GPON ONT for Bridging Applications in a Standard SFP Enclosure

✓ *GPON "Stick" ONT*

✓ *Triple-Play QoS*

✓ *Multicast video*

✓ *MSA-Compliant SFP Footprint*

The Zhone 2311 GPON SFP ONT is a complete GPON ONT in an SFP (Small Form-factor Pluggable) package. Bridging applications are now easier to deploy with this MSA-compliant GPON SFP inserted into a suitable host device. Like the Zhone desktop 2301 ONT, the 2311 SFP ONT delivers a full range of advanced IP voice, data and video services over an all-optical broadband access network.

The 2311 SFP ONT is ideal for to converting the network side of a device from a legacy Ethernet connection to a high-speed GPON link. Ethernet switches, routers, set-top boxes and Zhone MX-Series access products are just some of the devices that may host the 2311 SFP ONT in their on-board SFP port. The customer side of the 2311 SFP ONT presents a full-duplex Gb link with wire-speed throughput. No external power supply is required for the 2311 SFP ONT.

Dying-Gasp support alerts the network operator of loss of power to the host device, or removal of the 2311 SFP ONT, helpful for problem identification in remote areas. The 2311 SFP ONT is hot pluggable and easy to install. Its small footprint makes it ideal for use where space or physical access to AC power is difficult.

Compliant with standard OMCI definitions, the 2311 ONT is manageable at remote sites and supports the full range FCAPS functions including supervision, monitoring and maintenance. Provisioning may be accomplished using Dynamic OMCI or ZMS (Zhone Element Management System).

Zhone provides the complete PON solution: ONTs, OLTs, optical splitters, BBUs, EDFAs, RF Transmitters, cabinet solutions and management systems are available from Zhone allowing our customers to buy a complete and fully tested solution from one trusted source.

Technical Specifications

Dimensions

- MSA-compliant SFP enclosure
- 75mm L x 14mm W x 12mm H
- Length beyond SFP cage: 27mm

Weight

- 31g (with dust plug only)
- 48g (packaged in giftbox)

Power

- Input: 3.3VDC +/- 5%, 600mA max
- Power Consumption (25C):
  - Idle: 1.0W
  - Full load: 1.8W
- Power Consumption (60C):
  - Idle: 1.4W
  - Full load: 2.0W

Interfaces

- GPON
  - SC/APC Fiber Connector
  - Full ITU-T G.984 compliance
  - ITU-T G.985 compliance with WBF
    for interoperability with NG wavelengths
  - GPON ONU Class B+ optics

- GPON Tx
  - Upstream data rate 1.244Gbps
  - Burst-mode upstream transmitter (1310nm)
  - Launch power is +0.5 to +5.0 dBm

- GPON Rx
  - Downstream data rate 2.488Gbps
  - APD downstream receiver (1490nm)
  - RX sensitivity -28dBm
  - RX power overload level -8dBm

- Ethernet
  - 1 x1000 Base-X Ethernet (internal port)
  - Meets IEEE 802.3 specifications

Standards Support

- ITU-T G.984 compliant
- IEEE 802.3 Ethernet
- IEEE 802.1p/q VLANs

Management

- OMCI (complies with G.984.4)
- Image updates via OMCI, TFTP or HTTP

Protocol Support

- GPON:
  - Fully ITU-T G.984 compliant framing
  - Dying Gasp support
  - 8 T-CONTs per device
  - 32 GEM Ports per device
  - Flexible mapping between GEM ports and T-CONTs
  - Activation with automatic discovered S/N and
    password in conformance with ITU-T G.984.3
  - AES-128 Decryption with key generation and
    switching
  - FEC (Forward Error Correction)
  - 802.1p mapper service profile on U/S
  - Support for Multicast GEM Port

- VLANs:
  - Per port IEEE 802.1Q VLAN ID processing
  - All VLAN IDs supported
  - VLAN tagging/untagging
  - VLAN Stacking (QinQ)
  - VLAN Switching

- Ethernet / IP
  - Bridging and switching (802.1d / 802.1q)
  - Four traffic classes with 802.1p
  - 802.3n flow control
  - Up to 128 MAC address entries
  - VLAN tagging / untagging
  - VLAN stacking (Q-in-Q)
  - 8 of 4,094 VLANs for filtering
  - MAC limiting
  - 2,000 bytes max ethernet frame size

- IPTV
  - IGMP multicast
  - IGMP snooping
  - Up to 256 Multicast Groups

- IPv6
  - Transparent pass-through of IPv6 frames

Operating Requirements

- Ambient Temperature: -40C to +60C
- Case Temperature: -40C to +85C
- Relative Humidity: 5% to 95%, non-condensing

Regulatory Compliance (Pending)

- FDA 21 CFR 1040.10, 1040.11
- IEC-60825 Class 1
- IEC 60950-1
- FCC 47 CFR Pt 15 Sub B
- EN 55022, EN 300386
- EN 61000-4-1-5

Ordering Information

ZNID-GPON-2311	Indoor GPON SFP ONT, 1xGE (internal)