

## FD512XW-G-R310 1GE+1FE+WIFI Data Type ONU



### Brief Views

FD512XW-G-R310 GPON 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 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.

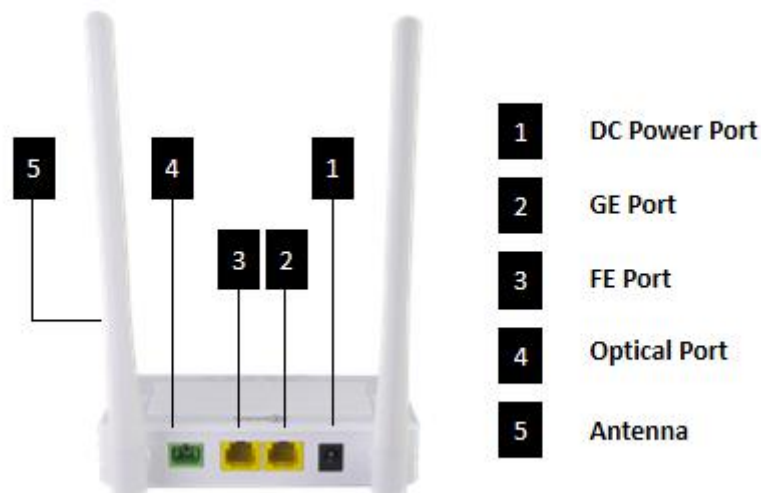
FD512XW-G-R310 have a high reliability and provide quality of service guarantee, easy management, flexible expansion and networking. It fully meets the ITU-T technical standards and have good compatibility with third party OLT.

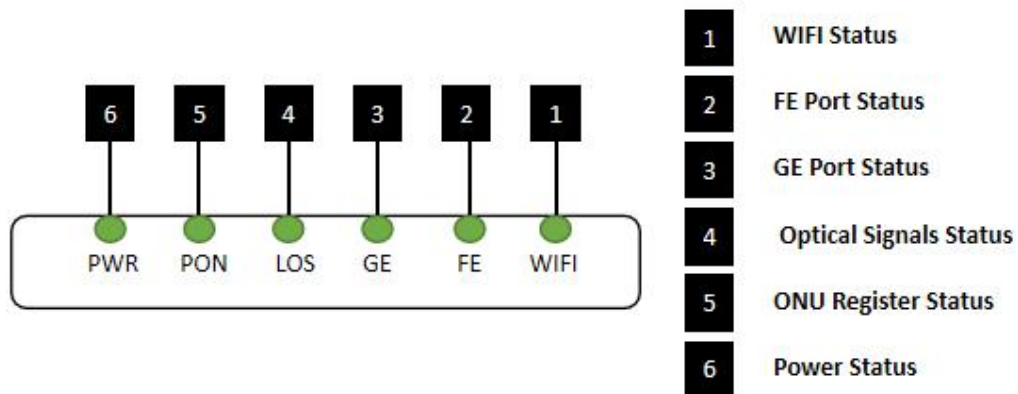
FD512XW-G-R310 integrates wireless function which meets 802.11 b/g/n technical standards. It has two external high gain omnidirectional antennas, the wireless transmission rate up to 300Mbps. It has the characteristics of strong penetrating power and wide coverage. It can provide users with more efficient data transmission security.

## Functional Feature

- In compliant with ITU - T G. 984 Standard
- Support ONU auto-discovery/Link detection/remote upgrade of software
- Meet 802.11 b/g/n technical standards
- Support VLAN transparent, tag configuration
- Support multicast function
- Support DHCP/Static/PPPOE internet mode
- Support port-binding
- Support OMCI+TR069 remote management
- Support data encryption and decryption function
- Support Dynamic Bandwidth Allocation (DBA)
- Support MAC filter and URL access control
- Support power-off alarm function ,easy for link problem detection
- Specialized design for system breakdown prevention to maintain stable system
- EMS network management based on SNMP ,convenient for maintenance

## Product Interface and LED Definitions





Indicator			Description
1	WIFI	WIFI	Blinking: Data is being transmitted On: WIFI function Open Off: WIFI function Close
2	FE	FE Port status	On: Ethernet connection is normal; Blinking: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;
3	GE	GE 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: In process of registering to OLT;
6	PWR	Power status	On: The ONU is power on; Off: The ONU is Power off;

## Specification

Item		Parameter
Interface	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 28dB Link loss and 20KM distance with 1:128
	Ethernet Interface	1*10/100/1000M and 1*10/100M 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, Rx1490nm Tx Optical Power: 0.5~5dBm Rx Sensitivity: -28dBm Saturation Optical Power: -8dBm
	Data Transmission Parameter	PON Throughput: Downstream 2.488Gbit/s; Upstream 1.244Gbit/s Ethernet: 100Mbps or 1000Mbps Packet Loss Ratio: <1*10E-12 latency: <1.5ms
<b>Network Management</b>	Network Management	OMCI, TR069, WEB, Telnet
	Management Function	Status monitor, Configuration management, Alarm management, Log management
<b>Physical Features</b>	Power	<4W, 12V/0.5A power supply adapter
	Physical Specifications	Item Dimension: 228mm(L) x108mm(W) x 28mm (H) Item Net Weight: about 136g
	Environmental Specifications	Operating temperature: 0 to 40°C Operating humidity: 10% to 90%(Non-condensing)



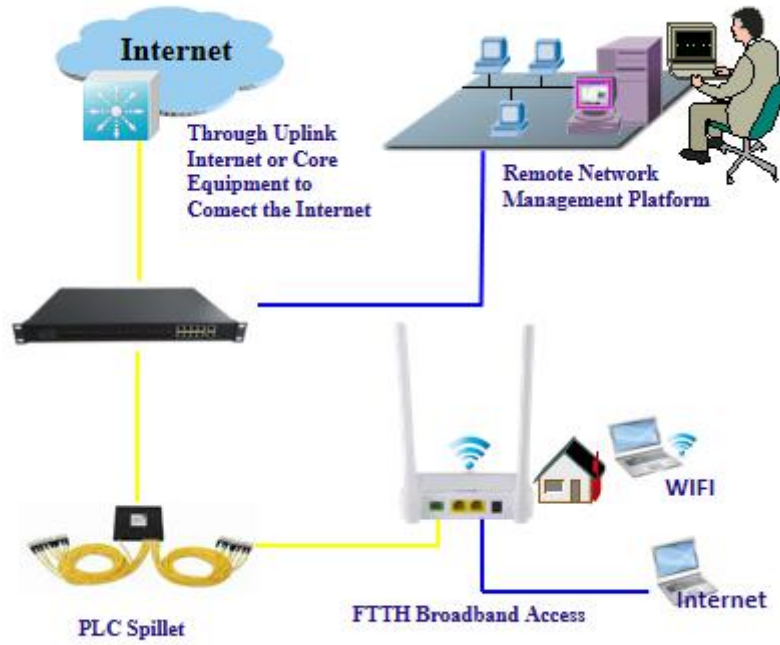
## WiFi Specification

	Item	Parameter
<b>Performance parameters</b>	Operating Mode	Router or bridge
	Technical standard	IEEE802.11b/g/n
	Frequency	2.412 ~ 2.472 GHz
	Antenna gain	5dBi
	Support rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 24, 36, 48, 54Mbps 802.11n: max rate 300Mbps
	Channel	2.4GHz Channel: 1,2,3,4,5,6,7,8,9,10,11,12,13
	Modulation mode	11b: DSSS: DBPSK(1Mbps),DQPSK(2Mbps),CCK(5.5/11Mbps) 11g: OFDM:BPSK(6/9Mbps), QPSK(12/18Mbps),16QAM(24/36Mbps) Q64QAM(48/54Mbps) 11n: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM
	Receive sensitivity	11Mbps: ≤-90dBm 54 Mbps: ≤-76dBm HT20 MCS7: ≤-73dBm HT40 MCS7: ≤-70dBm
	Transmit power	802.11n: 17dBm
	Encryption mode	AES, TKIP, WPA, WPA2, WPA-PSK/WPA2-PSK

## Network Application

Typical Solution: FTTH

Typical Business: INTERNET,WIFI



## Ordering Information

Product Name	Product Model	Descriptions
1GE+1FE+WIFI	FD512XW-G-R310	1*10/100/1000M and 1*10/100M Ethernet interface, 1 GPON interface, support 300Mbps WIFI, plastic casing, external power supply adapter