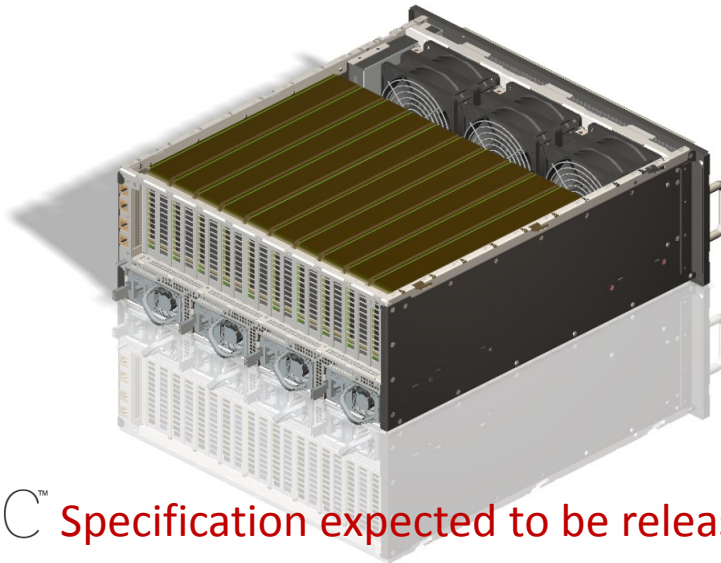## Next Generation Accelerated Server Platform

A rack mount COM·HPC **server with support for up to 20x PCIe Gen 4 full-sized cards for service acceleration and high bandwidth I/O**
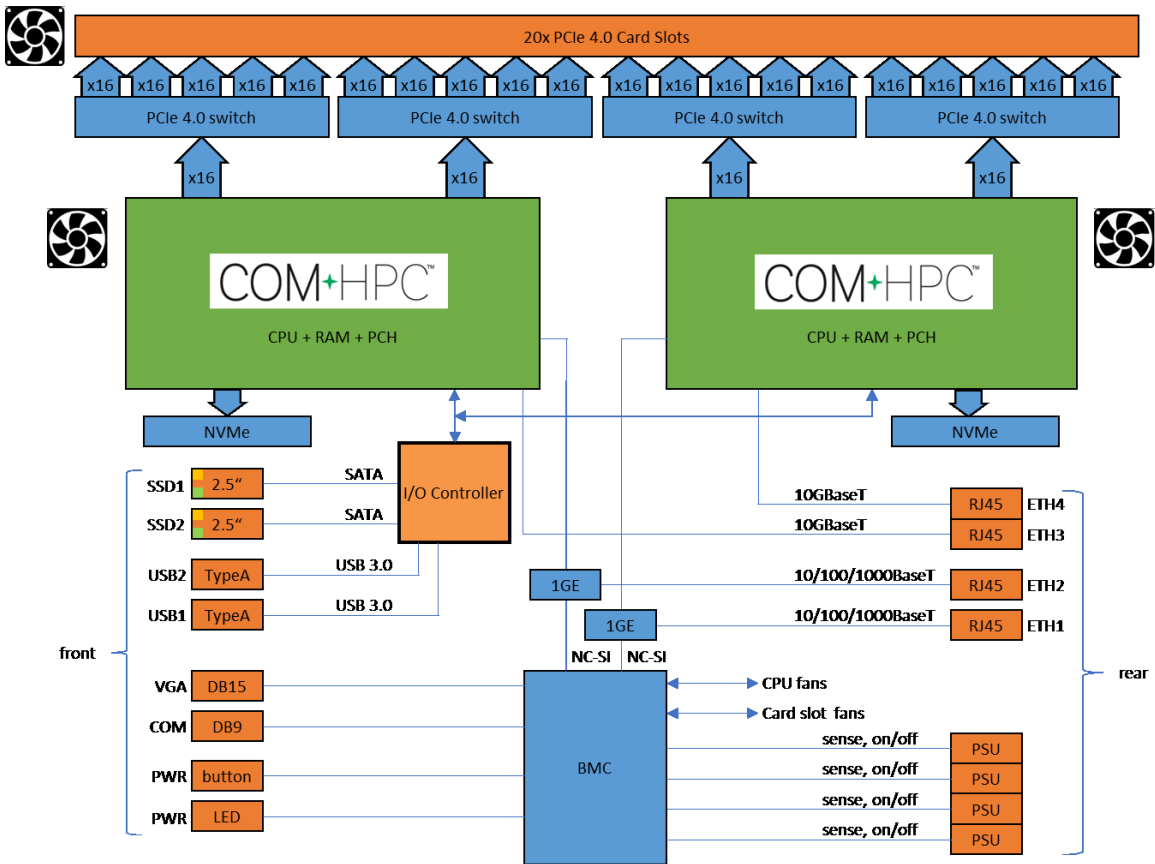
Compatible to

COM
HPC™

Draft Specification

PICMG®

* COM·HPC™ **Specification expected to be released end of Q2 2020**

Ideal for high performance computing, deep learning, artificial intelligence, storage services and block chain calculation applications.

➢ Combine your selection of accelerating hardware with an PICMG® COM·HPC CPU modules. Utilizing the huge market for COTS and custom products being designed for PCI Express card slots. you can add your own IO and payload configuration to meet your specific requirements.

➢ This platform provides you with a compact 4u, 500mm deep rack mountable environment for twenty full sized PCIe 4.0 cards. With high power density and optimized thermal performance it's ideal for compute cards with high power consumption and significant data traffic.

➢ Server with up to two COM·HPC modules based on AMD Ryzen, EPYC Rome or Intel ICE Lake CPUs, future processor generations is an embedded part of this platform. This includes standard server I/O with VGA, USB and Ethernet and two 10Gbps Ethernet interfaces on top.

➢ The platform infrastructure can be powered, monitored and maintained remotely as per high-end data center server applications.

➢ Dual redundancy is available for mission critical applications.

20 SLOT-PCIe PRODUCT DATASHEET

COMTEL ELECTRONICS

Block diagram labels:

20x PCIe 4.0 Card Slots

x16 x16 x16 x16 x16 | x16 x16 x16 x16 x16 | x16 x16 x16 x16 x16 | x16 x16 x16 x16 x16

PCIe 4.0 switch | PCIe 4.0 switch | PCIe 4.0 switch | PCIe 4.0 switch

x16 | x16 | x16 | x16

COM·HPC™ — CPU + RAM + PCH | COM·HPC™ — CPU + RAM + PCH

NVMe | NVMe

SSD1 2.5" — SATA — I/O Controller
SSD2 2.5" — SATA
USB2 TypeA — USB 3.0
USB1 TypeA — USB 3.0

front

VGA DB15
COM DB9
PWR button
PWR LED

1GE
1GE
NC-SI NC-SI

BMC

10GBaseT — RJ45 ETH4
10GBaseT — RJ45 ETH3
10/100/1000BaseT — RJ45 ETH2
10/100/1000BaseT — RJ45 ETH1

CPU fans
Card slot fans
sense, on/off — PSU
sense, on/off — PSU
sense, on/off — PSU
sense, on/off — PSU

rear

Features

PCIe card cage
- 20x full-size card slots
- 4x PCIe x16 Gen 4.0 from CPU
- PCIe x16 Gen 4.0 to each slot
- Active air flow from edge to bracket
- Power budget:
  - 500-3600W with 80-140VAC
  - 1300-7500W with 180-260VAC

CPU
- 2x COM·HPC™ modules with
- 8x DDR4-3200 DIMM with ECC
- Up to 1 Tbyte (8x 128GB DIMM)

Storage
- 2x 2.5" SATA drive bay (9mm)
- 2x NVMe 4.0 slots

I/O
- VGA (up to 1920x1200)
- 2x USB 3.0
- 2x 10/100/1000BaseT
- 1x RS232
- 2x 10GBaseT

Remote over Ethernet
- KVM
- IPMI 2.0 (power and cooling)

Dimensions
- 4U, 19" rack, 500mm deep

Environment
- 90-260VAC, up to four power cords
- 0-40°C ambient temperature, non-condensing