

XG-99C

XGS-PON Optical Network Terminal



Overview

The CIG XG-99C is a high-performance XGS-PON Single Family Unit ONT designed for service providers delivering premium fiber broadband to FTTH and FTTP residential subscribers. Compliant with ITU-T G.9807.1, the XG-99C enables 10 Gbps symmetric upstream and downstream bandwidth, giving operators a reliable platform for multi-gigabit internet, IP video, voice, and next-generation connected-home and business services.

Purpose-built for streamlined fiber service delivery, the XG-99C helps providers support growing demand for symmetrical bandwidth driven by cloud applications, remote work, video conferencing, gaming, content creation, smart-home devices, and high-definition streaming. Its XGS-PON performance gives subscribers the capacity they need today while helping operators future-proof their access networks for higher-value service tiers.

The XG-99C is available in two configurations to match deployment needs. The XG-99C1 includes a single 10GBase-T Ethernet port for direct connection to a multi-gigabit router or gateway, while the XG-99C2 adds a second 10/100/1000Base-T Ethernet port for legacy device connectivity or service separation. This model flexibility allows service providers to standardize on a compact ONT family while supporting different customer premises requirements.

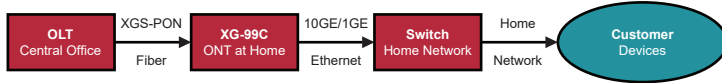
For operators, the XG-99C delivers a strong value proposition: simplified XGS-PON deployment, reliable 10G symmetric service delivery, efficient multicast video support through IGMP snooping, secure subscriber traffic with AES-128 payload encryption, and full OMCI-based remote management for provisioning, monitoring, and lifecycle support. The result is a compact, service-provider-ready ONT platform that helps reduce operational complexity while enabling premium fiber experiences at scale.

Key Features

- **XGS-PON (ITU-T G.9807.1)** — 10 Gbps symmetric up/downstream
- **Triple-play ready** — internet, IP video, and voice services
- **10GBase-T Ethernet** — compatible with 5G/2.5G/1GBase-T hosts
- **Two SKUs** — XG-99C1 (10GE) and XG-99C2 (10GE + 1GE)
- **AES-128 encryption + FEC** — secure, reliable fiber delivery
- **OMCI management** — ITU-T G.988 FCAPS with remote firmware update
- **IGMP snooping v2/v3** — efficient multicast video distribution
- **Advanced QoS** — multiple T-CONTs, XGEM ports, 802.1p, DBA
- **VLAN support** — tagging/detagging, Q-in-Q, VLAN translation
- **Flexible mounting** — desktop, vertical, or wall mount
- **Low power** — <10W from external 12V adapter
- **Certifications** — FCC/ETL, CE compliant

Configuration Scenario

Typical FTTH Deployment



Features

PON

- **Standard:** ITU-T G.9807.1 (XGS-PON); Class N1 optical budget
- **Speed:** 10 Gbps symmetric
- **Reach:** Up to 20 km; +4 to +9 dBm TX power; -28 dBm RX sensitivity

Ethernet

- **10GE Port:** 10GBase-T, RJ-45; compatible with 5G/2.5G/1GBase-T (auto-negotiation)
- **1GE Port:** 10/100/1000Base-T, RJ-45 (XG-99C2 only); MDI/MDIX auto-sensing
- **Switching:** Built-in Layer-2 switch; VLAN tagging/detagging, Q-in-Q, translation

Video / QoS

- **Multicast:** IGMP snooping v2/v3; dedicated multicast XGEM port; rate limiting
- **QoS:** Multiple T-CONTs and XGEM ports; DBA; 802.1p priority mapping; CoS
- **CoS:** Classification by UNI, VLAN-ID, 802.1p, IP ToS/DSCP; marking/remarking

Security/Mgmt

- **Encryption:** AES-128 decryption with automatic key generation and switching
- **FEC:** Forward Error Correction in both upstream and downstream directions
- **OMCI:** ITU-T G.988; alarms, AVC, performance monitoring; dual firmware + rollback

Model Information

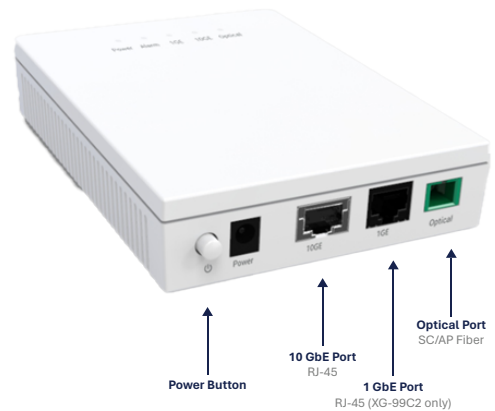
MODEL #	DESCRIPTION
XG-99C1	XGS-PON SFU ONT, 10 Gbps symmetric, 1× 10GBase-T LAN, SC/APC optical, OMCI, AES-128
XG-99C2	XGS-PON SFU ONT, 10 Gbps symmetric, 1× 10GBase-T LAN, 10GE + 1GE, SC/APC optical, OMCI, AES-128

Contact

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Interface Connections

Front LEDs: Power - Alarm - 1G - 10G - Optical



Hardware Specifications

Dimensions

- 215×110×40 mm (with bracket); 150×110×30 mm (without)

Mounting

- Desktop, vertical, or wall mount

PON Standard

- ITU-T G.9807.1 (XGS-PON); Class N1

Upstream/TX

- 1260–1280 nm (burst-mode DFB laser)

Downstream/RX

- 1575–1580 nm (APD receiver)

Ethernet (10GE)

- 1× 10GBase-T, RJ-45 (both SKUs)

Ethernet (1GE)

- 1× 10/100/1000Base-T, RJ-45 (XG-99C2 only)

Power

- 12V DC external adapter; <10W

Operating Temp

- -5°C to +45°C; 20–80% RH non-condensing

Safety / EMI

- FCC/ETL, CE compliant