

## Introduction

### 1.1 Product Description

xPON 1GE+1FE+WiFi+(CATV optional) ONU meets telecom operators FTTO (office), FTTD (Desk) ,FTTH(Home) broadband speed, SOHO broadband access, video surveillance and other requirements to design an EPON/GPON Gigabit Ethernet products. It is based on mature and stable, cost-effective EPON/GPON technology, high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of IEEE802.3ah and ITU-TG.984.x , China Telecom EPON/GPON equipment technical requirements and other specifications.



Figure 1 1GE+1FE+WiFi ONU      Figure 2 1GE+1FE+WiFi+CATV ONU

### 1.2 Product categories

Product model	Product specification
V2802RGW	1 xPON+1GE+1FE+WiFi
V2802RGWT	1 xPON+1GE+1FE+WiFi +CATV

Table 1 Product categories

### 1.3 Application Chart

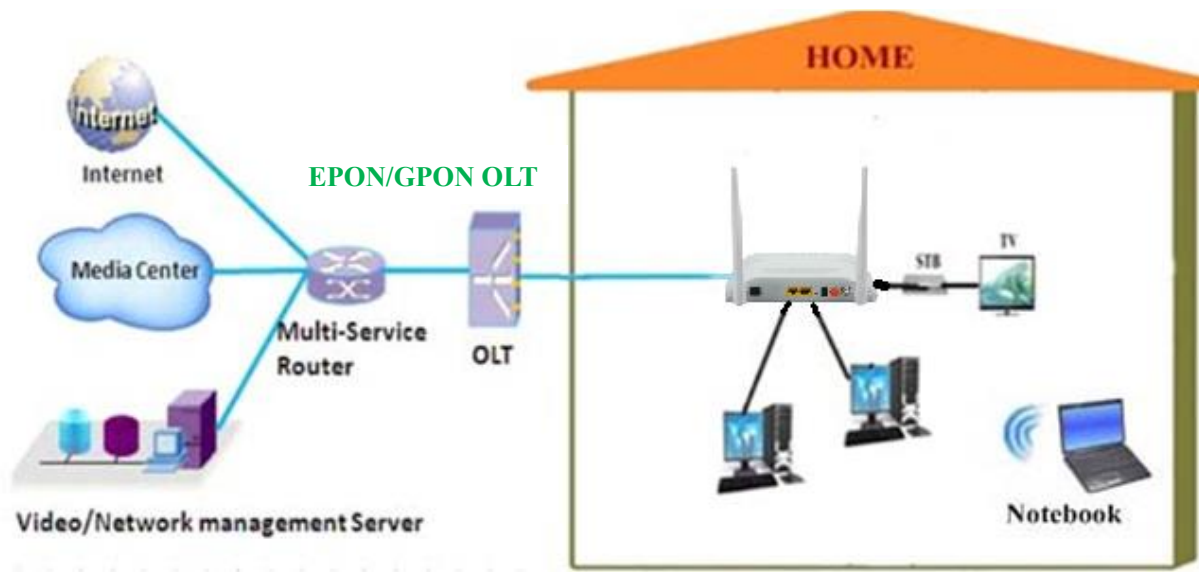


Figure 3 Application Chart

### 1.4 Technical parameters

Technical item	1GE+1FE+WiFi	1GE+1FE+WiFi+CATV
PON interface	1 xPON port(EPON PX20+ and GPON Class B+) Receiving sensitivity: $\leq -28\text{dBm}$ Transmitting optical power: $0\sim +4\text{dBm}$ Transmission distance: 20KM	
Wavelength	Tx1310nm,Rx 1490nm	Tx1310nm,Rx 1490nm and 1550nm
Optical interface	SC/UPC connector	SC/APC connector(signal fiber with WDM)
LAN interface	1 x 10/100/1000Mbps and 1 x 10/100Mbps auto adaptive Ethernet interfaces. Full/Half, RJ45 connector	
WiFi interface	Compliant with IEEE802.11b/g/n Operating frequency: 2.400-2.4835GHz support MIMO, rate up to 300Mbps 2T2R,2 external antenna 5dBi Support: multiple SSID Channel:13 Modulation type: DSSS、CCK and OFDM Encoding scheme: BPSK、QPSK、16QAM and 64QAM	
CATV interface	RF, optical power : $+2\sim -18\text{dBm}$ Optical reflection loss: $\geq 45\text{dB}$ Optical receiving wavelength: $1550\pm 10\text{nm}$ RF frequency range: 47~1000MHz, RF output impedance: $75\Omega$ RF output level: $\geq 82\text{dBuV}$ ( $-7\text{dBm}$ optical input) AGC range: $+2\sim -7\text{dBm}/-4\sim -13\text{dBm}/-5\sim -14\text{dBm}$ MER: $\geq 32\text{dB}(-14\text{dBm}$ optical input), $> 35(-10\text{dBm})$	
LED	6, For Status of POWER、LOS、PON、GE、FE、WiFi	7, For Status of POWER、LOS、PON、GE、FE、WiFi、CATV

Operating condition	Temperature: 0℃～+50℃ Humidity: 10%～90%（non-condensing）	
Storing condition	Temperature: -30℃～+60℃ Humidity: 10%～90%（non-condensing）	
Power supply	DC 12V/1A	
Power supply	≤6W	≤7W
Dimension	185mm×120mm×34mm（L×W×H）	
Net weight	0.24Kg	0.29Kg

Table 2 Technical parameters

## 1.5 Panel lights

LED	Mark	Status	Description
Power	PWR	On	Device is powered up.
		Off	Device is powered down.
Optical signal loss	LOS	Blink	Device does not receive optical signals.
		Off	Device has received optical signal.
Registration	REG	On	Device is registered to the PON system.
		Off	Device is not registered to the PON system.
		Blink	Device is registering.
Interface	GE、FE	On	Port is connected properly.
		Off	Port connection exception or not connected.
		Blink	Port is sending or/and receiving data.
Wireless	WiFi	On	WiFi turned on.
		Off	Device is power off or WiFi turned off.
		Blink	WiFi data transmission.
CATV(for V2802WT)	CATV	On	1550nm wavelength power of input is in normal range.
		Off	1550nm wavelength power of input is too low or no input.
		Blink	1550nm wavelength power of input is too high.

Table 3 Panel lights on

## 1.6 Interface description

Port Type	Function
PON	V2802W: SC/UPC type, single mode optical fiber cable V2802WT: SC/APC type, single mode optical fiber cable with WDM
GE、FE	Connect device with ethernet port by RJ-45 cat5 cable.
RST	Press down reset button and keep 1-5 seconds to make the device restart and recover from the factory default settings.
DC12V	Connect with power adapter.

CATV★	RF connector.
Power On/OFF	Power turn on/off.

Table 4 Interface description

**Note:**

1. With ★ tags, it is only for V2802WT.

## 1.7 Software feature

Software Key Feature	
EPON/GPON mode	Dual Mode , Can access EPON/GPON OLTs(HUAWEI、 ZTE、 FiberHome, etc).
Software mode	Bridging and Routing Mode.
Layer2	802.1D&802.1ad bridge,802.1p Cos,802.1Q VLAN.
Layer3	IPv4/IPv6 , DHCP Client/Server , PPPoE ,NAT , DMZ ,DDNS.
Multicast	IGMPv1/v2/v3 , IGMP snooping.
Security	Flow & Storm control, Loop Detection.
CATV management	Support CATV management.
WiFi	IEEE802.11b/g/n (TX power:17dBm/16dBm/15dBm),Up to 300Mbps Authentication : WEP/WAP-PSK(TKIP)/WAP2-PSK(AES).
Firewall	Filtering Based on ACL/MAC/URL.
O&M	WEB/TELNET/OAM/OMCI/TR069, Support private OAM/OMCI protocol and Unified network management of VSOL OLT.

Table 5 Software Key Feature