XPON ONT Beam
1K04X Single Band

PPC®
A **BELDEN** BRAND

Features & Benefits

- Dual mode ONT (GPON and EPON)
- Compliant with G984.2 & IEEE 802.3ah
- Plug and play
- Wi-Fi 802.3 b/g/n (Single Band)
- Compliant with TR-069
- 1 Gigabit port
- ONU Auto discovery
- Supports Zero-touch provisioning

Overview

PPC's Optical Network Terminal (ONT) can be used in applications ranging from residential units to enterprise solutions. The GPON HGU (Home Gateway Unit) incorporates interoperability, key customer specific requirements, scalability and cost efficiency. Equipped with an ITU-T G.984 compliant 2.5G Downstream and 1.25G Upstream GPON interface, this device supports triple-play services including voice and high-speed internet access service. The ONT is highly reliable and easy to maintain, with guaranteed QoS for different service.

The ONT is fully compliant with GPON and EPON technical regulations such as ITU-T G.984.x and IEEE802.3ah, and technical requirements of EPON equipment. Dual mode HGU can detect and exchange PON mode automatically. Compliant with standard OMCI definition, this device is manageable at remote side and supports the full range FCAPS functions including supervision, monitoring and maintenance. This ONT can act as a wire-speed L2 switch and L3 routing gateway with functions including port forwarding, NAT, NAPT and PPPoE clients provide services. This model of ONT is equipped with 1 Uplink GPON, 1Gigabit LAN Ethernet and WiFi supporting 802.11b/g/n.

Technical Data

Interface

Feature	Value
PON Interface	1*GPON port, FSAN G.984.2 standard, Class B+
	Downstream Data Rate: 2.488Gbps
	Upstream Data Rate: 1.244Gbps
	SC/UPC single mode fiber
	27dB Link loss and 20KM distance with 1:128 split ratio
Ethernet Interface	1*10/100/1000M auto-negotiation
	Full/half duplex mode
	RJ45 connector
	Auto MDI/MDI-X
	100m distance
Power Interface	12V 1A DC Power supply
	2-PIN power adapter input
	Power switch
	Power consumption: less than 10W

XPON ONT Beam
1K04X Single Band

Technical Data

Specification	Value
Wireless Interface	Compliant with IEEE 802.11 b/g/n
	IEEE 802.11n 2.4GHz
	64 and 128 bit Wireless Encryption Protocol (WEP) support
	Wireless Protected Access support including Pre-Shared Key (WPA-PSK)
	Radio switched on/off function Support WPS
	Transmitter power: **IEEE 802.11b:** 18dBm, **IEEE 802.11g:** 15dBm, **IEEE 802.11g/n:** HT20 14dBm **IEEE 802.11g/n:** HT40 14dBm
	ERIP: ≤20 dBm
	2.4GHz supports 2*2 MIMO (Multiple-Input Multiple-Output) technology

Performance Parameter

Specification	Value
PON Optical Parameter	Wavelength: Tx 1310nm, Rx1490nm
	Tx Optical Power: 0.5~5dBm
	Rx Sensitivity: -27dBm
	Saturation Optical Power: -11dBm
Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/s s; Upstream
	1.244Gbit/s
	Ethernet: 1000Mbps
	Packet Loss Ratio: <1*10E-12
	latency: <1.5ms
Switching Parameters	Ethernet port auto negotiation or manual configuration
	MDI/MDIX automatically sense
	Hardware priority queues on the downstream direction in support of CoS
	802.1D bridging
	VLAN tagging/detagging per Ethernet port
	VLAN stacking (Q-in-Q) and VLAN Translation
	IP ToS/DSCP to 802.1p mapping
	Class of Service based on UNI, VLAN-ID, 802.1p bit, and combination
	Marking/remarking of 802.1p
	IGMP v2/v3 snooping and IGMP snooping with proxy report
	Broadcast/Multicast rate limiting
	Multiple WAN interfaces supporting
	WAN connection • Point-to-Point Protocol over Ethernet (PPPoE) • Dynamic Host Configuration Protocol (DHCP) • Static
	DHCP server for LAN devices
	DNS relay

XPON ONT Beam
1K04X Single Band

Technical Data

Specification	Value
Switching Parameters	Network Address Translation (NAT) / Network Address Port Translation (NAPT)
	Port forwarding
	Static routing
	Traffic classification and QoS based on Layer 3 and Layer 4 Identifier
	Access Control List (ACL)
	VPN Pass thru for Point to Point Tunneling Protocol (PPTP), Layer 2 Tunneling Protocol (L2TP) and IP Security Protocol (IPSec)
	Firewall
	Application Layer Gateway (ALG)
	Demilitarized Zone (DMZ)
	Dynamic Domain Name Server (DDNS)
	Network Time Protocol (NTP)
	Universal Plug and Play (uPnP)
	IGMP proxy
	IPv6 • Stateless Address Autoconfiguration (SLAAC) • DHCPv6 • PPPoEv6 • DNSv6

Standard Protocols

Specification	Value
PON Protocols	ITU-T Recommendation G.984.x (GPON)
	ITU-T Recommendation G.988 (OMCI)
	Advanced Encryption Standard (AES)
	Forward Error Correction (FEC)
	Class B+ optics (28dB)
	T-CONTs: 32
	Logical Range: 60 km
	Max Transmission Distance: 20 km
	GEM Port-IDs: 255;

XPON ONT Beam
1K04X Single Band

Technical Data

Device Management

Specification	Value
Management mode	Standard compliant OMCI interface as defined by ITU-T G.984.4
	Support TR069 and WEB management
	Standard compliant OMCI (the embedded operations channel) interface as defined by ITU-T G.988
	Compliant to TR-069
Management Function	Status monitor, Configuration management, Alarm management, Log management

Physical Features & Environmental Conditions

Specification	Value
Dimension	210mm x170mm x 38mm (Wx D x H)
Weight	200 g
Operating temperature	0°C ~ 55°C
Operating Humidity	5% ~ 95% (non-condensing)
Storage temperature	-30°C ~ 85°C
Storage Humidity	5% ~ 95% (non-condensing)
Mounting option	Desktop & Wall mounting
LED	Power, PON, LOS, LAN, Wi-Fi

Ordering Information

Model Number	Description
1K04X	XPON Optical Network Terminal 1*Gigabit ethernet with Wi-Fi 802.11 b/g/n, 1m Cat5e LAN cable and power adapter of output rating 12V 1A

rev2_06282022