DATA SHEET

PON Evo™ Remote Optical Line Terminals (R-OLTs)

200 Series

2-PON Port R-OLT

FEATURES

- Optimized for outside plant deployment in cable nodes and virtual hubs
- Coexists in same node with HFC, RFoG, and DAA modules
- Ultra-High Bandwidth:
  - XGS-PON and GPON
  - Non-blocking throughput
- Scales to 256 Subscribers
- On-board Traffic Management and PON/MAC capabilities
- Low power consumption supports multiple modules in a single virtual hub

The PON Evo™ 200 Series is a next-generation Remote Optical Line Terminal (R-OLT) module. Part of Aurora Networks outside plant node connectivity portfolio, the 200 Series is optimized for geographically distributed PON applications where the OLT is placed in the outside plant to deliver ultra-high bandwidth services to the subscribers.

By cost-effectively driving PON-based services through the last mile, the 200 Series R-OLT lowers the cost of deploying PON by economically serving smaller groups of subscribers, saving space and power, and using existing fiber and enclosures.

The 200 Series R-OLT complies with the ITU standards for GPON (G.984.x), XGS-PON (G.9807.1), OMCI (G.988), and Broadband Forum TR-156. It provides up to two GPON, XGS-PON, or Combo PON interfaces delivering both GPON and XGS-PON simultaneously. Each PON interface can serve 128 Optical Network Terminals (ONTs).

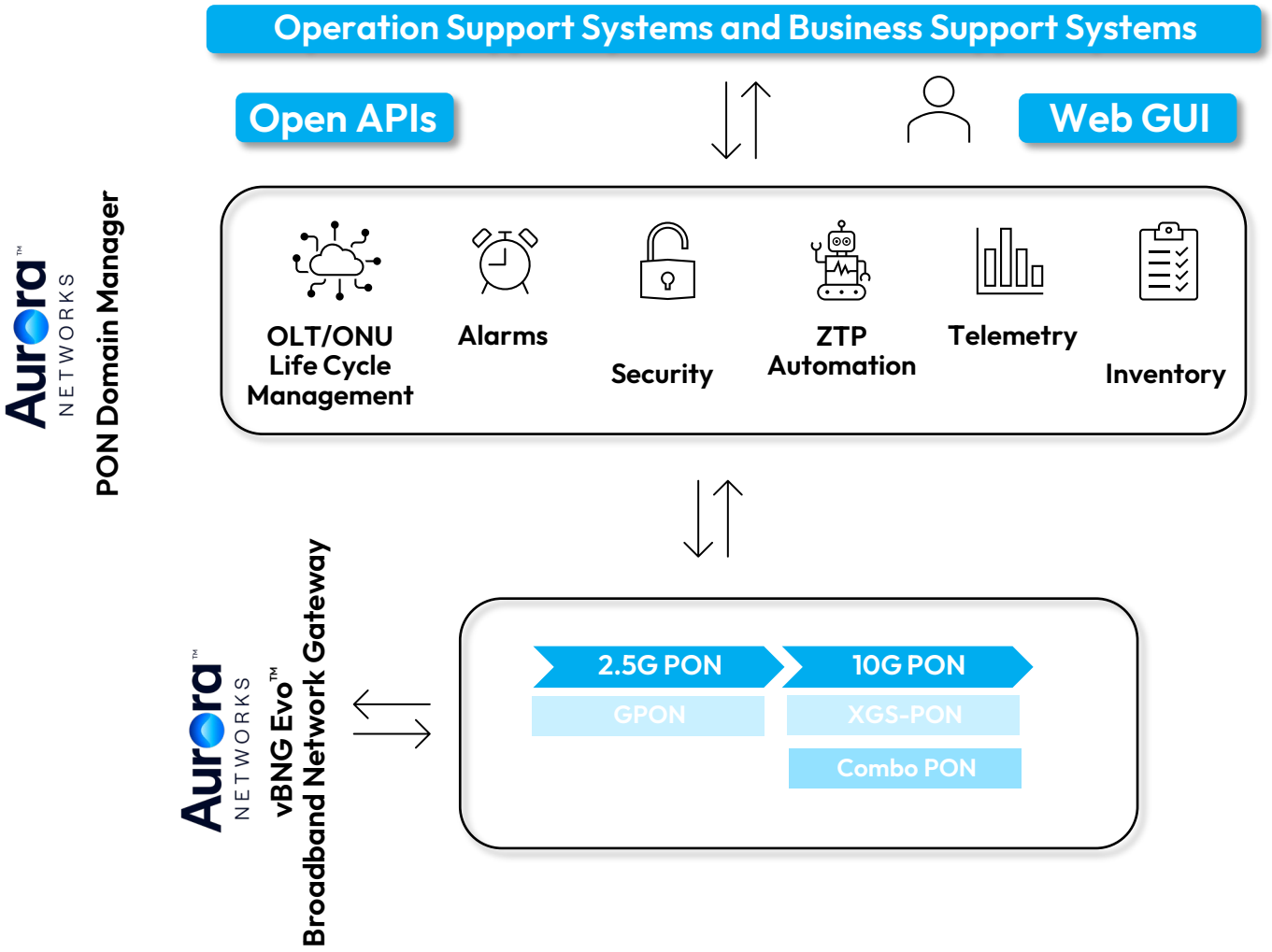
The 200 Series OLT utilizes standard 10G Ethernet uplinks, including CWDM, DWDM, and Bi-Di, for connecting to a Leaf Aggregation switch/router in the Converged Interconnect Network (CIN). This capability enables cable operators to utilize their transport backhaul fiber resources efficiently while extending the deployment of FTTX to serve customers at distances well beyond the typical 20 km reach of centralized, chassis-based PON architectures.

Aurora Networks PON Evo 200 Series R-OLT

Architecture

The 200 Series R-OLT works with Aurora Networks' PON Domain Manager, a virtualized controller that provides the following functions:

- Seamless integration of the management and assurance of OLTs resulting in a fully managed service deployment using existing operational production processes and procedures.
- Full lifecycle management of multiple OLTs from initial deployment through the application of services and subscriber provisioning, and integration into monitoring and network operational support systems.
- Zero-touch onboarding and provisioning of both OLTs and ONTs.
- Standards-based integration into northbound SDN orchestration and telemetry gathering applications.



SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions (H x W x D)	38.1 mm x 101.6 mm x 165.1 mm (1.5 in x 4 in x 6.5 in)
Interfaces	
PON Ports (GPON + XGS-PON)	2 x PON Ports
NNI Ports (10GE)	2 x NNI Ports Up to 2 x 10G Ethernet interfaces
Line Technology	
	GPON (ITU-T G.984) D/U: 2.5/1.25 Gbps XGS-PON (ITU-T G.9807.1) D/U: 10/10 Gbps ONUs: 128 ONUs per PON Logical Range: 60 km Maximum Differential Distance: 20 km Advanced Encryption Standard (AES); Forward Error Correction (FEC)
PON Port Capacity	
	Up to 2 x GPON interfaces Up to 2 x XGS-PON interfaces Up to 2 x Combo GPON + XGS-PON interfaces
Layer 2 Services	
	N:1, 1:1 VLANs; VLAN mapping to T-CONT/GEM Port; Add/Modify S-VLAN and C-VLAN; Pass/Modify Priority bits
IPTV Features	
	IGMPv2/v3 and MLDv1/v2 Snooping Multicast Channel Replication
Protection	
	Ethernet Link Aggregation on NNI Ports (Static and LACP; Load balancing)
Management	
	Centralized management using Aurora Networks PON Domain Manager Zero Touch Provisioning (ZTP) of R-OLT and ONUs Management Protocols: Netconf/Yang, Command Line Interface, GNMI (telemetry metrics) TACACS+ login authentication
Environment	
Operating Temperature Range	-40° to +60°C (-40° to +140°F)
Storage Temperature Range	-40° to +60°C (-40° to +140°F)
Humidity	5% to 95%, non-condensing
Powering	
Power Supply	PS4101 or PS4102 power supplies (required), depending on the node/VHub platform used
Power Consumption	35.5 W maximum, including 2 x NNI plus 2 x PON transceivers
Compliance	
Safety Standards	CSA C22.2#62368-1:2019 Ed.3 UL 62368-1:2019 Ed.3 BS EN IEC 62368-1:2020+A1:2020 IEC 62368-1:2018 Ed.3 IEC 60825-1
Earth Protection	ETSI ETS 300 253 Jan 1995 Recommendation
EMC	EN55024:2010 ITE EN55032:2012/AC:2013 Class B EN55035:2017/A11:2020/CSPR35:2016 CENELEC EN50083 EN50083-2:2012/A1:2015 EN50085 EN 61000-3-2:2014 EN61000-3-3:2013 VCCI-CISPR 32: 2016 Class B ITE Emissions (Japan) VCCI-V-3/2015.04 Class B ITE/2016 Class B ITE FCC 47 CFR Part 15 Subpart B Class B/ICES-003 Issue 6 Class B/Issue 7 Class B AS/NZS CISPR 32:2013 Class B ETSI EN 300 386:V2.2.1
Environmental	ENV EN 300019 ROHS WEEE
LED Status Indicators	
Power (PWR)	Dark = Module OFF (not receiving power) Green = Module ON (receiving power)
NNI, PON Ports	Refer to the Installation Guide for LED indicator colors and definitions

ORDERING INFORMATION

Model Name	Part Number	Description
		Remote Optical Line Terminal
ROLT-XG200-MPM	1514514	XGS-PON Remote Optical Line Terminal (R-OLT) for NH series nodes and VHub/UVHubs in a triple wide module. Two pluggable network uplink interfaces for 10GigE SFP+ and two pluggable access interfaces for GPON, XGS-PON, and combo SFP+. Network interface SFP+ and G/XGS/Combo-PON SFP+ plug-in transceiver modules must be purchased separately.
		PON SFP+ Transceivers
N/A	619630-001-00	GPON SFP+ Optical Transceiver Module for R-OLT interface. ITU-T G.984 Class C+, -40° to +85°C (-40° to +194°F) industrial temperature rated.
N/A	619631-001-00	XGS-PON SFP+ Optical Transceiver Module for R-OLT interface. ITU-T G.9807.1 Class N2, -40° to +85°C (-40° to +194°F) industrial temperature rated.
N/A	619632-001-00	Combo (GPON/XGS-PON) SFP+ Optical Transceiver Module for R-OLT interface. ITU-T G.984/ITU-T G.9807.1 Class C+/N2, -40° to +85°C (-40° to +194°F) industrial temperature rated.
		Uplink DWDM SFP+ Transceivers
TTD4540-xx-PI	N/A	SFP+ Transceiver, 10 Gbps, ITU channel xx (20–61), LC/UPC, 40 km, -40° to +95°C (-40° to +203°F)
TTD4580-xx-PI	N/A	SFP+ Transceiver, 10 Gbps, ITU channel xx (20–61), LC/UPC, 80 km, -40° to +95°C (-40° to +203°F)
		Uplink CWDM SFP+ Transceivers
TTCxxxx-TL40	N/A	SFP+ Transceiver, 10 Gbps, xxxx = 8 CWDM wavelengths (1470–1610 nm), LC/UPC, 40 km, -40° to +95°C (-40° to +203°F)
TTCxxxx-TL80	N/A	SFP+ Transceiver, 10 Gbps, xxxx = 8 CWDM wavelengths (1470–1610 nm), LC/UPC, 80 km, -40° to +95°C (-40° to +203°F)

Contact Customer Care for product information and sales:

- United States: +1-888-944-4357
- International: +1-215-323-2345

Aurora™ NETWORKS

7863609_200 Series_R-OLT_DS_RevB