FD404GW series 4GE+ 2POTS + CATV+ Wi-Fi Single Fiber EPON ONU

Brief Views

ONU FD404GW (4GE+2POTS+RF+Wi-Fi) series is a FTTH bandwidth access equipment .Based on mature and stable EPON technology, it has powerful functions with high stability ,sound QoS guarantee ,comprehensive management and flexible networking construction, etc .ONU FD404GW series is technology standard fully complies with ITU-T, IEEE and telecommunication 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.

ONU FD404GW series has 1 PON port, 2 POTS port, four10/100/1000 BASE-T ports and one CATV output. Support Wi-Fi function.
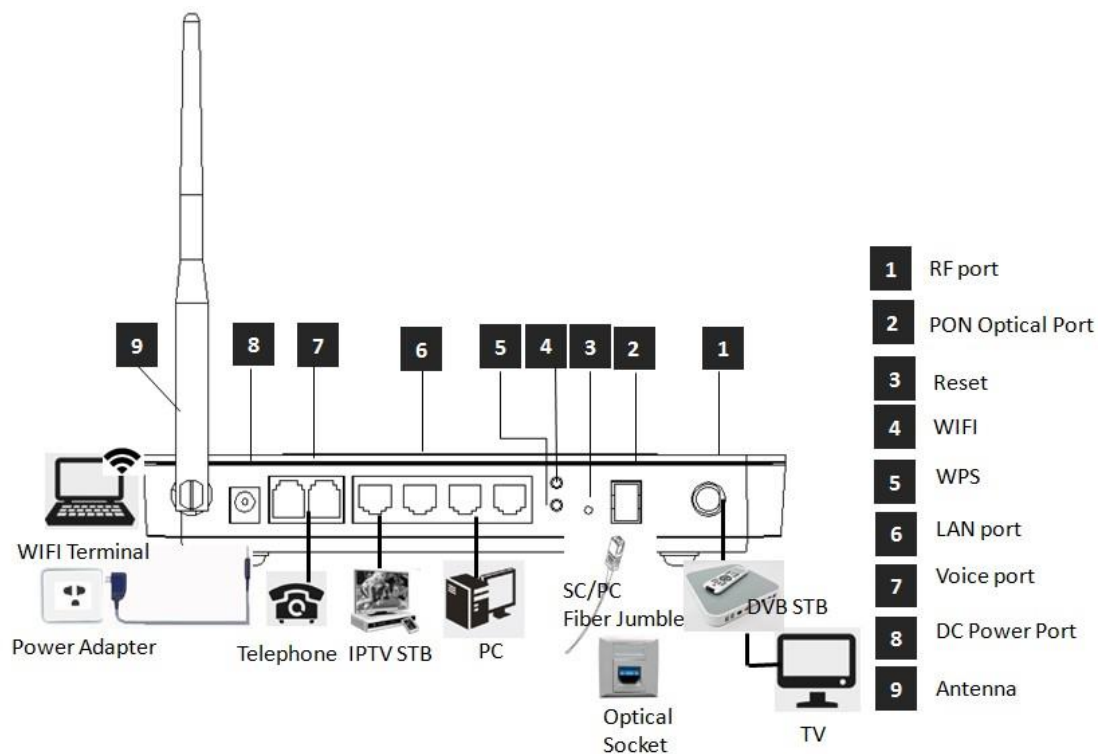
Functional Feature

- In compliant with IEEE802.3ah Standard and CTC2.1
- Up to 20KM transmission Distance
- Support VLAN and IGMP
- Support port isolation between different ports
- Integrated OAM remote configuration and maintenance function
- Plug and play, integrated auto detecting, auto configuration, and auto firmware upgrade technology
- EMS network management based on SNMP ,convenient for maintenance
- Full speed non-blocking switching.
- Support QinQ VLAN, 1:1 VLAN, VLAN reusing, VLAN trunk, etc.
- Integrated port monitoring, port mirroring, port rate limiting, port SLA, etc.
- Support auto polarity detection of Ethernet ports (AUTO MDIX).
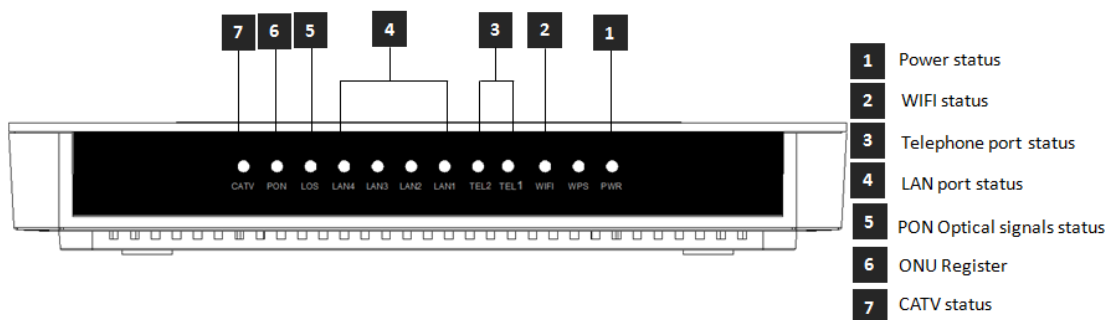- Integrated IEEE802.1p QoS with four level priority queues.

- Support IPv4 IGMP snooping and IPv6 MLD snooping.

◇ **Voice Service Functions**

- Support SIP (compatible with IMS), H.248, MGCP three VoIP protocol, and the soft switch platform the mainstream can be good intercommunication;
- With the heartbeat function, support the main producing soft exchange platform;
- Support ITU-T G.711, G.723.1, G.729 and other three kinds of compression algorithm; echo cancellation conforming to ITU-T G.168-2002, an echo canceller for the longest 128ms;
- Support high / low speed mode transparent transmission, T38 two fax;
- Support high-speed Modem (56Kbps) dial access; support RFC2833 and redundant RFC2833, ringing, MD5 certification, call forwarding, call waiting, the hotline, alarm clock, abbreviated dialing and other value-added services;
- Support 2 POTS interface and the three party call, three party support local mixing;
- Support POTS port GR909 line test function;
- Support dynamic PPPoE, DHCP and static IP;
- 7 * 24 hour call loss is less than or equal to 0.01%;

Product interface and LED definitions

1	RF port
2	PON Optical Port
3	Reset
4	WIFI
5	WPS
6	LAN port
7	Voice port
8	DC Power Port
9	Antenna

	Indicator		Description
1	PWR	Power status	On: The ONU is power on Off: The ONU is Power off
2	WIFI	WIFI	Blinking：Data is being transmitted On： Wi-Fi function Opens
3	TEL	Telephone port status	On：The connection between the TEL port and the voice server has been set up Blinking：The voice service of the TEL port is established Off：The connection between the TEL port and the voice server is not set up.
4	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
5	LOS	EPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
6	PON	ONU Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT;
7	CATV	CATV status	On：CATV optical normal Off：The CATV signals are not received

⊞ Specification

Item		Parameter
Interface	Uplink Interface	PON Interface: 1 EPON optical interface Meet 1000BASE-PX20+ standard Symmetric 1.25Gbps upstream/downstream SC single-mode fiber split ratio: 1:64 Transmission distance 20KM
	POTS Port	2*RJ11 with 3REN Max 1km distance Balanced Ring, 55V RMS
	CATV Interface	1 RF output Female F-Type Connector
	Ethernet Interface	4*10/100/1000Mauto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply

Performance Parameters	PON Optical Parameter	Wavelength: Tx 1310nm, Rx1490nm Tx Optical Power: 0～4dBm Rx Sensitivity: -27dBm Saturation Optical Power:-3dBm Connector Type:SC Optical Fiber: 9/125Чm single-mode fiber
	Data Transmission Parameter	PON Throughput: Downstream 950Mbps; Upstream 930Mbps 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
Network Management	Management Mode	Support IEEE802.3 QAM, ONU can be remotely managed by OLT Support Remote management through SNMP and Telnet Local management
	Management Function	Status monitor, Configuration management, Alarm management, Log management
Physical Features	Shell	Plastic casing
	Power	External 12VDC/1A power supply adapter Power consumption: <9W
	Dimension and Weight	Item Dimension：200mm(L) x 140mm(W) x 33mm (H) Item weight：0.6kg
	Environmental Specifications	Operating temperature: 0 to 50ºC Storage temperature: -40 to 85ºC Operating humidity: 10% to 90%(Non-condensing) Storage humidity: 5% to 95%(Non-condensing)

CATV

Item	Model		
	FD404GW	**FD404GWL**	**FD404GWA**
Wavelength	1550 +/- 10nm		
Optical return loss	>45dB		
Input optical power	-15dBm～0dBm	-18dBm～-9dBm	-18dBm～0dBm
RF frequency	47MHz~1000MHz		
RF output lever	84dBuV (@-5dBm@85MHz)	81dBuV (@-10dBm@85MHz)	78dBuV (@-12~-2dBm@85MHz)
CNR	>47dB (@-5dBm@ DS22 Channel)	>41dB (@-10dBm@DS22 Channel)	
CSO	>60dBc (@-5dBm@ DS22 Channel)	>60dBc (@-10dBm@DS22 Channel)	
CTB	>60dBc (@-5dBm@ DS22 Channel)	>60dBc (@-10dBm@DS22 Channel)	

RF output return loss	>14dB		>12dB
RF impedance	75Ohm		
AGC function	/	/	Support

<img> Wi-Fi Specification

Item	Parameter		
Performance parameters	Operating Mode	Router or bridge	
	Throughput	IEEE 802.11b: 11Mbps IEEE 802.11g: 54 Mbps IEEE 802.11n: 135Mbps	
	Frequency	2.412 ~ 2.472 GHz	
	Channel	13*Channel, configurable to meet the standard of USA, Canada, Japan and China	
	Modulation	DSSS , CCK and OFDM	
	Coding	BPSK, QPSK, 16QAM and 64QAM	
	RF receive sensitivity	802.11b: -82dBm @ 1 Mbps; -80dBm @ 2 Mbps; -78dBm @ 5.5 Mbps; -76dBm @ 11 Mbps 802.11g: -82dBm @ 6 Mbps; -81dBm @ 9 Mbps; -79dBm @ 12 Mbps; -77dBm @ 18 Mbps; -74dBm @ 24 Mbps; -70dBm @ 36 Mbps; -66dBm @ 48 Mbps; -65dBm @ 54 Mbps	
	RF output lever	802.11b: 16.5 ±1dBm 802.11g: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps 802.11n: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps	
	Encryption Mode	802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)	

<img> Application

✧ Typical Solution：FTTH, FTTO, PON+EOC

✧ Typical Business：INTERNET, VOICE, CATV, IPTV, VOD, IP Camera, Wi-Fi

Network Construction
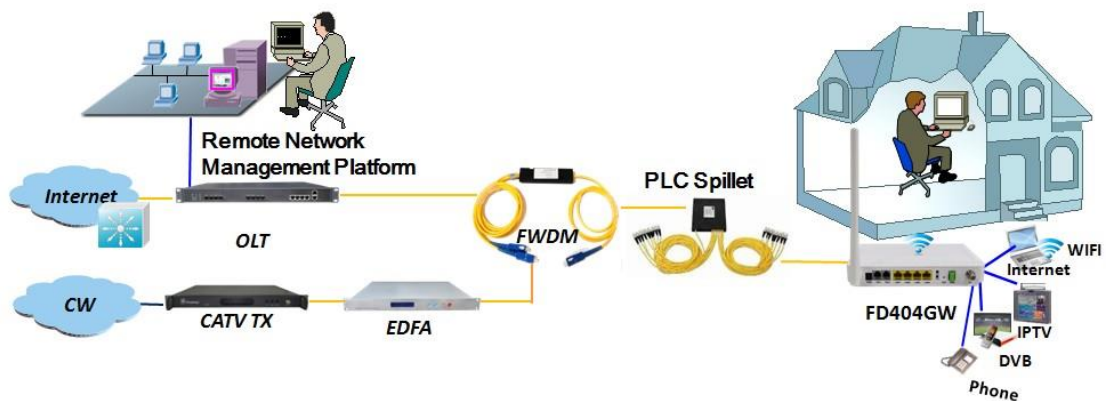
Ordering information

Product Name	Product Model	Descriptions
4GE + 2POTS + CATV+ Wi-Fi EPON ONU	FD404GW	4*10/100/1000M Ethernet interface, 1 EPON interface, 2 POTS interface, support Wi-Fi function, Input optical power -15dBm～0dBm, Plastic casing, external power supply adapter
	FD404GWL	4*10/100/1000M Ethernet interface, 1 EPON interface, 2 POTS interface, support Wi-Fi function, Input optical power -18dBm～-9dBm, Plastic casing, external power supply adapter
	FD404GWA	4*10/100/1000M Ethernet interface, 1 EPON interface, 2 POTS interface, support Wi-Fi and AGC function, Input optical power -18dBm～0dBm, Plastic casing, external power supply adapter