

### **Brief Views**

ONT-4GE-RFW(4GE+RF+Wi-Fi) is a FTTH bandwidth access equipment. Based on the mature and stable GPON technology, it has powerful functions with high stability, QoS guarantee, comprehensive management and flexible networking construction, etc. ONT-4GE-RFW series is fully compatible with ITU-T G.984 technology standard.

It adopts single fiber WDM technology with downlink wavelength 1490nm, uplink wavelength 1310nm. It only needs one-core fiber to transmit data service.

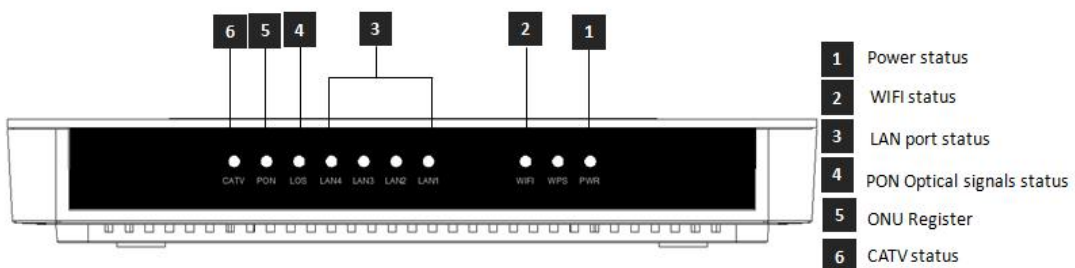
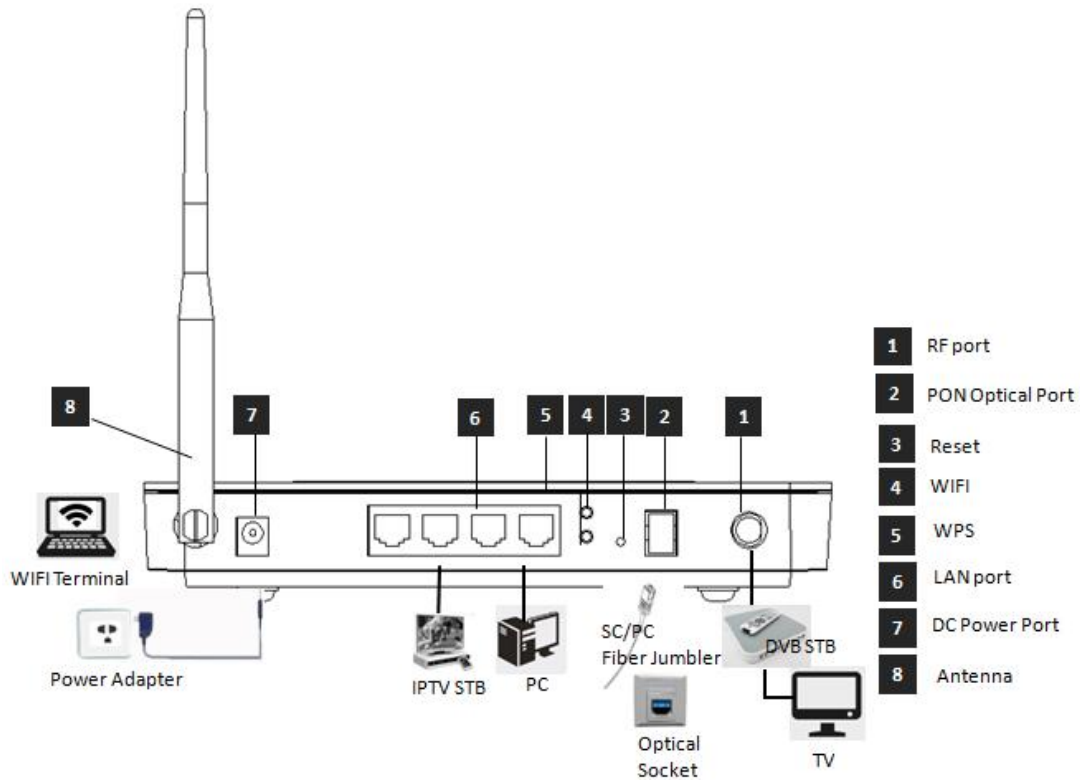
ONT-4GE-RFW has 1 PON port, four 10/100/1000BASE-T ports and one CATV output, support Wi-Fi function.

### **Functional Feature**

- Full compatible with ITU-T G.984
- Support four GE auto-adapting Ethernet ports
- Support one CATV output
- 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 IGMP Snooping
- Support AES-128
- CATV support turn on/off RF output remotely

### Product Interface and LED Definitions



Indicator		Description	
1	PWR	Power status	On: The ONT is power on Off: The ONT is Power off
2	WIFI	WIFI	Blinking: Data is being transmitted On: Wi-Fi function Opens
3	LAN1-4	LAN port status	On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up
4	LOS	GPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal

5	PON	ONT Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT;
6	CATV	CATV status	On: CATV optical normal Off: The CATV signals are not received

## Specification

Item		Parameter
<b>Interface</b>	Uplink Interface	1*GPON port, FSAN G.984.2 standard, Class B+ Downstream Data Rate: 2.488Gbps Upstream Data Rate: 1.244Gbps SC/PC single mode fiber 28dB Link loss and 30KM distance with 1:128
	CATV Interface	1 RF output Female F-Type Connector
	Ethernet Interface	4*10/100/1000M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply
<b>Performance Parameters</b>	PON Optical Parameter	Wavelength: Tx 1310nm, Rx 1490nm Tx Optical Power: 0~5dBm Rx Sensitivity: -27dBm Saturation Optical Power: -8dBm Connector Type: SC Optical Fiber: 9/125µm single-mode fiber
	Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/s; Upstream 1.244Gbit/s Ethernet: 1000Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms
	Business Capability	Layer 2 wire speed switching Support VLAN TAG/UNTAG, VLAN conversion Support Port-based speed limitation Support Priority classification Support storm control of broadcast Support link detection
<b>Network Management</b>	Management Mode	Standard compliant OMCI interface as defined by ITU-T G.984.4 Support TR069 and WEB management
	Management Function	Status monitor, Configuration management, Alarm

		management, Log management
<b>Physical Features</b>	Shell	Plastic casing
	Power	External 12VDC/1A power supply adapter Power consumption: <8W
	Dimension and Weight	Item Dimension: 200mm(L) x 140mm(W) x 33mm (H) Item weight: 0.5kg
	Environmental Specifications	Operating temperature: 0 to 50°C Storage temperature: -40 to 85°C Operating humidity: 10% to 90%(Non-condensing) Storage humidity: 5% to 95%(Non-condensing)

## WiFi Features

- Wi-Fi Specification 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 IEEE 802.11g: 6,9,12,18,24,36,48,54Mbps 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*Channel, configurable to meet the standard of USA, Canada, Japan and China
	RF receive sensitivity	802.11b: -96dBm @ 1 Mbps; -93dBm @ 2 Mbps; -91dBm @ 5.5 Mbps; -88dBm @ 11 Mbps 802.11g: -90dBm @ 6 Mbps; -89dBm @ 9 Mbps; -89dBm @ 12 Mbps; -867dBm @ 18 Mbps; -83dBm @ 24 Mbps; -79dBm @ 36 Mbps; -75dBm @ 48 Mbps; -75dBm @ 54 Mbps 802.11n: -96dBm @ 1 Mbps;-88dBm @ 11 Mbps; -90dBm@6Mbps; -75dBm@54Mbps;

		-86dBm@m0/20MHz;-69dBm@m15/20MHz;
	RF Tx Power	<ul style="list-style-type: none"> <li>•TX power out B mode @ 11 Mbps: 18dBm +/- 2</li> <li>• TX power out G mode @ 54 Mbps: 16dBm +/- 2</li> <li>• TX power 11n mode @ HT20: 16 dBm +/-2</li> </ul>
	Encryption Mode	64-bit, 128-bit WEP, AES, TKIP, WPA, WPA2, 802.1x
	Transmission distance	100m indoors coverage area 300m outdoors coverage area (varying depending on the actual environment)

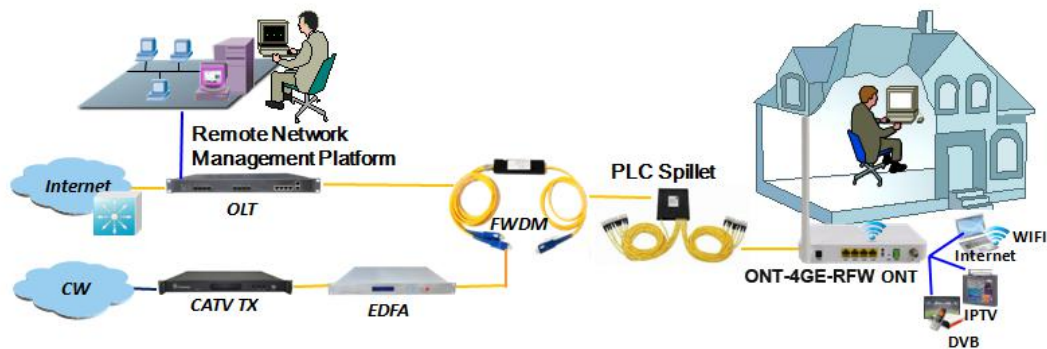
## CATV

Item	Parameter	Remark
Wavelength	1100-1600nm	
Optical return loss	>45dB	
Input optical power	-15dBm~0dBm	ONT-4GE-RFW
	-18dBm~-9dBm	ONT-4GE-RFW-L
	-18dBm~0dBm	ONT-4GE-RFW-A
RF frequency	47MHz~1000MHz	
RF output lever	84dBuV (@-5dBm@85MHz)	ONT-4GE-RFW
	81dBuV (@-10dBm@85MHz )	ONT-4GE-RFW-L
	78dBuV (@-12~-2dBm@85MHz)	ONT-4GE-RFW-A
CNR	>47dB (@-5dBm@ DS22 Channel)	ONT-4GE-RFW
	>41dB (@-10dBm@DS22 Channel)	ONT-4GE-RFW-L ONT-4GE-RFW-A
CSO	>60dBc (@-5dBm@ DS22 Channel)	ONT-4GE-RFW
	>60dBc (@-10dBm@DS22 Channel)	ONT-4GE-RFW-L ONT-4GE-RFW-A
CTB	>60dBc (@-5dBm@ DS22 Channel)	ONT-4GE-RFW
	>60dBc (@-10dBm@DS22 Channel)	ONT-4GE-RFW-L ONT-4GE-RFW-A
RF output return loss	>14dB	ONT-4GE-RFW
	>12dB	ONT-4GE-RFW-L ONT-4GE-RFW-A
RF impedance	75Ohm	
AGC function	Support	ONT-4GE-RFW-A

## Application

- Typical Solution: FTTH, FTTO, PON+EOC
- Typical Business: INTERNET, CATV, IPTV, VOD, IP Camera, Wi-Fi

## Network Construction



## Ordering information

Product Name	Product Model	Descriptions
4GE + CATV+ Wi-Fi GPON ONT	ONT-4GE-RFW	4*10/100/1000M Ethernet interface, 1 GPON interface, support Wi-Fi function, Input optical power -15dBm~0dBm, Plastic casing, external power supply adapter
	ONT-4GE-RFW-L	4*10/100/1000M Ethernet interface, 1 GPON interface, support Wi-Fi function, Input optical power -18dBm~-9dBm, Plastic casing, external power supply adapter
	ONT-4GE-RFW-A	4*10/100/1000M Ethernet interface, 1 GPON interface, support Wi-Fi and AGC function, Input optical power -18dBm~0dBm, Plastic casing, external power supply adapter