zhone

Enabling the hyper-connected world



8211XG

XGS-PON ONT

The cost-optimized 10 Gigabit X-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with leading-edge XGS-PON technology.

Features & Benefits

+ Supports 10Gbps/10Gbps (Downstream /Upstream) with integrated XGS-PON WAN interface
+ One high-capacity multi-rate 1G/2.5G/5G/10G Ethernet interface
+ One POTS interface compliant with SIP telephony standard



The Zhone 8211XG is a high-performance, XGS-PON compliant Optical Network Terminal (ONT) able to support service provider requirements for high-speed data and voice 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 upstream and 1577nm downstream wavelengths. The 8211XG offers symmetrical data rates of 10Gbps downstream and 10Gbps upstream, able to deliver access edge services and cover a full range of residential and business use cases.

The Zhone 8211XG 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 unique software management features, subscribers can enjoy hyper-connected multimedia services faster, easier, and more reliably.

The 8211XG ONT features a 1G/2.5G/5G/10G auto-sensing LAN port and one FXS RJ11 voice port in a compact enclosure for indoor use. The ONT may be wall-mounted inside the home or placed on a desktop.

Service Scenario

The 8211XG gives service providers a cost-optimized way to deliver symmetrical 10Gbps service over a single fiber to single-family homes and small businesses. One compact ONT carries high-speed Internet, IPTV, streaming video, and VoIP on QoS-prioritized service tiers, so providers can monetize premium multi-gig plans and protect voice and video quality. Standards-based XGS-PON, remote management through OMCI and TR-069, and automatic ONT activation by serial number help providers cut deployment time, truck rolls, and operating costs.

Key Service Attributes

+ FSAN ITU-T G.9807.1 XGS-PON compliant
+ One multi-rate 1G/2.5G/5G/10GBase-T Ethernet port (RJ45)
+ One POTS RJ11 port
+ MTU jumbo frame 9216-byte support
+ IPTV multicast, IGMPv2 and IGMPv3 services
+ Flexible XGEM port to T-CONT mapping
+ Traffic management including Q-in-Q tagging, 802.1Q VLANs, multiple subscriber VLANs, per-port rate limiting
+ 802.1p priority bits, DiffServ and priority queues based on service types
+ 12 VDC power adapter

8211XG XGS-PON ONT
Product Specifications

Hardware
- Dimensions
  Width: 5.52” (140mm)
  Depth: 4.41” (112mm)
  Height: 1.23” (33mm)
- Weight: 1.10 LB (0.5 kg)
- 128MB Flash Memory
- 256MB SDRAM (DDR3)
- XGS-PON WAN Interface
- Capacity:10Gbps Down/10Gbps Up

Interfaces
- WAN: 1x SC/APC port, XGS-PON
- LAN: 1x port 1/2.5/5/10GBase-T Ethernet (RJ45)
- POTS: 1x port RJ11
- Power: 1x 2-pin barrel connector
- LED Indicators
- Power switch
- Recessed RESET button

XGS-PON
- N1 Class, 20km (12.4 miles), reach, max split 128
- Maximum ODN Attenuation, +29 dB link budget
- Transmitter: 1270nm, +2.0 to +7 dBm
- Receiver: 1577nm, -28 dBm
- Forward Error Correction (FEC) per G.9807.1
- Dying Gasp

Telephone
- SIP (RFC 3261)
- RENs per line: 5 maximum
- Drop length: Residential short loop,
- 152.4 m (500 ft.)
- Output max: 25mA
- Ring voltage: 48Vrms @ 20/25 Hz

Quality of Service
- Hardware-based IEEE 802.1p (CoS) classification
- Strict Priority (SP)
- 8 queues per port
- Classified traffic can be tagged with VLAN ID and 802.1p priority bits (PCP), and can be assigned to priority queues
- Classify packets into different IEEE 802.1p priority queues according to DSCP values (RFC 2474, RFC 2475)
- Rate limiting from 64 kbps to the maximum port rate, 64 kbps granularity, accuracy within ±10%
- ACL L2-L4 support

Software Features
- IEEE802.1D and IEEE802.1Q
- IEEE 802.1ad (Q-in-Q) tagging
- IGMPv2 and IGMPv3 multicast
- Jumbo frame support, 9216-byte MTU
- Address learning with auto aging- L2/BPDU Filter
- Support 4096 MAC learning addresses
- Multiple T-CONTs/GEM ports per device
- Flexible mapping between GEM port and T-CONT
- Priority queues and scheduling for upstream
- Activation with automatic discovered serial number and password

8211XG XGS-PON ONT
Product Specifications

Environmental
- Operating Temperature: 32 to 104°F (0 to +40°C)
- Storage Temperature: -4 to 158°F (-20 to +70°C)
- Operating Humidity: 10 to 90% (non-condensing)
- Altitude: –200 to 10,000 feet (–61 to 3,048 m)

Powering
- DC Power: +12 VDC nominal, 1.0A
- Input Power: 90-240VAC, 50/60Hz
- Power Consumption: ~8W

Management
- ITU-T G988 compliant OMCI interface
- CPE Manager Web UI
- CLI over telnet
- SNMP Client
- TR-069, TR-104, TR-098 (future TR-143, TR-471)
  LED indications for status

Compliance
- FCC Part 15 Subpart B, Class B
- ICES-003 Class B
- CE Mark (EMC Directive)
- EN 55032 (Class B), EN 55035 (2014/30/EU)
- Safety: ETL Listed (Intertek)
- IEC 62368-1, UL 62368-1, EN 62368-1
- IEC 60825-1 / EN 60825-1 (Laser Class 1)
- FDA/CDRH 21 CFR 1040.10 and 1040.11
- RoHS 2011/65/EU (EU 2015/863)
- WEEE 2012/19/EU

Future (available upon request):
- UK: UKCA, UK RoHS, UK WEEE
- Canada: CSA C22.2 No. 62368-1
- CB Scheme certificate (IEC 62368-1)

Ordering Information

Model	Description
8211XG	1x SC/APC port, XGS-PON 1x 10GE RJ45 port 1x POTS RJ11 port 1x 12VDC barrel connector, 2-pin power
HX-8211XG-NA **HX-8211XG-UK** **HX-8211XG-EU** **HX-8211XG-00**	North America United Kingdom Europe No Power Supply Included

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Rev. 11-18-2026