

ONT-20

Versatile GPON Business ONT



- Standard ITU G.984 compliant GPON ONTs
- Industrial, enterprise, MTU, mobile backhaul and IoT applications
- POE support (based on model selected)
- Enhanced QoS and Multicast for Video
- ONT variants to suit the customer/application
- Ruggedized enclosure for industrial applications

ONT-20 is a versatile ONT product series available in multiple flavors, supporting 10/100/1000 Gigabit Ethernet, WiFi, USB and POTS interfaces, supporting POE. It is part of RAD's full GPON solution that includes both OLT (Optical Line Terminal) and ONT (Optical Network Terminal) platforms.

ONT-20 series is compliant to ITU-T G.984, G.988 and TR69 set of standards.

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) formats. The product line addresses the rapidly growing service provider needs for flexible, high-capacity fixed-line broadband solutions to support emerging video applications (e.g., CCTV, Mobile backhaul, MTU, VOD, IOT) in industrial, enterprise, residential deployments, aggregation of backhaul traffic from LTE cell sites, enterprise VPN Services and SD-WAN networks based on NFV paradigm.

SERVICES

Using standard OMCI and TR69 protocols, ONT-20 can be configured to provision CCTV, Mobile backhaul, MTU, VOD, IOT, Internet, IPTV, VoIP, WiFi services and more.

ETHERNET

ONT-20 has 8 Ethernet interfaces to cater for such applications as CCTV, PA systems, connectivity to external WiFi access points or any other application requiring Ethernet connectivity.

POE

The system has an option for POE (802.AF/AT) for powering devices connected to ONT-20 over Ethernet, thus reducing the requirement of separate power source for end equipment.

POTS

ONT-20 has two POTS interfaces for connectivity to PSTN network.

WIFI

ONT-20 supports WiFi 802.11 a/b/g/n/AC standards for hotspot applications.



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Specifications

ETHERNET INTERFACE

Number of Ports	8
Compliance	Meets 802.3 specifications
Type	10/100/1000Mbps
Connector	RJ-45
PoE Ports	802.3AF (For all 8 ports), 802.3AT (For 4 ports)
Ethernet Packets	up to 2 kB

POTS INTERFACE

Number of Ports	2
Type	FXS
Connector	RJ-11
Signaling	SIP (RFC 3261)
Locale Selection	Based on country profile
Codecs	G.711Alaw, G.711Ulaw, G.729a, G.726, PCM Wideband, G.722, GSM AMR, AMR Wideband Media and signal are separated
Fax	Transparent FAX, T.38
DTMF	Inband, RFC2833, SIP Info, V.18 support
Voice Activity Detection	Supported SIP
Transport	UDP & TCP

GPON INTERFACE

Connector	SC/APC
Wavelength	1490 nm/1310 nm
Distance	Up to 20 km depending on split ratio
Transmission	As per ITU-T G.984
Optical module	Class B+
Optical Transmit Power	+0.5 to +5dBm
Receive Sensitivity	-28dBm
Data Rates	2488 Mbps downstream 1244 Mbps upstream
GEM Ports	Up to 256 IDs
Protection	GPON Type-B redundancy
Monitoring	Dying gasp Ranging and activation process

WIRELESS INTERFACE

Compliance	802.11 a/b/g/N/AC with channel bandwidth: 20/40/80MHz (For 802.11 AC)
Frequency of Operation	2.4GHz/5GHz
SSID per Radio	4
Features	AP isolation Mac restrict mode Mac filter based probe response WMM
Max Clients	128
Operational Capabilities	ERP, HT, VHT
No of TX/RX Chains	2
Preamble	Configurable between short/long
Beacon Interval	Configurable
Security	Open, 802.1x, WPA, WPA-PSK, WPA2, WPA2-PSK, WEP

MANAGEMENT

Protocols	OMCI, TR69
Options	CLI, SNMP

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TRAFFIC MANAGEMENT

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

MONITORING AND DIAGNOSTICS

Upstream only	Performance monitoring Faults and alarms BER rate monitor
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GENERAL

Environment

Operating Temperature	0°C to +60°C (14°F to 140°F)
Altitude	Up to 4000m
Humidity	5 to 90%, non-condensing

Power

Power Consumption	Maximum Power Consumption: 20W
Power Saving	As per ITU-T 984.3 (01/2014) of ONU power management aspects
Power Supply	Non-PoE models: 12 VDC ,2A +/-5%, round barrel-type connector for power input PoE models: 44-57 VDC +/- 5%, 2x3 Molex-Minifit Jr type connector
Power Feeding	Max PoE Power for attached devices (4 Nos of 802.3 Type 2 PD or 8 Nos of 802.3 Type 1 PD): 120W

Physical

Form Factor	DIN Rail form factor
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Ordering

Model	Configuration
ONT-20P/8GEU/2FXS/APC	8GE (POE) + 2POTS + 2USB
ONT-20P/4GEU/APC	4GE (POE)

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