EDSFF is Here

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Paul Kaler, HPE
Mark Carlson, Toshiba
Jonmichael Hands, Intel
Jonathan Hinkle, Lenovo
Bill Lynn, Dell/EMC
Mike Danielson, Micron
Mark Shaw, Microsoft
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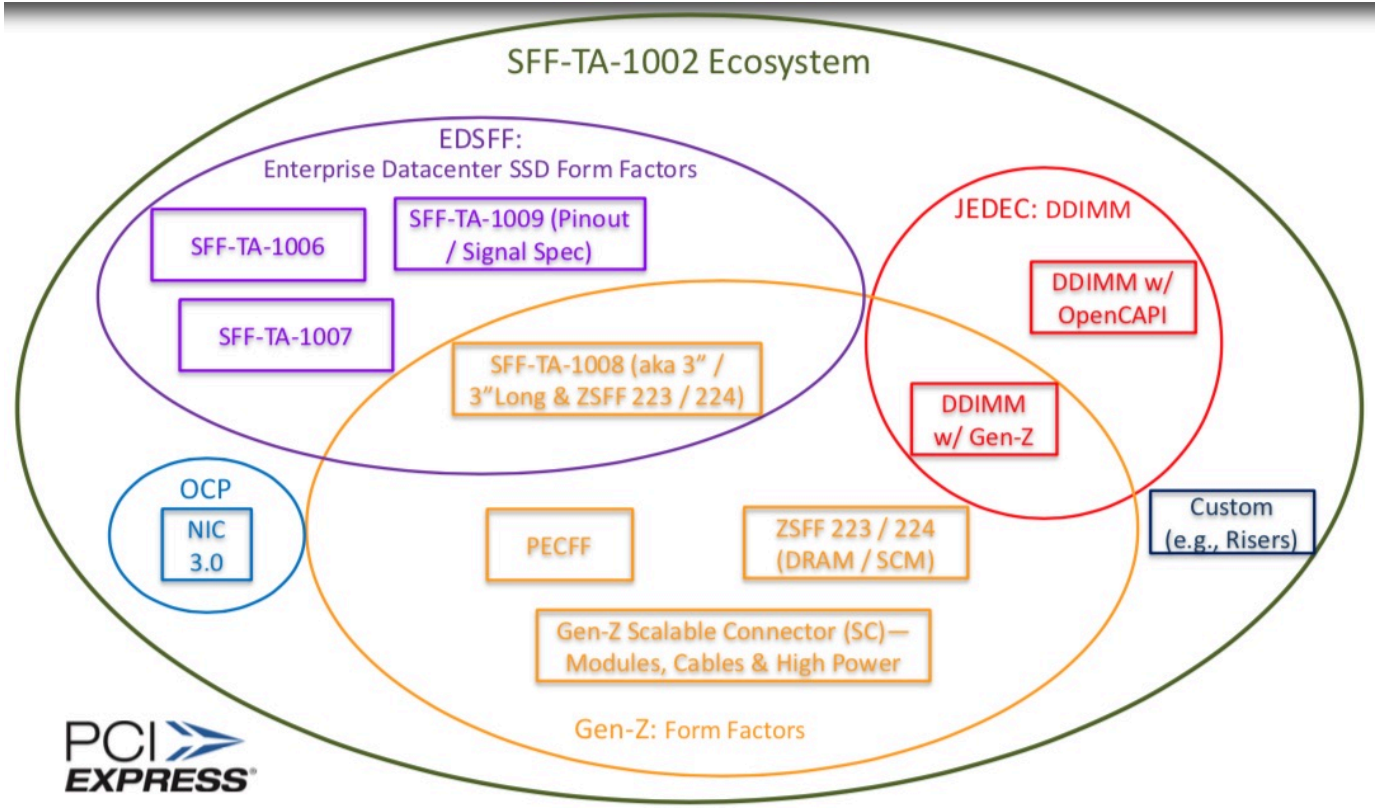
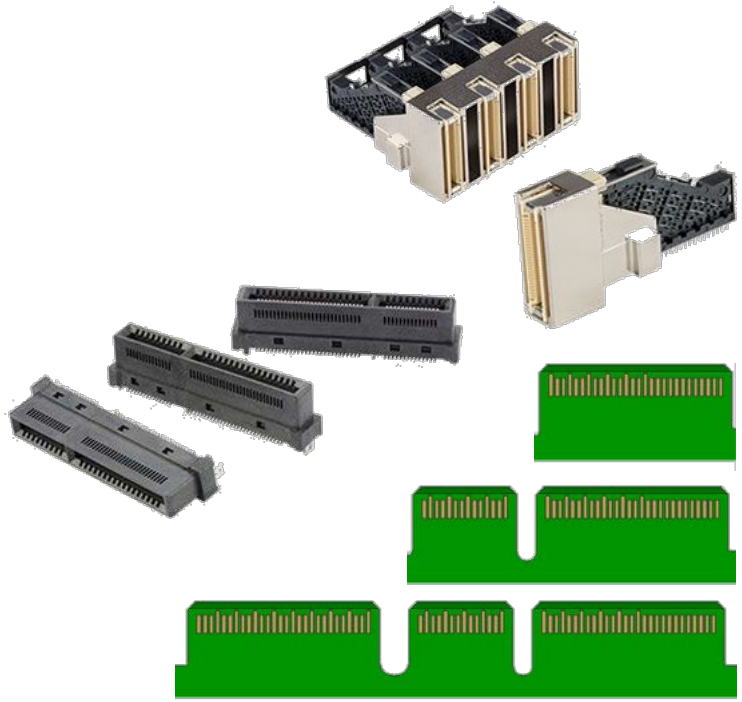
EDSFF Connector Ecosystem

SFF-TA-1002

- Spans Many Use Cases
  - DRAM, Storage Class Memory, NICs, Accelerators, and SSDs
- Maximizes flexibility for system designers



EDSFF Connectors and Pinout



SFF-TA-1002

- General Purpose Scalable connector
  - SFF-TA-1002 used for multiple devices
- Common pinout between EDSFF family
  - SFF-TA-1009 pinout for SSDs

Pin	Contact Sequence	Signal	Signal	Contact Sequence	Pin
B1	2nd mate	12 V	GND	1st mate	A1
B2	2nd mate	12 V	GND	1st mate	A2
B3	2nd mate	12 V	GND	1st mate	A3
B4	2nd mate	12 V	GND	1st mate	A4
B5	2nd mate	12 V	GND	1st mate	A5
B6	2nd mate	12 V	GND	1st mate	A6
B7	2nd mate	MFG	SMBCLK	2nd mate	A7
B8	2nd mate	RFU	SMBDAT	2nd mate	A8
B9	2nd mate	DUALPORTEN#	SMBRST#	2nd mate	A9
B10	2nd mate	PERST0#	LED#/ACTIVITY	2nd mate	A10
B11	2nd mate	3.3 VAux	PERST1#/CLKREQ#	2nd mate	A11
B12	2nd mate	PWRDIS	PRSNT0#	2nd mate	A12
B13	1st mate	GND	GND	1st mate	A13
B14	2nd mate	REFCLKn0	REFCLKn1	2nd mate	A14
B15	2nd mate	REFCLKp0	REFCLKp1	2nd mate	A15
B16	1st mate	GND	GND	1st mate	A16
B17	2nd mate	PETn0	PERn0	2nd mate	A17
B18	2nd mate	PETp0	PERp0	2nd mate	A18
B19	1st mate	GND	GND	1st mate	A19
B20	2nd mate	PETn1	PERn1	2nd mate	A20

SFF-TA-1009 defines pinout and functionality

https://www.amphenol-icc.com/product-series/mini-cool-edge-0-60mm.html

EDSFF SSD Family

E1.L (SFF-TA-1007)

- 318.75 x 38.4 mm
- Supports > 40W
- Up to 48 Standard NAND sites

E1.S (SFF-TA-1006)

- 111.5 x 31.5 mm
- Supports >12W
- Up to 12 Standard NAND sites

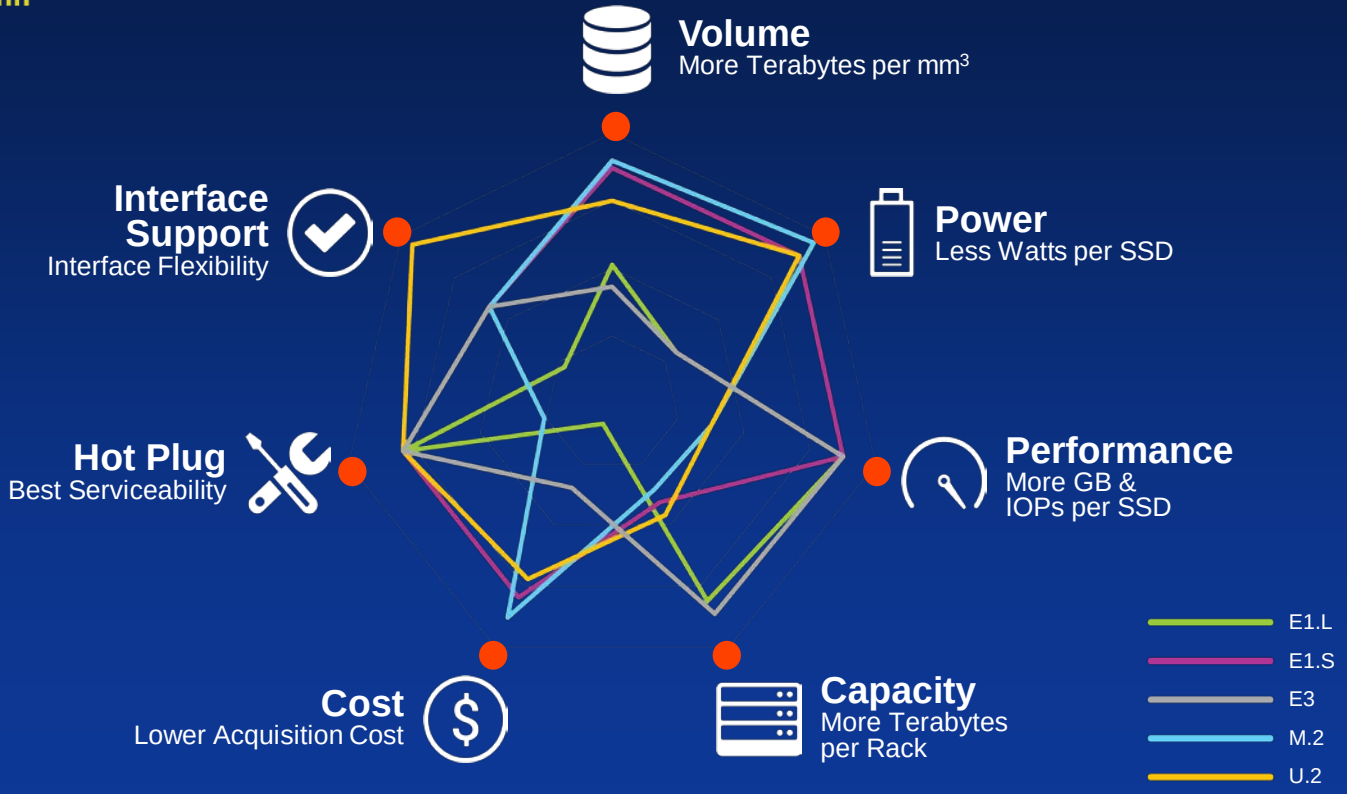
3 Form Factors coming to enterprise systems and datacenters!

E3 (SFF-TA-1008)

- (104.9/142.2) x 76mm
- Supports up to 70W
- Up to 48 Standard NAND sites

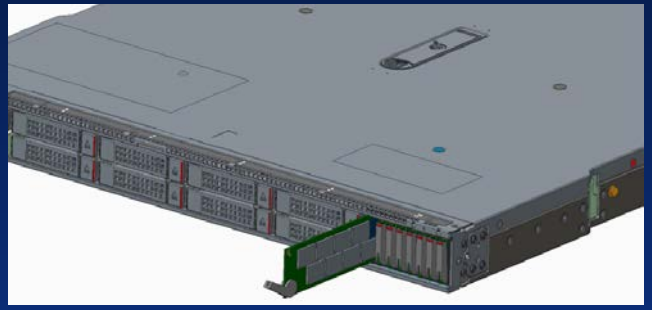
Flash Memory Summit

7 Dimensional Analysis



EDSFF SSD System Benefits

1U Fit & Scalable for Capacity or Performance

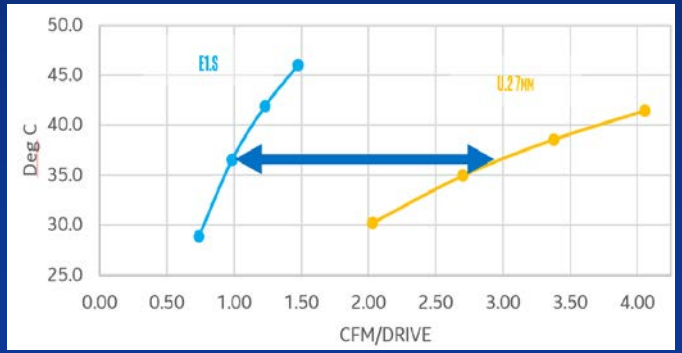


More PB in Less Space

Flash EDSFF

HDD FFs

Thermal Efficiency



Source: Intel

Audience Q&A