

Cisco 10G Routed PON Modules Data Sheet

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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: The maximum distance of 20km is at a split ratio of 1:128, and it can be increased if the split ratio is decreased.

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 |

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