1G1F WIFI XPON ONU User Manual

Please read before using the ONU

Chapter 1: Overview

1.1 ProductDescription

XPON/EPON ONU is designed as HGU(Home Gateway Unit) in different FTTH solutions, The carrier-class FTTH application provides different services access, It is based on mature and stable, cost-effective XPON Technology. XPON ONU can switch automatically with EPON and GPON mode when it access to the EPON or GPON Network. Adopts high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of the EPON Standard of IEEE802.3ah ,CTC3.0, and GPON Standard of ITU-TG.984.X

1.2 Product Feature and model list

XPON ONU Model	Feature	XPON ONU Model	Feature
HUR2101XR	■ 1GE 1FE	HUR2201XR	■ 1GE 1FE
	■ WIFI		■ WIFI
	■ CATV		■ POTS
	■ POTS	HUR2202XR	■ 1GE 1FE
HUR2102XR	■ 1GE 1FE		■ WIFI
	■ WIFI		
	■ CATV		

Table 1:Model List

◆ Notes: All schematic drawings in the document may be different from the real products. These differences will not affect the product functions. Please refer to the label at the bottom for the specific model to get current PON model.

1.3 Functional Feature

➢ Support EPON/GPON mode and switch mode automatically
➢ Support Route mode for PPPoE/IPoE/Static IP and Bridge Mode
➢ Support WIFI 802.11b/g/n and Multiple SSID
➢ Support RF interface for Video Service
➢ Support SIP protocol for VoIP Service
➢ Specialized design for system breakdown prevention to maintain stable system

1.4 Technical Parameters

Technical item	Details
PON Interface	1 G/EPON BoB (Bosa on Board)
	Receiving sensitivity: ≤-27dBm
	Transmitting optical power: +1~+4dBm
	Transmission distance: 20KM
Wavelength	TX: 1310nm, RX: 1490nm CATV:1550nm
Optical Interface	SC/APC Connector for CATV ONU
	SC/UPC Connector for ONU without CATV

LAN Interface	LAN port for 1*GE and 1*FE auto adaptive mode. Full/Half, RJ45 connectors
Wireless	Compliant with IEEE802.11b/g/n
	2.4GHz Operating frequency: 2.400-2.483GHz
	Support MIMO2*2, Rate up to 300Mbps
	2 external antenna 5dBi,
	Support multiple SSID
	Channel: Auto
	Modulation type: DSSS, CCK and OFDM
	Encoding scheme: BPSK, QPSK, 16QAM and 64QAM
CATV Interface	RF, WDM, optical power : -15~+3dBm
	Optical reflection loss: ≥45dB
	Optical receiving wavelength: 1550±10nm
	RF frequency range: 47~1000MHz, RF output impedance: 75Ω
	RF output level: 78 dBuV
	AGC range: -13~+1dBm
	MER: ≥32dB@-15dBm
POTS interface	1 FXS, RJ11 connector
	Support: G.711/G.723/G.726/G.729 codec
	Support: T.30/T.38/G.711 Fax mode, DTMF Relay
	Line testing according to GR-909
POTS interface	10 LED, For Status of WIFI、WPS、PWR、LOS、PON、LAN1~LAN2、FXS1、NORMAL、WORN (CATV ONU) 8 LED, For Status of WIFI、WPS、PWR、PON、LOS、LAN1~LAN2、FXS
Push-Button	3,For Function of Reset,WLAN,WPS
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 Consumption	≤6W
Dimension	180mm×107mm×28mm （L×W×H)
Net Weight	≤0.24Kg

Table 2: Technical parameters

1.5 Panel LED Description

LED	Status	Description
WIFI	On	The WIFI interface is up.
	Blink	The WIFI interface is sending or/and receiving data (ACT).
	Off	The WIFI interface is down.
WPS	Blink	The WIFI interface is securely establishing a connection.
	Off	The WIFI interface does not establish a secure connection.
PWR	On	The device is powered up.
	Off	The device is powered down.
LOS	Blink	The device doses not receive optical signals or with low signals.
	Off	The device has received optical signal.

PON	On	The device has registered to the PON system.
	Blink	The device is registering the PON system.
	Off	The device registration is incorrect.
LAN1~LAN2	On	Port (LANx) is connected properly (LINK UP).
	Blink	Port (LANx) is sending or/and receiving data (ACT).
	Off	Port (LANx) connection exception or not connected(LINK DOWN).
FXS	On	Phone has registered to the SIP Server.
	Blink	Phone has registered and data transmission (ACT).
	Off	Phone registration is incorrect.
Worm (CATV)	On	Input optical power is higher than 3dbm or lower than -15dbm
	Off	Input optical power is between -15dbm and 3dbm
Normal (CATV)	On	Input optical power is between -15dbm and 3dbm
	Off	Input optical power is higher than 3dbm or lower than -15dbm

Table 3: Panel lights on

1.6 Packing List

After opening the product packaging, please carefully check the items in the following table. If they are inconsistent with the reality, please contact the supplier.

Contents	Quantity
ONU	1pcs
Power adapter	1pcs
User manual	1pcs

Table 4:Packing List

Chapter2: Installation

2.1 Equipment Installation

ONU product is a fixed configuration cassette equipment. Simply install the device on a specified place, connecting the fiber and connect the Power adapter. Actual operation is as follows:

2.1.1 Installed on the desktop

Place the machine on a clean bench, you can observe the following operation:

• Ensure the smooth workbench.

• Around the device enough space for heat dissipation.

• Do not place objects on the device.

2.1.2. Mounted on the wall

• Observation ONU equipment chassis two cruciform recess, in accordance with the position of the groove, fix two screws in the wall.

• Put the original two mounting screws gently snap into recesses aligned.

• Slowly move the screw in the groove to fix the device firmly on the wall.

2.2 Installation Requirements

To avoid equipment damage caused by improper use and personal injury, please observe the following precautions:

• Do not place the device near water or in damp places, in order to prevent water or moisture from entering the device.

• Do not put the device in an unstable place, avoid falling damage to equipment.

• Make sure that the supply voltage of the device matches the required voltage value.

• Do not open the equipment chassis without permission.

• Make sure that the connected optical fiber is clean and within a reasonable optical power range

2.3 Environment requirements

ONU equipment must be installed in a dry and ventilated place, and to ensure the following conditions:

• Confirmation at the ONU installation at sufficient space to facilitate cooling machine.

• ONU suitable operating temperature of 0°C — 50°C, humidity 10% to 90%.

Electromagnetic Environment

ONU equipment in use can be affected by external electromagnetic interference, such as radiation and conduction has the impact on the device, this should note the following:

• Device workplace should avoid radio transmitters, radar stations, and high-frequency electric equipment.

2.4 Cable Connection

Rear View for multiple port

(1G1F+WIFI+CATV+1POTS)

(1G1F+WIFI+1POTS)
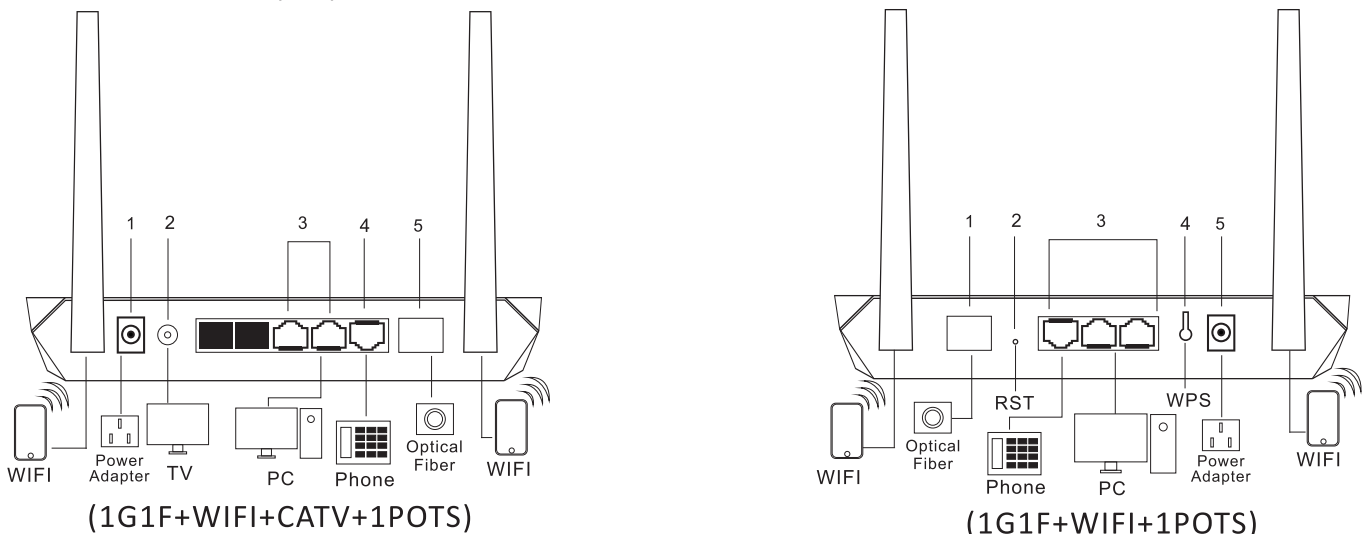
2.5 Side view for button
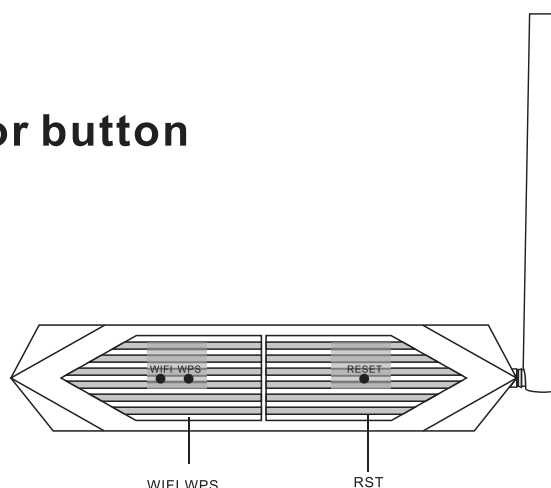
Chapter3: Web Management

XPON ONU provides simple Web management functions, including Device Information,User Information, WAN Settings,WLAN Settings,Firmware Upgrade,Restart,Restore Default etc...

3.1 Default configuration

Please open the browser and input correct username and password to login ONU webpage.

Figure 1 Web login
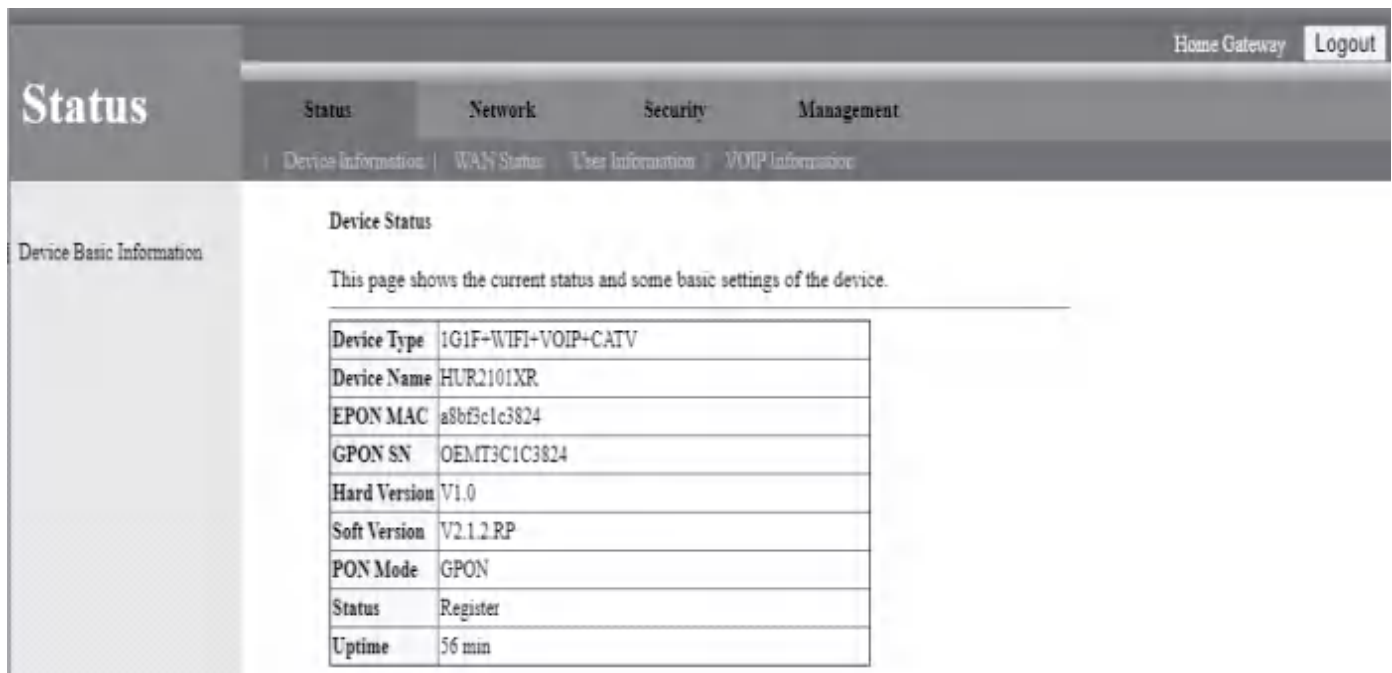
◆ Notes: About WEB login information, please see the label at the bottom.

3.2 Basic Configuration

Figure 2 Device Information

Device Information Menu displays current device basic information. Including Device Type,Device Name,Mac Address,Serial Number,Software Version,Register Status etc...
Note: All the device information may be changed, the actual device information shall prevail.

Figure 3 WAN Status

WAN Status Menu displays current WAN Connection Status and Optical Information.
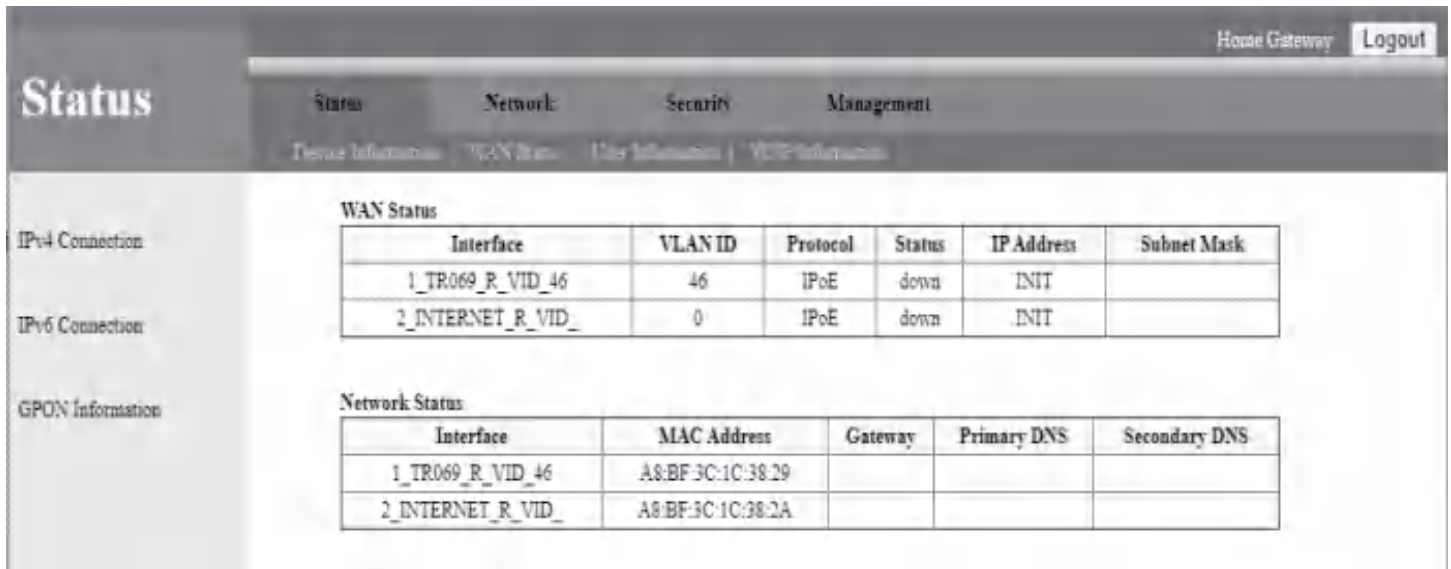
Figure 4 User Information

User Information Menu displays current device WLAN Status and LAN Status. Including WLAN Associated Clients and Interface Statistics etc...
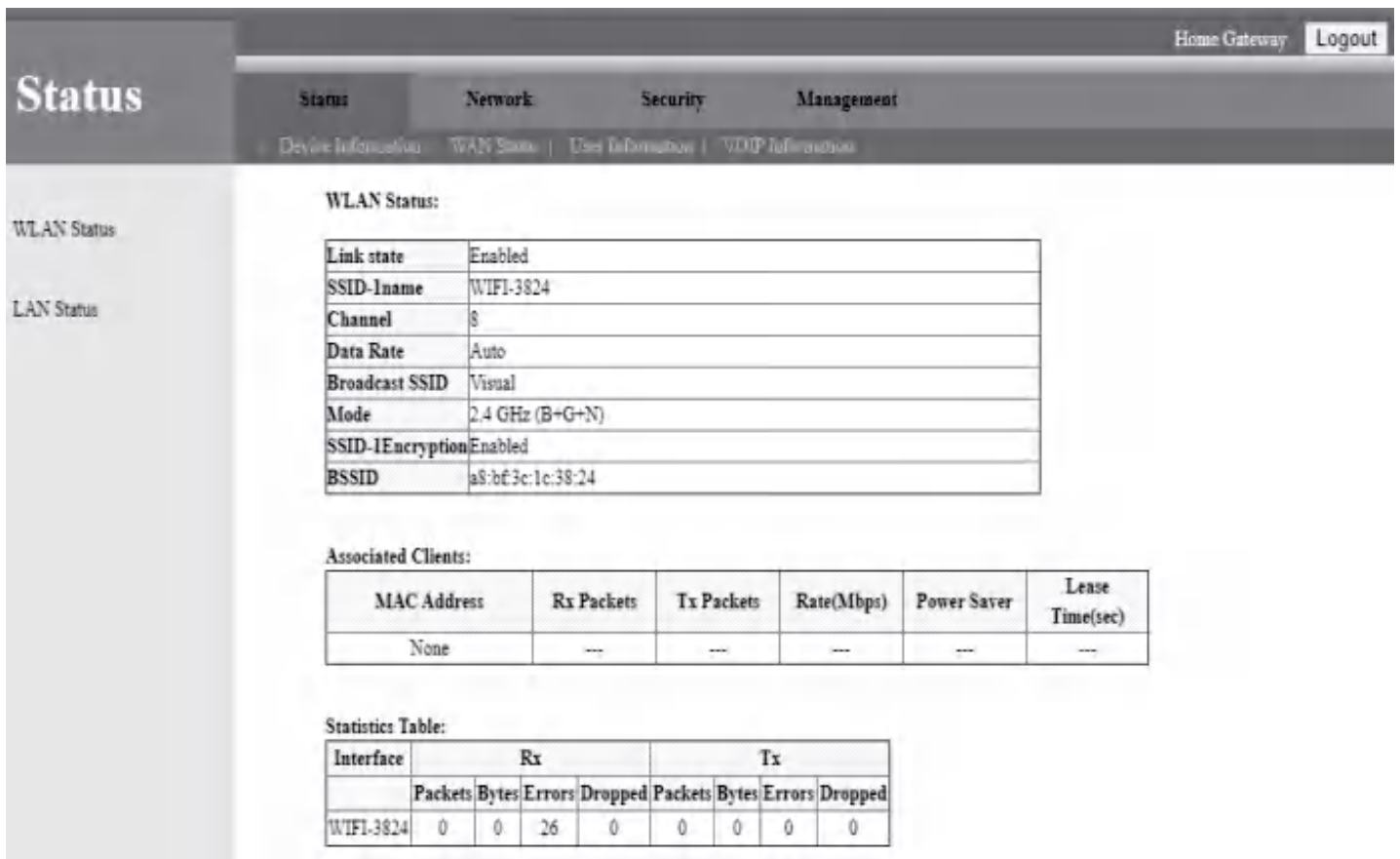
Figure 5 WAN Settings

WAN Settings Menu allows users to configure WAN connections according local network
Note: After modify WAN configuration, just take a while to take effect.

Figure 6 WLAN

WLAN Menu allows users to configure WLAN Configuration, Including WIFI SSID Name and WIFI PasswordNote: After modify WLAN configuration, just take a while to take effect.
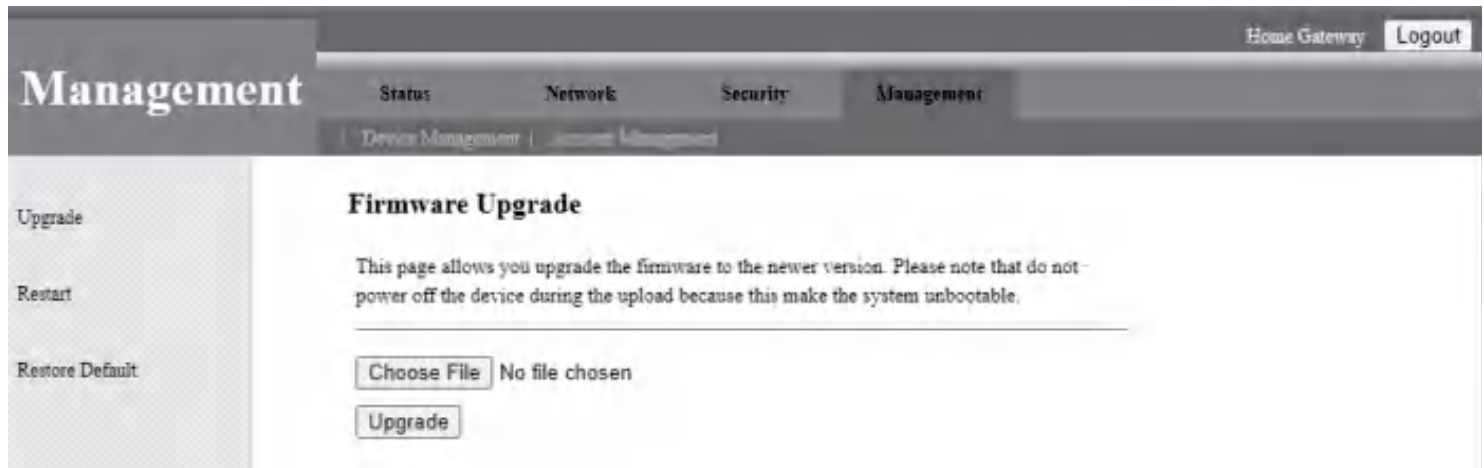
Figure 7 Firmware Upgrade

Firmware Upgrade Menu allows user to upgrade the firmware of the device. Click the "Choose File" button to select the firmware and then click the "Upgrade" button to upgrade.
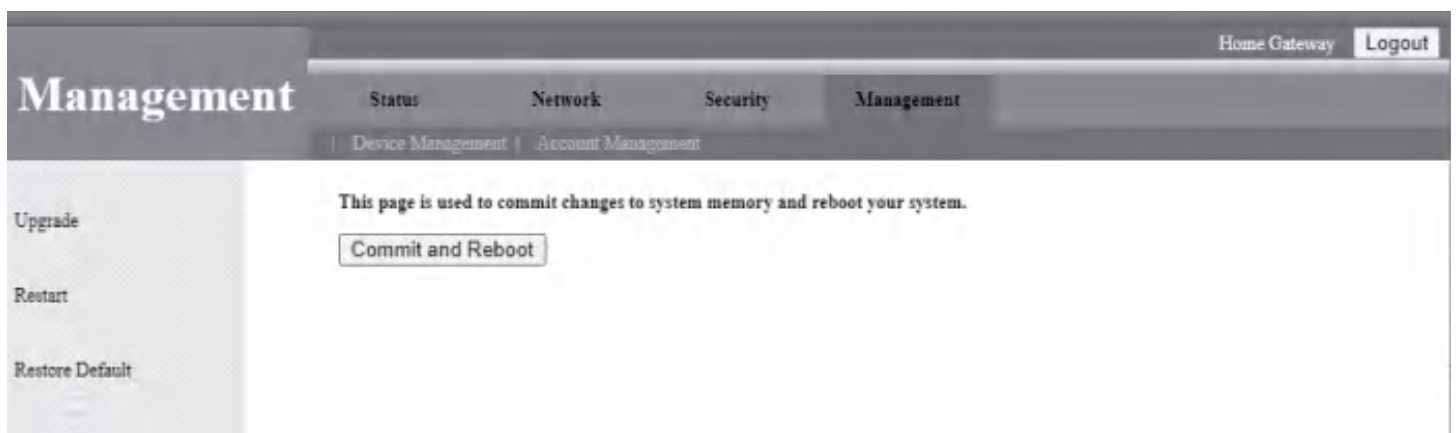Note:
1. Please do not power off during the upgrade process.
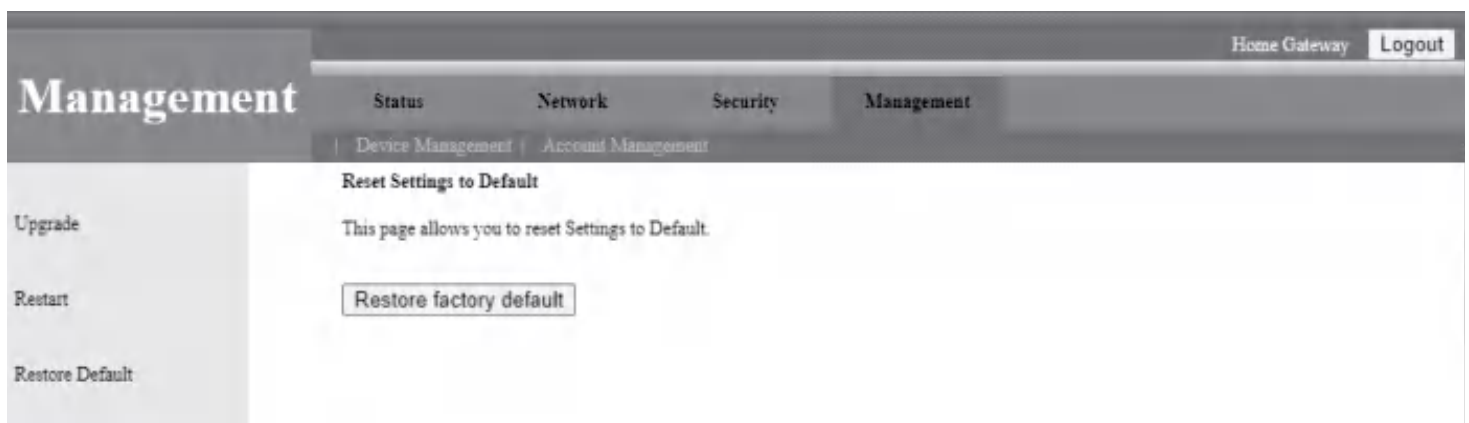2.The process of Upgrade will take 2-3 minutes.

Figure 8 Restart

Restart: The operation to save current configurations and reboot the device.

Figure 9 Restart

Restore Default : The operation to restore device into factory configuration
Note:After Restore, ONU configuration would be changed into default.

Chapter4: Troubleshooting

1. Why does LED of LAN not light?

Reasons:

1) Network cable is damaged or loose connection;

2) Cable type errors;

3) Cable length exceeds the allowable range.

Solution:

1)Plug the cable tightly;

2)Replace the network cable, and pay attention to the standard Ethernet cable must be parallel or crossing lines.

2.Why is LED of LOS always blinking?

Reasons:

1) Fiber broken;

2) Center office equipment failure.

Solution:

1) Check the connection characteristics of optical fiber , whether connected to the correct connector, and whether optical power is in a normal range;

2) Contact your operator.

3. Why does LED of PON flashes instead of always on?

Reasons:

1) Fiber optic connector is loose or dust;

2) Central office equipment failure;

Solution:

1) Inspect fiber is connected property;

2) Cotton ball with alcohol swabbing fiber optical connectors;

3) Contact your operator.

4. Why does ONU stop working after working for a long time?

Reasons:

1) Power supply is not working properly;

2) Central office equipment failure

Solution:

1) Change the power adapter;

2) Reboot onu;

3)Contact your operator.