

ONT-12B2

High Performance Enterprise and Residential GPON ONT



- Standard ITU G.984-compliant GPON ONT
- Enterprise and residential applications
- 1x10/100/1000 Mbps Ethernet Interface
- Compact size
- Hardware dying gasp

ONT-12B2 is a low-cost device for applications requiring a single Ethernet port. ONT-12B2 complies with the ITU-T G.984 and G.988 standards.

It is part of RAD's full GPON solution that includes both OLT (Optical Line Terminal) and ONT (Optical Network Terminal) platforms.

MARKET SEGMENTS AND APPLICATIONS

RAD offers a series of advanced GPON ONT elements designed for next-generation Optical Access networks deployed in FTTH (Fiber-to-the-Home) and FTTB (Fiber-to-the-Building) scenarios. The product line addresses the rapidly growing service provider needs for flexible, high-capacity fixed-line broadband solutions to support emerging high bandwidth video applications (e.g., IPTV, Mobile backhaul, MTU, VOD) in enterprises, residential deployments, and aggregation networks.

SERVICES

ONT-12B2 offers a low-cost solution for providing high speed Internet services (IPTV, VoiP, etc), business services, or backhaul application requiring a single Ethernet port. It features a single 10/100/100 customer facing interface and a single network side GPON interface.

Compliance to G.988 enables the ONT-12B2 device to be compatible with OLTs manufactured by other equipment vendors.

Specifications

ETHERNET INTERFACE

Number of Ports	1
Compliance	Meets 802.3 specifications
Type	10/100/1000Mbps
Connector	RJ-45
Max MTU Size	2 Kb (Jumbo packets)
Features	Half-duplex & full-duplex operation Auto-negotiation MDI/MDIX auto detection

LAYER 2 CAPABILITIES

Framing	As per IEEE 802.3as
Bridging	As per IEEE 802.1d Ingress/egress IEEE 802.1p tagging, replacement, and stripping IEEE 802.1ad Double tagging
QoS	Based on 802.1p and 802.1q
Forwarding	Traffic class forwarding to GEM port and TCONT
Marking	802.1p marking based on DSCP

GPON INTERFACE

Connector	SC/APC
Wavelength	1490 nm/1310 nm
Distance	20 km between closest and farthest ONT from OLT, as per GPON standards
Transmission	As per ITU-T G.984
Optical Module	Class B+
Optical Transmit Power	0 to +4 dBm
Receiver Sensitivity	-28 dBm
Data Rates	2488 Mbps downstream 1244 Mbps upstream
Monitoring	HW dying gasp Ranging and activation process

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MANAGEMENT

Protocols	G.988 (OMCI)
Options	CLI, Telnet
Firmware	Firmware upgrade, active and alternative firmware images

TRAFFIC MANAGEMENT

Downstream	AES-128 encryption and key exchange process FEC, RS (255, 239) Dedicated independent TX queues for PLOAM and CPU packets
Upstream	FEC, RS (255, 239) Normal queues for PLOAM and CPU packets

MONITORING AND DIAGNOSTICS

Features (upstream only)	Performance monitoring Faults and alarms BER monitoring
LEDs	Visual status indicators
Alarms	Alarm report and suppression (ARC)

GENERAL

Physical

Enclosure	Desktop Wall mount
Dimensions	L82 mm*W82 mm*H25 mm (L3.2inch*W3.2inch*H0.98 inch)

Environment

Operating Temperature	0°C to 45°C (32°F to 113°F)
Altitude	Up to 4000m
Humidity	10 to 90% RH non-condensing

Power

Input Voltage and Current	12 VDC, 5A +/- 5%
Connector	Round barrel-type connector for power input
Power Saving	As per ITU-T 984.3 (01/2014) of ONU power management aspects

Ordering

ONT-12B2/1GEU

ONT-12B2 device with single 10/100/1000 Mbps Ethernet port

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