

Cisco 10G Routed PON Modules



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Cisco 10G Routed PON family

Product overview

Cisco® 10G Routed PON modules enable the Cisco Routed PON Solution. Cisco 10G Routed PON simplifies the network with pluggable form factor Optical Line Terminals (OLTs) and a software controller on Cisco NCS 540, NCS5500, and NCS 5700 that converges ethernet and PON services. The Cisco Routed PON Solution replaces dedicated PON chassis with a multiservice router, increasing flexibility and reducing network footprint and power consumption.

Table 1. Benefits of Cisco Routed PON Solution

Feature	Benefit
Converged Architecture	Simplify your network with pluggable form factor OLTs and Cisco NCS540/5500/5700 to achieve a simplified network for converged transport using mature and rich set of features with Segment Routing /SRv6
Ease of Deployment	PON OLT plugs into universal ethernet ports with SFP+ sockets
Power and Operational cost	Replacing dedicated OLT chassis reduces the footprint and hence the power consumption
Open Standard	Compatible with most ONTs/ONUs available from 3rd party vendors. Supports open ecosystem for development and support for APIs at multiple levels with standard NETCONF/YANG models
MEF compliant	MEF 3.0 compliant for providing service performance, assurance and agility
Solution modularity and investment protection	Port-by-port upgrades for PON requirements with ease of network upgrade
Extensibility	Host PON controller on Cisco IOS-XR for management applications
Enhanced Subscriber Management	Deliver complete subscriber services with Cisco Cloud Native BNG
Timing	Class B/C timing support
Platform security	Fully secured platforms with built in management and control plane protection using Cisco IOS-XR and hardware security with Trust anchor module
L2 and L3 Business services	Provide business services along with residential services using a full feature set of L3VPN, EVPN and Multicast

Cisco XGS-PON OLT SFP+ module

The Cisco XGS-PON (10Gbps symmetrical PON) OLT SFP+ module is a feature-rich OLT device contained in a hot-pluggable SFP+ form factor. It contains a built-in 10G Ethernet-to-XGS-PON OLT MAC Bridge IC and optical transceiver. It offers a maximum split ratio of 1:128. This is an ODN Class N2 transceiver.



Figure 1.
Cisco XGS-PON OLT SFP+ module

Product specifications

Tables 2 through 4 list the Cisco PON SFP+ parameters and characteristics.

Cabling characteristics

Table 2. Cabling characteristics

Product	Connector type	Media	Cable type	Fiber grade	Core size (microns)	Maximum distance (km)
XGS-PON OLT SFP+	SC/UPC	SMF	Single fiber	G.652	9	20

Note: In general, a reach greater than 20km can be supported as long as the distance between the closest and the farthest ONTs is no more than 20km.

Environmental and operational characteristics

Table 3. Environmental and operational characteristics

Product	Operating temp range	Storage temp range	DOM capable	Typical power consumption (W)	Bail-latch color
XGS-PON OLT SFP+	-20 to 75° C	-40 to 85° C	Yes	2.475W	Blue

Table 4. Optical characteristics

Product	Transmit Power Range (dBm)	Receive Power Range (dBm)	Typical Transmit Wavelength (nm)	Typical Receive Wavelength (nm)
XGS-PON OLT SFP+	4 to 7	-7 to -28	1577	1270

Dimensions

- XGS-PON OLT SFP+ module– (H x W x D): 8.55 mm x 13.4 mm x 80.65 mm

Regulatory and standard compliance

XGS-PON OLT SFP+ module:

- Class B Electromagnetic Interference per FCC part 15B and EN55032, and IEC 61000-4-3
- ITU-T G.9807.1 and G.988 (XGS-PON) Compliant
- GR-468 Issue 2 Compliant
- GR-326 Compliant
- GR-63 Compliant
- Mil-STD-202G and Mil-STD-883K Compliant
- Compatible with Class 1 Laser Product: EN60825-1/A11
- RoHS6 Compliant
- UL Certified

Ordering information

To place an order, visit the [Cisco Ordering Home Page](#). Table 3 lists the ordering information for the Cisco SFP transceivers for POS/SDH and ATM applications.

Table 5. Ordering information

Product description	Product number
XGS-PON OLT SFP+ Module	SFP-10G-OLT20-X
XGS-PON RTU License	R-PON-10G-RTU

Warranty

- Standard warranty: 3 years
- Expedited replacement available via a Cisco SMARTnet™ Service support contract

Cisco environmental sustainability

Information about Cisco’s environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the “Environment Sustainability” section of Cisco’s [Corporate Social Responsibility](#) (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the “Environment Sustainability” section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

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Document history

New or revised topic	Described in	Date
Updating the reach information in the note section	Product Specifications	June 18, 2025

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