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 to 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 and 1577nm 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 software management features, subscribers can enjoy hyper-connected multimedia services faster, easier, and more reliably.

The 8211XG ONT features a 100M/1G/2.5/5/10Gbps auto-sensing LAN port, 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 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 8211XG ONT supports 10 Gigabit symmetrical data using the XGS-PON standard. Services include High-Speed Internet (HIS), Packet Voice, 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
+ One POTS RJ11 port
+ MTU jumbo frame 9216-byte support
+ IPTV multicast, IGMPv2 and IGMPv3 services
+ Any-port, Any-service data model
+ 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.989.3
- 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
- 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 rate limit shall be between 64 Kbps to the maximum port rate with 64kbps granularity. The accuracy error shall be less than ±10%
- DSCP IP CoS (RFC 2475)

Software Features
- IEEE802.1D and IEEE802.1Q
- 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 Wi-Fi 6 GPON 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 984.1/G988 compliant OMCI interface
- CPE Manager Web UI
- CLI over telnet
- SNMP Client
- TR-069, TR-104, TR-98
- LED indications for status

Compliance
- FCC Part 15 Class B
- ICES-003 Class B
- CE Mark
- Safety ETL/Intertek
- IEC 62368-1, UL 62368-1, EN 62368-1
- FDA IEC 60825-1
- RoHS 2015/863/EU
- WEEE

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

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