Poseidon V2

PCIe Gen5 based Open HW

EDSFF E3 SSD Reference

Composable Architecture

High-Perf. Shared Storage, High-Memory, Accelerator Server

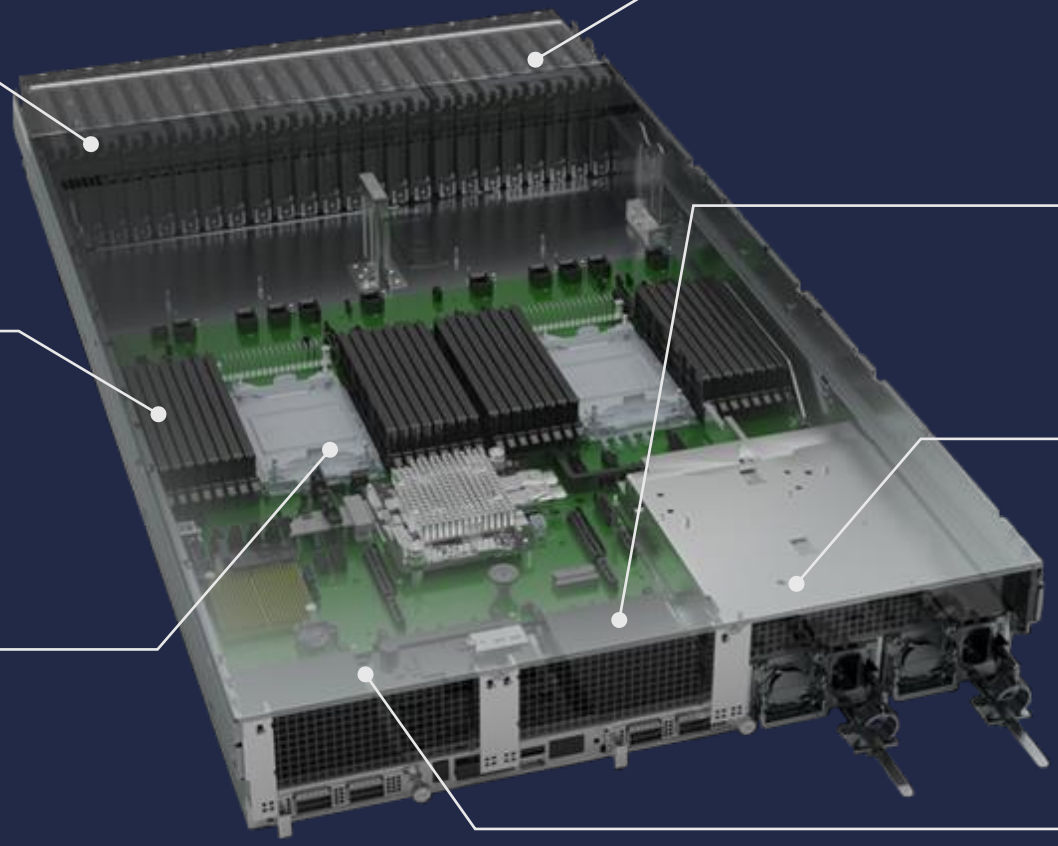
Universal Tray Design

Support Four E3 Form-Factor (E3.S 1T/2T, E3.L 1T/2T)

E3.S/E3.L 1T x24

E3.S/E3.L 1T x8 + 2T x8

Key Components



Form Factor **E3.S**

PCI EXPRESS Interface **PCIe 5.0**

PM1743

Samsung's PCIe Gen5 enabled PM1743

PCIe Gen5 is the latest 32 Gbps I/O bus technology, which offers a critical advantage to data-intensive applications.

- 2X Performance Qos
- Enhanced Telemetry
- RoT Support Secure Storage
- Multi-Tenancy

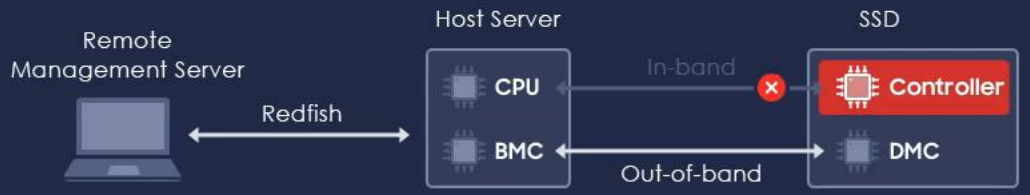
DMC

(Device Management Control)

Proof-of-concept

Management Control Unit connects to BMC directly

Even if in-band management path is disrupted(CPU, OS, SSD), BMC can still monitor status and logs of SSD



Temperature	0x0028	POR Count	0x0001
Power Consumption	0x0A1D	HW Status	0x0000
Voltage	0x0BC7	HW Error Code	0x0000
PLP Capacitor Health	0x00FE	GPIO Status	0x0000

SAMSUNG

Form Factor **E3.S**

V-NAND **V5 QLC**

Memory **DDR5**

CXL Compute Express Link™ Interface **CXL 2.0**

BM1733a

High density up to **128 TB**

Making More than **1 PB** per server

Disrupting total cost of ownership

CXL Memory Expander

High density up to **512 GB**

Memory Expander(CXL)

-Industry's First CXL memory expansion solution

-Drastically expands memory bandwidth and capacity

-Implemented in industry standard EDSFF form factor

SSD Density 1024 TB

Memory Density 0 GB

Number of SSD 8

Number of CXL Memory Expander 0

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Form Factor **E3.S**

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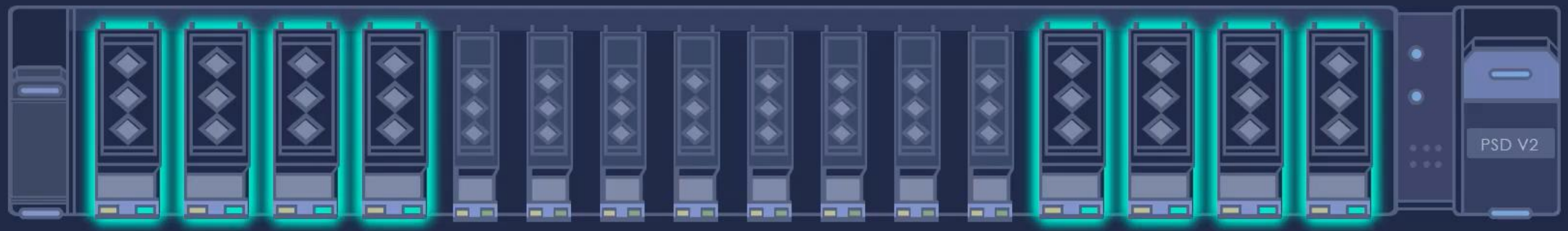
SSD Density 0 TB

Memory Density 4096 GB



Number of SSD 0

Number of CXL Memory Expander 8