

GPON Mini ONT

Model OT101-V



Product Specification

1 Product Descriptions

The GPON Mini ONT is an ITU-T G.984.5 compliant, Gigabit Passive Optical Network (GPON) standard ONU (Optical Network Unit) product, that supports Gigabit Ethernet interfaces that provides a Triple-play service for FTTH users. In addition to its high performance profile, the implementation of the mini ONT assures maximum compatibility and provides remote management via an OMCI channel.

The GPON Mini ONT supports one Gigabit Ethernet interface, which is more flexible to connect to Home Gateway for FTTH application, or connect to a MDU for FTTB/FTTN application.

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2 Product Specifications and Features

2.1 H/W

2.1.1 Interface

- One GPON SC/APC connector
- One RJ-45 1000 Base-T Gigabit Ethernet port
- One Power Connector
- One Push Bottom
- One hidden button for restoration of factory default settings

2.1.2 GPON Characteristics

- Class B+ GPON optical transceiver
 - ✚ Provide 1 SC connector that can be connected to the fiber cable from CO site.
 - ✚ Cable: Single Mode Fiber cable
- Upstream (Transmitter)
 - ✚ DFB laser diode
 - ✚ Wavelength: 1310nm+/-50nm
 - ✚ Average optical transmit power: up to +5dBm
 - ✚ 1.244Gbit/s upstream burst data rate
- Downstream (Digital Receiver)
 - ✚ APD receiver
 - ✚ Wavelength: 1490nm+/-10nm
 - ✚ Sensitivity: -28dBm
 - ✚ 2.488Gbit/s downstream continuous data rate

2.1.3 Ethernet

- Provides 1 RJ-45 connector for 10/100/1000 Mbps Gigabit Ethernet connection.
- Support 10BASE-T (IEEE802.3)
- Support 100BASE-TX (IEEE802.3u)
- Support 1000BASE-TX(IEEE802.3ab)

2.1.4 Dimension

- ✚ PCB: 91.5mm*45mm

2.1.5 LED indicators

LED	Color	Description
POWER 	Green	Show if the ONT is correctly switched-on and powered. Off -ONT is switched-off. Steady on - ONT is switched-on.

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LED	Color	Description
CONNECTION 	Green	Identify the different synchronization and activation phases of an ONT. Off -ONT is not synchronized with the PON. Blinking -ONT is synchronizing with the PON and it is in the activation phase. Steady on -ONT has reached its Operational State during the activation phase, remaining in this state as long as the ONT is working.
ALARM 	Red	Detect problems in the power levels of the optical signal received by the ONT. Off -Optical power > -27dBm Steady on -Optical B+: Optical power < -27dBm(default threshold with FEC off), Optical power < -30dBm(default threshold with FEC on) Note: This threshold can be modified by OLT through OMCI ANI-G configuration.
ETH 	Green	Show the status of the Ethernet port. Off -Link is down Steady on -Link is up but no traffic detected Blinking -Link is up and Rx/Tx traffic is detected.

2.2 S/W Features

GPON
Support ITU-T F.984.1/G.984.2/G.984.3/G.984.5
Support ITU-T G.984.4 OMCI Management
Maximum upstream (ONT->OLT) bandwidth: 1Gbps
Maximum downstream (OLT->ONT) bandwidth: 2.5Gbps
Support DS AES encryption
Support FEC
Support dying gasp
Support 8 TCONTs & 32 GEM ports
Support 8 Egress queues per TCONT at least
Support VLAN or VLAN plus priority gem mapping mode
Support Upstream SP, WRR, SP+WRR scheduling
Support optical transceiver monitor per G.984.2 Amendment 2. (The accuracy of the measurement should be +/- 3dBm maximum)
Support Per-flow(VLAN plus 802.1p) QoS policy dropping un-allowed p-bits
Support Per-flow(VLAN plus 802.1p) Rate limiting
Support Performance monitoring
LAN
Support auto negotiation
Support auto MDI/MDIX

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Support flow control
Support Manual speed setting for 10M,100M, 1000M
Support 2032 Bytes Ethernet packet size
Support IEEE 802.1Q VLAN
Support up to 8 VLANs
Support 8 Egress Queues
Support SP scheduling
Bridge
Transparent bridging
MAC learning (SVL)/aging
Support max frame length to 2032 bytes
VLAN tagging for untagged packets
VLAN transparent/translation
DSCP to 1p Priority Mapping for untagged IPoE packets
Support VLAN 1-4094
Per flow rate limiting
Multicast
Support IGMP v1/v2/v3 Snooping
Support immediate leaving
Support up to 50 multicast groups
Only the channels subscribed and requested by a customer are sent in downstream
Management
Remote management with advanced PLOAM functions
Management through G.984.4 OMCI (ONT Management and Control Interface)
Telnet session for local GPON password provision
Firmware upgrades through OMCI (G.988) from WAN.
Firmware upgrades through CLI from LAN
Dual images
Reset to factory default
System reboot

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3 Mechanic & ID Design

3.1 Outlook



3.2 Case

- Height: 2.9 cm
- Wide*Long: 10.2cm *9.5cm
- Weight: 250g approximately
- Pantone Silver 877C with varnish UVI
- MT-11010 (matt finish)
- RAL 9005 (Jet black)
- EN 60950 fireproof standard

3.3 Physical & Environment

3.3.1 Power

- Output: 12VAC, 0.5A
- Straight DC Jack for AC/DC power Adapter

3.3.2 Operation Temperature & Humidity

- ETS 300 019-1-3, Class 3.2.
- 0°C to 50°C
- 5% ~ 95% non-condensing

3.3.3 Storage Temperature & Humidity

- ETS 300 019-1-1, Class 1.2.
- -40 ~ 70°C
- Less than 95%RH, non-condensing

3.3.4 Transport

- ETS 300 019-1-2, Class 2.3.

4 Certification Requirements

4.1 EMC Certificates and Test Reports

- ANATEL

4.2 Safety Certificates and Test Reports

- ANATEL
- Plug meet NBR14136
stander