

ONT Product Line

GPON CPE
Solutions

Description

The ONT Customer Premises Equipment solutions are the right choice for those who implement a GPON optical network termination. The equipment architecture is based on Rec.

ITU G.984.x and supports multiplay service enabling High Speed Internet (HSI), Voice and Video services through Ethernet, WiFi, FXS and RF Overlay standard interfaces. Mobile backhaul and dedicated TDM business services are also enabled.

PT Inovação's ONT equipment solutions are BBF.247 certified (multi vendor OLT interoperability) and can be easily configured to differentiate operators business whether retail, wholesale and mobile.

Fiber-to-the-Home (FTTH), Fiber-to-the-Building (FTTB), Fiber-to-the-Business (FTTb), Fiber-to-the-Curb (FTTC) and Fiber-to-the-Cell (FTTc) are typically the target FTTx deployment scenarios to be considered within our offer.

PT Inovação's ONT solutions can be divided into four equipment family flavours:

ONT Bridging Family (simple L2 bridging devices)

This equipment family is very much suitable for lowcost GPON deployments offering the opportunity to deliver a reliable service using a third party gateway (FTTH scenario) or even delivering a suitable network termination point for mobile backhaul (FTTC scenario).

ONT Gateway Family (with L2/L3 gateway features)

This equipment family is the choice for full inhouse multiplay service enable (Voice, Video and Data) specially devoted for FTTH. Deployment WiFi 802.11 b/g/n and 802.11 ac is enabled. This equipment family has built-in routing features that avoid the need for an external third party gateway, and at the same time may have 3G/4G uplink.

ONT Dedicated Services Family (legacy traffic transport)

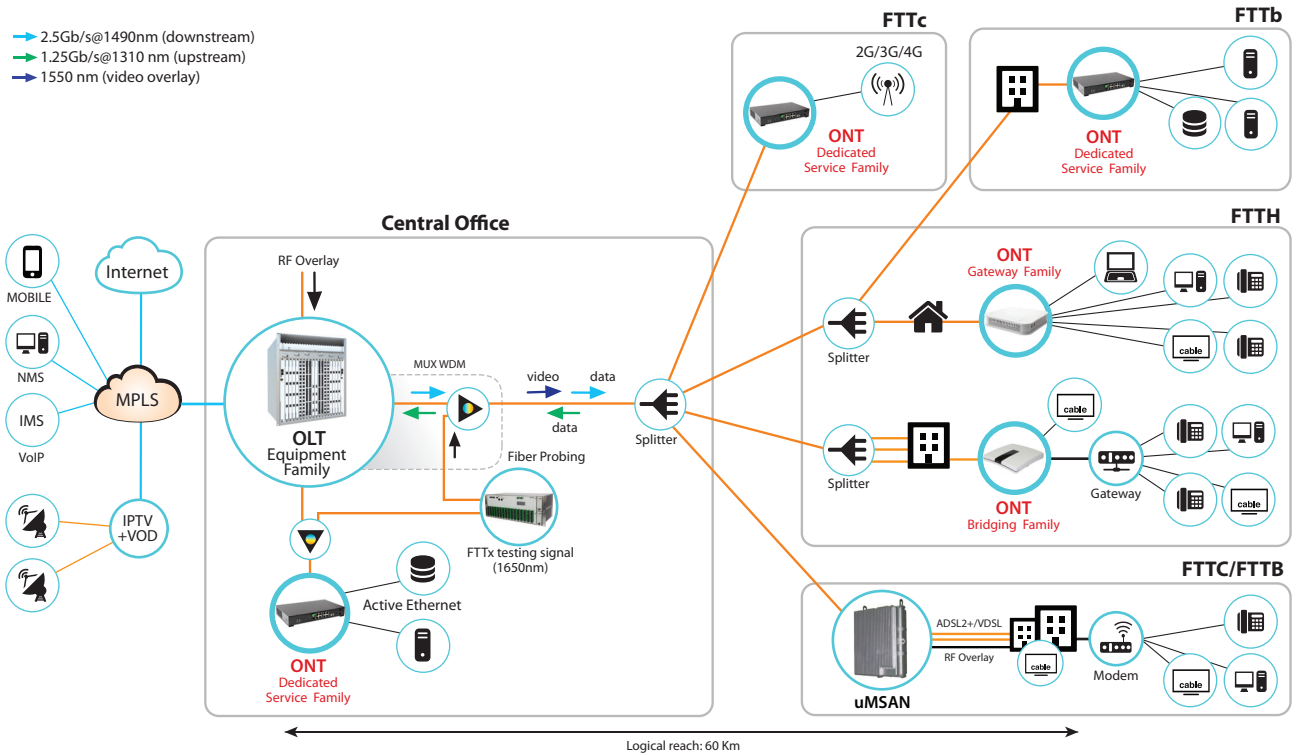
This equipment family is specially devoted to bring TDM dedicated terminals into next generation IP infrastructures. E1 and nx64 Kbps circuits are emulated and transported over GPON network up to the central office legacy exchange, or even in a point-to-point circuit scenario.

Business Benefits

- Evolution of the broadband access paradigm from few Mbps up to fiber 2.5Gbps/1.25Gbps (downstream/upstream) data rates;
- Multiplay service enabled including data (High Speed Internet), voice (VoIP) and TV (IPTV and RF Overlay);
- Legacy nx64 Kbps and E1 business services support;
- Low cost mobile backhaul equipment solution to boost your mobile 3G/4G fiber deployments, or even having 3G/4G uplink;
- BBF.247 (multi vendor OLT interoperability enabled) Certified;
- Mass remote management through OMCI (G.984.4 and G.988) and TR-069 standards, thus offering a full remote control without user intervention;
- Reliable and long live equipment solution with several Indoor/Outdoor mount options;
- Ability to be configured has the ONT that diferenciates your business.

ONT Product Line

Architecture



Dedicated Service Family



Bridging Family



Gateway Family

ONT Product Line Configurations

	Dedicated Service Family			Bridging Family				Gateway Family	
	ONT-NTA	BOX-RF	BOX-RF-S	ONT-MBH	ONT-SFU	ONT-SFU-S	ONT-4GE-2FXS	ONT-RGW	ONT-RGW-S
RF-Overlay		1xCATV	1x(CATV+SAT)		1xCATV	1x(CATV+SAT)	1xCATV	1xCATV	1x(CATV+SAT)
WiFi (802.11 b/g/n) WiFi (802.11 ac)								2,4GHz/(2x2)-5GHz/(2x2) Dual-concurrent	2,4GHz/(2x2)-5GHz/(2x2) Dual-concurrent
USB	2							2x Host	2x Host
FXS Ports	2/4						2	2	2
ETH Ports	4 x 10/100/ 1000BASE-T			1 x 10/100/ 1000BASE-T	1 x 10/100/ 1000BASE-T	1 x 10/100/ 1000BASE-T	4 x 10/100/ 1000BASE-T	4 x 10/100/ 1000BASE-T	4 x 10/100/ 1000BASE-T
NAT/NAPT								✓	✓
Firewall								✓	✓
VPN pass-through								✓	✓
PPPoE termination								✓	✓
Nx64K	✓								
E1/T1	✓								
OMCI	✓			✓	✓	✓	✓	✓	✓
TR-069								✓	✓
CLI								✓	✓
WebGUI								✓	✓
MoCA 2.0								✓	✓
PoE								✓	✓

Physical characteristics

WAN Uplink Interfaces	G.984 GPON B+ and Active Ethernet	
GPON layer per G984.x	Comply with GPON standard: ITU-T G984.1 /G984.2 /G984.3 /G984.4 /G984.5 /G988; GPON Encapsulation Method (GEM) supports Ethernet; Configurable AES (Downstream) and FEC (Downstream and Upstream); Bitrates: 2488Gbps (Downstream) /1244Gbps (Upstream);	Class B+ optics (28dB); T-CONTs: 32; GEM Port-IDs: 255;
L2/L3 layer	VLAN-ID to GEM port-ID mapping (per WT-156): -N:1 VLAN. -1:1. Transparent VLAN; Classification: DSCP/TOS, 802.1p TCI, VLAN-ID, MAC address; Traffic Management: up to 8 queues per T-CONT in priority-controlled mode or up to 16 queues per T-CONT in rate-controlled scheduling mode;	802.1q VLAN processing: Q-in-Q, tagging, removing tag, replacing tag or transparent forwarding; Routing: Network Access Translation (NAT) and Network Access Port Translation (NAPT); Firewall; VPN; DHCP Client and Server; PPPoE Client; Performance: 1000Mbps bidirectional;
IPTV	IGMP v1/v2/v3 snooping and proxy; IGMP processing per VLAN ID to support group of channels; Interactive services (Video On Demand); IPTV streams forwarding simultaneous :128; IPTV prioritization using Quality of Service (QoS) using 802.1p;	
VoIP specifications	Call control: SIPv1/v2; T.38 Fax relay; Fax/Data bypass; Echo canceller; Echo canceller length; Jitter buffer; Caller ID generation; G.711 PCMU; G.711 PCMA; G.723.1; G.726.	G.729; VAD and CNG; Caller ID and call waiting; RTP/RTCP packet encapsulation; RFC 2833 Support; In-band signaling detection and generation (DTMF, call progress tones); Automatic Tone generation (dial, busy, ring back, stutter, distinctive ring); 3-Way conferencing;
MOCA®	Frequency band: 500MHz up to 1650MHz; Up to 16 nodes MoCA® 1.1: 175 Mbps Net Throughput MoCA® 2.0: 400 and 500 Mbps Net Throughputs MoCA® 2.0 is backward interoperable with MoCa 1.1	
Services	Content sharing - UPnP Media Server; - DLNA DMS; - Metadata Support; OSGI (Open Service Gateway Interface). E1 (SATO); Nx64Kbps (CESoP).	
POTS	RJ-11 FXS port;	
LAN Ethernet interfaces	RJ-45 10/100/1000 BASE-T; Support auto-negotiation; Support auto MDI/MDIX.	
Video Overlay	1 port on a F Connector; 75 ohms impedance (nominal);	TV overlay: 1550nm -8dBm < Pin < +2dBm; Analog bandwidth: minimum 47 MHz and maximum 862 MHz.
WiFi	IEEE 802.11 b/g/n 2x2/3x3 access point and 802.11ac; Dual Mode selectable 2.4GHz/5GHz; 802.1x Authentication; External RADIUS Authentication; WPA/WPA2 Protected access; 64/128 Bits WEP encryption; AES and TKIP Encryption;	Wi-Fi multimedia support: WMM and WMM-PS; Multiple SSIDs Profiles; MAC Address filtering integrated; WPS (Pushbutton and PIN entry); Hotspot 2.0.
USB	USB 2.0 Host;	
Management	Web-based with GUI; Remote management over the OMCI, PLOAM, OAM and TR-069, TR-104, TR-111, TR-142;	Secure software download upgrade via OMCI or TR-069; Embedded Telnet server for remote management; SNMP V3; Zero Touch configuration; CLI
PoE	IEEE 802.3at, Type 1, Class 1 and 2) (POE 6W per port)	
Power Requirement	Comply with CoC V3.	
Environment	-5°C to +45°C, 0 - 95% Relative Humidity.	

ONT Product Line

GPON CPE Solutions

ONT-SFU



Front view

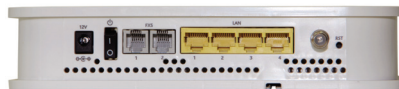


Rear view

ONT-RGW



Front view



Rear view

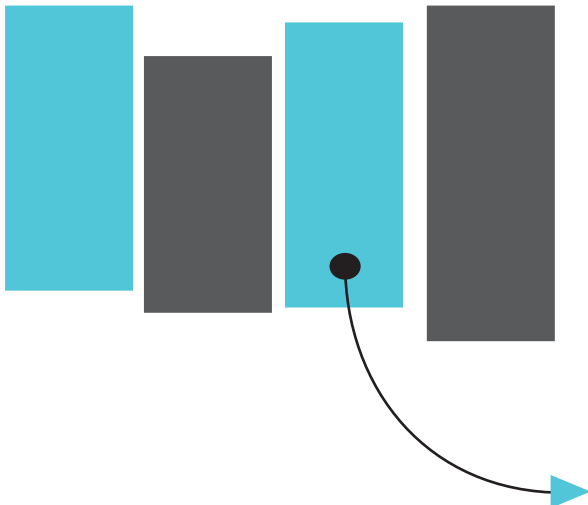


Side view

ONT-NTA



Front view



ABOUT PT Inovação

PT Inovação has been for more than 65 years a fundamental lever for delivering advanced digital and communication services.

Innovation is in our DNA and Communications Service Providers, market leaders around the world, count on our innovative portfolio to gain competitive advantages in the market and improvements in companies' processes.

Knowledge is the raw material that we transform into advanced solutions with an innovation approach supported on an ecosystem built around R&D entities and industrial partners.

Take a journey with us at www.ptinovacao.pt and discover how to boost your business!

