

## FD614GW HGU GPON ONT



### Overview

FD614GW GPON HGU ONT is one of the GPON optical network unit design to meet the requirement of the broadband access network. It apply in FTTH/FTTO to provide the data, voice and video service based on the GPON network.

GPON is the latest generations of access network technology. ITU-T G.984 is the standard protocol of GPON. The GPON standard differs from other PON standards in that it achieves higher bandwidth and higher efficiency using larger, variable-length packets. GPON offers efficient packaging of user traffic, with frame segmentation allowing higher quality of service (QoS) for delay-sensitive voice and video communications traffic. GPON networks provides the reliability and performance expected for business services and provides an attractive way to deliver residential services. GPON enables Fiber To The Home (FTTH) deployments economically resulting to accelerated growth worldwide.

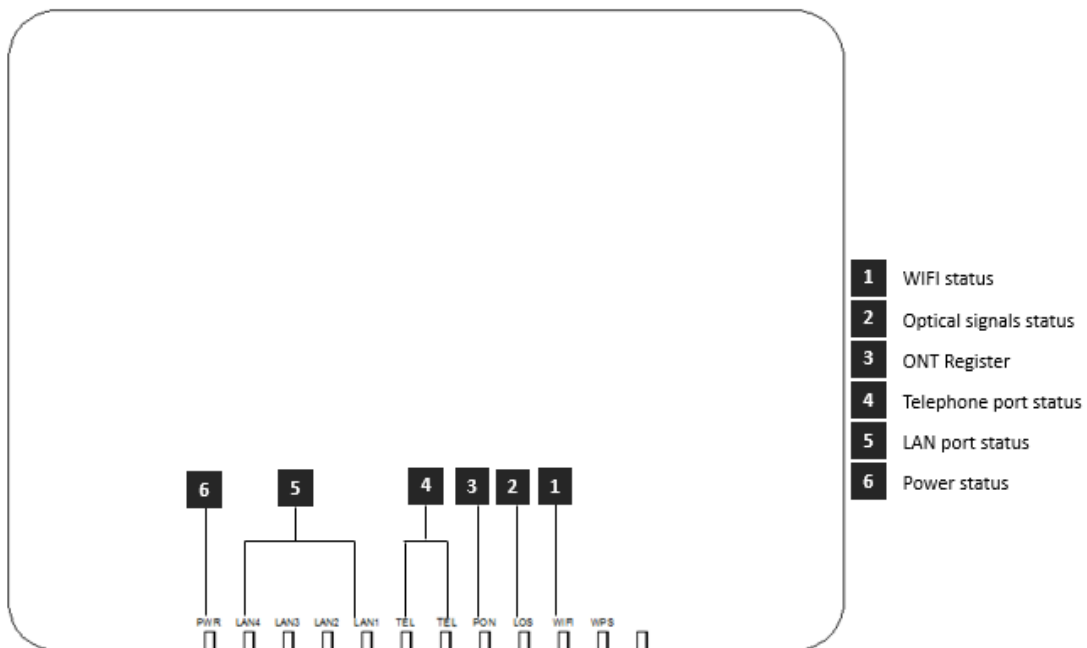
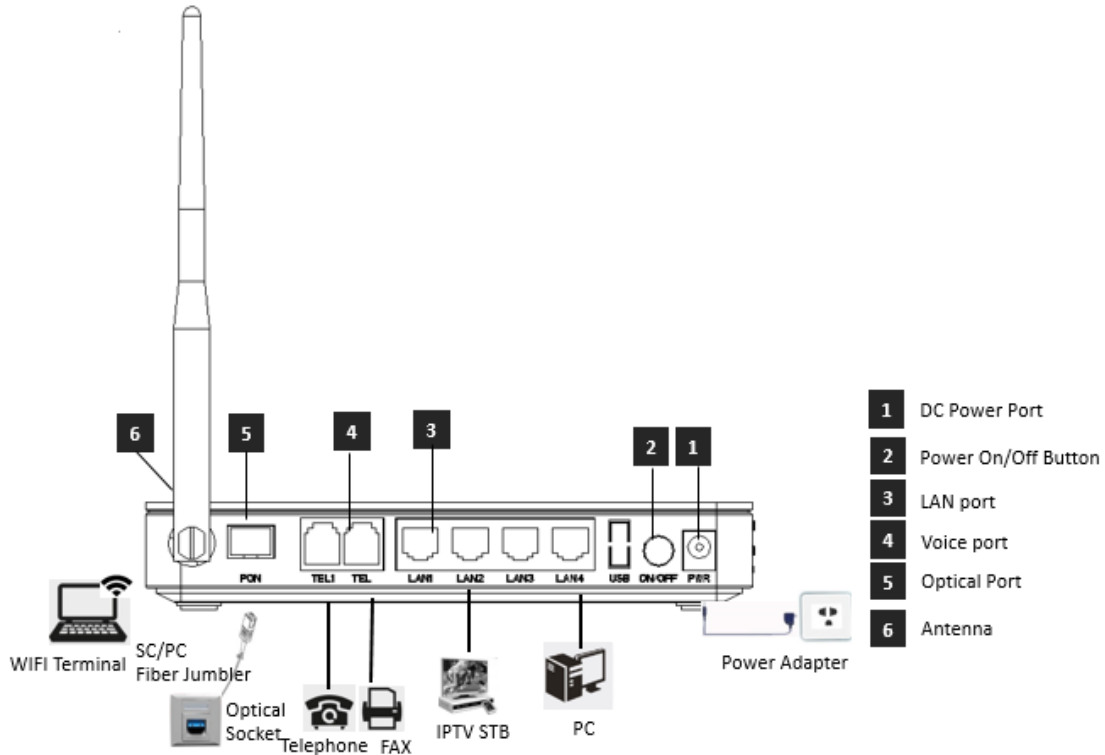
FD614GW provide two POTS ports, four GE auto-adapting Ethernet ports and one 802.11 n/b/g Wi-Fi port. The FD614GW features high-performance forwarding capabilities to ensure excellent experience with VoIP, Internet and HD video services. Therefore, the FD614GW provides a perfect terminal solution and future-oriented service supporting capabilities for FTTH deployment. It has good third-party compatibility to work with the third party OLT, such as Huawei/ZTE/Fiberhome/Alcatel-Lucen.



## Features

- Full compatible with ITU-T G.984
- Support two POTS
- Support four GE auto-adapting Ethernet ports
- Support one 802.11 n/b/g WiFi port
- Support OMCI and TR069 for remote management
- Support Web for local management
- Support Auto-negotiation and MDI/MDIX
- Support the Ethernet interface rate, working mode and flows control
- Support loopback at UNI
- Support packet filtering and anti-illegal message attack protection
- Support performance statistics of Ethernet lines
- Support VLAN tagged label processing, traffic classification and packet filtering, STP/RSTP etc.
- Support DHCP Option60 reporting the location information of the Ethernet interface
- Support PPPoE+ for accurate subscribers identification
- Support H.248、MGCP and SIP protocol
- Support IGMP Snooping
- Support AES-128

## Product interface and LED definitions



| Indicator |      |                      | Description  |
|-----------|------|----------------------|--|
| 1         | WIFI | WIFI                 | Blinking : Data is being transmitted<br>On : Wi-Fi function Opens              |
| 2         | LOS  | GPON optical signals | On: Optical power lower than receiver sensitivity ;<br>Off: Optical in normal  |
| 3         | PON  | ONT Register         | On: Success to register to OLT;<br>Blinking: In process of registering to OLT; |

|   |      |                       |  |
|---|------|-----------------------|--|
|   |      |                       | Off: In process of registering to OLT;   |
| 4 | TELn | Telephone port status | On : The connection between the TEL port and the voice server has been set up<br>Blinking : The voice service of the TEL port is established;<br>Off : The connection between the TEL port and the voice server is not set up. |
| 5 | LANn | LAN port status       | On: Ethernet connection is normal;<br>Blinking: Data is being transmitted through the Ethernet port;<br>Off: Ethernet connection is not set up;  |
| 6 | PWR  | Power status          | On: The ONT is power on;<br>Off: The ONT is Power off;   |

## Specification

| Item                         | Parameters          | Specification  |
|------------------------------|---------------------|--|
| Interface                    | PON Port            | 1*GPON port, FSAN G.984.2 standard, Class B+<br>Downstream Data Rate: 2.488Gbps<br>Upstream Data Rate: 1.244Gbps<br>SC/PC single mode fiber<br>28dB Link loss and 30KM distance with 1:128 |
|                              | Ethernet Port(LAN)  | 4*10/100/1000M Auto-negotiation RJ45 ports<br>Full Duplex / Half-Duplex<br>RJ45, Auto-MDI/MDI-X<br>Transmission Distance 100 Meter   |
|                              | POTS Port           | 2*RJ11 with 3REN<br>Max 1km distance<br>Balanced Ring, 55V RMS   |
|                              | Power Supply Port   | 12V DC input   |
| Management                   | NetworkManagement   | Standard compliant OMCI interface as defined by ITU-T G.984.4<br>Support TR069 and WEB management  |
|                              | Management Function | Status monitor, Configuration management, Alarm management, Log management   |
| Environmental Specifications | Shell               | Plastic casing   |
|                              | Power               | External 12V 1A AC/DC power supply adapter<br>Power consumption: <7W   |
|                              | Dimensions          | 170mm(L)*130mm(W)*30mm(H)<br>0.3kg   |
|                              | Environment         | Operating Temperature: 0~45°C<br>StorageTemperature: -40~85°C<br>Operating Humidity: 10%~90%(Non-condensing)<br>StorageHumidity: 10%~90%(Non-condensing)                                   |

## WIFI Features

- 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
- Support multi-SSID (Maximum 4 SSID)
- Support automatic channel selection
- Support hide SSID
- Support wireless security of 64/128 bit WEP、802.1x、WPA and WPA2。

| WIFI Specification            |                        |  |
|-------------------------------|------------------------|--|
| <b>Performance parameters</b> | Standard               | IEEE802.11b/g/n  |
|                               | Frequency              | 2.400 ~ 2.500 GHz  |
|                               | Wireless data rate     | IEEE 802.11b: 1,2,5.5,11Mbps<br>IEEE 802.11g: 6,9,12,18,24,36,48,54Mbps<br>IEEE 802.11n: up to 200 Mbps  |
|                               | Modulation schemes     | 802.11g: 64QAM, 16QAM, QPSK, BPSK, DSSS<br>802.11b: CCK, DQPSK, DBPSK<br>HT20: 64 QAM, 16QAM, QPSK, BPSK   |
|                               | Channel                | 13*Channel, configurable to meet the standard of USA, Canada, Japan and China  |
|                               | RF receive sensitivity | 802.11b: -96dBm @ 1 Mbps; -93dBm @ 2 Mbps;<br>-91dBm @ 5.5 Mbps; -88dBm @ 11 Mbps<br>802.11g: -90dBm @ 6 Mbps; -89dBm @ 9 Mbps;<br>-89dBm @ 12 Mbps; -867dBm @ 18 Mbps;<br>-83dBm @ 24 Mbps; -79dBm @ 36 Mbps;<br>-75dBm @ 48 Mbps; -75dBm @ 54 Mbps<br>802.11n: -96dBm @ 1 Mbps; -88dBm @ 11 Mbps;<br>-90dBm@6Mbps; -75dBm@54Mbps;<br>-86dBm@m0/20MHz;-69dBm@m15/20MHz; |
|                               | RF TxPower             | •TX power out B mode @ 11 Mbps: 18dBm +/- 2<br>• TX power out G mode @ 54 Mbps: 16dBm +/- 2<br>• TX power 11n mode @ HT20: 16 dBm +/-2   |
|                               | Encryption Mode        | 64-bit, 128-bit WEP, AES, TKIP, WPA, WPA2, 802.1x  |
|                               | Transmission distance  | 100m indoors coverage area<br>300m outdoors coverage area<br>(varying depending on the actual environment)   |

## Application

- ◇ Solution: FTTH、FTTB、FTTO、PON+EOC
- ◇ Business: Broadband Internet、Voice、IPTV、VOD、IP Camera、WIFI

## Network Construction

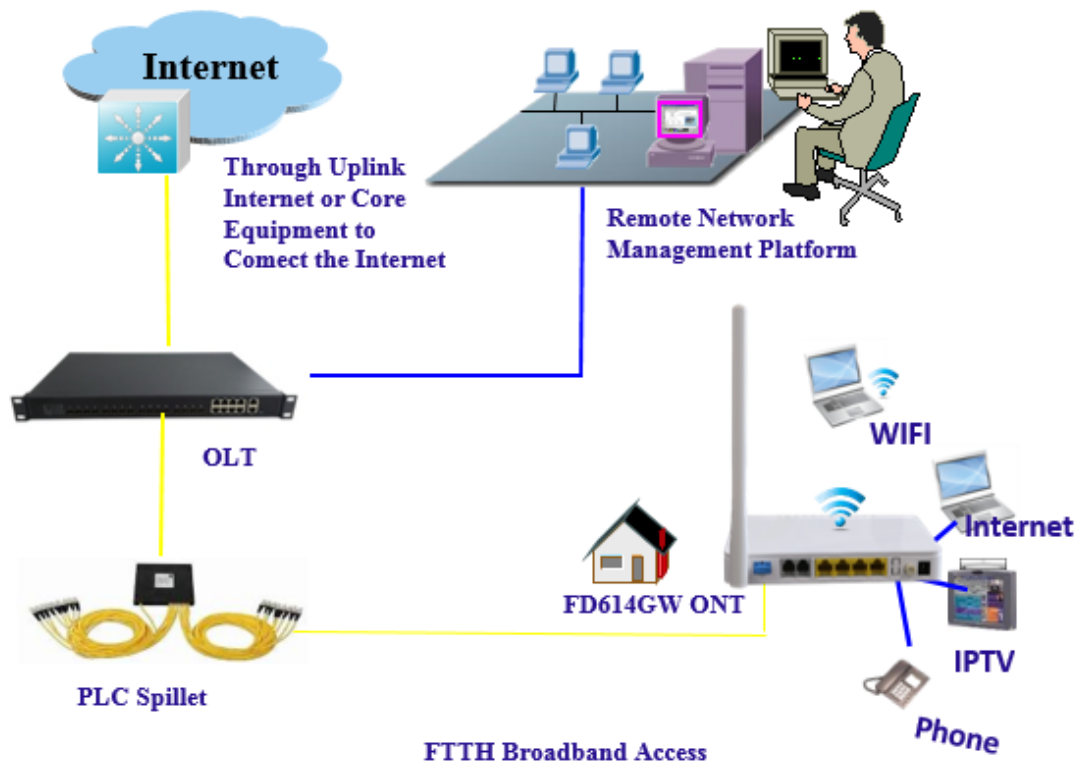


Figure: FD614GW Application Diagram

## Ordering information

| Product Name                    | Product Model | Descriptions   |
|---------------------------------|---------------|--|
| HGU Type with Wi-Fi<br>GPON ONT | FD614GW       | 4*GE Ethernet interface, 2*POTS interface, 1 GPON interface, support Wi-Fi function, plastic casing, external power supply adapter |