



From Edge to Cloud New Generation Central Office with OCP Solutions

Toward the Next Generation Central Office

Telecom operators manage thousands of central offices, but are locked by legacy hardware and high costs. CORD^[1], combines SDN, NFV, commodity hardware and cloud services to create more efficient, agile networks at the edge. The edge affords an opportunity to customize the network and services for individual customer segments.

As network functions virtualization (NFV) has gained more success over the past years, telecom operators are adopting the idea of disaggregating application and function from the proprietary hardware platforms used to run telecom applications in favor of commercial off-the-shelf (COTS) hardware deployed as a cloud infrastructure.

Access Methods	Telco Network Edge
5G	Tower
LTE	Central Offices
WiFi	Other Telco Real Estates (Wire Centers etc.)
Wiredline	

Virtulizing the Telecom Edge



[1] CORD : Central Office Re-architected as Datacenter. CORD enables the economies of a data center and the flexibility of SDN by applying Cloud-Native Infrastructure to Central Office with white box solutions.
 [2] SEBA™ : SDN-Enabled Broadband Access. SEBA™ is a lightweight platform of R-CORD®. It supports a multitude of virtualized access technologies at the edge of the carrier network. SEBA™ supports both residential access and wireless with white box equipment including OLT, and switches and servers for the SDN broadband access.
 [3] R-CORD : Residential CORD includes services that leverage wireline access technologies.

- 33%+ More Power Savings
- Less Expenditure
- Interchangeable
- Vendor Lock-in Free
- Quick Adoption

Partnership

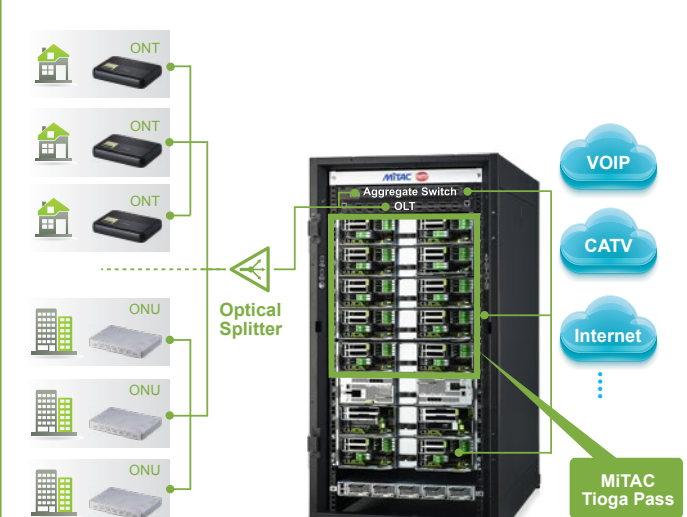


MITAC and Edgecore are both Platinum Members of OCP. (Edgecore is also the board partner member of ONF.) MITAC and Edgecore have collaborated and joined provide the world's first OCP SEBA™^[2] POD solution in 2019.

SEBA™ Recommended Hardware

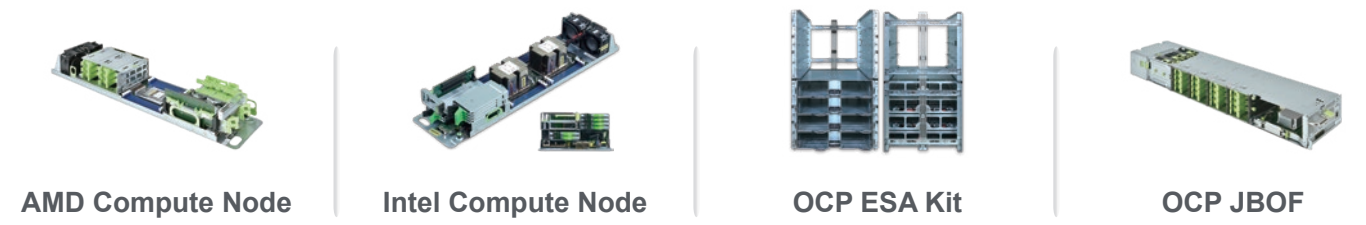
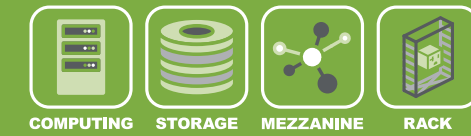
MITAC's Tioga Pass is a SEBA™ validated server; together with our OCP ESA kit in the OCP SEBA™ POD, it helps telecom carriers adopt OCP solutions supporting their service in a central office as a cloud native infrastructure with optimized power efficiency.

MiTac OCP SEBA™ POD @ Central Office



Continuous Commitment

Contiguously MiTac is committed to deliver OCP based CORD^[1] solution in 2020 which would bring great advantages in cost and flexibility in SDN, NFV cloud services deployment



MITAC COMPUTING TECHNOLOGY CORP.

Faster Way Toward OCP Solutions



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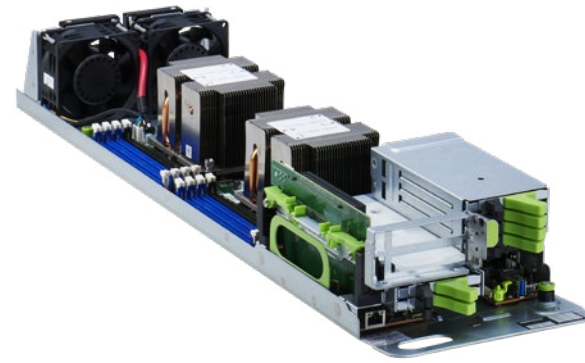
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www.mitacmct.com/products/OCP



OCP Server - Tioga Pass E7278 Series



Intel® Xeon® Scalable Processor Platform Power Efficiency Optimized for Computing

- High Power Efficiency
- Various SKUs for Different Usage Scenarios
- Compatible with Open Rack v2
- Compatible with 19" EIA Rack through MITAC ESA Kit
- Tool-Less Design for Easy Maintenance



Standard

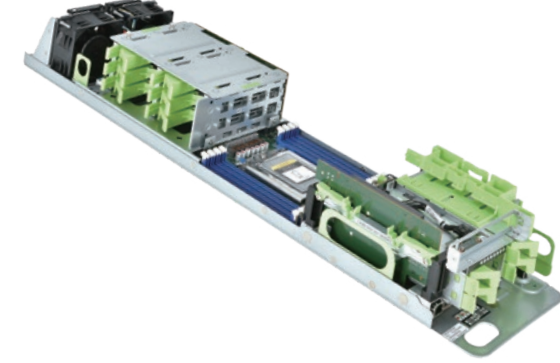
Advanced

Ultra

	Standard (E7278-S)	Advanced (E7278-A)	Ultra (E7278-U)
Processor	(2) Intel® Xeon® Scalable Processor, TDP 165W · Support both SkyLake SP and Cascade Lake SP, Intel® C621-AT chipset		
Memory	(12) DIMM slots, 6 channels · Up to 768 GB R-DIMM, DDR4 2933MT/s		
PCIe Extension	(2) FHHL PCIe Gen3 x16	(2) HHHL PCIe Gen3 x16	(1) FHHL PCIe Gen3 x16
Boot Drive (for OS)	80/110mm M.2 (SATA/PCIe Gen3 x4)		
Storage Extension	(1) 3.5" SATA HDD	(6) 2.5" 7mm SATA SSD	(4) 2.5" U.2 SSD (Hot Plug) (1) 2.5" 7mm SATA SSD (optional) [1]
Mezzanine	(1) OCP NIC 2.0		
Management Port	(1) 1GbE RJ45, Intel i210, support NC-S		
BMC	ASPEED AST2500 · Support IPMI 2.0 and DMTF Redfish® 1.7 (DSP0266 1.7.0 Specification and Redfish Schema 2019.1)		
Dimension & Weight	D28.5" x W6.9" x H3.5" (724 x 175 x 89mm) / 17.6~18.7lbs (8~8.5kg)		
Power Supply	Centralized OCP power shelf (12V DC)		
OS Certification	VMWare · ESXi 6.7 U2/U3 · ESXi 7.0 Red Hat® · RHEL 7.6~7.x (x86_64 Arch) · Red Hat® OpenStack® 13.0 - 13.x (x86_64 Arch) · Red Hat® OpenStack® 14.0 - 14.x (x86_64 Arch) · Red Hat® Virtualization 4.2 - 4.3 (x86_64 Arch)		
Other Certification	SEBA™ Certified HW (before June 2020)		

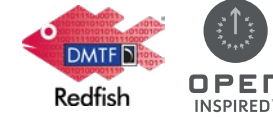
[1] Only supports when Low-profile or No PCIe card installed.

OCP Server - Capri E8020 Series



AMD EPYC™ 7002 / 7003 series Platform Density Optimized for Software Defined Data Center

- High Density Storage, up to 10 NVMe SSDs with Ultra SKU
- Various SKUs for Different Usage Scenarios
- Compatible with Open Rack v2
- Compatible with 19" EIA Rack through MITAC ESA Kit
- Tool-Less Design for Easy Maintenance



Advanced

Ultra

	Advanced (E8020-A)	Ultra (E8020-U)
Processor	(1) AMD EPYC™ 7002 (Rome) / 7003 (Milan) Series Processor, TDP 225W (Rome)	
Memory	(8) DIMM slots, 8 channels · Up to 1,024 GB RDIMM/LRDIMM, DDR4 3200 MT/s	
PCIe Extension	(2) HHHL PCIe Gen4 x16	(1) FHHL PCIe Gen4 x16
Boot Drive (for OS)	80/110mm M.2 (SATA/PCIe Gen3 x4)	
Storage Extension - Front	(6) 2.5" 7mm SATA SSD	(4) 2.5" U.2 SSD (Hot Plug) (1) 2.5" 7mm SATA SSD (optional) [1]
Rear PCIe Extension - Rear	(6) 2.5" U.2 SSD	
Mezzanine	(1) OCP NIC 2.0	
Management Port	(1) 1GbE RJ45, Intel i210, support NC-SI	
BMC	ASPEED AST2500 · Support IPMI 2.0 and DMTF Redfish® 1.7 (DSP0266 1.7.0 Specification and Redfish Schema 2019.1)	
Dimension	D28.5" x W6.9" x H3.5" (724 x 175 x 89mm)	
Power Supply	Centralized OCP power shelf (12V DC)	
OS Certification	VMWare · ESXi 6.7 U3 Red Hat® · RHEL 8.2.2	

[1] Only supports when Low-profile or No PCIe card installed.

OCP JBOF - Crystal Lake EST1250



PCIe Gen3 JBOF with High Density Storage to Maximize Data Storage

- Scalable Sled Form Factor
- High Density Storage, up to 16 NVMe SSDs (U.2)
- Compatible with Open Rack v2
- Compatible with 19" EIA Rack through MITAC ESA Kit
- Tool-Less for Easy Maintenance Design
- Compatible with MITAC Tioga Pass through MITAC Retimer Card



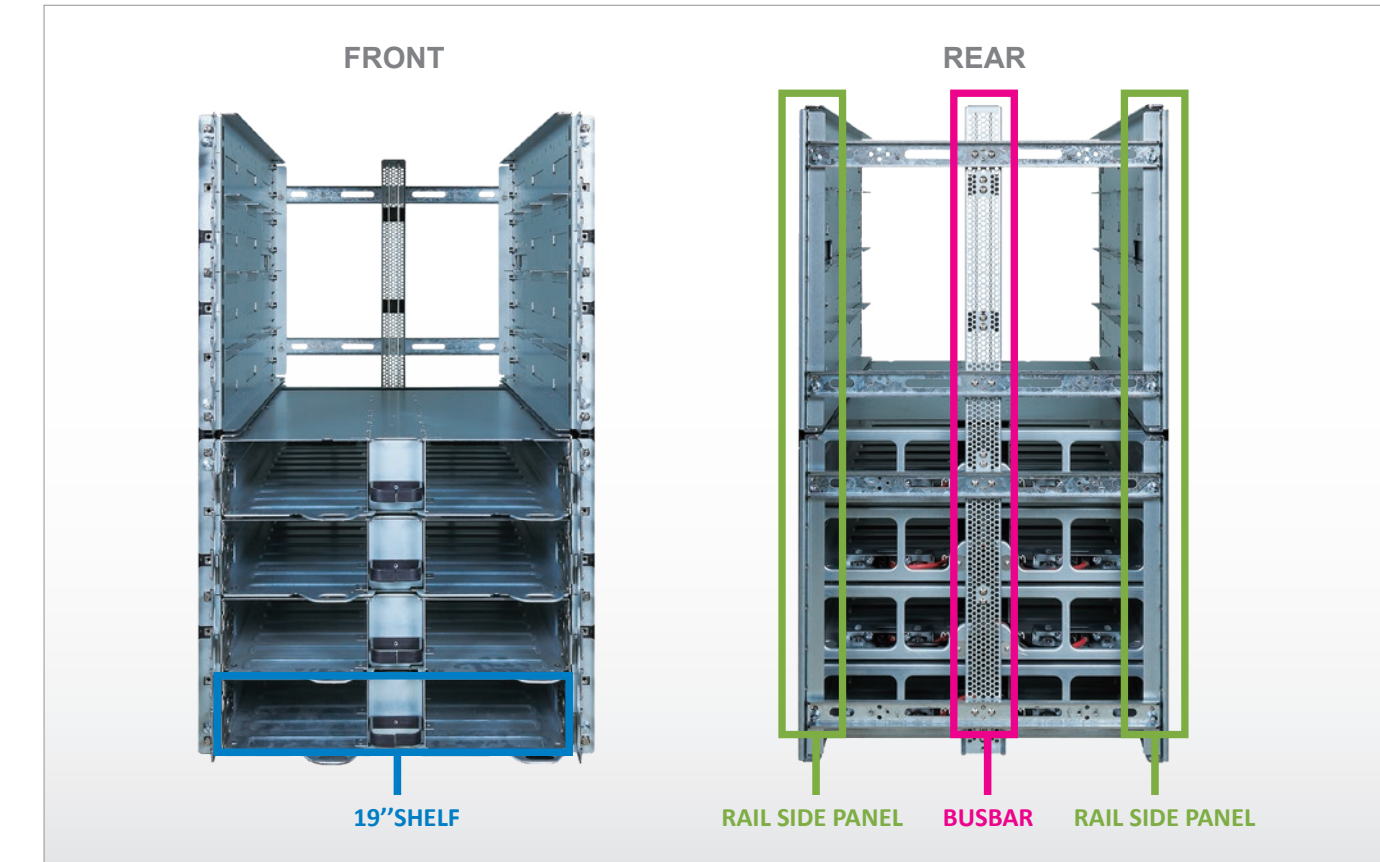
	EST1250-U
Storage	(16) U.2 SSDs per Sled (Totally 48 SSDs in 21" shelf)
IO Port	PCIe 3.0 x 16
BMC	ASPEED AST2520, support OpenBMC with IPMI 2.0
PCIe Switch	PM8535 for PCIe Gen3
Management IO	(1) 1GbE RJ45
Dimension	L30.3" x W6.6" x H3.5" (769 x 168 x 89mm)



	Shelf for Open Rack v2	Shelf for EIA310 Rack ^[1]
Height	2 OU	2 OU
Dimension	L31.5" x W21.1" x H3.7" (800 x 537 x 93mm)	L30.1" x W17" x H3.7" (765 x 431 x 93mm)
Sleds per Shelf	3	2

[1] Adopt with MITAC ESA Kit

Open Compute in 19" EIA Rack



	8 OU ESA Kit	16 OU ESA Kit
19" Shelf	D30" x W17" x H3.9" (765 x 431 x 98mm)	D30" x W17" x H3.9" (765 x 431 x 98mm)
ESA Rail Kit	D33" x W19" x H15.6" (837 x 483 x 397mm)	D33" x W19" x H31.2" (837 x 483 x 794mm)
Max. Capacity	8 sleds per ESA kit (with 4 shelves)	16 sleds per ESA kit (with 8 shelves)
Weight	40kg	78kg

[1] Images are based on 16OU ESA Kit with 4 shelves

Open Compute in 19" EIA Rack

- To Upgrade your Rack to OCP Infrastructure
- Cost Efficiency for Edge and Cloud Computing

