

C-DATA Z_GPON SFU Products

4GE

User Manual

Version : V1.1

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1 Note

1.1 Installation Precautions

- Do not near flammable or conductive items, high temperature, direct sunlight or moist environment, or on PC chassis, and check whether other home equipment placed around stability
- Check the cable line. Test and confirm the ac or dc input voltage in the range of allowable, and direct current (dc) correct polarity.
- Unless the manufacturer has given permission, please use the volume and the types of the power supply with Ming products attached adapter
- To prevent lightning damage to the product, make sure that the power outlet and the power adapter ground are securely grounded. In the thunderstorm, be sure to unplug the power and all the connections.
- Equipment shall be less than 10% of the input voltage fluctuations, power plug with a refrigerator, hair dryer, electric iron not use the same socket.
- To avoid any damage to body by power socket overload, or damage to cause electric shock or fire plug, please check the power cord, if found damaged, please change immediately.
- Please place the equipment on the smooth plane and equipment cannot be placed on other items.
- Equipment is easy heat when working, should maintain the appropriate cooling space to avoid damage caused by overheating products. The elongated holes on the housing are designed for heat dissipation. Keep the ventilation clean and prevent the items from falling into the inside of the equipment. Doing so may cause damage or fire to the equipment. Do not spill liquid onto the surface of the equipment.

1.2 Precautions for Use

- Please read the user manual carefully before using the equipment and follow all the precautions on the user manual.
- Do not look straight at fiber which may damage the eyes. Please wear safety glasses to effectively protect your eyes from damage. Wear the fiber cap when fiber no in use.
- Power off the device when it not in use.
- Please make sure the power switch is closed before plug the power supply, to avoid surge. Please be careful when remove the power supply, transformer temperature may be higher.
- For safety, please do not open the shell of equipment, especially equipment power on.

- Unplug the power supply before cleaning equipment. Use a soft dry cloth cleaning equipment, do not use the liquid or spray.
- Do not use this product connected to any electronic products unless got our engineer allow. because any wrong connection may cause electricity or fire danger.

2 Introduce

The series of ZTE solution GPON ONU is GPON terminal products to meet the telecom, radio and television FTTH fiber to the home multi-service access. This series of products based on mature and stable, cost-effective Gigabit GPON technology and Gigabit switching technology. With high bandwidth, high reliability, easy management and good quality of service (QoS) guarantee, the technical performance of the equipment meets the requirements of ITU G.984 equipment and other specifications, have good compatibility with the mainstream manufacturers (Huawei / ZTE / flames / Alan) OLT.

GPON is the latest generations of access network technology. ITU-T G.984 is the standard protocol of GPON. With high bandwidth, high efficiency, large coverage, rich user interface and many other advantages, is the operator to achieve access network business broadband, integrated transformation of the ideal technology.

2.1 Product Feature

- Internet, IPTV service access
- Fully in line with GPON ITU-T G.984 standard, using GPON uplink 1.25G, downlink 2.5G standard
- Support G.984 standard, China Telecom CTC2.0
- Support bidirectional FEC, supports the RS (255, 239) FEC decoding
- Supports default SFU (pure bridged data) access
- Support data encryption, VLAN transparent, vlan tag, vlan trunk
- Support up and down traffic limit function
- Supports port loop detection / port link status detection / power dying gasp alarm
- Support OLT remote upgrade / WEB local upgrade function
- Supports broadcast storm suppression
- Support port isolate between different port.
- Support port flow control
- Support managed by different manufacturers OLT work as SNMP-agent. Easy to

install and maintain

- Provide a variety of fault alarm function, easy to fault diagnosis
- Support AES-128 decryption, support key generation and switching
- Support DBA technology and priority Dual management model to ensure minimum bandwidth requirements for users

2.2 Environmental Requirements

Operation temperature: 0°C~50°C(Indoor type) -35°C~70°C(Building type)

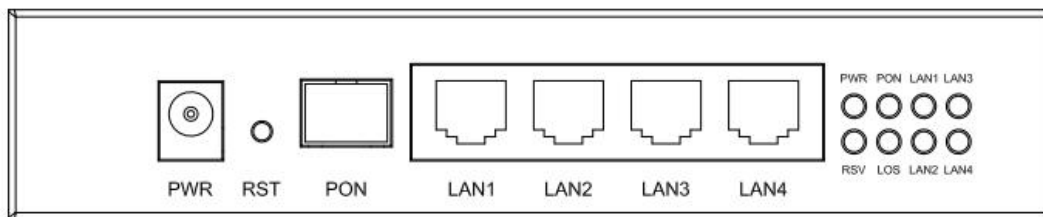
Operation humidity: 10%—90%(Non-condensing)

Power adapter input: 12V / 0.5A

Transmitted optical power: 0.5~5dBm

Input optical power: -8 ~ -28dBm

2.3 Product Interface Definitions



2.4 Product LED Definitions

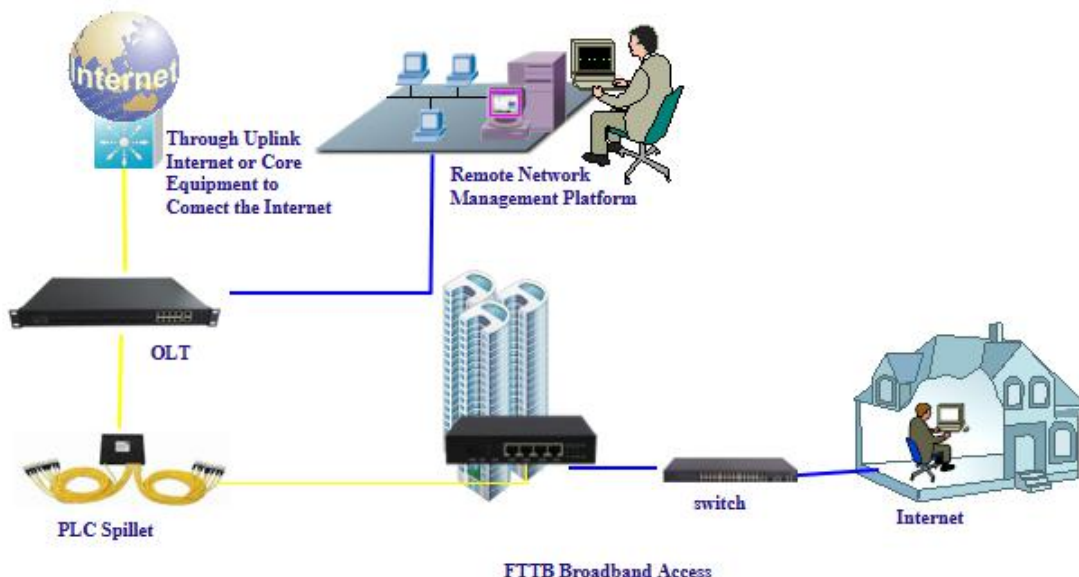
Indicator		Description
PWR	Power status	On: The ONU is power on; Off: The ONU is Power off;
PON	ONU Register	On: Success to register to OLT Blinking: In the process of registering to OLT; Off: In the process of registering to OLT;
LAN1-4	LAN Port status	On: Ethernet connection is normal; Blinking: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;
LOS	EPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
RSV	No definition	Reserved led

2.5 Device Connection

- Connecting the fiber: Insert the SC fiber connector into the PON connector on the rear panel of the ONU.
- Connect the Ethernet cable: Connect the RJ-45 Ethernet cable to any LAN port of the ONU and the home device, ie, the computer, IPTV set-top box.
- Connect the AC adapter: Plug the AC / DC adapter into the AC wall jack and the ONU 12V DC power jack.

2.6 Network Application

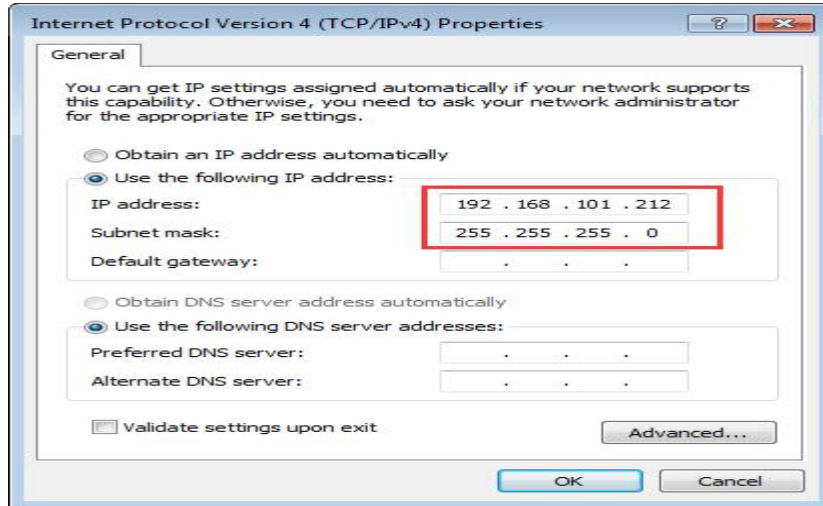
【 Building Type 4GE ONU networking application 】



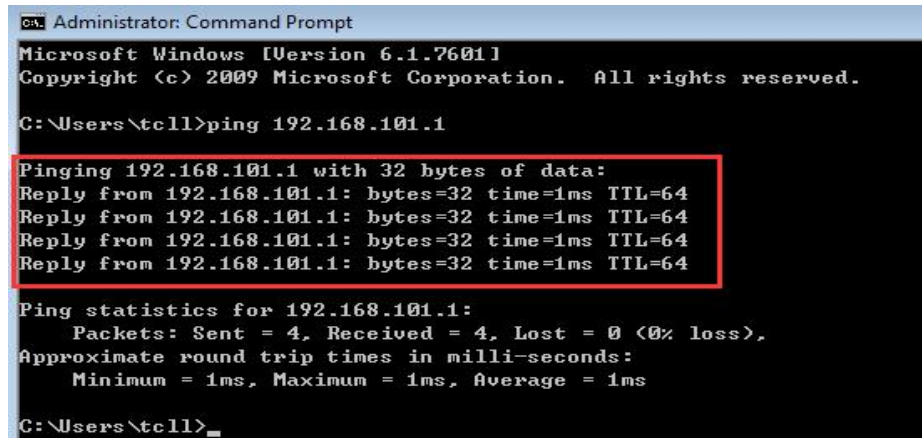
3 ONU Local WEB login

3.1 ONU and PC physical Connection

- a) Connect your computer's local network card to the LAN ports of the ONU via a network cable.
- b) Set the IP address of the computer's local network card to **192.168.101.X (X: 2-254)**.

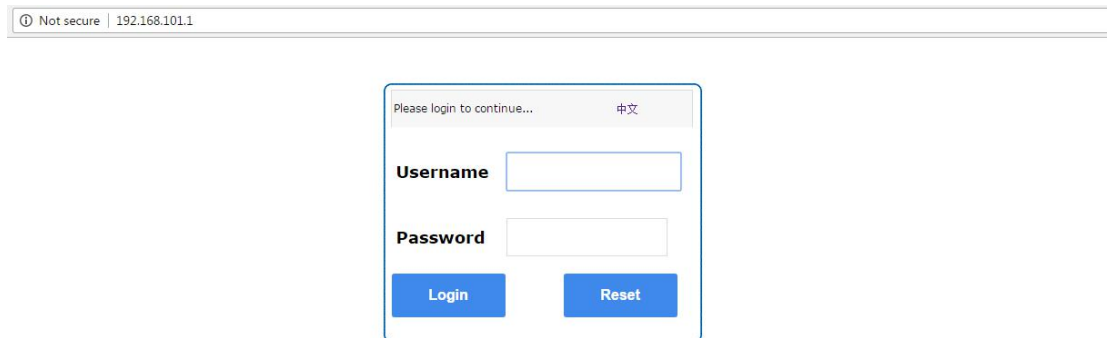


c) The computer opens the cmd window. To ensure that the computer can ping ONU management ip address **192.168.101.1**



3.2 Computer Access ONU Local WEB

In the case # 3.1 computer can communicate with the ONU, open the computer's **Web browser (IE, Firefox, google)**, copy and paste the ONU access URL: <http://192.168.101.1>, pop-up as follows ONU prompt landing page:



Enter the ONU super login user: **adminisp** password: **adminisp** Click "Login" button, there will be the following ONU main login interface:

The screenshot shows the ONU main interface with a navigation bar (Status, Network, Security, App, Administration, Maintenance, Help) and a sidebar (Device Information, Network Information, User Information). The main content area displays a table of device information:

Model	ONU
Serial Number	E067B3-12345678
Hardware Version	V1.0
Software Version	V1.0.1-X000
Boot Loader Version	V1.0.1-X000
Local Mac Address	#0:67:b3:00:00:01
Build Info	Build.1158.190909

Additional UI elements include an 'English' dropdown menu, 'Help', and 'Logout' buttons.

After entering the main interface of the ONU, the ONU can be set up further. For details, see the following setup guide.

4 ONU Registration Information Configuration

4.1 ONU Registration Status View

web login ONU select the **Status ->Network Information -> Link information**, you can check whether the ONU registered successfully:

The screenshot shows the ONU main interface with the 'Link information' tab selected in the sidebar. The main content area displays a table of link information:

GPON State	Authentication Success
PEC State	Enable
Optical Module Input Power (dBm)	-22.6
Optical Module Output Power (dBm)	2.4
Optical Module Supply Voltage (uV)	3313000
Optical Transmitter Bias Current (uA)	7600
Operating Temperature of the Optical Module (°C)	30

The 'GPON State' and 'Authentication Success' cells are highlighted with a red border. Additional UI elements include an 'English' dropdown menu, 'Help', and 'Logout' buttons.

4.2 ONU Optical Power Information View

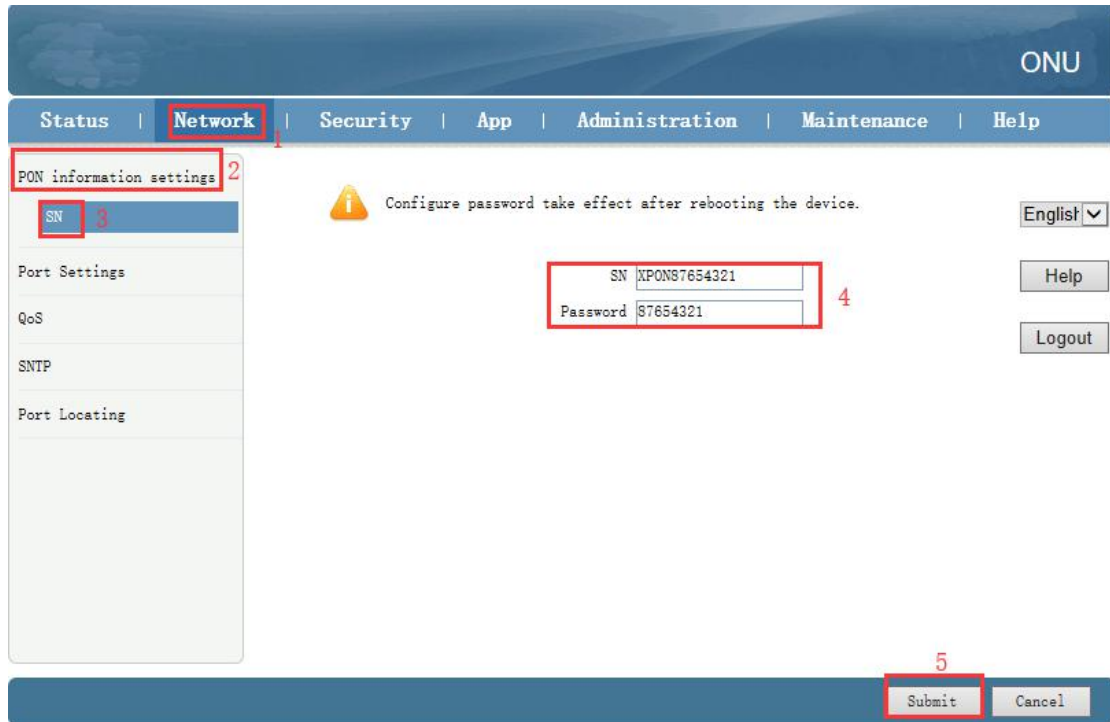
web login ONU select the **Status -> Network Information -> Link information**, you can view the ONU input and output optical power information:

GPON State	Authentication Success
FEC State	Enable
Optical Module Input Power (dBm)	-22.6
Optical Module Output Power (dBm)	2.2
Optical Module Supply Voltage (uV)	3323000
Optical Transmitter Bias Current (uA)	7550
Operating Temperature of the Optical Module(° C)	30

4.3 ONU Registers SN Configuration

The SN of the ONU is mainly applicable to the OLT SN authentication mode by default. Sometimes it may be related to the problem of compatibility, need to modify the default SN of the ONU, you can refer to the following ways to modify, SN by 4 characters prefix (letters) + 8 ASCII code. The standard specifies this length.

1.web login ONU and select the **Network -> PON information settings -> SN**, you can set and view the ONU SN and password (generally do not need to modify):



2. After completing the SN and password settings, you can click the **"Submit"** button below to complete the setup.

5 Port Isolation Settings

ONU ports isolation is mainly used to the terminal that connect to the ONU can communicate with each other or not.

Login ONU WEB. Click **Network** -> **Port Settings** -> **Port Isolation**, we can enable or disable port Isolation function in here, and click **"Submit"** button to finish the settings.

The screenshot shows the ONU configuration interface. The 'Network' tab is selected. In the left sidebar, 'Port Settings' and 'Port Isolation' are highlighted. The main area shows 'Port' set to 'GE1' and 'Isolation' checked. At the bottom, 'Submit' and 'Cancel' buttons are visible.

6 ONU LAN Information View

Login ONU WEB. Click **Status ->User Information -> Ethernet**, we can view the the status of every lan ports of ONU.

The screenshot shows the 'Ethernet' view under 'User Information'. It displays a table of Ethernet port states and a DHCP address information table.

IP Address	MAC Address	Device type	LAN

LAN	Status	Rate	Link	Received		Sent	
				Bytes	Frames	Bytes	Frames
Network port1	Full Duplex	1000M	Equipment connected	3737867	34320	38227565	61917
Network port2	Half Duplex	10M	Equipment disconnected	0	0	176903	2558
Network port3	Full Duplex	1000M	Equipment connected	1320046	12190	2633307	19665
Network port4	Half Duplex	10M	Equipment disconnected	0	0	174687	2529

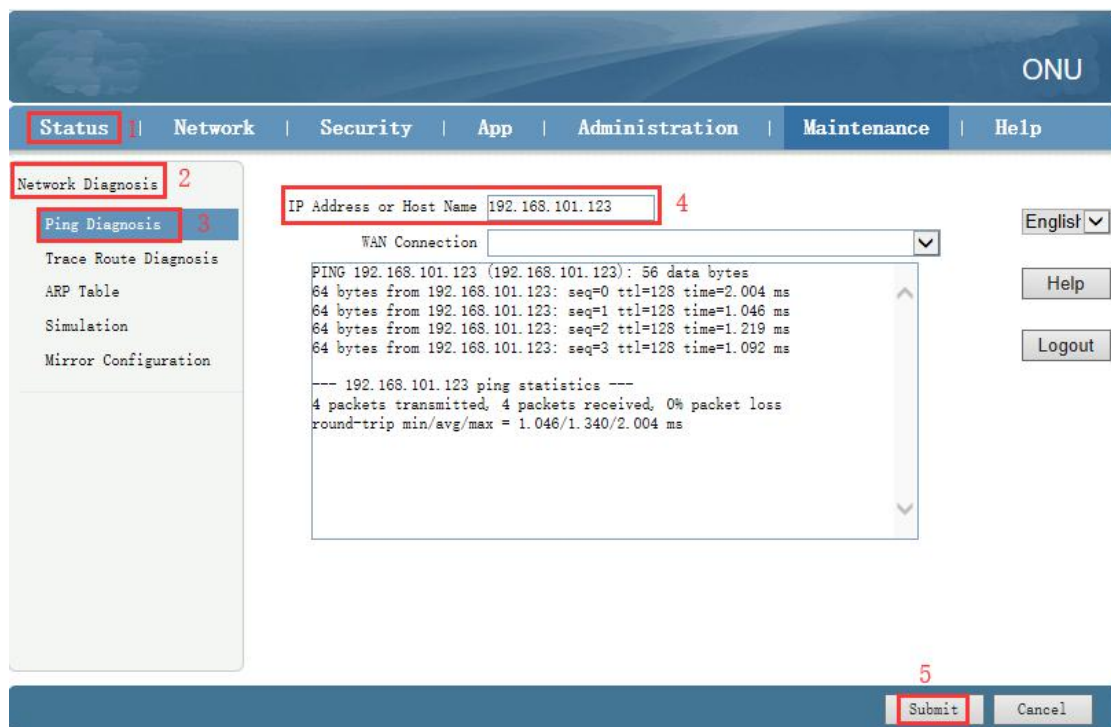
7 Multicast / IPTV Service Basic Settings

ZTE solution ONU multicast / IPTV service settings are mainly through the OLT to configure, including multicast vlan, snooping configuration can be configured through the OLT. The specific configuration can refer to each manufacturer's OLT to configure.

8 ONU Ping Diagnostic

Ping diagnostic of ZTE SFU ONU is mainly used to test connectivity between ONU and client devices.

Login ONU WEB. Click **Status -> Network Diagnosis -> Ping Diagnosis**, type terminal IP address that connect to the ONU lan port, and click "**Submit**" button to test the connectivity.



9 ONU Device Management

9.1 ONU Device Remote Access Settings

web login ONU and select the **Security -> Service Control -> Service Control**. In this page you can set the ONU telnet remote access and WEB remote

access:

Enable	Ingress	Start Source IP Address	End Source IP Address	Mode	Service List	Modify	Delete
✓	LAN			Permit	HTTP, TE		

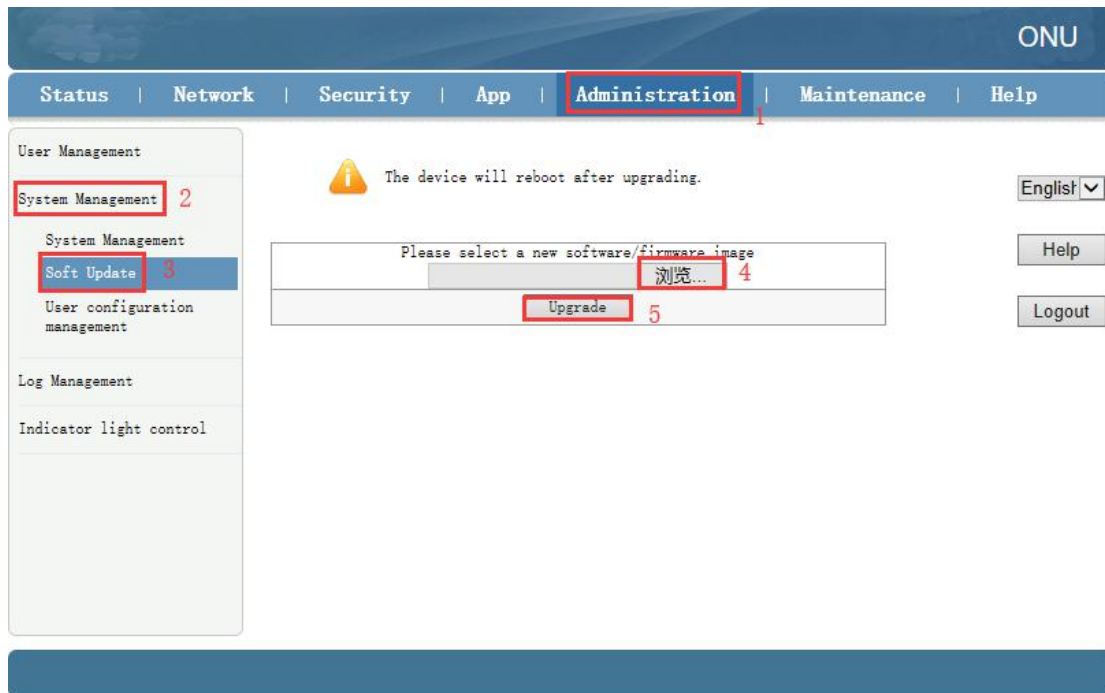
9.2 Restore Default

web login ONU and select the **Administration -> System Management -> System Management**. Click the **"Factory reset"** button to restore the ONU factory settings:

9.3 Software Upgrade

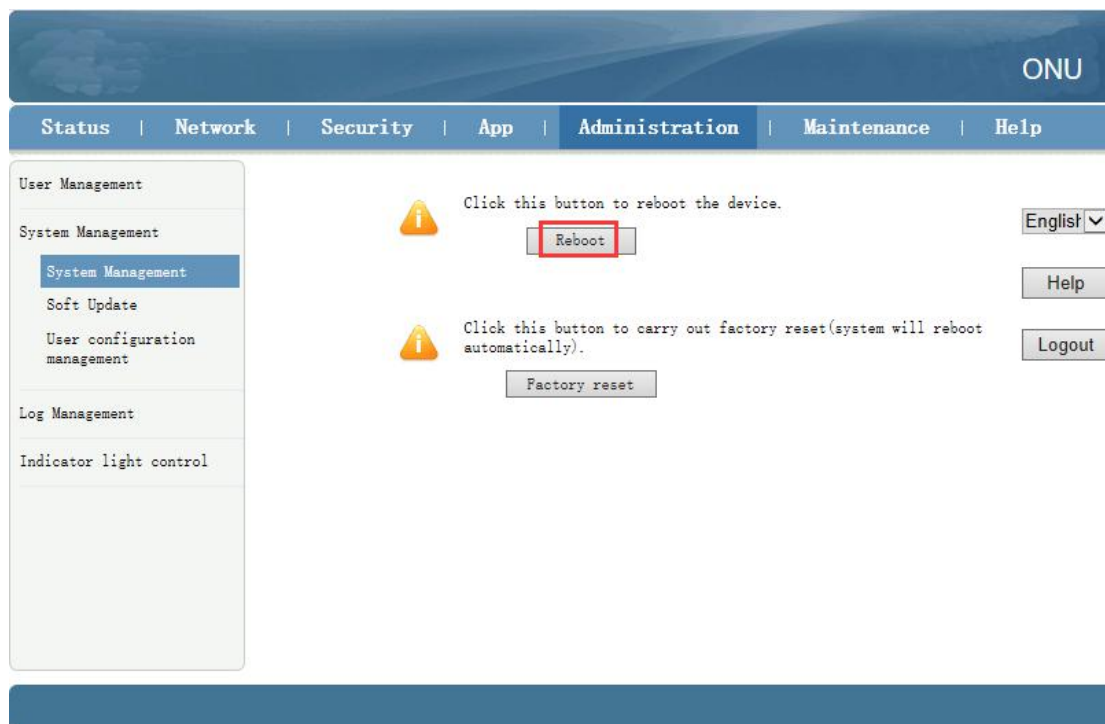
web login ONU and select the **Administration -> System Management -> Software Upgrade**. Click the "浏览" button to select an upgrade file, and then click the "Upgrade" button to upgrade:

Note: ONU upgrade will automatically restart, do not need to manually restart the ONU, upgrade time is about 3 minutes.



9.4 Reboot Device

web login ONU and select the **Administration -> System Management -> System Management**. Click the "Reboot" button to restart the ONU device:



Concluding Remarks

Thanks for using products of Shenzhen C-Data Technology Co. Ltd.

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