

**Open Compute Project Datacenter** 

https://www.opencompute.org/wiki/Storage#Documents

E1.S & E1.L

SNIA SFF-TA-1002 - Protocol Agnostic Multi-lane High Speed Connector

https://www.snia.org/forums/cmsi/knowledge/formfactors

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 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 SEE-TA-1009 - Enterprise and Datacenter Standard Form Factor Pin

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

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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 Images may differ from the actual products and services.