

OPEN

Compute Engineering Workshop

March 10, 2016

San Jose



Open CloudServer v2.1 specification Systems Overview

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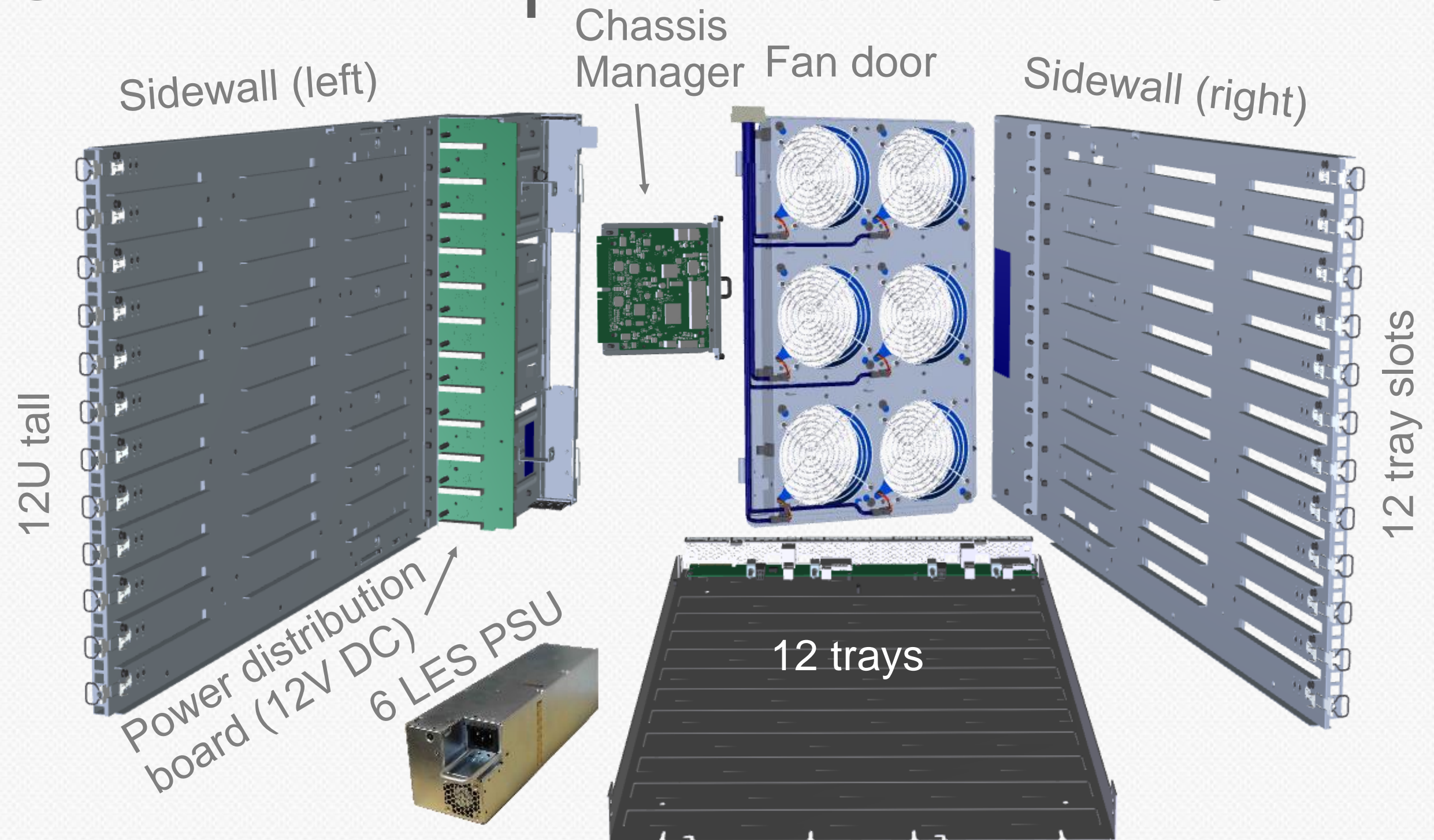


Common Chassis components with V2.0

V2.0 chassis plus

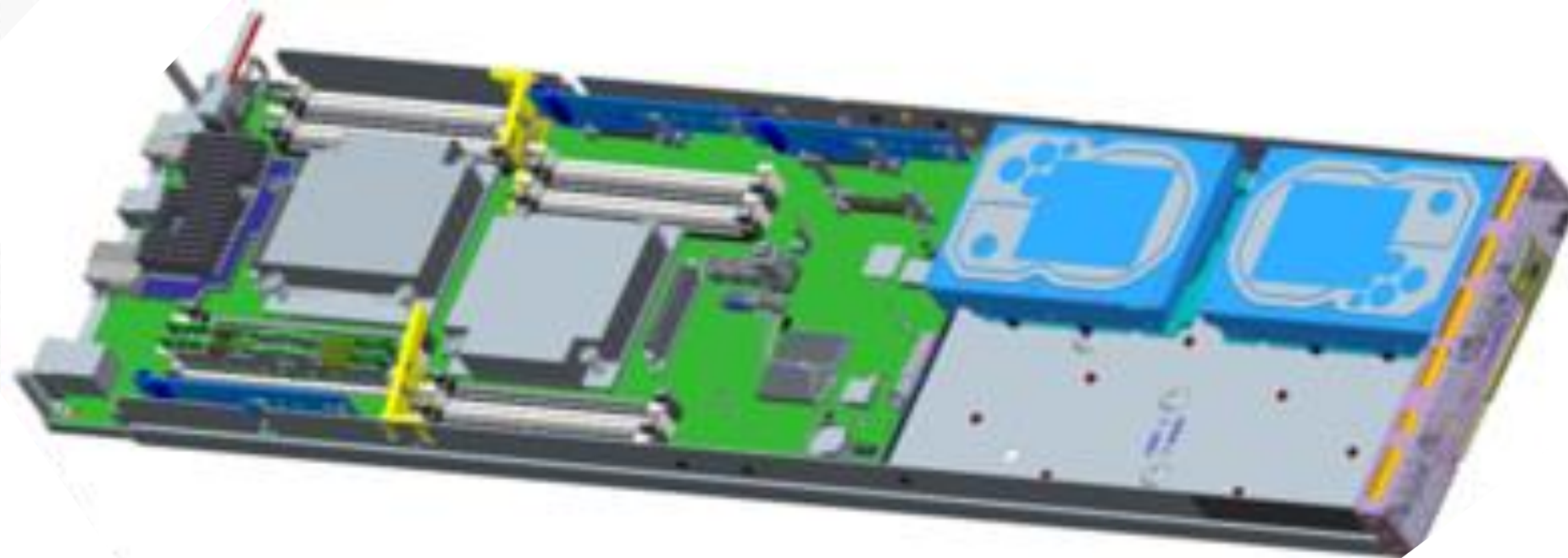
New Compute Blades

New Tray Backplane



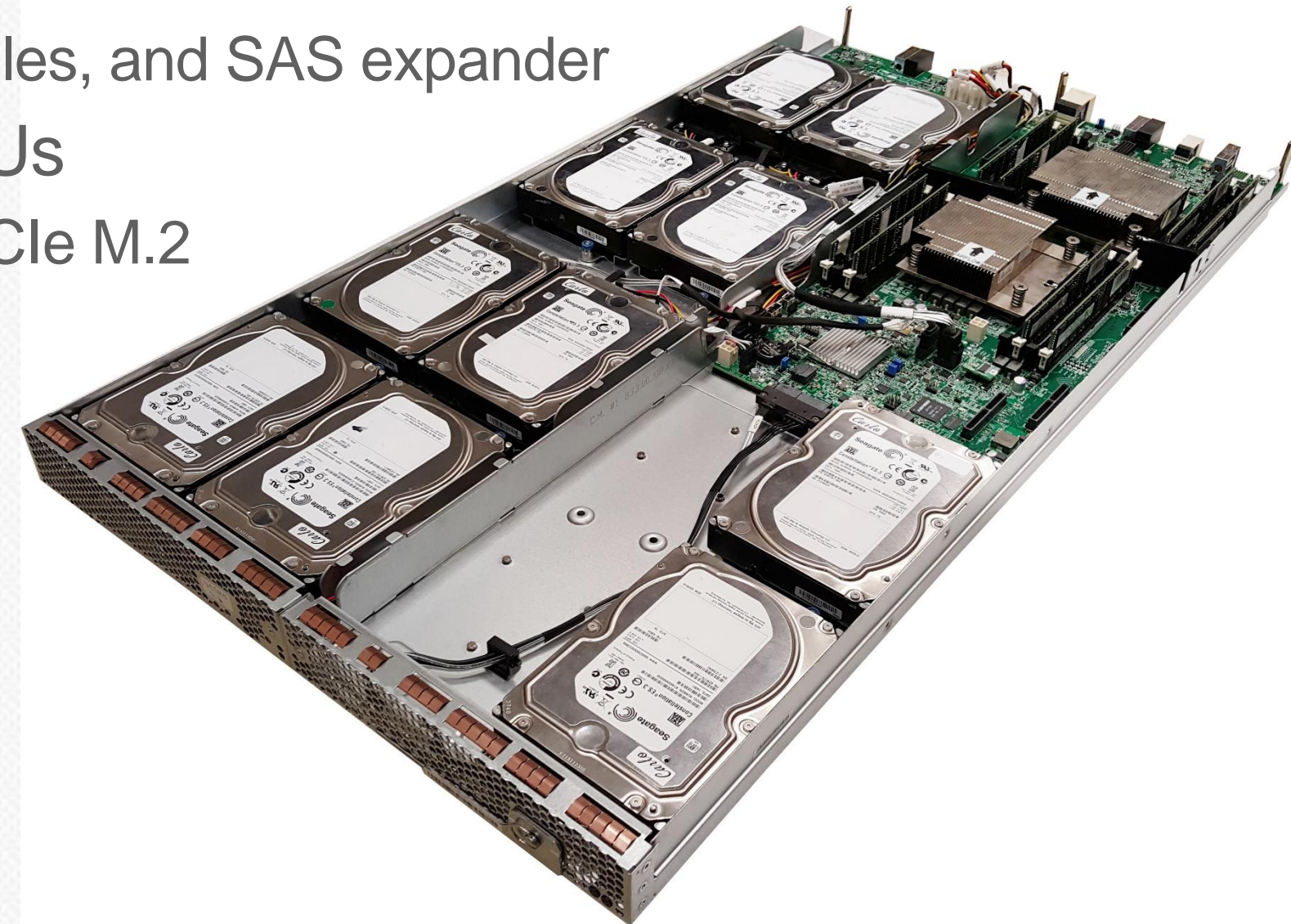
Open CloudServer v2.1 half-wide blade

- Supports next-generation Xeon CPU
- Improved airflow to support up to 135W CPUs
 - Reduction from four SATA HDDs to two SATA HDDs
 - Transition FLASH from SATA SSD to PCIe M.2

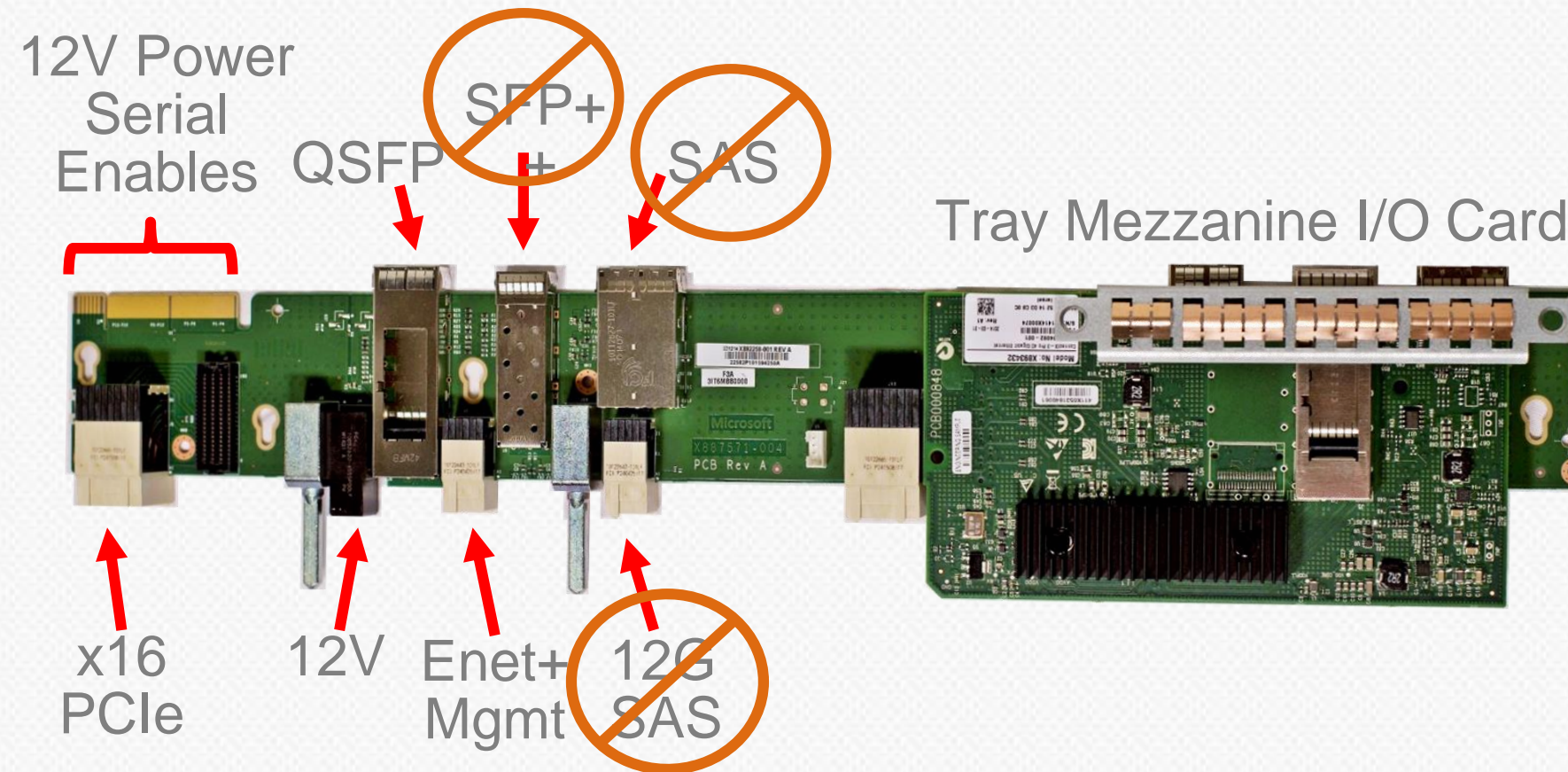


Open CloudServer v2.1 full-wide blade

- Full wide tray supports two CPUs and ten SATA HDDs
 - Lower cost compared to half wide blade + half wide JBOD
 - Removes SAS HBA, internal/external SAS cables, and SAS expander
- Improved airflow supports up to 135W CPUs
 - Remove two HDDs and transition FLASH to PCIe M.2



Open CloudServer v2.1 Tray Backplane



Limited changes from V2.0 to V2.1 tray backplane

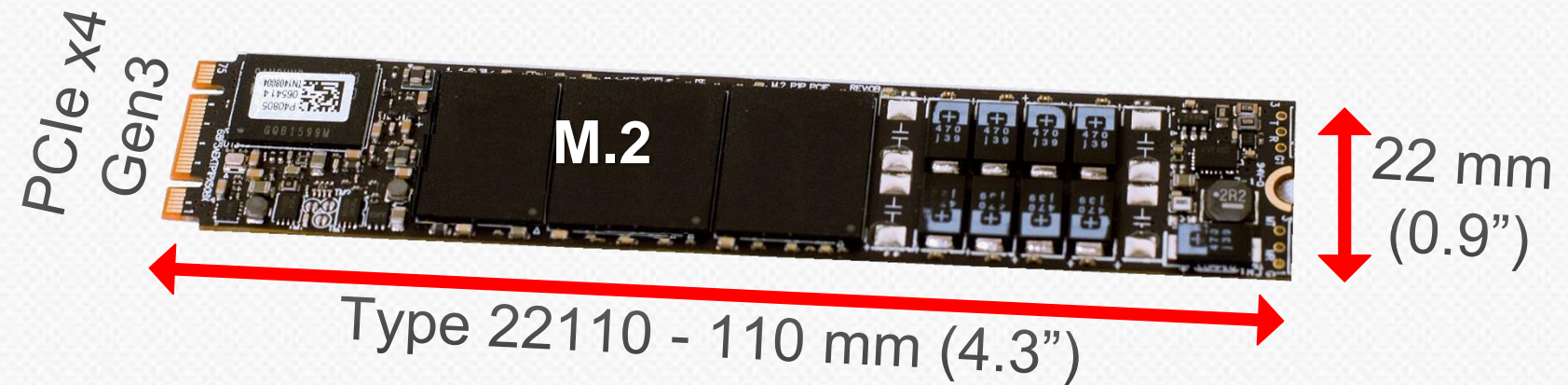
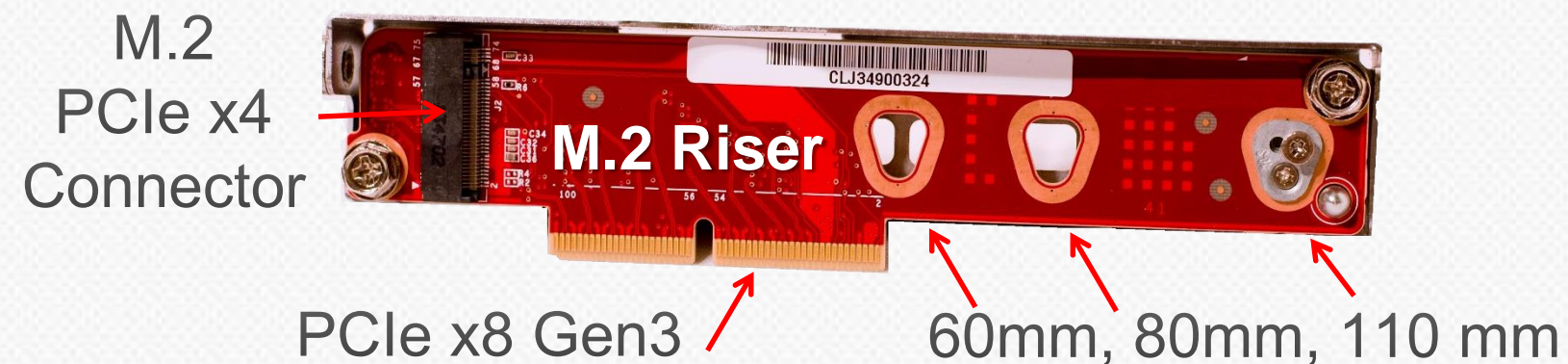
- Removes SFP+ and SAS connectors to reduce cost.
- Enables higher power tray backplane mezzanine cards



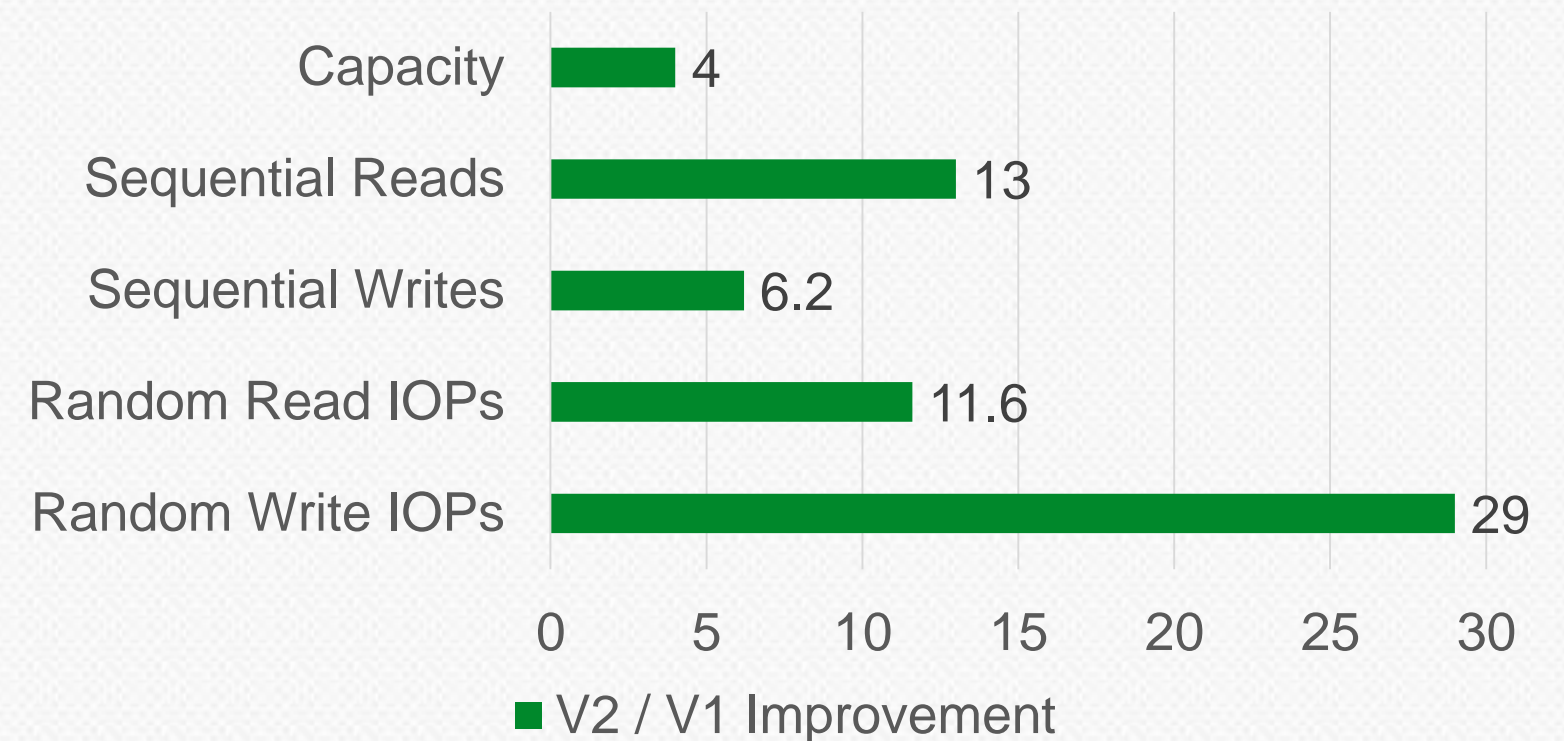
OCS M.2 CloudSSD Optimized Flash

M.2 CloudSSD Flash Drives

- Four risers supporting eight M.2 modules
- PCI-Express Gen3 x4 NVMe
- Multiple lengths: 60mm, 80mm, 110mm
- Vertical provides better thermal than SSD
- Low and high endurance capable



V2 M.2 NVMe Improvement over V1 SSD



Comprehensive Contribution

Open Source Code

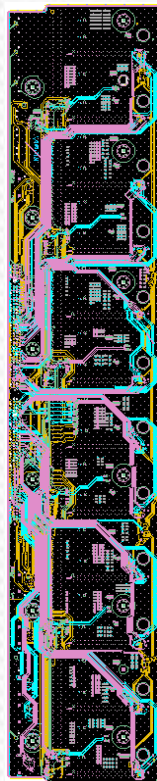
Chassis management
Operations Toolkit
Interoperability Toolkit

Specifications

Chassis, Blade, Mezzanines
Management APIs
Certification Requirements

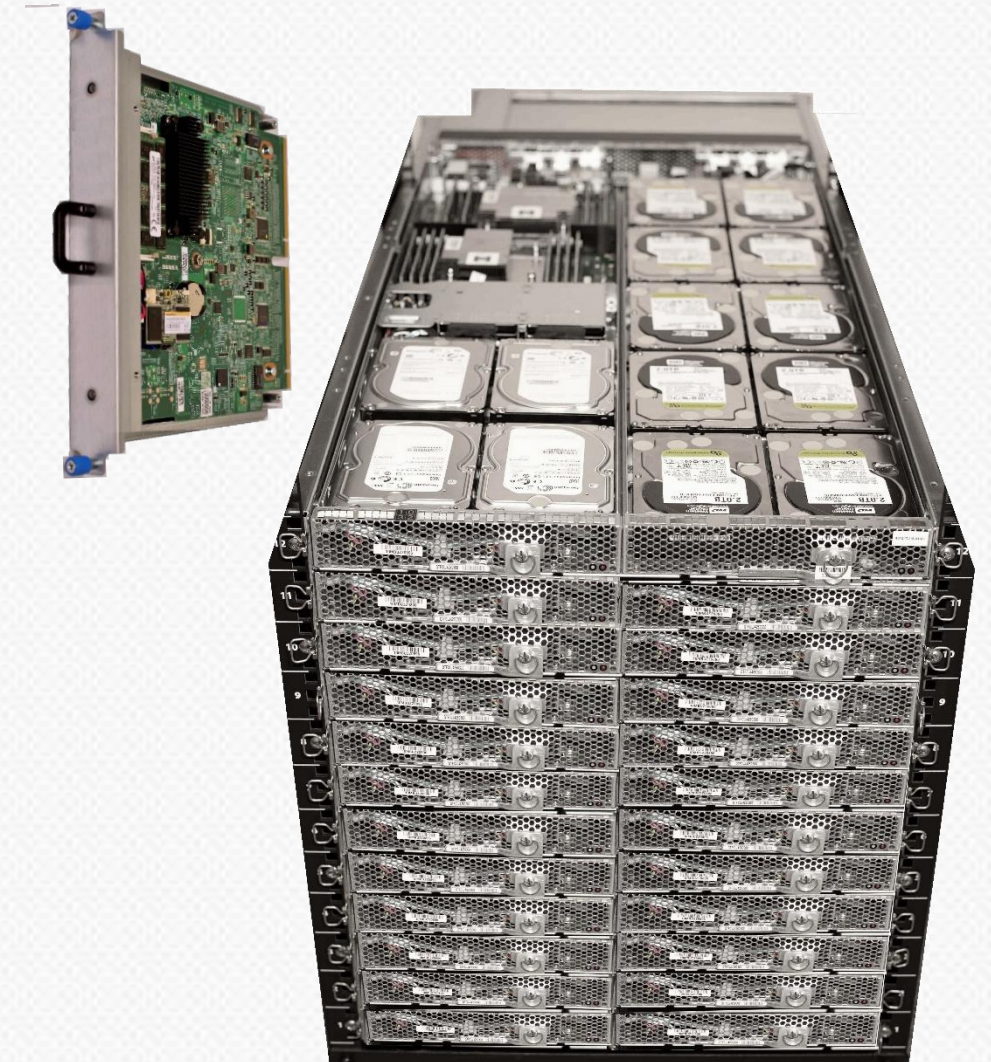
Mechanical CAD Models

Chassis, Blade, Mezzanines



Board Files & Gerbers

Power Distribution Backplane
Tray Backplane



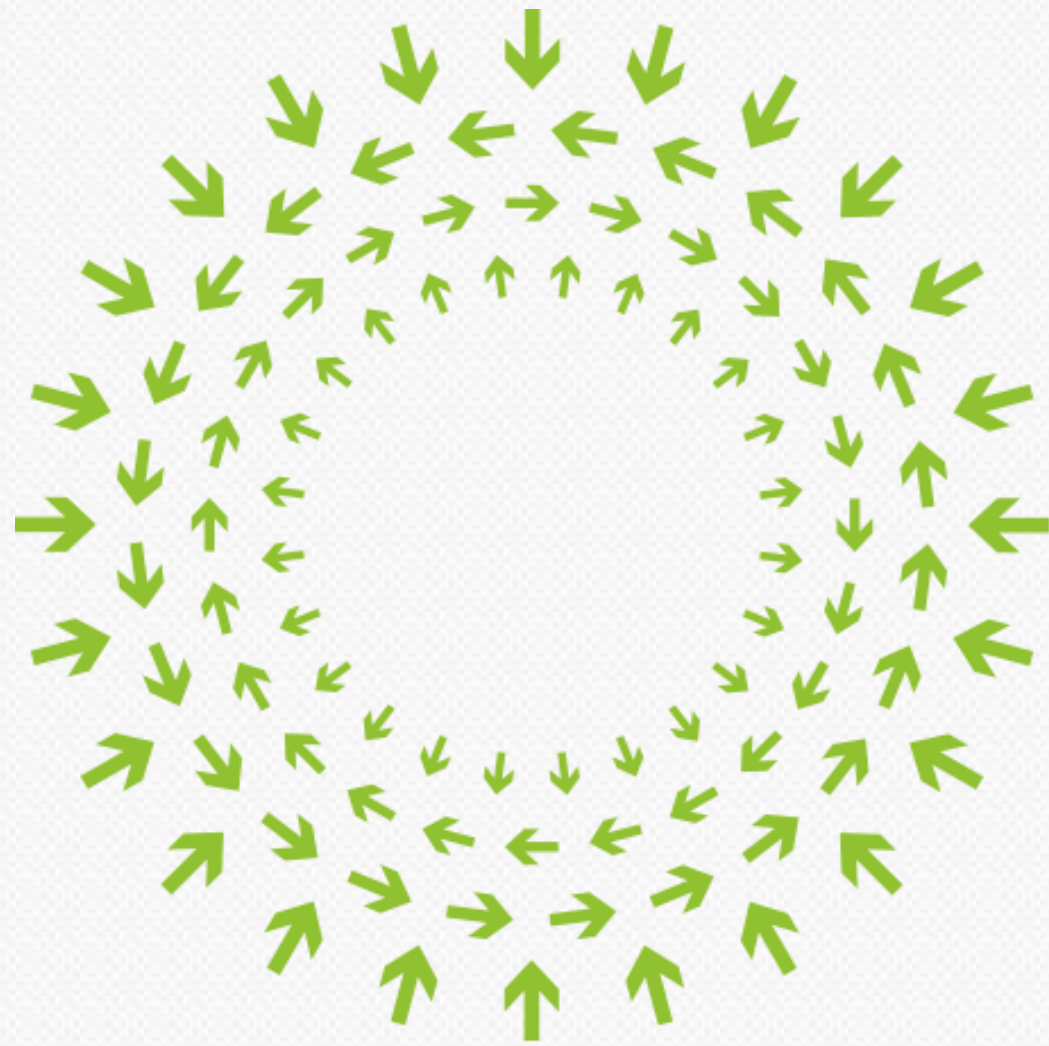
Q&A





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