PON Evo™ Optical Line Terminals (OLTs)

800 Series
8-PON Port 1RU OLT

COMMSCOPE®

FEATURES

- Ultra-High Bandwidth:
  - 100GE Uplink Interface
  - GPON, XGS-PON
- High Availability:
  - LAG/LACP Uplink Protection
  - ERPS ITU-T G.8032 Protection
  - Type B protection for the ODN domain
- Virtualization and Slicing:
  - Seamless migration toward a fully Virtualized network environment
  - Several virtual network operators can share infrastructure

The PON Evo™ 800 Series OLT is a next-generation OLT system. Part of CommScope's central office connectivity portfolio, the 800 series provides ultra-high bandwidth services across low-density geographic areas, supporting rural and corporate environments to comprehensively address the entire access network. It serves both B2C and B2B markets, meeting the needs of Residential, Business, and Mobile customer segments.

The PON Evo 800 Series OLT complies with all the relevant ITU technology standards, such as GPON (ITU-T G.984.x) and XGS-PON (ITU-T G.9807.1), using Multi-PON-Module (MPM) optical interfaces. Each PON port may serve up to 128 Optical Network Terminals (ONTs), assuming a maximum splitting ratio of 1:128.

The PON Evo 800 Series OLT is a carrier-grade, high-availability OLT with carrier-grade performance designed to support extended temperature ranges, making it suitable to be deployed in Outside Plant (OSP) cabinets in even the harshest environments.

Type B protection is available for the subscriber side, while for the network side, star and ring topologies are available with multiple 1/10GE and/or 100GE optical interfaces. These interfaces are supported by the Link Aggregation Control Protocol (LAG/LACP) and the Ethernet Ring Protection Switching (ERPS ITU-T G.8032) protocol.
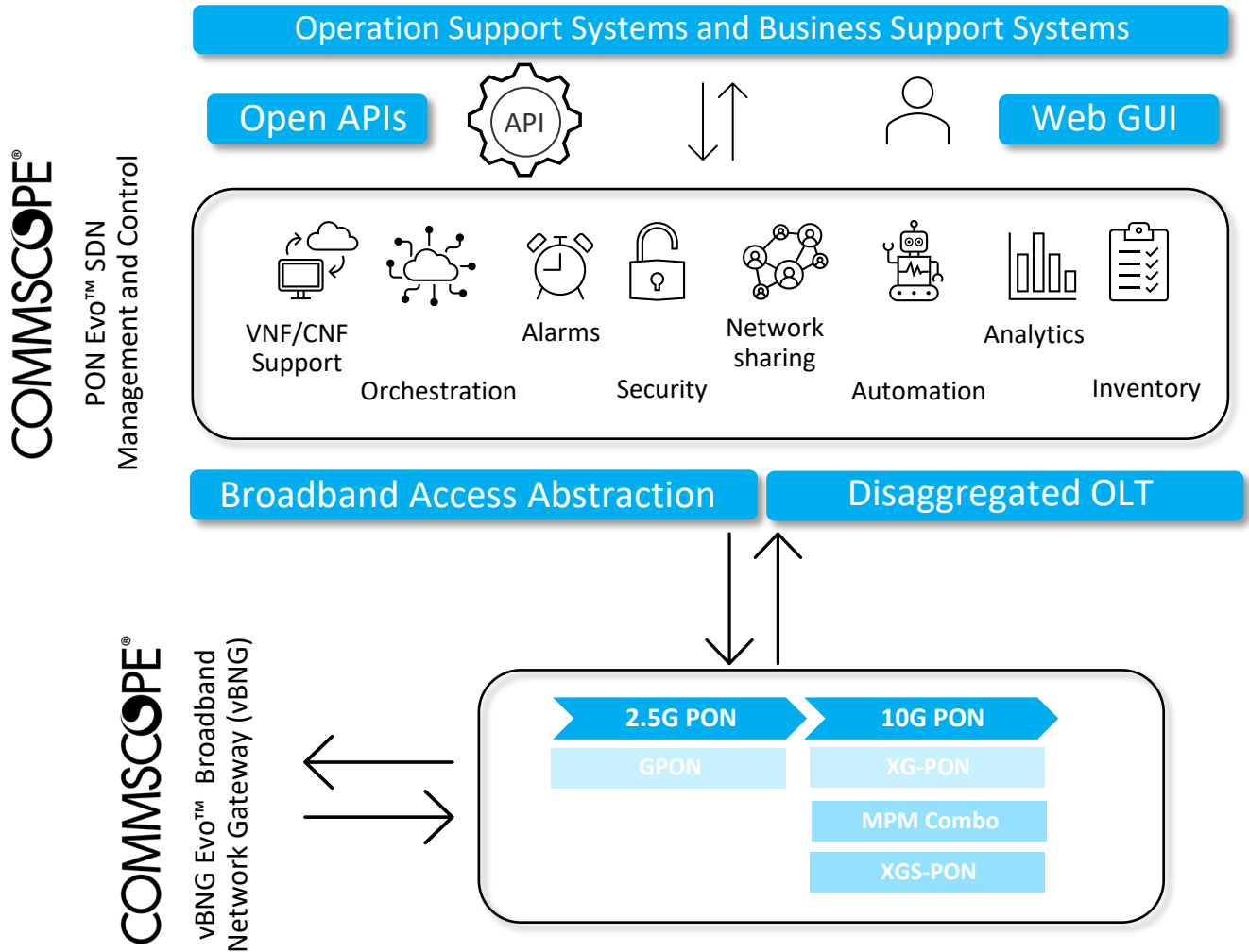

CommScope PON Evo 800 Series OLT

Architecture

CommScope's PON Evo SDN Management and Control application remotely manages OLTs, ONTs, and all CommScope PON solution hardware components. The application offers operational efficiency features that include centralized Alarm Management, Reporting, Job Scheduler, Access Control, Zero-Touch Configuration (ZTC), and Provisioning (ZTP) capabilities.

The equipment also provides a Common Line Interface (CLI) at the management level. Virtualization and slicing scenarios are ready and available to differentiate and enable new business models at the optical fiber access network.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions, H x W x D	1RU x 48.5 cm x 24.0 cm (1RU x 19.1 in x 9.45 in)
Interfaces	
PON MPM Ports (GPON+XGS-PON)	8 x (SPF+) UNI PON Ports
Optical 1/10GE Ports	4 x (SFP+) NNI Ports
Optical 40G/100GE Ports	2 x (SFP+) NNI Ports
Electrical Ethernet Ports	2 x 10/100/1000BaseT (Out of band Management)
Mini USB Port (DBG)	1 x Serial debug port exclusively for factory configuration
USB Type A (DBG Aux)	1 x USB Aux Mass Storage port, exclusively for systems recovery with TAC Support
Alarm Interface	1 x RJ45 Interface for I/O 4 x inputs and 2 x outputs
Sync Interface ToD	1 x RJ45
Sync Interface BITS	1 x RJ45
Line Technology	
	Advanced Encryption Standard (AES); Forward Error Correction (FEC) Up to 128 ONT/Us per PON; T-CONTs: 1024 per PON; Logical Range: 60 km Maximum Differential Distance: 20 km GPON (ITU-T G.984) D/U: 2.5/1.25 Gbps XG-PON (ITU-T G.987) D/U: 10/2.5 Gbps XGS-PON (ITU-T G.9807.1) D/U: 10/10 Gbps
PON Port Capacity	
	Pizza Box stand-alone equipment 8 x XGS-PON+8 x GPON Redundant power and Fan modules
Layer 2 Services	
Services	1:1, N:1 (TR-156i3); VLAN-ID conversion to GEM port-ID; Transparent Add/change S-TAG and C-TAG; Priority bits (p-bits) included in changes
Performance	VLAN Business Ethernet Services/Transparent VLAN Services (VBES/TLS)
IPTV Features	
	IGMPv2/v3 snooping with proxy reporting; IPTV streams forwarding: 1024
Timing/Synchronization	
	SYNC-E, IEEE1588v2/PTP, GNSS (Global Navigation Satellite System)
Protection	
	Load balancing and LACP (IEEE 802.3ad) capabilities on uplink interfaces, Type B protection on xPON interfaces, Ethernet Ring Protection Switching (ERPS ITU-T G.8032)
Management and Security	
	Local management by Command Line Interface (CLI) Remote management using SNMP and HTTP protocols Centralized management using CommScope PON Evo™ SDN Management and Control CPE remote management over OMCI G.988 channel with ONU software upgrade capability Anti-MAC and IP spoofing with DAI and IPSG Access Control Lists & MAC limiting; Storm control of unicast, multicast and broadcast traffic In-band and Out-of-band Management: CLI, SNMP, XML RADIUS/TACACS+ login authentication End-to-end Zero-Touch Provisioning (ZTP) capabilities
Environment	
Operating Temperature Range	-40° to +65°C (-40° to 149°F)
Humidity	5%–95% of relative humidity range
Powering	
Power Supply	-48 V DC Input Voltage, Voltage Range -40.5 V DC to 57 V DC
Power Consumption (Watts @-48 V, 25°C)	< 110 Watts Max
Compliance	
Power	ETSI EN300 132-2 V2.1.1 (2003-01) Recommendation
Earth Protection	ETSI ETS 300 253 Jan 1995 Recommendation
EMC	ETSI 300 386
Environmental	EN 300 019-2-1 (Storage, Class 1,2) EN 300 019 2-2 (Transportation, Class 2,3) G3108 Class 2 Equivalent to ATIS-0600010.01.2008 Class 2, Harsh–Protected Environment
LED Status Indicators	
	Fan-Module Status; ON; PRC; LCK; HLR 1/10/25GE, 40G/100GE Power: P1, P2

ORDERING INFORMATION

Model Name	Part Number	Description
		Optical Line Terminal
PON Evo 800 Series 1RU OLT SHELF	OLT-8-1RU	Shelf OLT 1RU 8x GPON/8x XGS-PON
PON Evo 800/1600 Series OLT DC KIT	OLT-1RU-DC-KIT	800/1600 Series DC Power Kit and Cable
		SFP/SFP+ Optics
User Network Interface PON SFP GPON	SFP-GPON-BPLUS-CT	SFP OLT GPON Class B+ Commercial Temp
	SFP-GPON-BPLUS-IT	SFP OLT GPON Class B+ Industrial Temp
	SFP-GPON-CPLUS-CT	SFP OLT GPON Class C+ Commercial Temp
	SFP-GPON-CPLUS-IT	SFP OLT GPON Class C+ Industrial Temp
	SFP-GPON-D-CT	SFP OLT GPON Class D Commercial Temp
	SFP-GPON-D-IT	SFP OLT GPON Class D Industrial Temp
User Network Interface PON SFP+ MPM	SFP-MPM-CPLUS-CT	SFP+ OLT MPM (XGS-PON/GPON) Class C+ Commercial Temp
	SFP-MPM-CPLUS-IT	SFP+ OLT MPM (XGS-PON/GPON) Class C+ Industrial Temp
	SFP-MPM-CPLUS-ET	SFP+ OLT MPM (XGS-PON/GPON) Class C+ Extended Temp
	SFP-MPM-D-ET	SFP+ OLT MPM (XGS-PON/GPON) Class D Extended Industrial Temp
User Network Interface PON SFP+ Dual Density	SFP-DD-G-CPLUS-IT	SFP+ OLT GPON DD Class C+ Industrial Temp
	SFP-DD-XG-N2-ET	SFP+ OLT XGS-PON DD Class N2 Extended Industrial Temp
		Virtual Broadband Gateway (vBNG)
vBNG Evo Control Plane	AXC-BNG-BASE-SW	vBNG Control Plane Base License
	AXC-BNG-1K-S	Control Plane 1K BNG Subscriber sessions
	AXC-BNG-10K-S	Control Plane 10K BNG Subscriber sessions
	AXC-BNG-100K-S	Control Plane 100K BNG Subscriber sessions
	AXC-BNG-500K-S	Control Plane 500K BNG Subscriber sessions
vBNG Evo User Plane	AXC-BNG-UP-BASE	vBNG User Plane Base License
	AXC-BNG-10G-BW	User Plane Bandwidth 10G
	AXC-BNG-40G-BW	User Plane Bandwidth 40G
	AXC-BNG-100G-BW	User Plane Bandwidth 100G
vBNG Evo vBNG Bundles	AXC-BNG-10G-20K-PKG	Bundle 20K Control Plane Subscriber Sessions and 10G User Plane Bandwidth
	AXC-BNG-20G-20K-PKG	Bundle 20K Control Plane Subscriber Sessions and 20G User Plane Bandwidth
	AXC-BNG-100G-20K-PKG	Bundle 20K Control Plane Subscriber Sessions and 100G User Plane Bandwidth
	AXC-BNG-100G-64K-PKG	Bundle 64K Control Plane Subscriber Sessions and 100G User Plane Bandwidth
	AXC-BNG-200G-128K-PKG	Bundle 128K Control Plane Subscriber Sessions and 200G User Plane Bandwidth
	AXC-BNG-400G-256K-PKG	Bundle 256K Control Plane Subscriber Sessions and 400G User Plane Bandwidth
vBNG Evo Enhanced Services	AXC-BNG-CGN-10G-BW	Enhanced Carrier Grade NAT Bandwidth 10G
	AXC-BNG-CGN-100G-BW	Enhanced Carrier Grade NAT Bandwidth 100G
	AXC-BNG-SGRE-BASE	Enhanced Soft GRE License

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