

# 2301



## 2301 GPON ONT

Fiber Access G-Series ONT enables subscribers to enjoy bandwidth-intensive multimedia services with DZS leading-edge GPON technology.

### Features & Benefits

- + Supports 1.0Gbps/1.0Gbps (Downstream/Upstream) with integrated GPON WAN interface
- + One gigabit multi-rate 10/100/1000M Ethernet interface

The DZS 2301 is an advanced, GPON 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.984 GPON standard with integrated, Class B+ on-board optics supporting 1310nm and 1490nm wavelengths. The 2301 offers data rates of 1.0Gbps downstream and 1.0Gbps upstream able to deliver access edge services and full range of residential and business use cases required. With software management features, subscribers can enjoy hyper-connected multimedia services much easier, faster, and more reliably than ever before.

The DZS 2301 includes one SC/APC GPON interface, and one 10/100/1000Base-T port. The ONT supports wire-speed L2 bridging at line rate. An option fiber tray offers a convenient way to slack loop extra fiber and prevent subscribers from touching optical interface.

## Service Scenario

The GPON 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 2301 ONT supports 1.0G capable downlinks using the GPON standard. Services include High-Speed Internet (HSI), Packet Voice, IPTV, OTT video, and cloud enabled services to multi-media devices.

## Key Service Attributes

- + FSAN ITU-T G.984 GPON Class B+ compliant
- + One 10/100/1000MBase-T Ethernet ports, RJ45 supporting 1Gbps symmetrical services
- + IPTV multicast, IGMPv2 and IGMPv3 services
- + Traffic management including Q-in-Q tagging, 802.1Q VLANs, multiple subscriber VLANs
- + 802.1p priority bits, DiffServ and priority queues based on services types
- + 12 VDC input power

## Product Specifications

### Hardware

- + Dimensions
  - Width: 5.2" (130mm)
  - Depth: 1.4" (34mm)
  - Height: 3.5" (90mm)
- + Weight 0.81 LB (0.37 kg)
- + 128MByte Flash Memory
- + 128MByte SDRAM (DDR)
- + GPON WAN Interface
- + Capacity: 1.0Gbps Down/1.0Gbps Up

### Interfaces

- + WAN: 1 SC/APC port, GPON
- + LAN: 1 port 10/100/1000MBase-T Ethernet (RJ45)
- + Power: 1 2-pin 12VDC barrel input
- + LED Indicators
- + Recessed RESET button

### GPON

- + Class B+ optics, 20km (12.4 miles), reach, max split 64
- + Maximum ODN Attenuation, +28.5 dB link budget
- + GPON Type B redundancy support
- + xPON co-existence filter
- + Transmitter, 1310nm, +0.5 to +5 dBm, DBF
- + Receiver, 1490nm, -28 dBm, APD/TIA
- + 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 rate-limit shall be between 64 Kbps 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

### Environmental

- + Operating Temperature 32~104°F (0~+40°C) Commercial
- + Storage temperature 4~149°F (-20~65°C)
- + Operating humidity 5 to 90% (non-condensing)
- + Altitude: -200 to 10,000 feet (-61 to 3,048 m) above sea level

### Powering

- + DC Power +12 VDC nominal, +10-16 VDC / 0.5A
- + Input power, 90-240VAC, 50/60Hz
- + Power consumption, ~6W maximum

### Management

- + ITU-T 984.1/G988 compliant OMCI interface
- + CLI over telnet
- + 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

# Ordering Information

Model	
2301	1x SC/APC port, GPON (Class B+) 1x 1G RJ45 ports 1x 2-pin barrel, 12VDC power input 0 to +40°C
ZNID-GPON-2301-NA	North America
ZNID-GPON-2301-EU	EU
ZNID-GPON-2301-UK	UK
ZNID-GPON-2301-00	No power supply



2301 ONT with optional fiber tray

**DZS Headquarters**  
Plano, TX USA  
[info@DZSi.com](mailto:info@DZSi.com)  
[www.DZSi.com/contact-us](http://www.DZSi.com/contact-us)

**Contact DZS today**  
[www.DZSi.com](http://www.DZSi.com)  
[support@DZSi.com](mailto:support@DZSi.com)

