openOLT

Overview

CO-OLT24XG-PON is a powerful next generation 1RU PON access platform designed for remote terminal (RT) and/or central office (CO) applications.

It is a programmable system with FPGA-based 10G PON MAC and high performance NPU, focused on vOLTHA Infrastructure deployment. It supports symmetric 24 X 10Gbps XGS PON access connectivity in downlink and 6 X 100Gbps in uplink. This is an Open Networking Foundation R-CORD and SEBA compatible system.

- 24 x XFP XGS-PON downlink port, running G.9807.1 10G PON MAC
- 6x QSFP28 10/25/40/100G Ethernet port for uplink
- Providing non-blocking, 10Gbps symmetric bandwidth to each PON port with low latency
- Support native IPv6 and dual stacked IPv4/IPv6
- GEM mode only
- Up to 256 ONTs per XGS-PON MAC
- Up to 64K GEM ports per PON port
- Up to 8K services per PON port
- Timing synchronization from in-band IEEE 1588v2 or timing input port
- ToD synchronization per G.989.3 for XGS-PON
- Deep packet buffers for high-speed packet processing
- Flexibility to define a wide range of match-action table processing (OpenFlow 1.3+ multi-table pipelines)
- Interop with various SDN controllers (OpenDaylight and ONOS) to program match-action tables in real-time via the out-of-band OpenFlow 1.3+ channel
- Guaranteed fast failover (link or device) by supporting large number of flow mod/sec
- High-performance processor to ensure device’s stability and OpenFlow control plane performance
- Intel processor to running ONIE and ONL (Open Network Linux) and capability of supporting optional guest VM for applications on the same hardware
- Field replaceable redundant power supply, with both DC and AC options
- Field replaceable N:1 protected FANs
- IEEE 1588v2 or timing input port
# Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Dimension (W x H x D)</td>
<td>484mm x 44.4mm x 500mm (19.05” x 1.74” x 19.68”)</td>
</tr>
<tr>
<td>Uplink ports</td>
<td>6 X 100Gbps, QSFP28</td>
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<tr>
<td>Downlink ports</td>
<td>24 X 10Gbps, XFP</td>
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<tr>
<td>Switching capability</td>
<td>840Gbps</td>
</tr>
<tr>
<td>Power supply</td>
<td>Ac: 90~260v, Dc: -48v</td>
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<tr>
<td>Power redundancy</td>
<td>1+1 hot swappable</td>
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<tr>
<td>Power consumption</td>
<td>450W</td>
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<tr>
<td>Weight</td>
<td>10KG</td>
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# Features

### PON
- G.9807.1 Compliant
- High splitter rate, each PON port supports up to 256 ONUs, up to 8K GEM ports per PON port
- Multiple ONU authentication methods, SN, PON password, SN+PON password
- Support of DBA

### VLAN
- Support of two VLAN tags: S-VID and C-VID. These 2 VLAN tags allow 16M services defined in theory
- Support of three service models defined in TR-156: 1:1, N:1, TLS
- Support of QinQ based on port or service flow
- Support of VLAN add, remove, translate per ONU service flow based

### QoS
- Support of rate-limit based on port or self-defined service flow
- Support of priority remark based on port or self-defined service flow and provide 802.1P, DSCP priority and Remark
- Support of QoS scheduling based on port and self-defined service flow

### Multicast
- IGMP v2/v3 and MLD proxy
- Multiple multicast service VLANs or SSM
- Fast leave
- Up to 4096 active multicast groups

### Switching
- Learn and processing up to 192K MAC addresses
- Both traffic grooming and hair-spin switching

### Security
- DHCP Option82
- MAC/IP Anti-spoofing
- ICMP/IGMP Anti-spoofing

### Management
- Integrated with VOLTA running at cloud
- CLI (Command Line Interface)
- NETCONF
- SNMP traps