Model: NCMO-5G4W10CW MANUAL

Chapter 1: Overview

1.1 Product Description

NCM-5G4W10CW GPON ONU is designed as HGU (Home Gateway Unit) in deferent FTTH solutions, the carrier-class FTTH application provides data service access. It is based on mature and stable cost-effective GPON technology. Adopts high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of GPON Standard of ITU-TG.984. x.

1.2 Product Feature and model list

GPON Model	Features
NCM-2G4W10CW	■ 1GE3FE ■ 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 Characteristics

- Fiber: Connect to the Internet through GPON OLT
- LAN: Provide Ethernet port. Ethernet devices can be connected directly to the LAN port, to achieve Internet service.
- WIFI: User can connect WIFI to surf the internet
- CATV: Provide RF interface for Video Service

Unless otherwise noted, the above specifications reflect typical device performance at stated reference levels in the recommended operating configuration(s). Specifications are subject to change without notice.

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1.4 Technical Parameters

Technical item	Details
PON Interface	1 GPON port (Class B+) Receiving sensitivity: ≤-27dBm Transmitting optical power: 0~+4dBm Transmission distance: 20KM
Wavelength	TX: 1310nm, RX: 1490nm
Optical Interface	SC/UPC Connector (SC/APC Connector for CATV)
LAN Interface	1LAN port for GE and FE automatic adaptive mode and 3FE LAN ports. Full/Half, RJ45 connector
CATV Interface	RF, optical power: +2~-18dBm Optical reflection loss: ≥45dB Optical receiving wavelength: 1550±10nm RF frequency range: 47~1000MHz, RF output impedance: 75Ω RF output level: 78dBuV AGC range: 0~-15dBm MER: ≥32dB@-15dBm
Wireless	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: Auto Modulation type: DSSS, CCK and OFDM Encoding scheme: BPSK, QPSK, 16QAM and 64QAM
Push-Button	3, For Functions 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	155mm×92mm×34mm（L×W×H）
Net Weight	≤0.24Kg

Table 2: Technical parameters

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1.4 Panel LED Description

LED	Status	Description
POWER	On	The device is powered up.
	Off	The device is powered down.
PON	On	The device has registered to the PON system.
	Blink	The device is registering the PON system.
	Off	The device registration is incorrect.
LOS	Blink	The device does not receive optical signals.
	Off	The device has received optical signal.
SYS	On	The device system runs normally.
	Off	The device system runs abnormally.
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.
LAN1~LAN4	On	Ethernet connected properly (LINK).
	Blink	Ethernet is sending or/and receiving data (ACT).
	Off	Ethernet connection exception or not connected.
Worn (CATV)	On	Input optical power is higher than 3dbm or lower than -13dbm
	Off	Input optical power is between -13dbm and 3dbm
Normal (CATV)	On	Input optical power is between -13dbm and 3dbm
	Off	Input optical power is higher than 3dbm or lower than -13dbm

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

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Chapter2: Installation

2.1Equipment Installation

ONU product is a fixed configuration cassette equipment. Site equipment installation is relatively simple. Simply install the device on a specified place, connecting the upstream fiber subscriber line connections, connect the power cable. Actual operation is as follows:

2.1.1 Installed on the desktop

Place the machine on a clean bench, this installation is relatively simple, 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.

2.2.2. Mounted on the wall

• Observation ONU equipment chassis two cruciform recess, in accordance with the position of the groove, instead two screws in the wall
• The original selected two mounting screws gently snap into recesses aligned.
• Slowly let go, so that the device under the support of the screw hanging 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.
• Unplug before cleaning the power plug; prohibit the use of liquid cleaning.

2.3 Environment requirements

ONU equipment must be installed in the interior, and to ensure the following conditions:

• Confirmation at the ONU installation with enough 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 interferences, such as radiation and conduction through the impact on the device, this should note the following:

• Device workplace should avoid radio transmitters, radar stations, and high-frequency interface from power equipment.
• User cable typically require alignment indoors if outdoor lighting traces measures should.

2.4 Cable Connection

Optional cable connection for different model

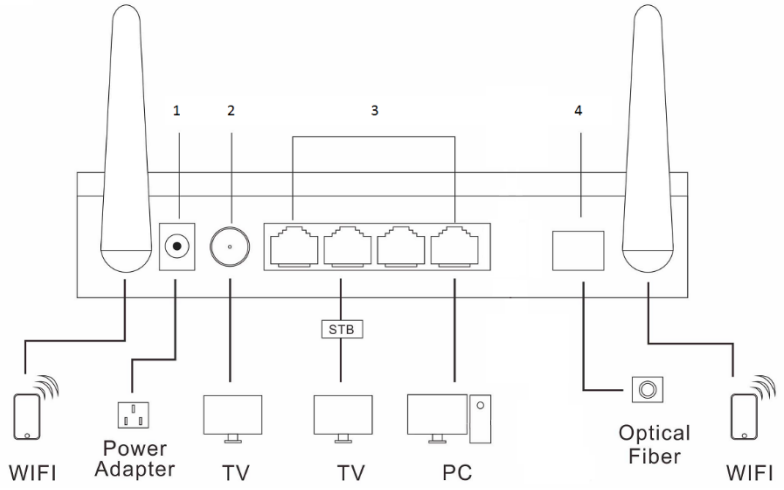
Rear View for multiple port

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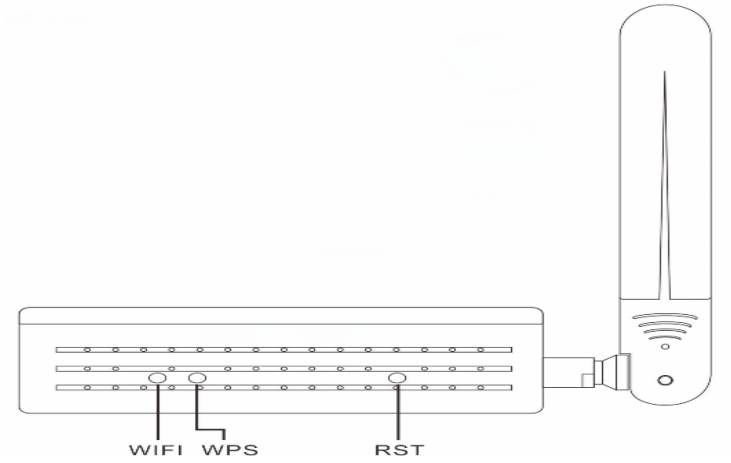
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2.5 Side view for button



Chapter3: Web Management

XPON ONU provides simple Web management functions, including device information, modify LAN Management IP address、OID, Password, Configuration File, Backup, Upload, Restore firmware upgrade etc...

NOTE:

- About more ONU detail configuration should be configured by administrator permission.

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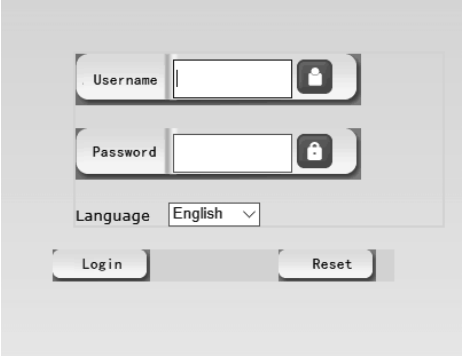
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3.1 Default configuration

The following is the default device configuration information.

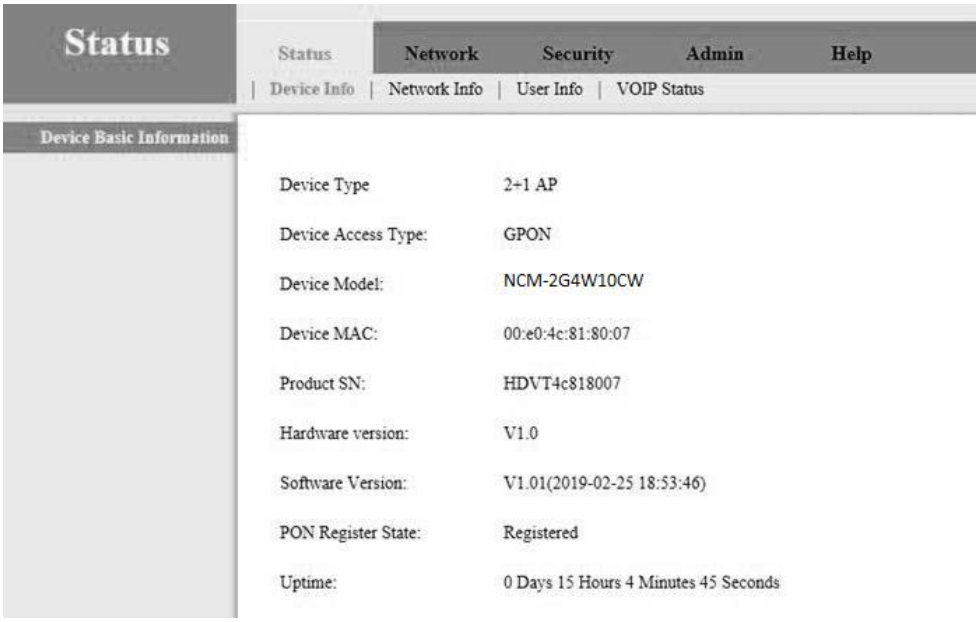
Figure 2 Web login



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

3.2 Basic Configuration

Figure 3 Device Information



Device Info Menu displays the current device base information. Including Model, Mac address, Serial Number, Software Version, on Register State etc...

Note: All the device information may be changed, the actual device shall prevail

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Figure 4 Network Info

Device Info Menu displays the current WAN Connection information.

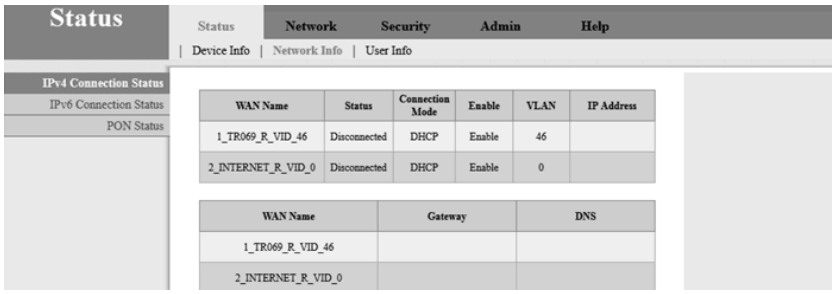


Figure 5 WLAN Configuration

WLAN Configuration Menu displays the current device WIFI basic information. Including SSID Name, SSID Enable, WIFI Encryption etc....User could modify the SSID Name and Password.

Note: After modify WLAN configuration, users usually don't need to reboot, just take a while for WLAN configuration to take effect.

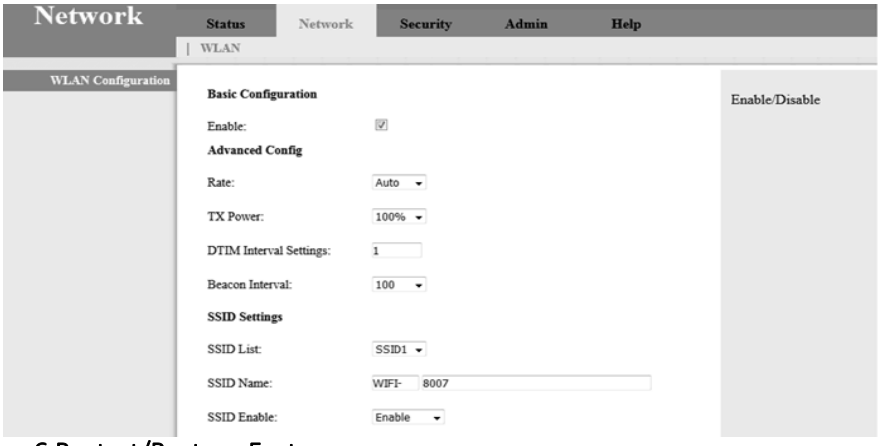
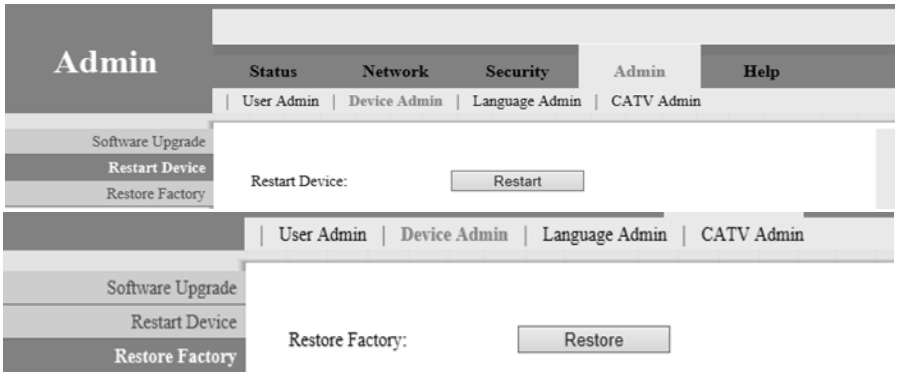


Figure 6 Restart/Restore Factory



Restart: The operation to reboot the device.

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Restore Factory: The operation to restore the device to its factory configuration.**Note:** About RST button, please press RST button over 10 seconds until all Panel lights on, than ONU can restore factory default and reboot.

Figure 7 Upgrade



Firmware upgrade Menu allows user to update the software of the device. Click the "Browse" button to select the software and then click the "Upgrade" button to update.

Note:

1. Please do not power off during the upgrade process.
2. The process of Upgrade will take 2-3 minutes.

Chapter4: Troubleshooting

1. After power, why are all the lights lit?

Reasons: 1) Power connection errors;
2) Power is not normal.

Solution: 1) Check that the power cable is connected;
2) The rear panel of the power supply is turned on.

2. Why does LED of LAN not light?

Reasons: 1) Network cable is damaged or loose connection.
2) Cable type errors.
3) Long lines outside the allowable range.

Solution: 1) Replace the network cable and pay attention to the standard Ethernet cable must be parallel or crossing lines.

3.Why is LED of LOS always blinking?

Reasons: 1) Fiber failure.
2) Center office equipment failure.

Solution: 1) Inspect fiber is connected property, is connected to the correct connector, optical power is normal;
2) Contact your operator.

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

Reasons: 1) Fiber optic connector is loose. 2) Central office equipment failure.
3) Fiber optic connector is dust.

Solution: 1) Inspect fiber is connected property.
2) Cotton ball with alcohol swabbing fiber optic connectors.
3) Contact your operator.

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

Reasons: 1) Power supply is not working properly.
2) The equipment from overheating.

Solution: 1) Check if there is contact with abnormal voltage is too high or too low.
2) Check the ambient conditions, vents are nominal ventilation.

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