



## 5101XG XGS-PON ONT

Industrial-temperature 10 Gigabit X-Series ONT enables subscribers to enjoy edge XGS-PON technology with indoor or outdoor placement.

### Features & Benefits

- + Supports 10Gbps/10Gbps (Downstream/Upstream) with integrated XGS-PON WAN interface
- + High capacity 10Gbps multi-rate 1G / 2.5G / 5G / 10G Ethernet interface
- + 802.3af, at, and bt PoE++ compliant
- + Metal housing with options for rackmount, wall-mount or cabinet installation

The 5101XG is a hardened XGS-PON compliant Optical Network Terminal (ONT) rated for outdoor, industrial-temperature applications, able to support service provider requirements for high-speed data in a cost-effective design. The ONT is fully compliant with ITU-T G.9807.1 XGS-PON standard with integrated, on-board optics supporting 1270nm and 1577nm wavelengths. The 5101XG offers symmetrical data rates of 10Gbps downstream and 10Gbps upstream, able to deliver high-capacity subscriber services. ONT supports Power-over-Ethernet (PoE) powering over the 10G Ethernet port.

The 5101XG ONT is ideal for FTTH or small business deployments in bridging-only applications where high-speed data must be transported reliably. With unique Zhone's software management features, subscribers can enjoy hyper-connected multimedia services faster, easier, faster and more reliably.

The 5101XG ONT features a single 100M / 1G / 2.5G / 5G / 10G auto-sensing LAN port in a compact enclosure for indoor and outdoor use. The ONT may be wall-mounted inside the home or placed inside a IP45 rated enclosure using an optional mounting bracket.

## Service Scenario

The XGS-PON network consists of an Optical Line Termination (OLT) located at the Central Office, and a set of residential Single-Family Unit (SFU) and Multi Dwelling Unit (MDU) locations with Optical Network Terminals (ONTs). Between them is the optical distribution network (ODN) comprised of fibers, passive optical splitters and couplers.

The 5101XG ONT supports 10 Gigabit symmetrical data using the XGS-PON standard. Services include High-Speed Internet (HSI), IPTV, OTT video, and cloud enabled services to multi-media devices.

## Key Service Attributes

- + FSAN ITU-T G.9807.1 XGS-PON compliant
- + One 10GBase-T Ethernet port, RJ45 supporting 10Gbps symmetrical services
- + MTU jumbo frame 9216-byte support
- + Traffic management including Q-in-Q tagging, 802.1Q VLANs, multiple subscriber VLANs, per-port rate limiting
- + IPTV multicast, IGMPv2 and IGMPv3 services
- + Open Access, any-service data model
- + 802.1p priority bits, DiffServ and priority queues based on service types
- + Power over Ethernet Powered Device (PoE PD), 56 VDC over 10G Ethernet port
- + 54 VDC power option, 2-wire connector

## 5101XG XGS-PON ONT

### Product Specifications

#### Hardware

- Dimensions
  - Width: 6.2" (158mm)
  - Depth: 5.9" (150mm)
  - Height: 1.54" (39mm)
- Weight 0.77 LB (0.35 kg)
- 256MByte Flash Memory
- 512MByte SDRAM (DDR3)
- XGS-PON WAN Interface
- Capacity:10Gbps Down/10Gbps Up

#### Interfaces

- WAN: 1 SC/APC port, XGS-PON
- LAN:1 port 1/2.5/5/10GBase-T Ethernet (RJ45) with IEEE802.3af PoE PD support
- Direct DC Power: 1 2-wire terminal block
- LED Indicators
- Recessed RESET button

#### XGS-PON

- N1/N2 Class, 20km (12.4 miles), reach, max split 128
- Maximum ODN Attenuation: +29 dB link (N1) or 31dB (N2) link budget
- Transmitter: 1270nm, +2.0 to +7 dBm
- Receiver: 1577nm, -28 dBm
- Forward Error Correction (FEC) per G.989.3
- Dying Gasp

#### Quality of Service

- HW-based internal IEEE 802.1p (CoS)
- Strict Priority (SP)
- 802.1Q(VLAN tag) QoS mapping ToS/CoS
- 8 queues per port
- Classified traffic can be tagged with VLAN ID and Ethernet Priority bit, and can be assigned to priority queues
- Classify packets into different IEEE 802.1p priority queues according to DSCP values (RFC 2475)
- The range of traffic shaping or ratelimit shall between 64Kbps to the maximum port rate with 64kbps granularity. The accuracy error shall be less than  $\pm 10\%$ .
- DSCP IP CoS (RFC 2475)

#### Software Features

- IEEE802.1D and IEEE802.1Q
- Address learning with auto aging- L2/BPDU Filter
- Support 2048 MAC learning addresses
- Multiple T-CONTs/GEM ports per device
- Flexible mapping between GEM port and T-CONT
- Priority queues and scheduling on upstream
- Activation with automatic discovered serial Number and password

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## Product Specifications

### Environmental

- Operating Temperature: -40°F to 149°F (-40°C to +65°C) Industrial
- Storage temperature: -40°F to 185°F (-40 to 85°C)
- Operating humidity 10 to 95% (non-condensing)
- Altitude: -200 to 10,000 feet (-61 to 3,048 m)

### Powering

- 48-56VDC IEEE802.3af (15W) PoE PD via LAN port
- Optional +54 VDC, 1A input, 2-wire connector.
- Power consumption ~12W maximum

### Management

- ITU-T 984.1/G988 compliant OMCI interface
- CLI over telnet
- LED indications for status

### Compliance

- FCC Part 15 Class B
- IEC 62368-1
- FDA IEC 60825-1
- RoHS 2015/863/EU

## Ordering Information

Model	Description
5101XG	1x SC/APC port, XGS-PON (Class N1) 1x 10G RJ45 port, 802.3af PoE Powered Interface 48-56VDC 1x 2-wire terminal block (54VDC) 4x M3 6mm Screws Operating Temperature: -40°C to +65°C
HX-5101XG-00	No power supply



Zhone Technologies, Inc