OPEN POSSIBILITIES.

Open Accelerator Infrastructure Overview

NOVEMBER 9-10, 2021

[OAI]

Open Accelerator Infrastructure(OAI) Project Overview

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OPEN PLATINUM™

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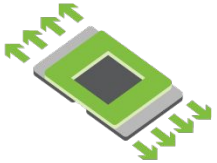
OCP GLOBAL SUMMIT
NOVEMBER 9-10, 2021

Agenda



OPEN ACCELERATOR INFRASTRUCTURE

- OAI Project Overview
- Workstreams
- OAI Group Contribution
- Workshop Sessions

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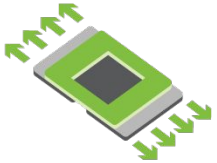
OAI Project Overview



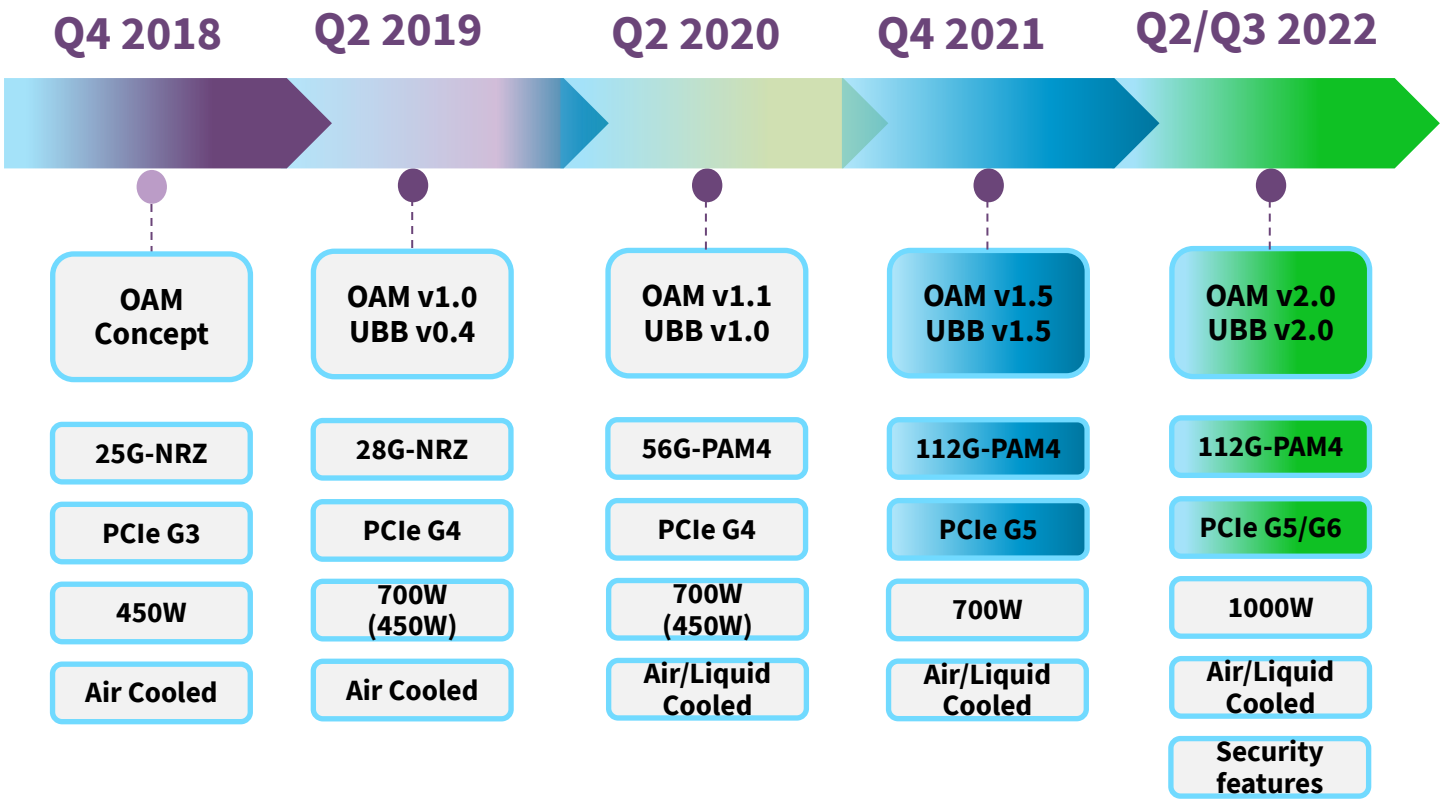
OPEN ACCELERATOR INFRASTRUCTURE

- Formed 3/2019, under OCP Server Project
- To build the infrastructure for a fast adoption of upcoming Accelerator based products that are compliant with the OAM spec
- Scope:
  - physical and logical aspects such as electrical, mechanical, thermal and serviceability
  - management and hardware security,
  - produce solutions compatible with existing/traditional operation systems and frameworks

OPEN POSSIBILITIES.

OAM
Open Accelerator Infrastructure (OAI)
facebook
Alibaba Group
intel
XILINX
zt Systems
Mellanox TECHNOLOGIES
Qualcomm
habana
京东云
Microsoft Azure
NVIDIA
BittWare a molex company
Cambricon 寒武纪
TE connectivity
Baidu 百度
Google
inspur
Lenovo
Enflame
AMD
IBM
wiwynn
hyve design solutions
CoolIT systems
GRAPHCORE
Tencent
molex
PENGUIN COMPUTING
Amphenol
BROADCOM
QCT
Inventec
MICROCHIP

OAI/OAM Timeline



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OAI Group Workstreams

- OAI System
  - UBB/OAM spec revisions, System topology, HIB/Chassis spec ,System management and security requirements
- Power
  - Focus on Power delivery of OAI, including power requirement, design specs, reference designs, etc.
- Cooling
  - Establish specifications, framework, standardization and best practices of Liquid Cooling Solutions for OAI and OAM, from module level to system level; Interchangeability between OAM liquid cooling and OAM air-cooled cards, and fully integrated liquid cooling modules in a server chassis
- High Speed Serdes
  - Next Gen high speed research such as 112G PAM4, PCIe Gen5/6
- OAM Diag Tool
  - Common vendor-agnostic utility for OAM management

Industry Adoption

OAM Current Status

- OAM Spec v1.5 to be released by end of 2021
- We are working with accelerator suppliers to enable their OAM-based solutions

Gaudi OAM
Intel/Habana

OAM
AMD

OAM
Nvidia

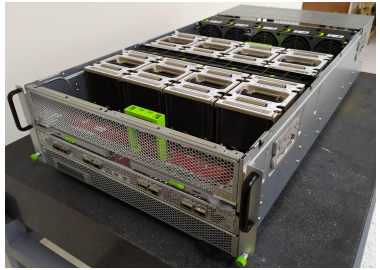
OAM
Xilinx

OAM
Enflame

OAM
Cambricon

PVC OAM
Intel

OAI/OAM Systems



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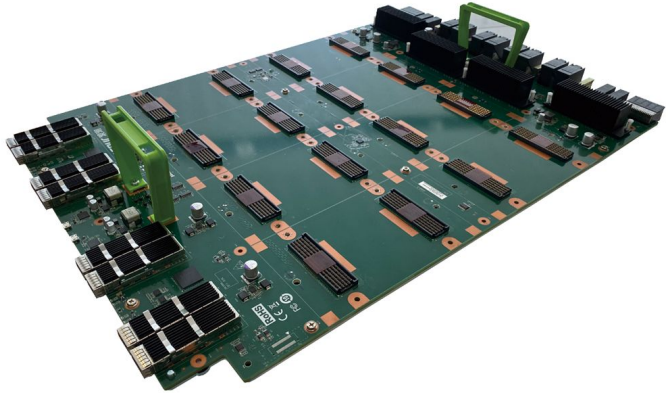
SUPERMICRO hyve design solutions facebook

- OAM
- UBB
- Tray



OPEN POSSIBILITIES.

Agenda

Workshops	Date	Time
Open Accelerator Infrastructure Project Overview	11/10/2021	1:00 PM -1:10 PM
Liquid Cooling: Drivers, timelines and a case for industrial convergence on coolant temperatures	11/10/2021	1:10 PM -1:25 PM
OAI Workstreams Update: System design, High Speed serdes and Power	11/10/2021	1:25 PM - 1:40 PM
Lightning talk for OAI Cooling and OAM Tool	11/10/2021	1:40 PM - 1:50 PM
[Panel] Open and Interoperable AI Training Clusters	11/10/2021	2:00 PM - 2:50 PM
Zion Modular Platform Architecture Overview	11/10/2021	3:00 PM - 3:20 PM
Intel Ponte Vecchio Compute Accelerator OAM Product and System	11/10/2021	3:20 PM - 3:30 PM
[Video] ON-DEMAND: Improvement of OAI System Management		
[Video] OAM Power Delivery Design Challenges and Recommendations		

Call to Action

- Project Wiki with latest specification : https://www.opencompute.org/wiki/Server/OAI
- How to get involved in the Project/Sub-Project Community
  - Mailing list: https://ocp-all.groups.io/g/OCP-OAI

Thank you!