HYPER CLOUD APPLIANCE
CSP-7550

The CSP-7550 is a combination server-switch hardware appliance based on 8- or 16-core Intel® Xeon® processors. The switch system includes 32 QSFP28 (100 GbE) network ports based on a P4 programmable Intel Tofino chipset, all contained within a single 2RU chassis form-factor.

The Intel® Xeon® Purley platform increases CPU capacity and performance for virtual machine consolidation and density, as well as boosting memory bandwidth (four channels). The flexible CSP-7550 design supports 8 DDR4 DIMM slots per CPU, with local storage options including two SATA III or PCIe. The hardware platform is truly open, either install an available operating system and application software that suits your needs, or build your own customized device that represents a solid future-proof investment.

The CSP-7550 supports four open PCIe slots for customers to choose any standard FPGA, smart NIC, AI/ML etc PCIe cards for different applications. The CSP-7550 also supports an optional FPGA card that has a high-speed (6x100G) connection to the Tofino 64Q chipset. Customers can choose a SKU bundled with one or four Edgecore FPGA cards. With the FPGA cards, the CSP-7550 is able to support extra-large tables and service millions of HQoS sessions.

The CSP-7550 is an ideal solution for load balancing (L4 and L7 network load balancer), firewall (virtualized security appliances), network visibility, performance monitoring, and mobile LTE/5G gateways (hybrid 4G/5G).

Key Features and Benefits

- Dual processor sockets
  Intel® Xeon® processor family
  Up to 28 cores, 56 threads per socket
  Improved performance of Intel® DPDK due to Intel® AVX-512
  8 DIMM slots per socket for DDR4 2133/2400/2666 MHz ECC LRDIMM or RDIMM
- Flexible local storage options for optimized system performance:
  M.2 interface support NVMe PCIe3.0 x4 lane and SATA3.0
- Network switch interfaces:
  32 x 100GbE QSFP28 ports
- 4 open PCIe slots, 2 full-height (PCIe Gen3 x16) and 2 half-height (PCIe Gen3 x8)
- Dual redundant AC PSUs
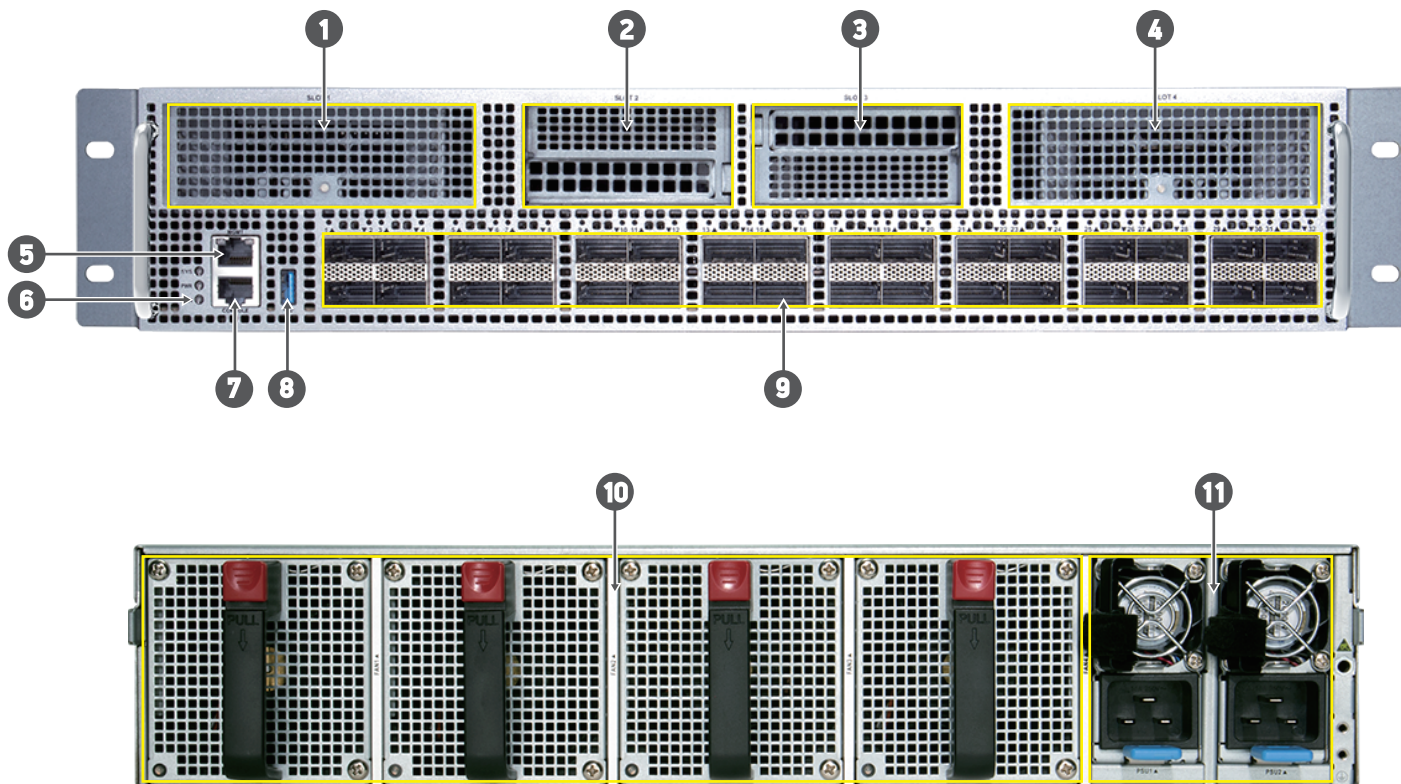- Remote management through a Baseboard Management Controller (BMC)

Product Applications

- Server Load balancer (SLB)
- Network Packet Broker (NPB)
- Broadband Network Gateway (BNG)
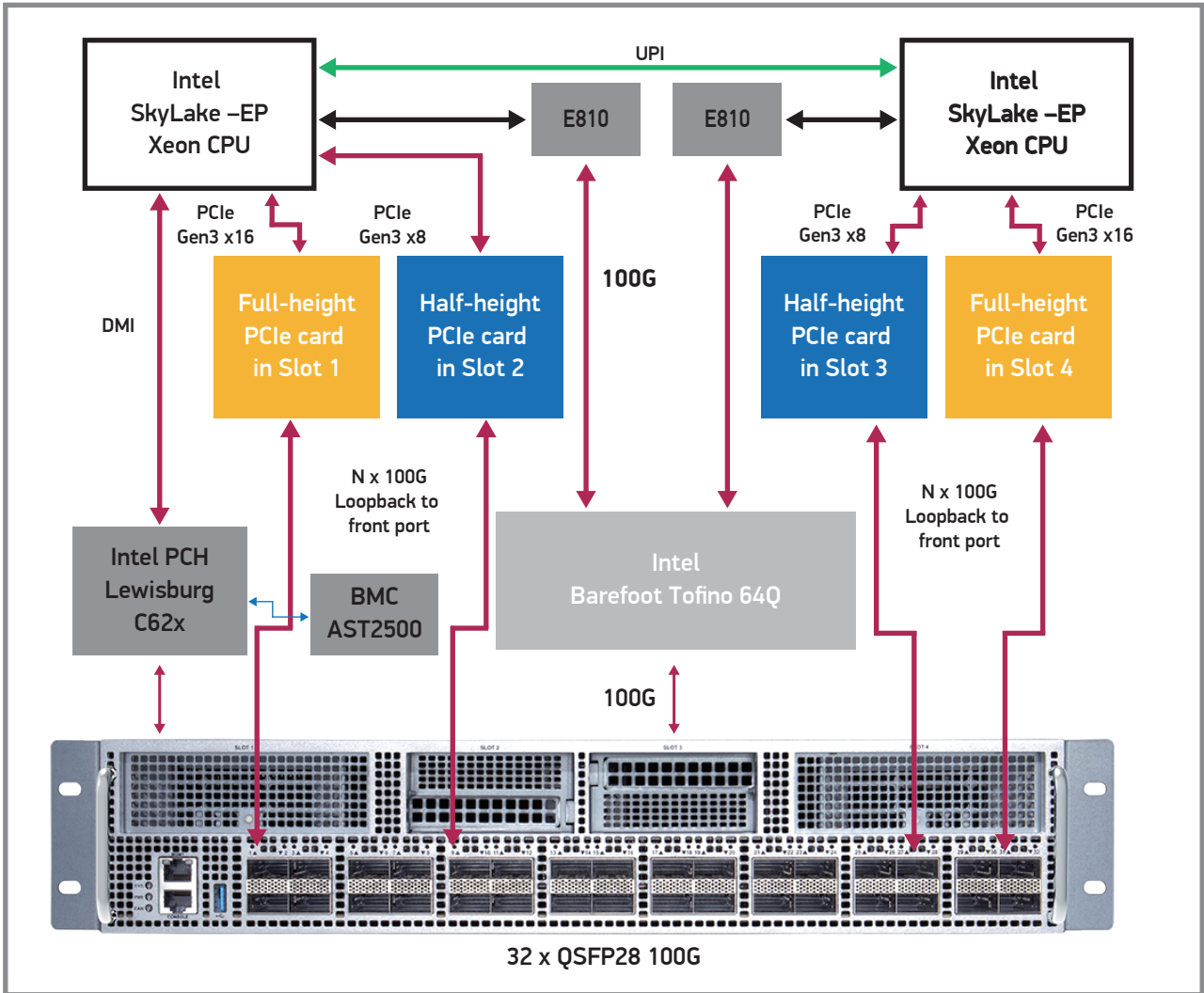- 5G User Plane Function (UPF)

Freedom of choice
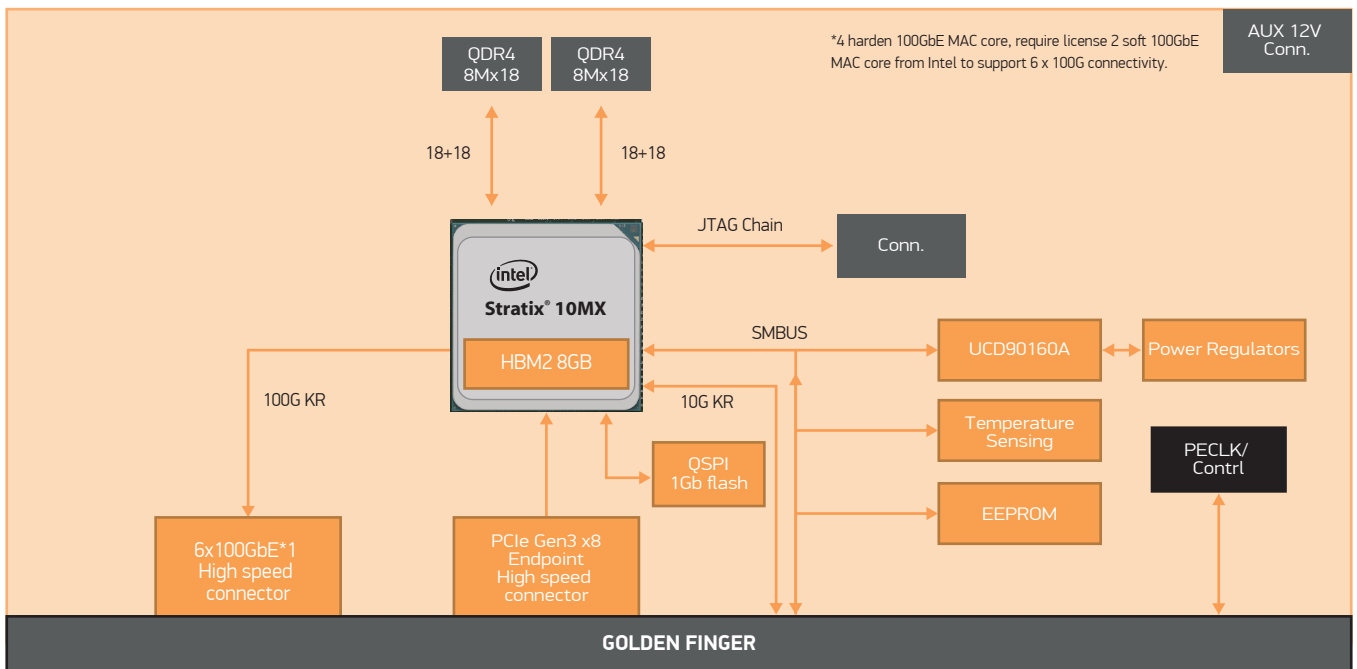Greater control
Rapid innovation
Reduced CAPEX and OPEX

Free Software Included

⊙nιe

Interfaces

Description

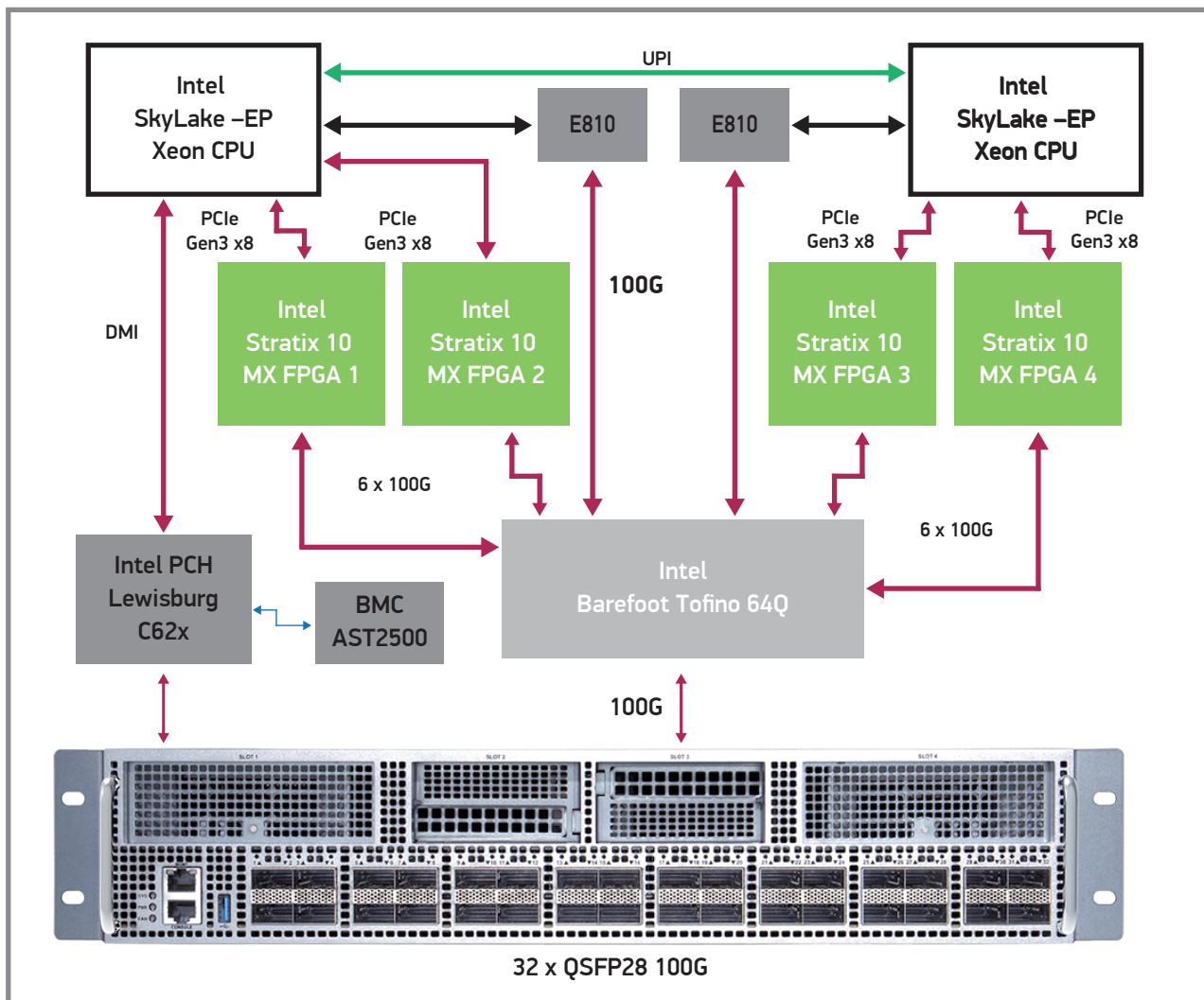|			
1	Slot 1 full-height PCIe slot	7	Console port
2	Slot 2 half-height PCIe slot	8	USB storage port
3	Slot 3 half-height PCIe slot	9	32 x 100G QSFP28 ports
4	Slot 4 full-height PCIe slot	10	3+1 redundant fans
5	Management port for CPU and BMC	11	1+1 AC PSUs
6	System/Thermal/Power LEDs		

CSP-7550 Block Diagram

Optional FPGA Card Block Diagram

CSP-7550 with Optional FPGA

Intel SkyLake –EP Xeon CPU

UPI

Intel SkyLake –EP Xeon CPU

E810

E810

PCIe Gen3 x8

PCIe Gen3 x8

PCIe Gen3 x8

PCIe Gen3 x8

100G

DMI

Intel Stratix 10 MX FPGA 1

Intel Stratix 10 MX FPGA 2

Intel Stratix 10 MX FPGA 3

Intel Stratix 10 MX FPGA 4

6 x 100G

6 x 100G

Intel PCH Lewisburg C62x

BMC AST2500

Intel Barefoot Tofino 64Q

100G

SLOT 1

SLOT 2

SLOT 3

SLOT 4

32 x QSFP28 100G

Form Factor

■ 2RU rack mount

Processor System

■ Processor: 2x Intel® Xeon® Silver 4110 (8-Core, 2.1 GHz) or Intel® Xeon® Gold 5218 (16-Core, 2.3 GHz)
■ Core Number: Support up to 8 or 16-Core with Intel HT technology

Memory

■ DDR4: 128GB (CSP-7550-8C)/256GB (CSP-7550-16C) RDIMM/ 512GB (CSP-7550-16C1FPGA), 2666MHz
■ ECC Support: Yes

Networking

■ Switch Chip: Tofino BFN-T10-064Q-B0
■ Switch Capacity: Up to 6.4 Tbps switching capacity

FPGA Card

■ Intel Stratix MX with 8GB High Bandwidth Memory (HBM2)

Ethernet I/O

■ 100G: 32 x 100G QSFP28
  Each supporting 1 x 100GbE, 1 x 40GbE or via breakout cables 100GbE to 4 x 25GbE or 40GbE to 4 x 10GbE

Management

■ BMC Chip: AST2500
■ Ethernet: 1 x GbE RJ-45 for CPU and BMC
■ Console: 1 x RJ-45 console for CPU
■ USB: 1 x USB 3.0

Local Storage

■ 240GB M.2 SSD (CSP-7550-8C)
■ 240GB M.2 SSD (CSP-7550-16C)

Power Supply

■ Power Type: 2 x redundant 2500 W AC PSUs
■ AC Input: 90-264 VAC @ 47-63 Hz
■ Watts: 2 x 2500 W (1+1 redundant, 2500 W each)

System Fans

■ 3+1 hot-swappable redundant fan modules

System Power Consumption

■ Max power consumption:
  CSP-7550-8C: 1410 W
  CSP-7550-8C2FPGA: 1710 W
  CSP-7550-8C4FPGA: 2010 W
  CSP-7550-16C: 1490 W
  CSP-7550-16C1FPGA: 1640 W
  CSP-7550-16C2FPGA: 1790 W
  CSP-7550-16C4FPGA: 2090 W

Software

■ Switch is loaded with Open Network Install Environment (ONIE) software installer
■ Compatible with the following NOS options: open source options, plus commercial NOS offerings

Dimensions

■ 440 (W) x 800 (D) x 87 mm (H)

Weight

■ 26.725 kg

Environment

■ Operating Temperature: 0 to 40°C
■ Operating Humidity: 20% - 90% RH
■ Storage Temperature: -20 to 70°C
■ Storage Humidity: 5% - 90% RH

Compliances

■ EMC/Safety: CE, FCC Full
■ RoHS

Warranty

Please check www.edge-core.com for the warranty terms in your country.

For More Information

To find out more about Edgecore Networks Corporation products and solutions, visit www.edge-core.com.

About Edgecore Networks Corporation

Edgecore Networks Corporation is in the business of providing innovative network solutions. In the service provider network, in the data center or in the cloud, Edgecore Networks Corporation delivers the software and systems that transform the way the world connects. Edgecore Networks Corporation serves customers and partners worldwide. Additional information can be found at www.edge-core.com.

Edgecore Networks Corporation is a subsidiary of Accton Technology Corporation, the leading network ODM company. The Edgecore data center switches are developed and manufactured by Accton.

To purchase Edgecore Networks solutions, please contact your Edgecore Networks Corporation representatives at +886 3 563 8888 (HQ) or +1 (949)-336-6801 or authorized resellers.

Ordering Information

Model Number	Part Number	CPU Type	Memory	SSD	Description
CSP-7550-8C	F0TCH7551005H	4110 x2	128GB (32GBx4)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 4110 (8-Core), 128GB DDR4 memory, 240GB M.2 SATA SSD. ■ 2 full-height PCIe Gen3 x16 and 2 half-height PCIe Gen3 x8 slots. ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back).
CSP-7550-8C2FPGA	F0TCH7551025H	4110 x2	128GB (32GBx4)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 4110 (8-Core), 128GB DDR4 memory, 240GB M.2 SATA SSD. ■ 2 FPGA cards with Intel Stratix 10MX 8GB HMB2, 6x100GbE high speed connector (4 hard core 100GbE and optional 2 soft core IP). ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back)..
CSP-7550-8C4FPGA	F0TCH7551026H	4110 x2	128GB (32GBx4)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 4110 (8-Core), 128GB DDR4 memory, 240GB M.2 SATA SSD. ■ 4 FPGA cards with Intel Stratix 10MX 8GB HMB2, 6x100GbE high speed connector (4 hard core 100GbE and optional 2 soft core IP). ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back).
CSP-7550-16C	F0TCH7551004H	5218 x2	256GB (32GBx8)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 5218 (16-Core), 256GB DDR4 memory, 240GB M.2 SATA SSD. ■ 2 full-height PCIe Gen3 x16 and 2 half-height PCIe Gen3 x8 slots. ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back).
CSP-7550-16C2FPGA	F0TCH7551024H	5218 x2	256GB (32GBx8)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 5218 (16-Core), 256GB DDR4 memory, 240GB M.2 SATA SSD. ■ 2 FPGA cards with Intel Stratix 10MX 8GB HMB2, 6x100GbE high speed connector (4 hard core 100GbE and optional 2 soft core IP). ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back).
CSP-7550-16C4FPGA	F0TCH7551027H	5218 x2	256GB (32GBx8)	240GB	■ 32-Port 100G QSFP28 Server Switch, ONIE software installer, Barefoot Tofino 6.4 Tbps. ■ Dual Intel 5218 (16-Core), 256GB DDR4 memory, 240GB M.2 SATA SSD. ■ 4 FPGA cards with Intel Stratix 10MX 8GB HMB2, 6x100GbE high speed connector (4 hard core 100GbE and optional 2 soft core IP). ■ Dual PSUs and fan modules with port-to-power airflow, rack mount kit (front and back).