![C-COR Engineering Tomorrow's Networks logo]

DATA SHEET
GPON Networks

IPCOR G8 Series
GPON ONT G8224/G8204/G8201

Overview

The IPCOR G8 Series ONTs are GPON optical network units designed to meet the requirements of broadband access networks. They are ideal for FTTx applications to provide data, voice and video services based on a GPON network.

The G8 series devices meet the ITU-T G.984 GPON standard and deliver higher bandwidth and efficiency using large variable-length packets. Depending on the model the ONUs consist of two POTS ports, four GE auto-adapting Ethernet ports and one 802.11 n/b/g Wi-Fi port. They also feature high-performance forwarding capabilities to ensure excellent experience with VoIP, internet, and HD video services and efficient packaging of user traffic, with frame segmentation allowing higher quality of service (QoS) for delay-sensitive voice and video communications traffic.
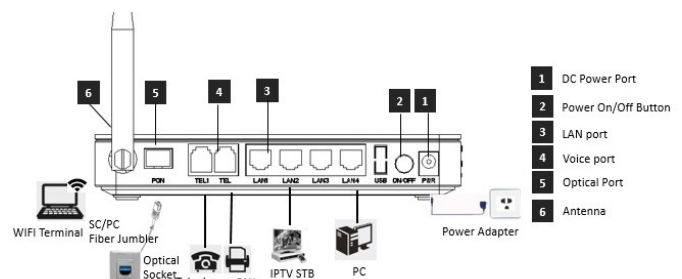
The G8 Series provide a perfect terminal solution that offers future-oriented service supporting capabilities for FTTx deployment. With reliability and performance expected of business services the G8 Series are also an attractive way to deliver residential services and enabling economical FTTx deployments to help accelerated growth.

Mechanical

Dimensions (Height x Width x Depth)	30 x 170 x 130	mm
Weight (in maximum configuration)	0.3	kg

KEY FEATURES

- ITU-T G.984 compliant;
- 4 × auto-adapting GE ports;
- 2 × POTS ports;
- 802.11 n/b/g WiFi port ;
- IGMP snooping;
- Remote management;
- Web-based GUI;
- Auto-negotiation and MDI/MDIX;
- Supports H.248, MGCP, and SIP protocols;
- FTTH, FTTB, FTTO, PON + EOC;
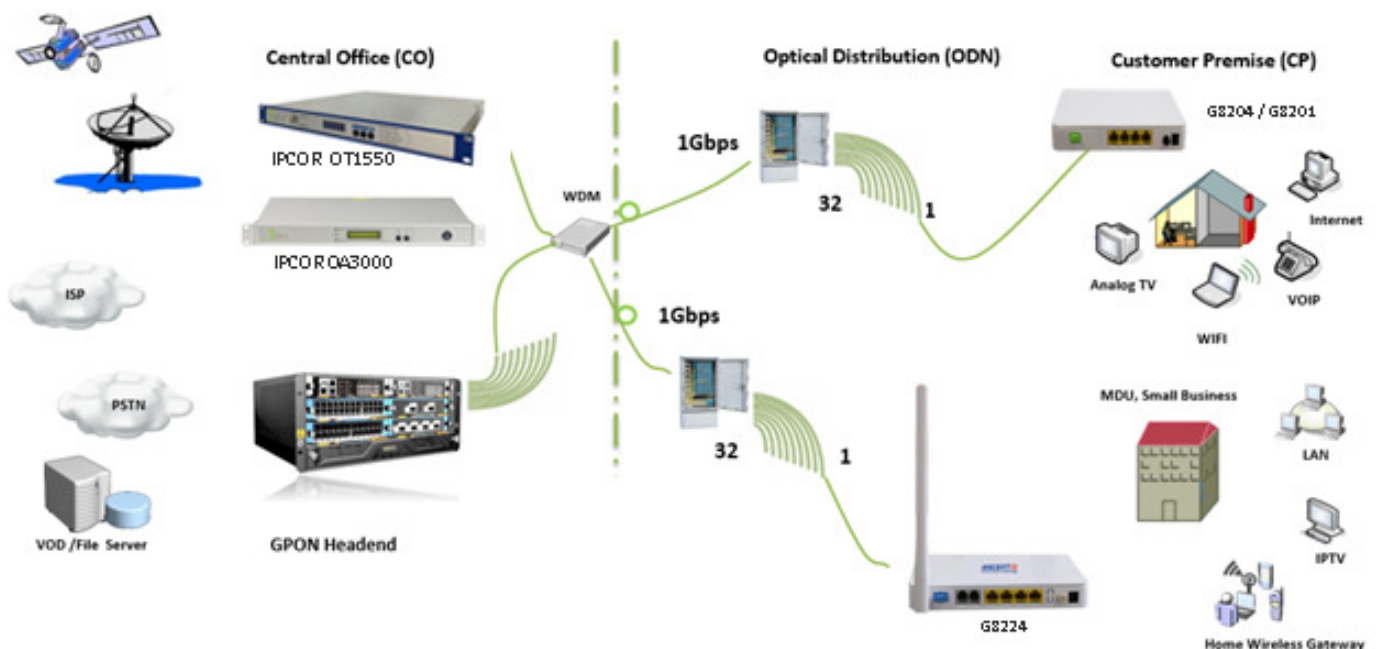- Broadband internet, VoIP, IPTV, VOD, IP camera, WiFi.

Features

- Fully compatible with ITU-T G.984
- Web-based GUI for local management
- Depending on Model (see specifications table below),
  Supports:
  - Two POTS ports
  - Four GE auto-adapting Ethernet ports
  - One 802.11 n/b/g WiFi port
  - OMCI and TR069 for remote management
  - Auto-negotiation and MDI/MDIX
  - Ethernet interface rate, working mode and flows control
  - Loopback at UNI
  - Packet filtering and anti-illegal message attack protection
  - Performance statistics of Ethernet lines
  - VLAN tagged label processing, traffic classification and packet filtering, STP/RSTP etc.
  - DHCP Option60 reporting the location information of the Ethernet interface
  - PPPoE+ for accurate subscriber identification
  - H.248, MGCP, and SIP protocols
  - IGMP snooping
  - AES-128 encryption

Application Diagram

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Specifications

Item	G8201	G8204	G8224
Port	1 × GPON port 1 x 10/100/1000M auto-negotiation RJ45 port	1 × GPON port 4x10/100/1000M auto-negotiation RJ45 ports	1 × GPON port 4 x10/100/1000M auto-negotiation RJ45 ports 2 x POTS ports 1 x WIFI
Network Management	Standard compliant OMCI interface as defined by ITU-T G.984.4	Standards compliant OMCI interface as defined by ITU-T G.984.4	
	Supports TR069 and WEB management	Supports WEB management	
Power Supply	External 12V 1A AC/DC power supply adapter	External 12V 0.5A AC/DC power supply adapter	External 12V 0.5A AC/DC power supply adapter
Power Consumption	<7W	<5 W	<5 W
Power Supply Port	12V DC input		
PON Port	GPON port, FSAN G.984.2 standard, class B+ Downstream data rate: 2.488 Gbps Upstream data rate: 1.244 Gbps SC/PC single mode fiber 28 dB link loss and 30 km distance with 1:128		
Ethernet Port (LAN)	10/100/1000M auto-negotiation RJ45 ports Full duplex / half-duplex RJ45, auto-MDI/MDI-X Transmission distance 100 m		
POTS Port	2 × RJ11 with 3REN Max 1 km distance Balanced ring, 55V RMS		
Management Function	Status monitor, configuration management, alarm management, log management		
Shell	Plastic casing		
Environment	Operating temperature: 0~45℃ Storage temperature: -40~85℃ Operating humidity: 10~90% (non-condensing) Storage humidity: 10~90% (non-condensing)		

WiFi Features

Available to G8224 Model Only

- IEEE 802.11n compliant, 2.4 GHz
- Full IEEE 802.11b/g legacy compatibility with enhanced performance
- Two-stream spatial multiplexing up to 300 Mbps PHY data rates
- Supports:
    - Multi-SSID (Maximum 4 SSIDs)
    - Automatic channel selection
    - SSID hiding
    - 64/128 bit WEP, 802.1x, WPA, and WPA2 for wireless security

Item	Specification
Standard	IEEE802.11b/g/n
Frequency	2.400 ~ 2.500 GHz
Wireless Data Rate	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: up to 200 Mbps
Modulation Schemes	802.11g: 64QAM, 16QAM, QPSK, BPSK, DSSS 802.11b: CCK, DQPSK, DBPSK HT20: 64 QAM, 16QAM, QPSK, BPSK
Channel	13 × channels, configurable to meet the standard of USA, Canada, Japan, and China
RF Receiver Sensitivity	**802.11b:** -96 dBm @ 1 Mbps; -93 dBm @ 2 Mbps; -91dBm @ 5.5 Mbps; -88 dBm @ 11 Mbps **802.11g:** -90 dBm @ 6 Mbps; -89 dBm @ 9 Mbps; -89 dBm @ 12 Mbps; -867 dBm @ 18 Mbps; -83 dBm @ 24 Mbps; -79 dBm @ 36 Mbps; -75 dBm @ 48 Mbps; -75 dBm @ 54 Mbps **802.11n:** -96 dBm @ 1 Mbps; -88dBm @ 11 Mbps; -90dBm@6Mbps; -75dBm@54Mbps; -86dBm @ m0/20MHz; -69dBm @ m15/20MHz;
RF Tx Power	TX power out b mode @ 11 Mbps: 18 dBm +/- 2 TX power out g mode @ 54 Mbps: 16 dBm +/- 2 TX power 11n mode @ HT20: 16 dBm +/-2
Encryption Mode	64-bit, 128-bit WEP, AES, TKIP, WPA, WPA2, 802.1x
Transmission Distance	100 m indoors coverage area 300 m outdoors coverage area (varies depending on actual environment)

Australia Office

2 Anzed Court
Mulgrave VIC 3170
Australia
T. +61 3 8542 0600
F. +61 3 8542 0629
E. sales@c-cor.com.au
www.c-cor.com.au

Regional Representation

Pakistan/ Korea
E: sales@c-cor.com.au

Ordering Information

P/N.	Description
A390.2.01.1.0.E	**G8201** GPON ONT 1x GE (1.25G US, 2.5G DS), 1xGE, Single Fiber, SC/PC, external power supply adapter
A390.2.04.4.0.E	**G8204** GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, Single Fiber, SC/PC, external power supply adapter
A390.2.24.4.2.W.E	**G8224** GPON ONT 1x GE (1.25G US, 2.5G DS), 4xGE, 2xPOTS, WIFI, Single Fiber, SC/PC, external power supply adapter

Contact your local sales representative for product availability in your area and for other interface and option requirements.

Due to ongoing product development, technical specifications are subject to change without notice