QCT’s New Gen Offering For OCP & Olympus

Alan Chang/QCT
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<thead>
<tr>
<th>Event</th>
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<td>QCT’s New Gen Offering for OCP and Olympus</td>
<td>Tuesday March 20</td>
<td>12:50pm - 1:05pm</td>
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<td>OCP Design for EIA Adoptions</td>
<td>Tuesday March 20</td>
<td>3:45pm - 4:10pm</td>
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<td>Quanta QCT Project Olympus</td>
<td>Wednesday March 21</td>
<td>9:30am - 10:00am</td>
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Openness is the Industry’s Biggest Trend!!

QCT is fully dedicated to the Open Compute Project.
Industry Trend – Data Fabric in Cold Aisle

facebook
Open Rack

Microsoft
Olympus

Tencent
Alibaba Group
Baidu
Scorpio
QCT has the most OCP design Building Blocks deployed by CSPs

This year, we are adding even MORE to an already rich product line
Tioga Pass Overview
OCP Compute Server Refresh

• **Intel Next Generation Platform**
  - Supporting the latest and most powerful Intel® Xeon® Skylake-SP processor family
  - Up to 1.5TB 2666 MHz DDR4 memory

• **Maximize Performance while Reducing Eco-footprint**
  - Eco-Friendly completely Halogen free board and component design

• **Uniform Scale-up and Scale-out Building Block**
  - Scale out on Capacity and Computing

• **High Reliability, Serviceability and Availability**
  - Incredible level of business continuousness

• **Air Cooling thermal design for existing infrastructure**
  - Support up to 165W processor TDP with ambient operating temperature of up to 40°C* to reduce operating costs

40°C* is stretch goal, 35°C is spec
Modular Infrastructure Allows Simplicity and Flexibility
add or remove building blocks as needed
One Infrastructure with Wide Application Coverage

High Performance Compute Sled
Intel® Xeon® Skylake SP family

High Density Compute uServer
Intel® Xeon® D-1500 family

High Capacity All Flash NVMe
(16x per tray)
Intel® P3520 NVMe
optional Intel® Xeon-D compute node
Yosemite v2

Open Compute Project Microserver

Up to 4 Xeon® D-2100 Family SOC per Sled*
Up to 18 NVMe M.2 per Sled*
Up to 16 Nodes In 4OU Rackmount

* Depends on module configuration
Yosemite v2
Multi-Node, Multi-Sled Microservers

- High-end Performance at Low-end power consumption
  - Supporting the Intel® Xeon® Skylake-D Processor family
  - Up to 128G 2666MHz DDR4 memory
- Glacier Point Module Support
  - (6) M.2 per board for up to 12x NVMe/SATA per sled
- Multi-Host Networking Aggregation
  - SuperNIC supports (4) Node I/O aggregation
- Ultra Dense Chassis Design
  - High density 4OU 4 Sled for total of 16 node high density design
Yosemite v2 Front View
Yosemite v2 Modules
Twin Lakes Motherboard

Front View
- Memory Slots
- Intel® Xeon® Skylake D-2100
- 160mm (6.29"

Rear View
- Memory Slots
- M.2 SATA / PCIe 2280
- M.2 PCIe 22110
- M.2 PCIe 22110
- 210mm (8.27"

Dimensions:
- Front View: 160mm (6.29"
- Rear View: 210mm (8.27"

Intel® Xeon® Skylake D-2100
Yosemite v2 Modules
Flexible Workload Modules – Glacier Point

Glacier Point Module:
- Increase cache/storage capacity
- 6x PCIe M.2 SSD* adaptor

* Replaces a Twin Lake compute module
Crane Flat Module: Increase network bandwidth with 100Gb OCP mezzanine *

* Replaces a Twin Lake compute module
Yosemite v2

**CPU:** 1x Intel® Xeon Skylake-D 2100 SOC (up to 105W TDP) per Node

**DIMM slots:** 8x 2666MHz DDR4 RDIMM per Node

**Storage:**
- 1x 2280 SATA/PCIe M.2 per Node
- 2x 22110 PCIe M.2 per Node

**Expansion Modules (up to 2 per sled):**
- Glacier Point: 6x 22110 PCIe M.2 SSD
- Crane Flat: 1x PCIe x16 3.0 OCP Mezzanine NIC
Big Sur Refresh with Intel® Xeon Scalable Processor Motherboard
Also refreshed with V100 GPU card support
Rackgo X Big Sur Refresh

Open Compute Project GPU server

Up to **2** Intel® Xeon® Scalable Processor
Up to **4** onboard PCIe/SATA M.2
Up to **8** Dual-Width PCIe Gen 4 GPUs
Up to **24** Memory Modules
Truly Dedicated to OCP Philosophy

- MB will contribute back to community for upgrade
- PCIe Gen4 GPU baseboard PoC
Rackgo X Big Basin with V100 Refresh

Industry First JBOG with NVLink Support

Up to 8 Nvidia Tesla P100/V100-SXM2 modules
Up to 4 PCIe Host uplink/downlink slots
Up to 116 TFLOPs in FP32 throughput

* Refreshed with NVLink 2.0 to support Tesla V100
Rackgo X Big Basin
Execute Deep Learning Algorithms Like Never Before

- **Industry First JBOG – Just a Bunch of GPUs**
  - The first ever pure GPU enclosure design with SXM2 support
  - Host up to 8 Tesla P100/V100-SXM2 via NVLink interconnect

- **NVLink Enabled Architecture**
  - High-bandwidth, energy-efficient interconnect for ultra-fast communication

- **Flexible GPU ratios (8x SXM2) for Specific Workloads**
  - Deep Learning SKU: 1x host with 8x SXM2
  - Business Analytics (BA) SKU: 2x host with 4x SXM2 each
Big Basin Front View

- 2x PCIe x8 Expansion slots
- 4x PCIe x16 Host uplink or downlink Expansion slots
- Debug Port v2
- Dedicated Mgmt Port
- Debug Port v1
Big Basin Top View

IO board
(2) PCIe Gen3 x8 slot

FHHL PCIe Gen3 x16 slot

SXM2

SXM2

SXM2

SXM2

PLX

PLX

PLX

PLX

BMC
We are also adding Project Olympus DX-88 to our line up.