

OPEN POSSIBILITIES.

The Era of Cloud Native Platforms is Here

Presenting the Ampere® Mt. Jade Reference Platform
with Ampere® Altra® Max™ CPUs



NOVEMBER 9-10, 2021

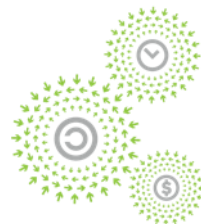


The Era of Cloud Native Platforms is Here

Presenting the Ampere[®] Mt. Jade reference platform
with Ampere[®] Altra[®] Max[™] CPUs

Naren Nayak, Sr. Director for Application Engineering, Ampere Computing
Jayesh Shah, Sr. Director for Platform Strategy, Ampere Computing

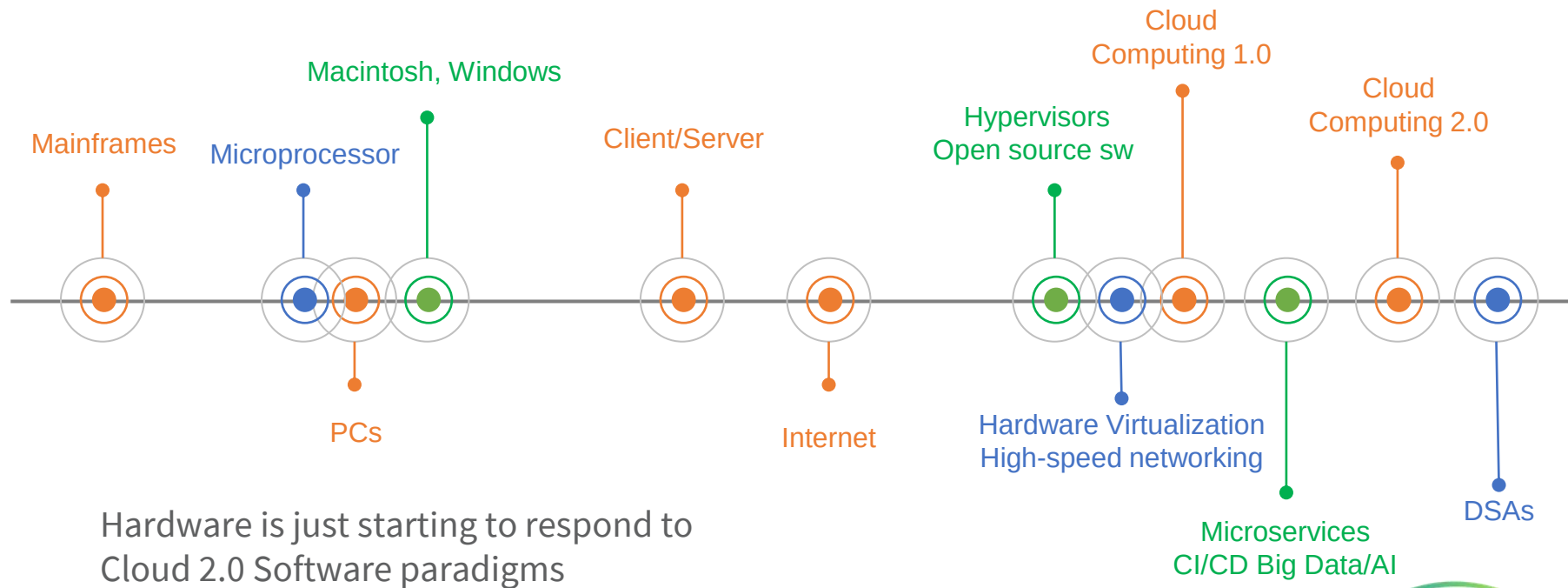
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PLATINUM[™]



A Timeline of Computing Disruptions



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General Purpose Compute Designed for the Cloud –Some Desirable Attributes

Performance
& Core Count

vCPU
performance

Predictability

Energy
Efficiency

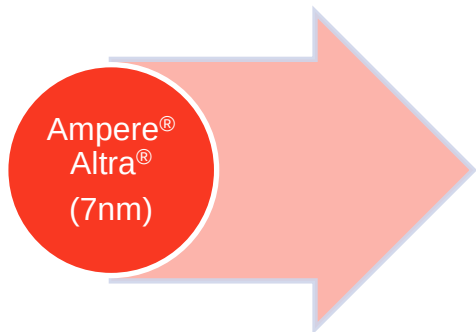
I/O
Capabilities

Open
[Design,
Software,...]

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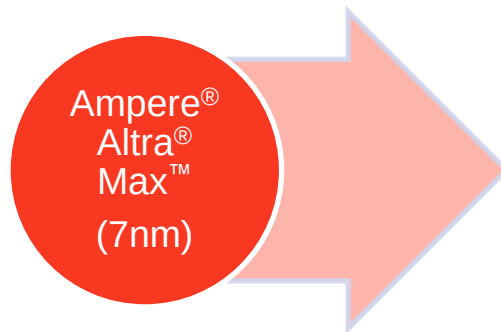
High Core Count

80 cores



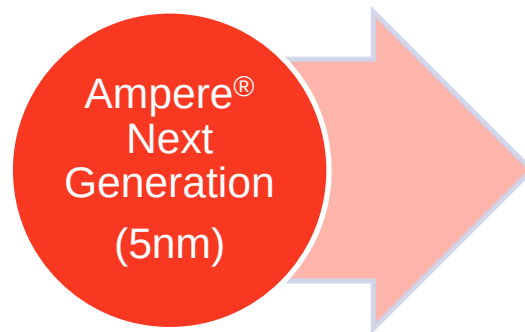
2020

128 cores



2021

128+ cores

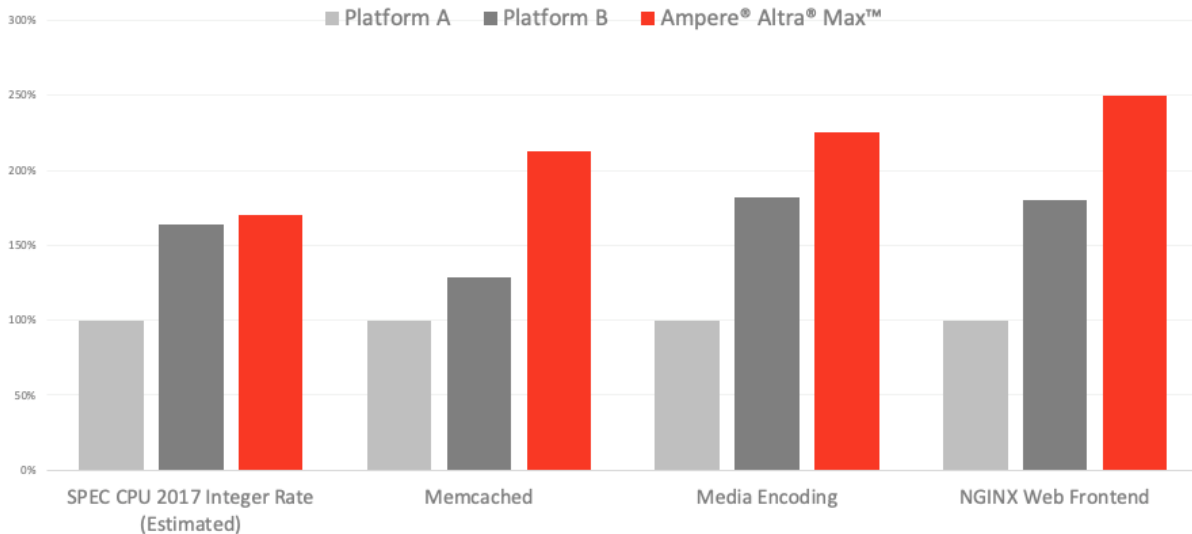


2022

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Compelling Performance

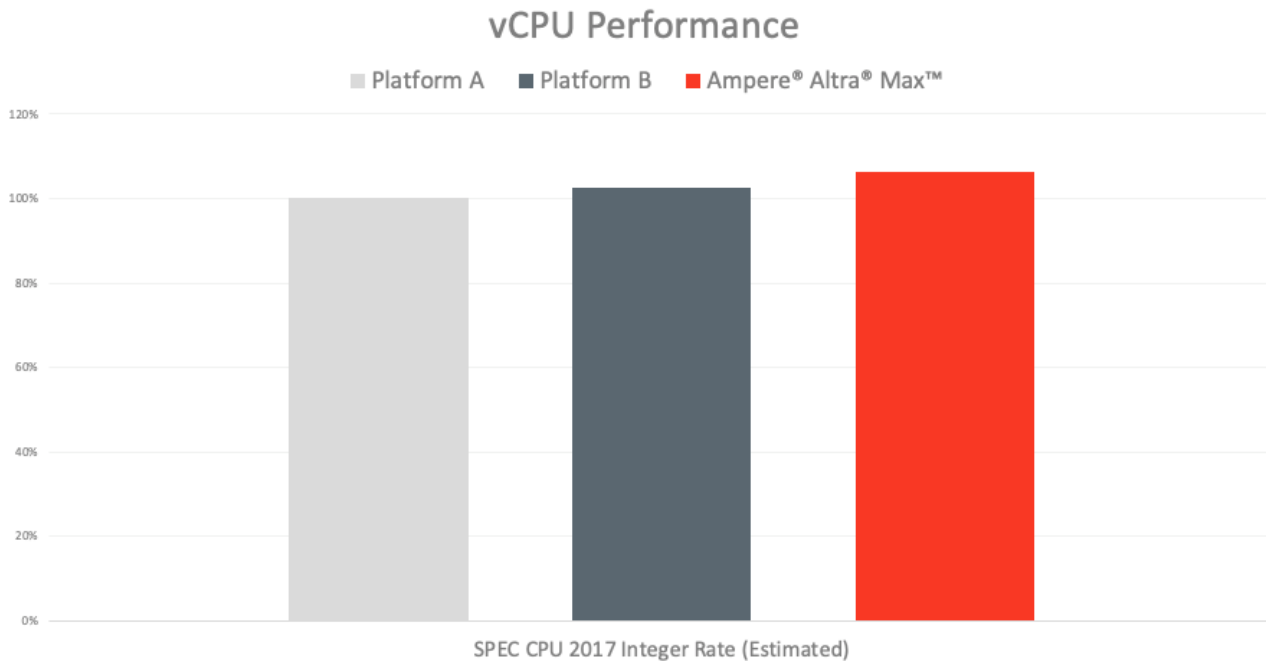
Performance on Cloud Workloads



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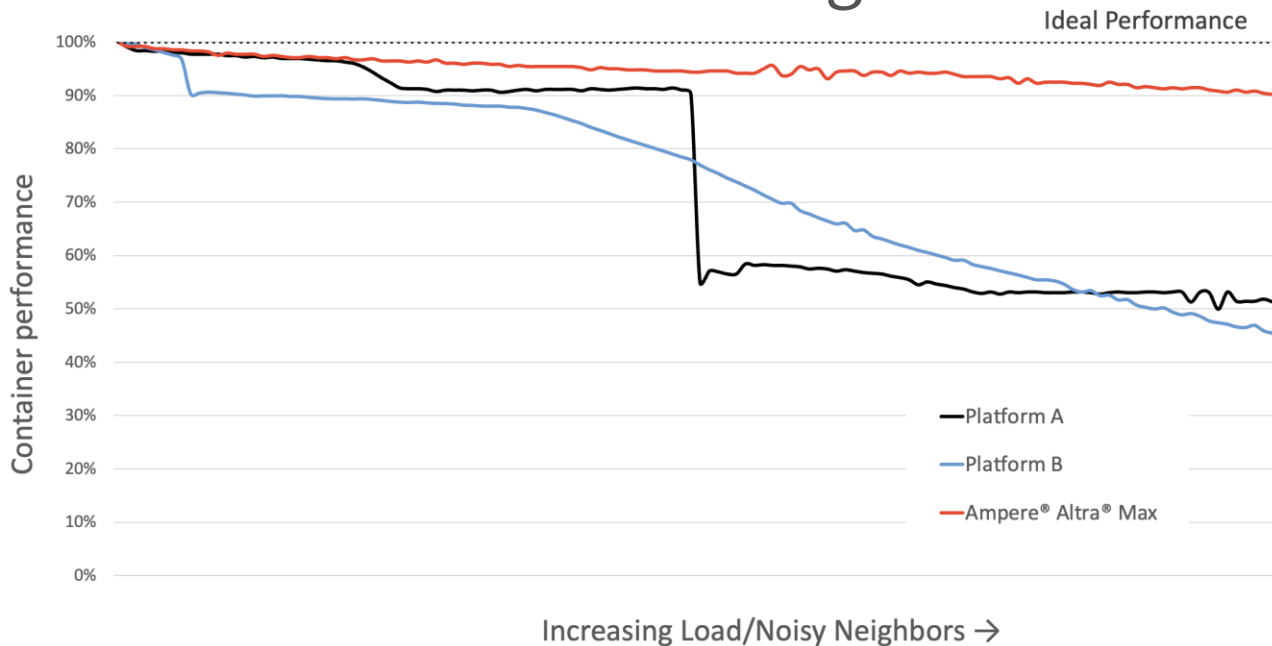
Competitive per-vCPU Performance



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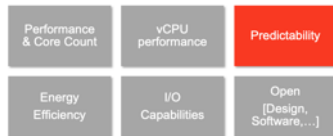
Performance & Core Count	vCPU performance	Predictability
Energy Efficiency	I/O Capabilities	Open [Design, Software,...]

Predictable Performance At High Load

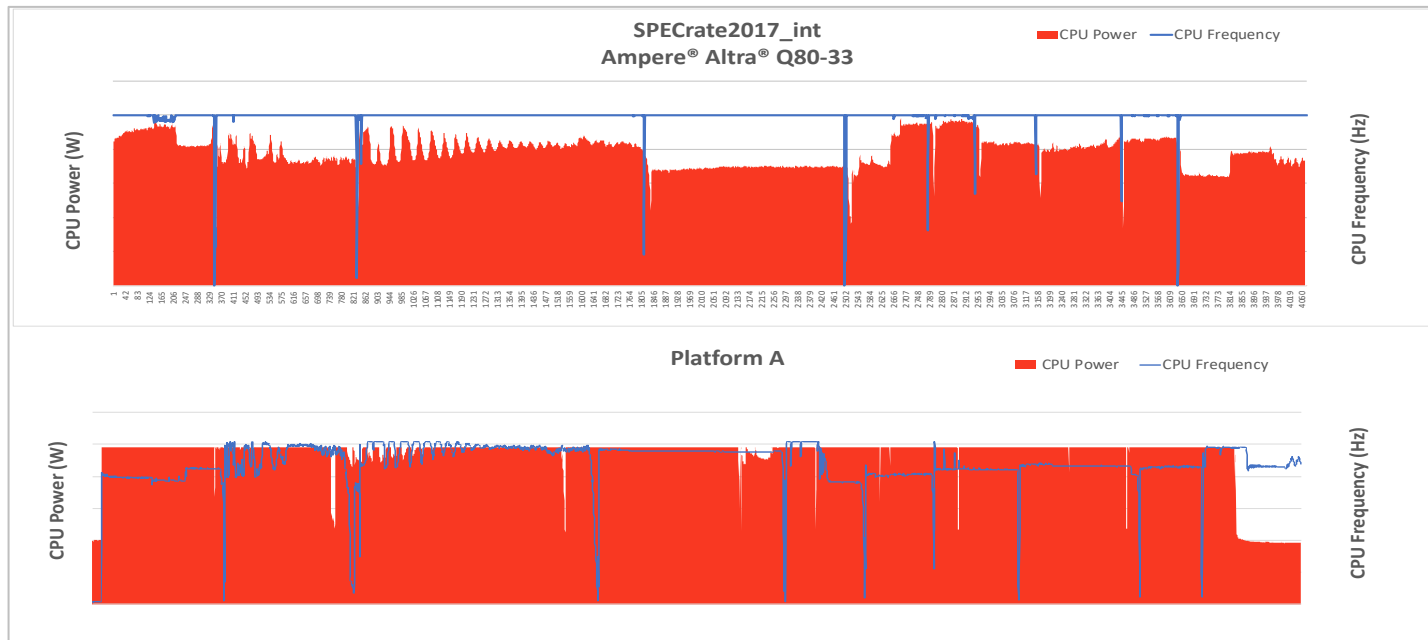


Predictable Performance and Greater
Resistance to Noisy Neighbors

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Excellent Energy Efficiency



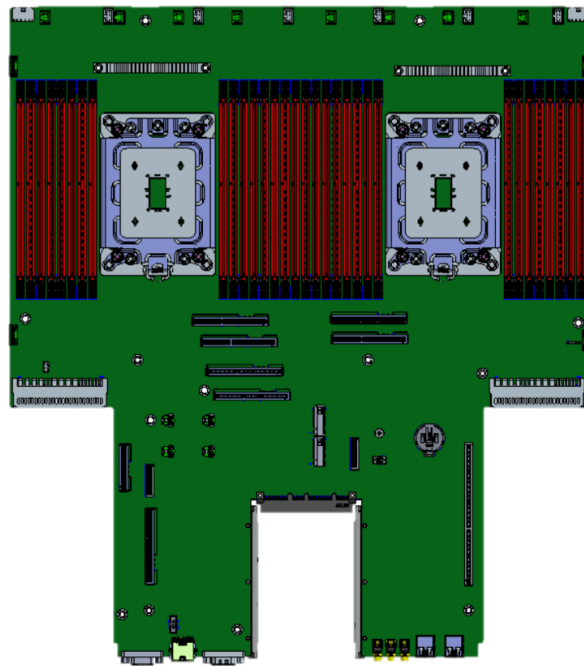
Lower Power Consumption
for Similar Levels of Performance

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Performance & Core Count	vCPU performance	Predictability
Energy Efficiency	I/O Capabilities	Open [Design, Software,...]

Mt. Jade Server Baseboard

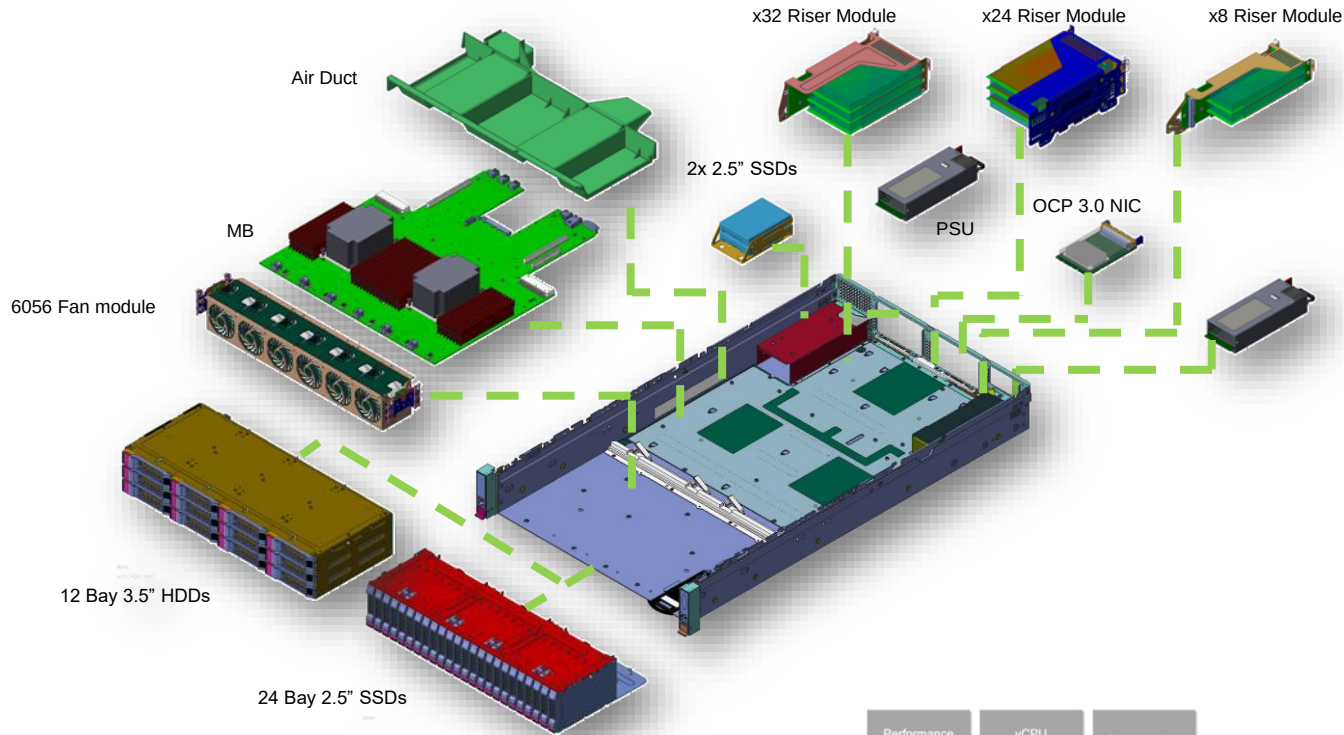
- Socket spread-core motherboard
- 1U and 2U 19" chassis support
- 128-cores Ampere® Altra Max™ or 80-cores of Ampere® Altra® up to 250W TDP
- 8-channels of DDR4-3200 memory supporting 2DPC
- 128 PCIe Gen4 lanes per processor
 - 32 lanes for CCIX P2P
- 2U has 24x 2.5" bays for NVMe drives
- 2U has 6x fans that are hot-swappable
- Two M.2 slots for NVMe drives
- ASpeed BMC
- OCP NIC 3.0 slot in the middle of the platform
- Two PSUs supporting up to 2kW CRPS



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Mt. Jade with 24 NVMe Drives



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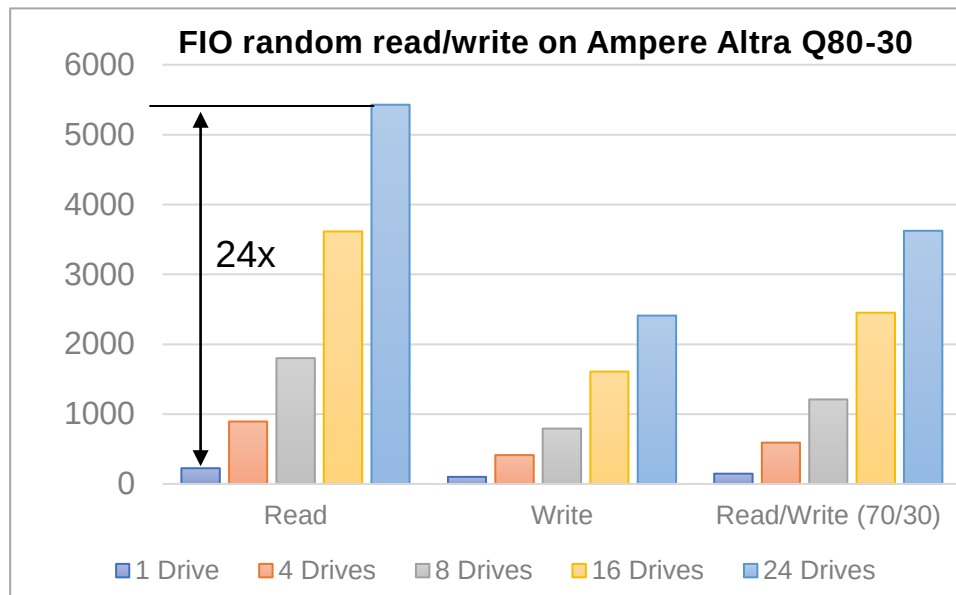
Performance & Core Count	vCPU performance	Predictability
Energy Efficiency	I/O Capabilities	Open [Design, Software,...]

Extreme Storage Capabilities



FIO Optimized Storage Performance:

- Performance scales linearly up to 24 drives
- Random and Sequential operations saturate drive specifications easily
- Low CPU utilization
- Average latency is stable across 24 drive load
- Sequential BW scales linearly up to 82GB/s Read and 21.3 GB/s Write respectively



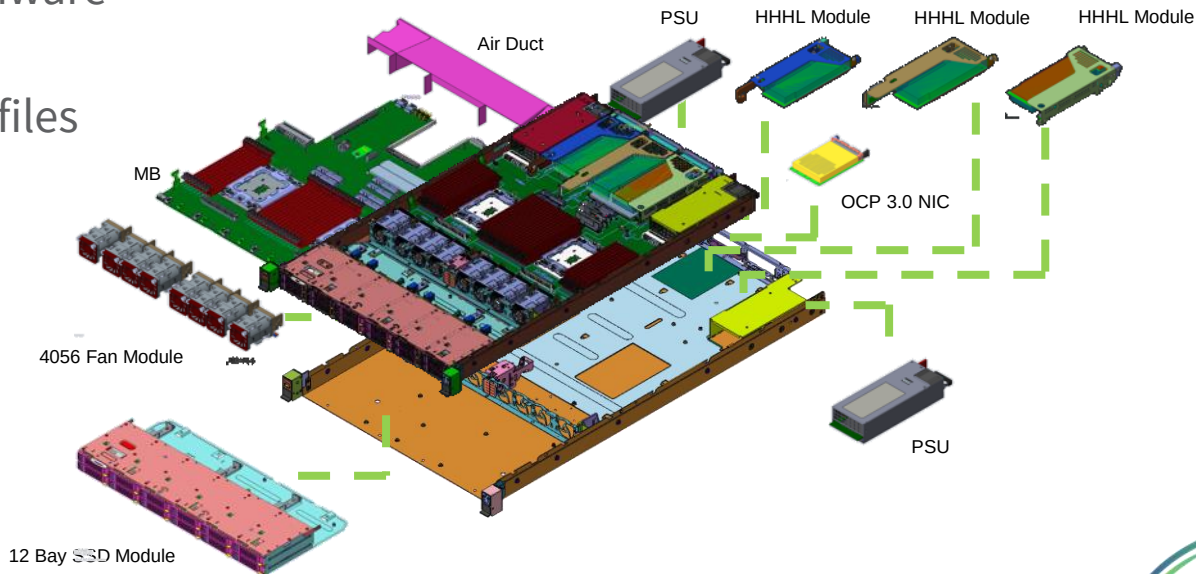
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Complete Mt. Jade Solution Contributed to OCP

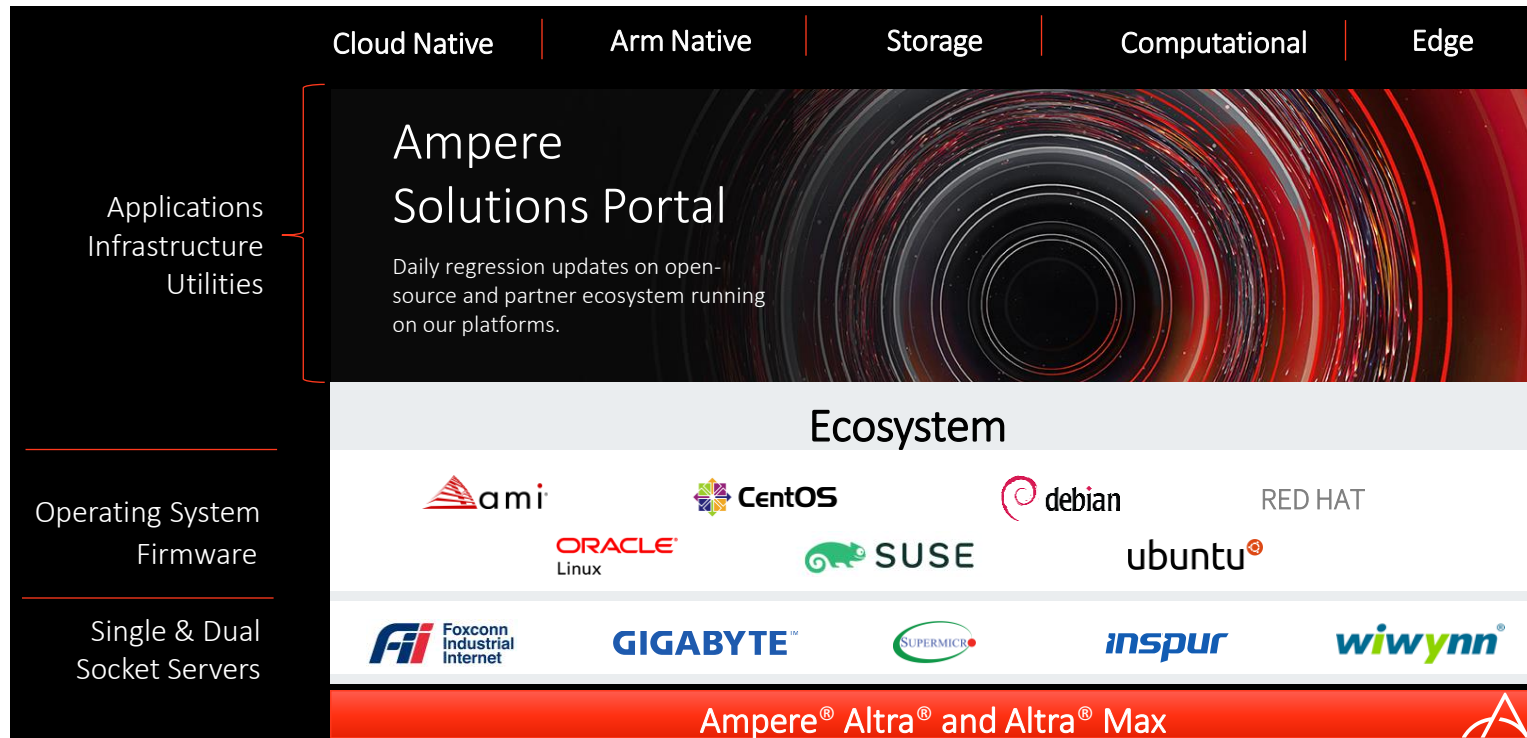
- Board specification
- openBMC firmware
- EDK2 UEFI
- Board design files



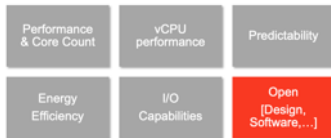
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Performance & Core Count	vCPU performance	Predictability
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Ampere's Expanding Open Ecosystem



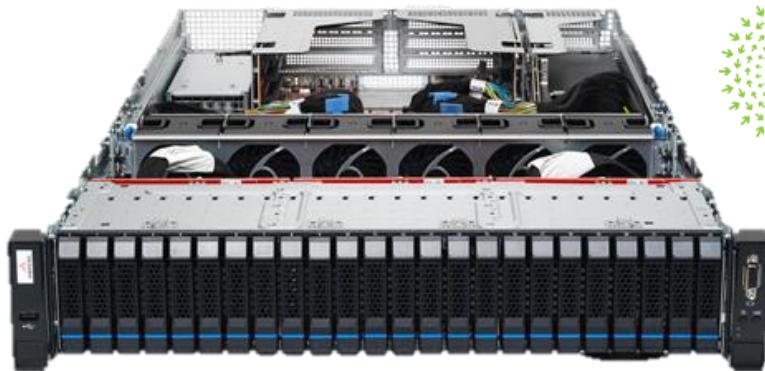
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Product Information

- Ampere Platforms <https://solutions.amperecomputing.com/systems/altra>
- Marketplace Link <https://www.opencompute.org/products>
- Mt. Jade Firmware



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Compute Project
SOLUTION PROVIDER®

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Call to Action

- Get involved in the next-generation General Purpose Cloud Server Specification
- Provide feedback on Ampere's firmware

Where to buy:

<https://www.opencompute.org/products>

Project Wiki with latest specification:

<http://www.opencompute.org/wiki/Server/>

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Open Discussion



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