

GPON-SFP-ONT-MAC-I Configuration Guide

Basic Product Introduction

The transceiver is designed for Passive Optical. Network application, 2.488Gbps downstream and 1.244Gbps upstream. It is fully compliant with ITU-T G.984.2. The product is an MSA compliant SFP that incorporate not just the optics for an ONU, but all of the electronics need as well. It is a 'PON on a Stick' that an entire FTTH ONU is a slightly oversized SFP. It can be plugged into networking equipment. Allowing the data interfaces in a switch, router, etc., to be customized for different fiber environment and distance requirements.

- Single fiber bi-directional data links GPON ONU and application with GPON MAC function
- Transmitter 1310nm 1.244Gbps with DFB-LD
- Receiver 1490nm 2.488Gbps with APD-TIA
- SFP package with SC/APC receptacle
- Single 3.3V power supply
- Digital diagnostic monitor interface compatible with SFF-8472
- Compliant with MSA SFP-8074
- Compliant with ITU-T G.984.2 Operating temperature range commercial -40°C to 85°C
- Power dissipation < 2.5W, Distance up to 20km
- 0.5dBm ~ 5dBm launch power, -28dBm ~ -8dBm for receiving

Applications:

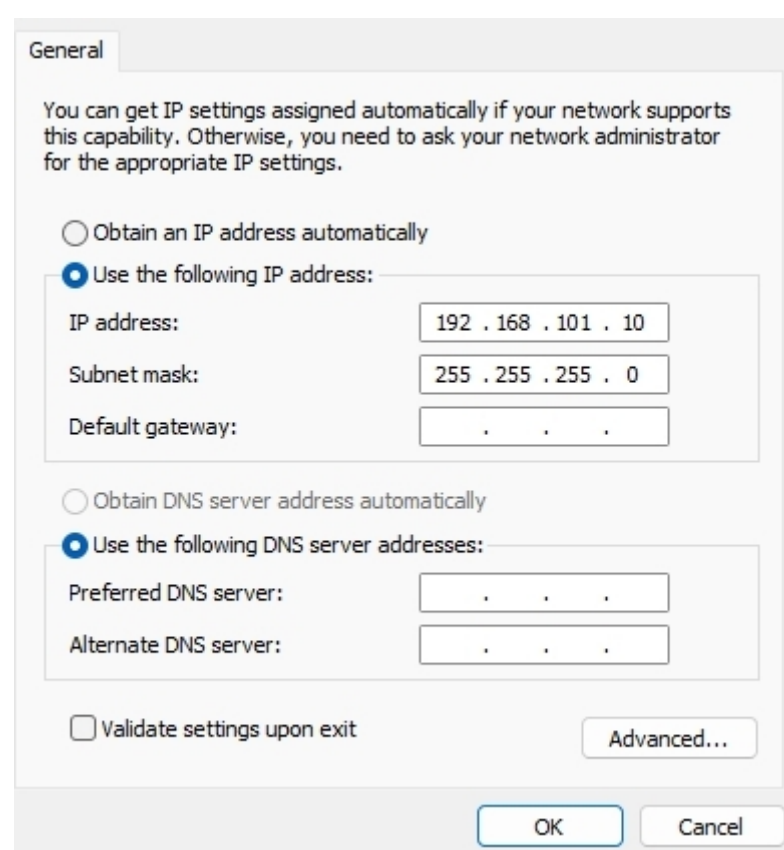
- GPON
- FTTx
- Wireless Backhaul

Physical Connection

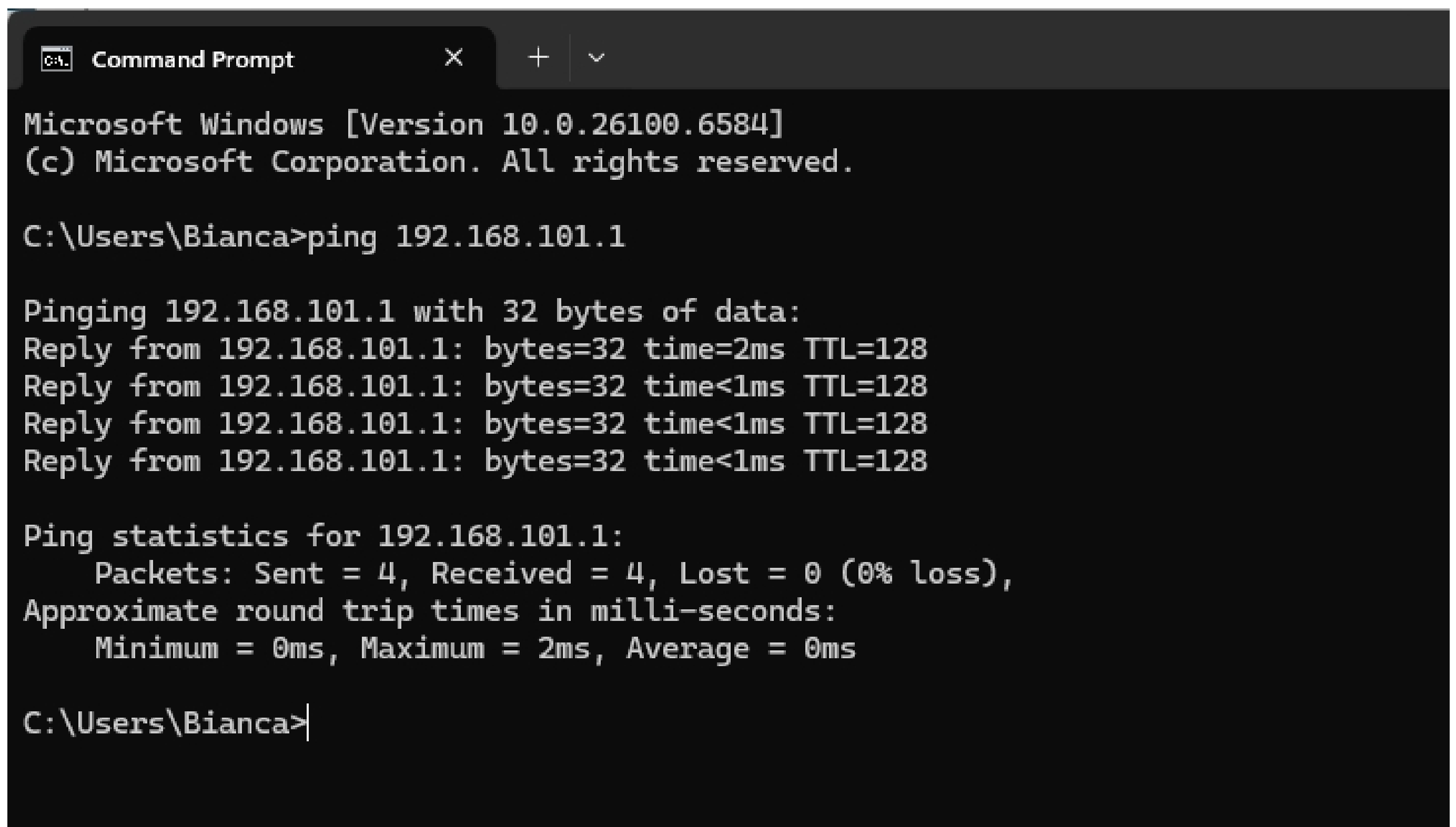
- **Step 1:** Insert the GPON ONU Stick into an SFP+ port on your router or switch.
- **Step 2:** Connect the Stick ONU module to the OLT module using an SC/UPC fiber optic cable.
- **Step 3:** Check the LED indicators on the router or switch; a solid green light indicates a successful connection.
- **Step 4:** Connect your computer to a LAN port on the router or switch using an Ethernet cable.

Computer initial configuration

- **Step 1:** Set your computer's IP address to be in the same IP address range as the Stick module.



- **Step 2:** Open the Command Line Interface (CLI) on your PC and ping 192.168.101.1. A successful reply confirms connectivity.

A screenshot of a Windows Command Prompt window. The title bar shows 'Command Prompt' with standard window controls. The text inside the window shows the Windows version (10.0.26100.6584) and copyright information. The user 'Bianca' is at the C:\Users\Bianca directory. They have executed the command 'ping 192.168.101.1'. The output shows four successful replies from 192.168.101.1 with 32 bytes of data, response times of 2ms and <1ms, and a TTL of 128. Ping statistics show 4 packets sent and received with 0% loss, and round trip times of 0ms, 2ms, and 0ms respectively. The prompt is currently at 'C:\Users\Bianca>'.

```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Bianca>ping 192.168.101.1

Pinging 192.168.101.1 with 32 bytes of data:
Reply from 192.168.101.1: bytes=32 time=2ms TTL=128
Reply from 192.168.101.1: bytes=32 time<1ms TTL=128
Reply from 192.168.101.1: bytes=32 time<1ms TTL=128
Reply from 192.168.101.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.101.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\Users\Bianca>
```

How to log in to the module

The default IP address of the GPON-ONU-34-20BI module is 192.168.101.1.

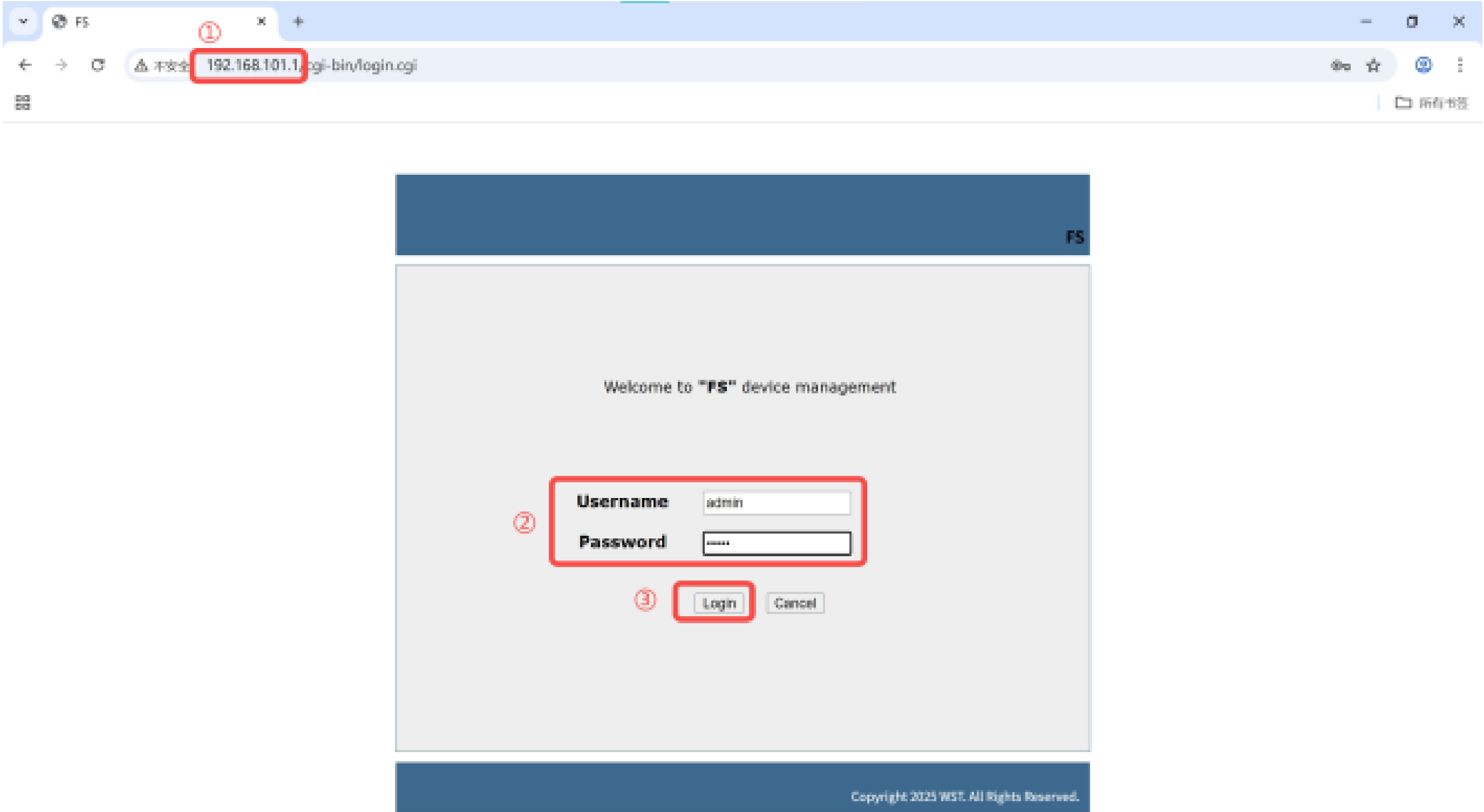
Access Methods: Web, SSH, Telnet.

- Web Login

Open a web browser and navigate to <http://192.168.101.1>.

Enter the username and password: **admin / admin**.

Click **Login** to access the module's Web GUI graphical management interface.

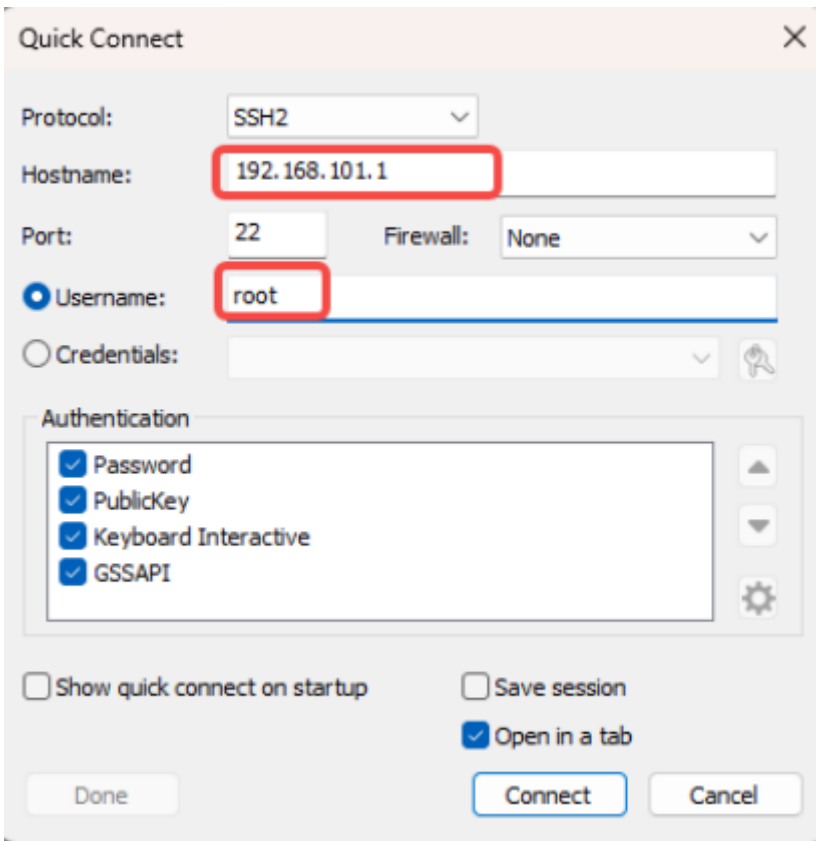


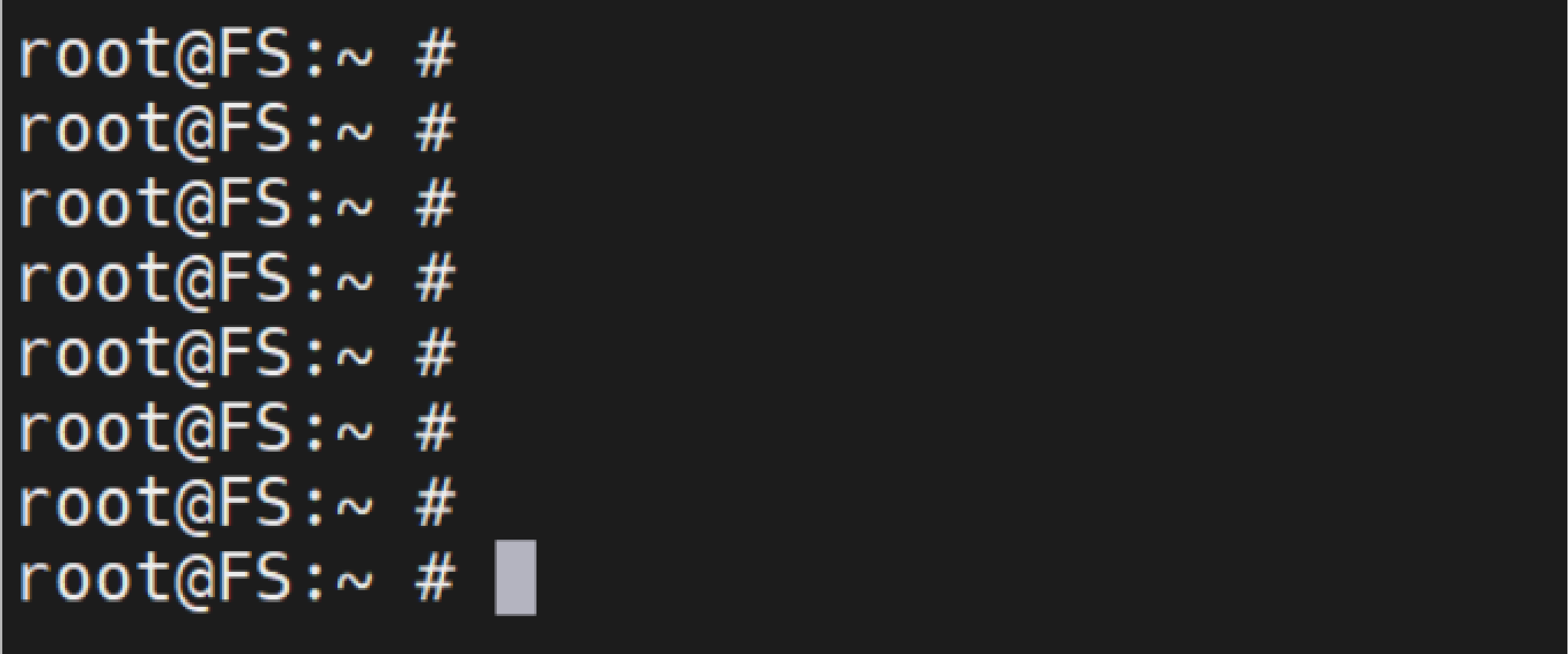
• SSH Login

Open an SSH client (e.g., SecureCRT, MobaXterm) and create a new SSH session.

Enter the IP address 192.168.101.1, and the username/password: **root / root**.

Click **Connect** to access the module's command-line interface via SSH.



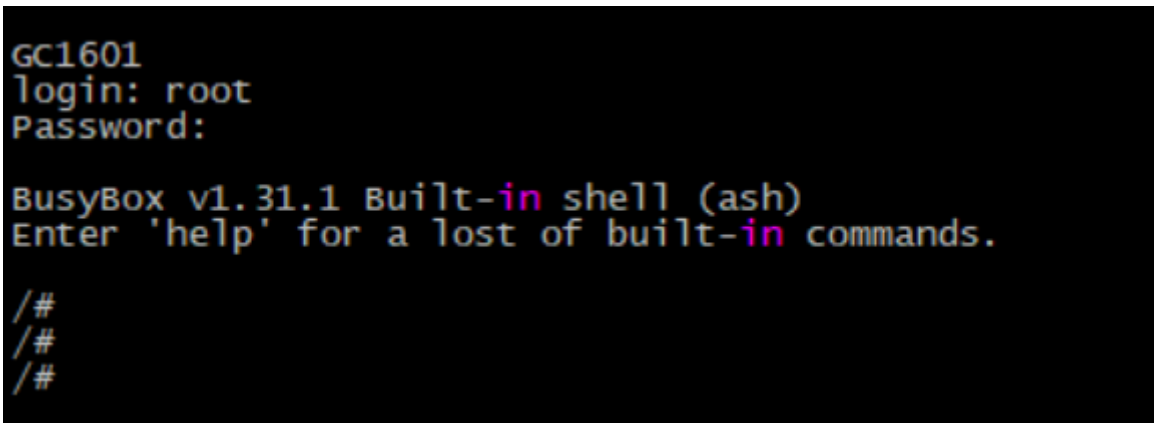
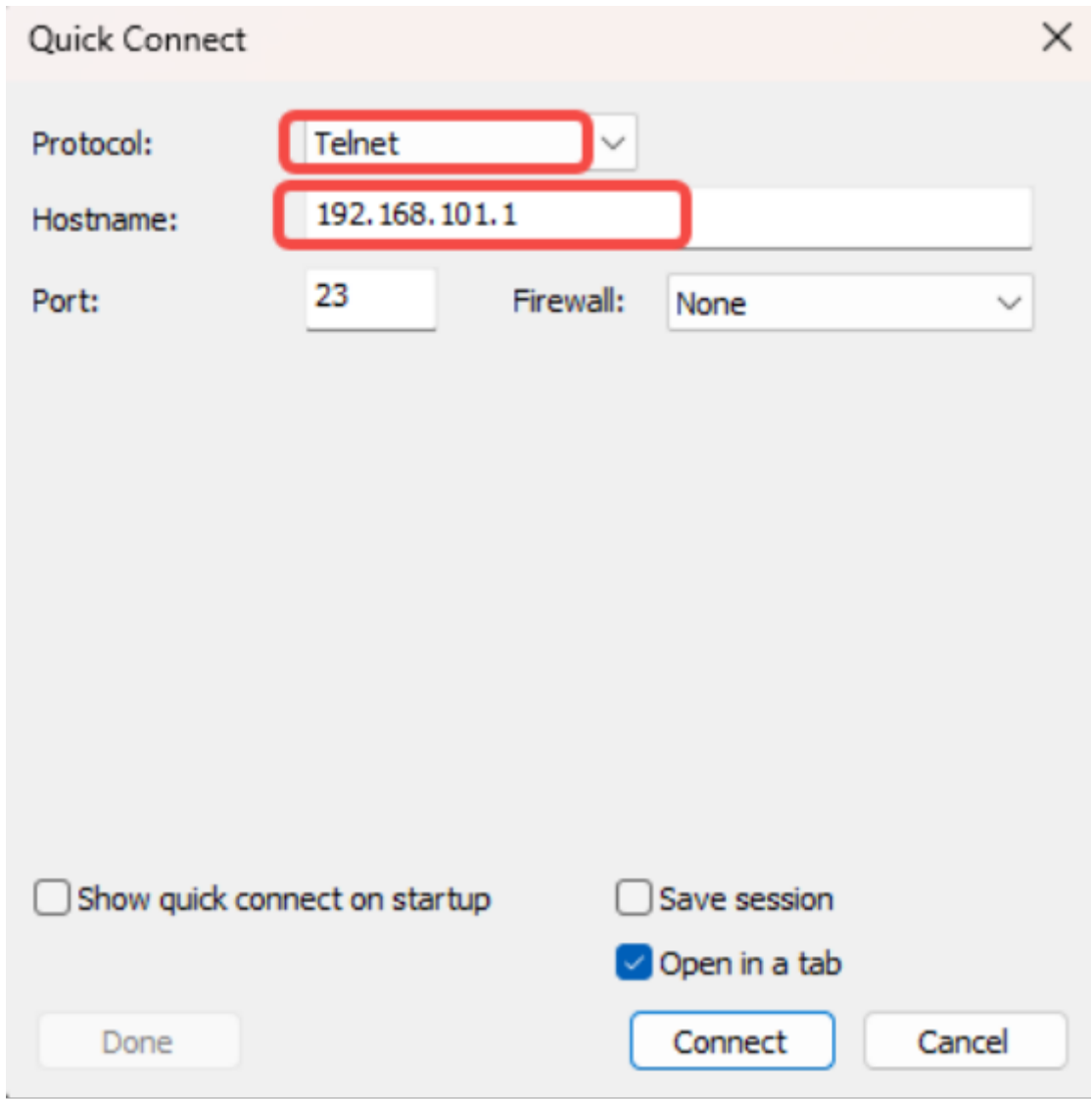


• Telnet Login

Open a terminal client (e.g., SecureCRT, MobaXterm) and create a new Telnet session.

Enter the IP address [192.168.101.1](#), and the username/password: **root / root**.

Click **Connect** to access the module's command-line interface via Telnet.



Basic Web Interface Configuration

Checking device and module status

- Status>Device Information

FS

Logout

Status

Device Information

PON Information

WAN Information

Eth Port Information

LAN Allocated Status

WAN Configuration

LAN Configuration

Routing(IPv4)

Security Configuration

Network Application

System Tool

Diagnosis

Device Information

Manufactory	FS
Model	FS
Serial Number	000000-FS0025061209
Hardware Version	V1.0
Software Version	V1.2.3
Bootloader Version	V1.2.2
PON Serial Number	FS0025061209
PON Password	1234567891
PON MAC	00:00:50:00:00:4a
PON Mode	GPON
Build Info	Build. Sun Jul 27 15:20:13 CST 2025

Refresh

• Status>PON Information

FS

Logout

Status

Device Information

PON Information

WAN Information

Eth Port Information

LAN Allocated Status

WAN Configuration

LAN Configuration

Routing(IPv4)

Security Configuration

Network Application

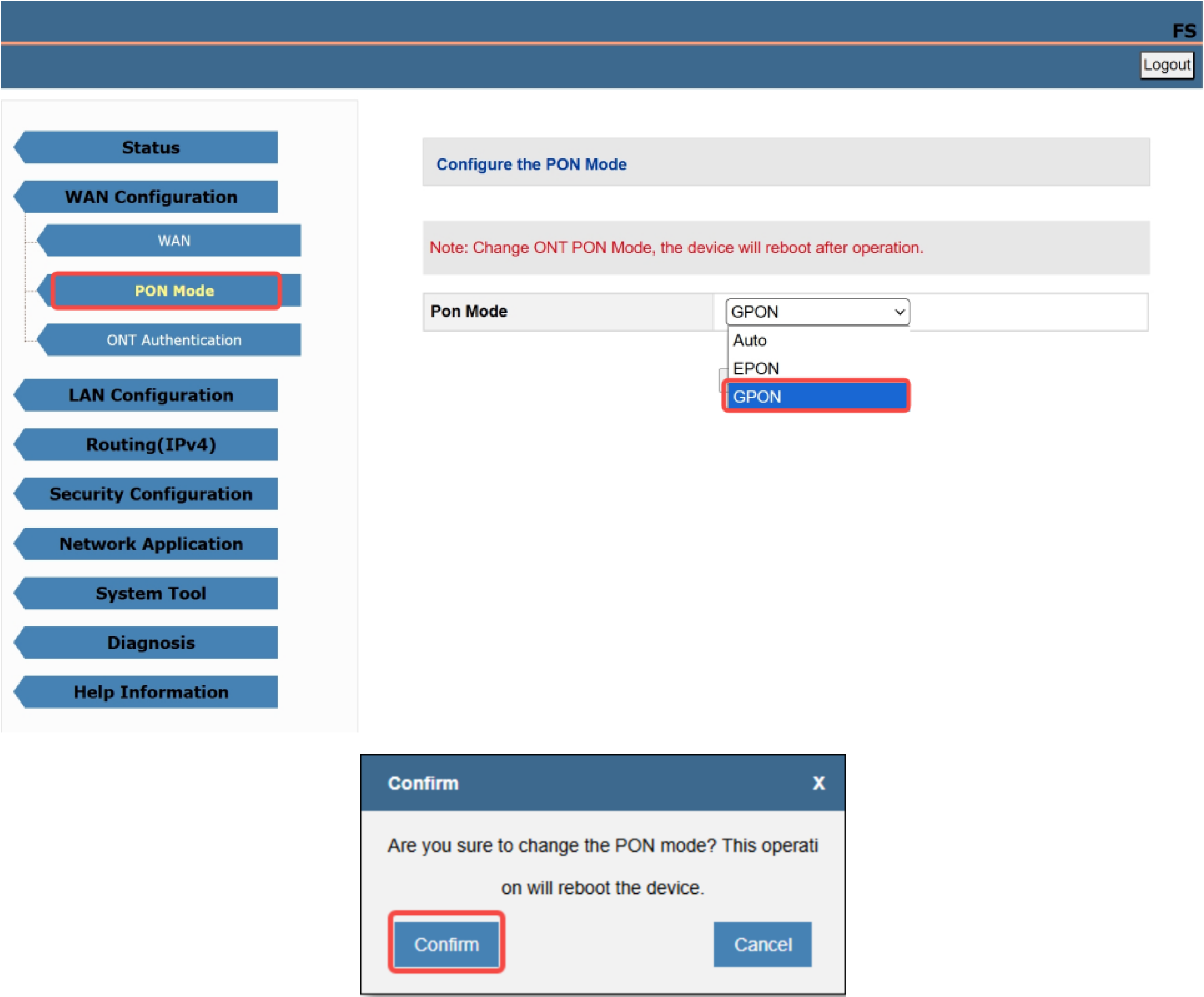
PON Information

GPON State	Optical Los
Optical Module RX Power(dBm)	-inf
Optical Module TX Power(dBm)	3.14
Optical Module Working Voltage(uV)	3135200
Optical Transmitter Bias Current(uA)	0
Working Temperature of the Optical Module(°C)	46

Refresh

Modify module information

• WAN Configuration>PON Mode



View or modify module LOID, LOID Password, SN, SN Password, etc.

- WAN Configuration>ONT Authentication

Status

WAN Configuration

WAN

PON Mode

ONT Authentication

LAN Configuration

Routing(IPv4)

Security Configuration

Network Application

System Tool

Diagnosis

Help Information

Configure the ONT Authentication

LOID	FS0000000001
Password	*****
SN	FS0025061209
SN Password	*****

Apply

Cancel

View or modify module IP address

- LAN Configuration>DHCP Configuration

Status

WAN Configuration

LAN Configuration

DHCP Configuration

DHCPv6 Configuration

Port Configuration

Routing(IPv4)

Security Configuration

Network Application

System Tool

Diagnosis

Help Information

FS

Logout

Configure the LAN DHCP

Note: After change the LAN IP address, the connection will be closed.

LAN IP Address	192.168.101.1
Subnet Mask	255.255.255.0

Note: The DHCP Start IP and End IP address should be in the same subnet as the LAN IP.

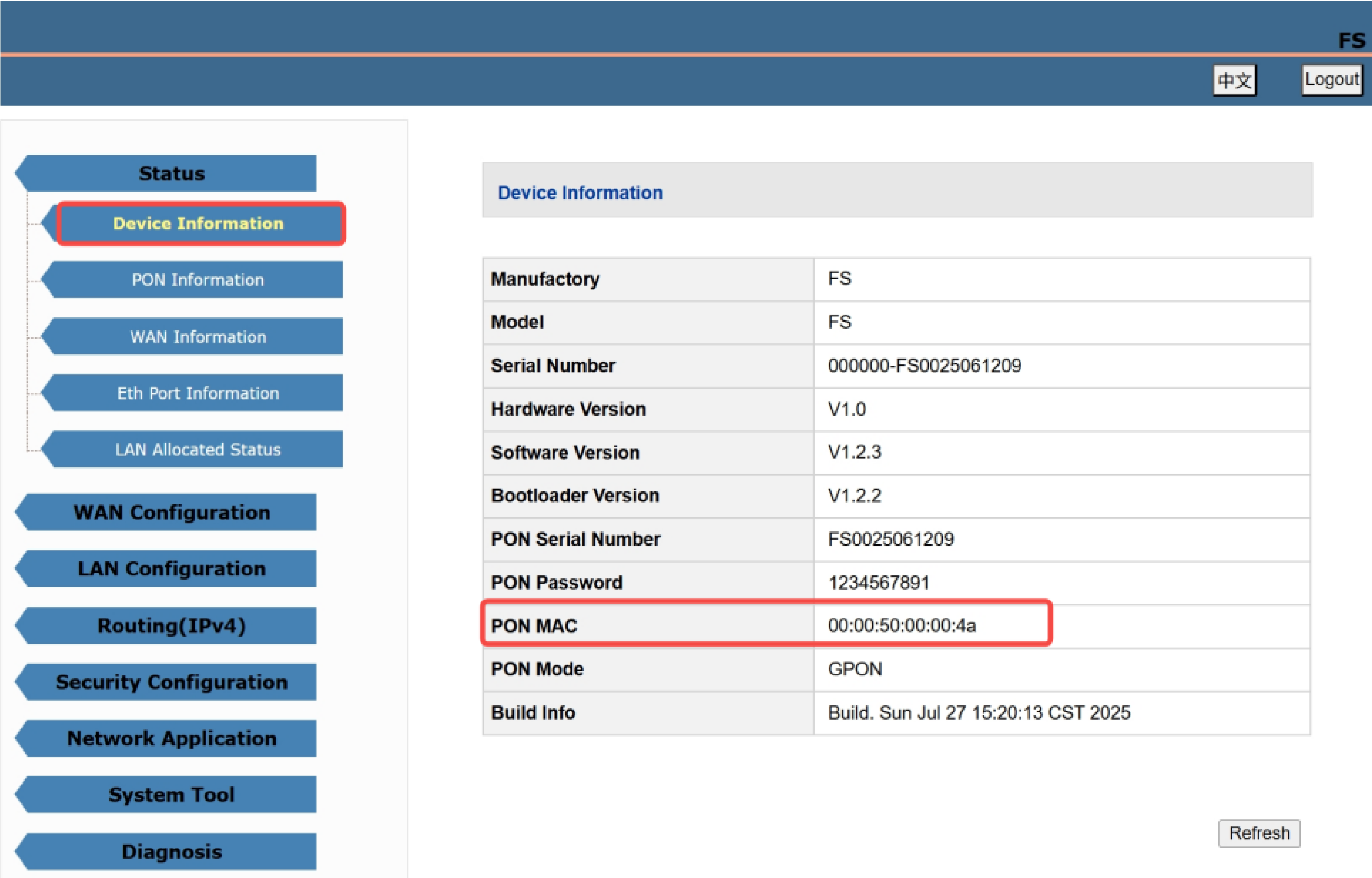
Enable DHCP Server	☐
DHCP Start IP Address	192.168.101.2
DHCP End IP Address	192.168.101.254

Assign IspDNS	☐
DNS Server1 IP address	
DNS Server2 IP address	
DNS Server3 IP address	

Default Gateway	192.168.101.1
Lease Time	86400 s

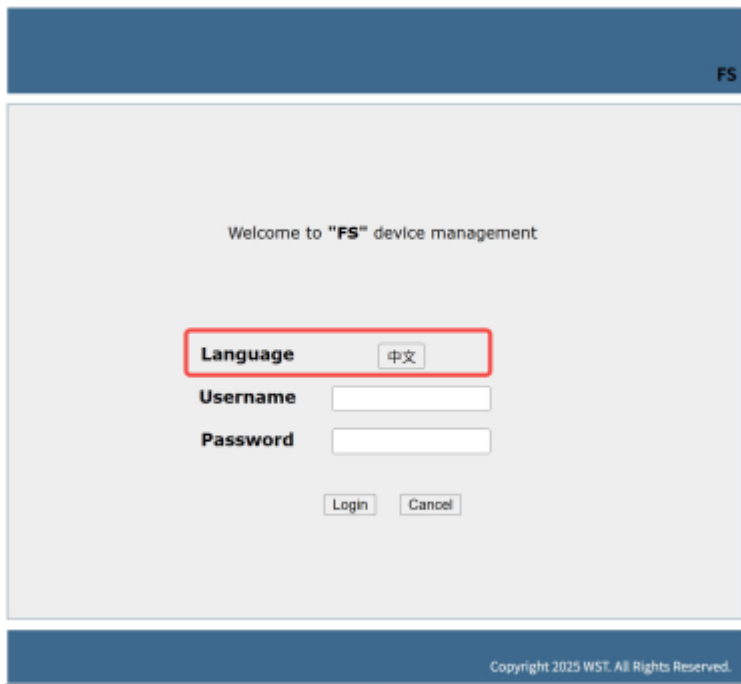
Viewing the module MAC address

- Status>Device Information



Modify the WEB interface language

- For the first time, you need to use SSH to change the language and save it;
- Click on the language switch on the WEB interface for the second time.



SSH/Telnet main operation instructions

Configuring SN and MAC

- Query GPON SN

root@FS:~ # gccli sys sn

SN: FS0025061209

- Modify GPON SN

Note: The first 4 bytes are in ASCII, and the last 8 bytes are in Hex.

root@FS:~ # gccli sys sn

SN: FS0025061209

```
root@FS:~ # gccli sys sn FS0025061208
```

sys sn success

```
root@FS:~ # gccli sys save
```

sys save success

```
root@FS:~ #
```

- **Query MAC address**

```
root@FS:~ # gccli sys mac
```

Mac Address: 00:00:50:00:00:4A

- **Modify MAC address**

```
root@FS:~ # gccli sys mac
```

Mac Address: 00:00:50:00:00:4A

```
root@FS:~ # gccli sys mac 00:00:50:00:00:4B
```

sys mac success

```
root@FS:~ # gccli sys save
```

sys save success

```
root@FS:~ #
```

Configuring the Vendor and Vendor ID

- **Query Vendor & Vendor ID**

```
root@FS:~ # gccli sys vendor
```

Vendor: FS

- **Query Vendor ID**

```
root@FS:~ # gccli sys vendorid
```

Vendor Id: FS

```
root@FS:~ #
```

Configuring Hardware and Software Version Numbers

- **Query hardware and software version numbers**

```
root@FS:~ # gccli sys hwversion
```

Hardware Version: V1.0

```
root@FS:~ # gccli sys version
```

Software Version: V1.2.3

```
root@FS:~ #
```

- **Modify hardware and software version numbers**

```
rrroot@FS:~ # gccli sys hwversion V1.0
```

sys hwversion success

```
root@FS:~ # gccli sys save
```


sys save success

root@FS:~ # gccli sys version

Software Version: V1.2.3

sys version success

root@FS:~ # gccli sys save

sys save success

root@FS:~ #

Configuring LOID and LOID Password

- Query LOID

root@FS:~ # gccli sys loid

LOID Name: FS0000000001

- Revise LOID

root@FS:~ # gccli sys loid

LOID Name: FS0000000001

root@FS:~ # gccli sys loid FS0000000002

sys loid success

root@FS:~ # gccli sys save

sys save success

root@FS:~ #

- Query LOID PASSWORD

root@FS:~ # gccli sys loidpw

LOID Password: 1234567891

- Revise LOID PASSWORD

root@FS:~ # gccli sys loidpw 1234567890

sys loidpw success

root@FS:~ # gccli sys save

sys save success

root@FS:~ #

Configuring Language Switching

root@FS:~ # gccli sys language

Language: English

root@FS:~ # gccli sys language Chinese

sys language success

root@FS:~ # gccli sys save

sys save success

root@FS:~ # gccli sys language

Language: Chinese

root@FS:~ #



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