

AN5506-02-FG

FiberHome F. ONU GPON WiFi AN5506-02FG User Manual

Model: AN5506-02-FG

1. INTRODUCTION

The FiberHome AN5506-02-FG is a high-performance, low-power consumption GPON Optical Network Unit (ONU) designed for Fiber To The Home (FTTH) networks. This device provides comprehensive connectivity solutions for residential environments, including high-speed internet access, voice services, and multicast capabilities. It is compliant with ITU-T G.984 standards, ensuring reliable and efficient network performance.

Key Features:

- **High Performance for FTTH Networks:** GPON ONU compliant with ITU-T G.984, ideal for internet, voice, and multicast access in residential environments.
- **Full Voice and Multicast Support:** Compatible with SIP, H.248, multiple voice codecs, and IGMP Snooping protocols.
- **Integrated Wi-Fi:** Supports IEEE 802.11 b/g/n standards with WPA/WPA2-PSK authentication and AES encryption.
- **Advanced QoS and Remote Management:** PQ, WRR, and PQ+WRR queue scheduling modes; configuration via WEB, Telnet, OMCI, and TR-069.
- **Security and Stable Connectivity:** AES-128 encryption, NAT, built-in firewall, and support for DHCP, PPPoE, and static IP.

2. PRODUCT OVERVIEW

Familiarize yourself with the physical components and interfaces of your AN5506-02-FG device.



Figure 2.1: Front View of the AN5506-02-FG. This image shows the white rectangular device with two external antennas. The front panel features a series of LED indicators for various statuses such as Power, PON, LOS, LAN, Phone, Wi-Fi, and WPS. The side includes ventilation grilles and a recessed reset button.



Figure 2.2: Rear View of the AN5506-02-FG. This image displays the back panel of the device, highlighting its various ports. From left to right, it features an On/Off button, a Power input, two LAN ports (LAN1, LAN2), a Phone port, a Wi-Fi button, a WPS button, and a PON optical fiber port. Two external antennas are also visible on either side.

LED Indicators:

- **Power:** On (Green) - Device is powered on; Off - Device is off.
- **PON:** On (Green) - OLT registration successful; Flashing (Green) - Registering with OLT; Off - No connection to OLT.
- **LOS:** On (Red) - Optical signal loss; Off - Optical signal is normal.
- **LAN1/LAN2:** On (Green) - Ethernet link established; Flashing (Green) - Data transmission; Off - No Ethernet link.
- **Phone:** On (Green) - Phone service active; Flashing (Green) - Phone call in progress; Off - Phone service inactive.
- **WiFi:** On (Green) - Wi-Fi enabled; Flashing (Green) - Data transmission; Off - Wi-Fi disabled.
- **WPS:** Flashing (Green) - WPS pairing in progress; Off - WPS inactive.

3. SETUP GUIDE

Follow these steps to set up your FiberHome AN5506-02-FG GPON ONU.

1. **Unpack the Device:** Carefully remove the ONU and all accessories from the packaging. Ensure all components are

present: the ONU device, power adapter, and any included cables.

2. **Connect the Optical Fiber:** Insert the optical fiber cable from your service provider into the PON port on the rear of the ONU. Ensure the connector is clean and properly seated. *Caution: Do not look directly into the optical port when the device is powered on, as it may emit invisible laser radiation.*
3. **Connect Power:** Connect the provided power adapter to the 'Power' port on the ONU and then plug it into a suitable electrical outlet. Press the 'On/Off' button to power on the device. The 'Power' LED should illuminate green.
4. **Connect Ethernet Devices:** Use standard Ethernet cables to connect your computer, router, or other network devices to the 'LAN1' or 'LAN2' ports on the ONU. The corresponding LAN LED will light up when a connection is established.
5. **Connect Phone (Optional):** If you have voice service, connect your analog telephone to the 'Phone' (FXS/POTS) port using an RJ11 phone cable.
6. **Verify Connection:** Once powered on, observe the LED indicators. The 'Power' LED should be solid green. The 'PON' LED should turn solid green after a few moments, indicating successful registration with the OLT. If the 'LOS' LED is red, there is an issue with the optical signal.
7. **Access Management Interface:** To configure advanced settings, connect a computer to a LAN port and open a web browser. Enter the default IP address (usually 192.168.1.1 or similar, check the label on the device or consult your service provider) to access the web management interface. Use the default username and password provided.

4. OPERATING INSTRUCTIONS

This section covers the basic operation of your AN5506-02-FG, including Wi-Fi and network settings.

4.1 Wi-Fi Configuration

- **Enable/Disable Wi-Fi:** Press the 'WiFi' button on the rear panel to toggle Wi-Fi on or off. The 'WiFi' LED on the front panel indicates its status.
- **Connect via WPS:** To connect a WPS-enabled device, press the 'WPS' button on the ONU. Within two minutes, activate WPS on your client device. The 'WPS' LED will flash during the pairing process.
- **Manual Wi-Fi Connection:**
 - a. Access the web management interface (refer to Section 3).
 - b. Navigate to the Wi-Fi settings section.
 - c. Locate the SSID (network name) and Wi-Fi password (WPA/WPA2-PSK key). These are often printed on a sticker on the device.
 - d. You can change the SSID and password for security. Save changes after modification.
 - e. Connect your wireless devices to the new Wi-Fi network using the updated credentials.

4.2 Network Settings (via Web Interface)

- **WAN Connection:** The ONU typically receives its IP address and configuration from the service provider via DHCP or PPPoE. Do not modify these settings unless instructed by your ISP.
- **LAN Settings:** You can view or change the ONU's LAN IP address and DHCP server settings. Ensure these do not conflict with other devices on your network.
- **Firewall and NAT:** The device includes a built-in firewall and supports Network Address Translation (NAT) for security and efficient IP address usage. Advanced users can configure port forwarding or firewall rules if needed.
- **QoS (Quality of Service):** The ONU supports various QoS modes (PQ, WRR, PQ+WRR) to prioritize network traffic, ensuring smooth performance for latency-sensitive applications like voice and video.

5. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your ONU.

- **Cleaning:** Keep the device clean and free from dust. Use a soft, dry cloth to wipe the exterior. Do not use liquid cleaners or aerosols. Ensure ventilation grilles are not blocked.
- **Firmware Updates:** Firmware updates are typically managed by your Internet Service Provider (ISP) via OMCI or TR-069. Do not attempt to manually update firmware unless specifically instructed by your ISP, as incorrect updates can damage the device.
- **Restarting the Device:** If you experience minor network issues, try restarting the ONU by unplugging the power adapter, waiting 10 seconds, and then plugging it back in.
- **Factory Reset:** A factory reset will revert all settings to their default values. This should only be done as a last resort for troubleshooting or when instructed by support. To perform a factory reset, locate the recessed 'Reset' button on the side/rear panel. With the device powered on, use a paperclip or similar pointed object to press and hold the button for approximately 5-10 seconds until the LEDs flash. Release the button and wait for the device to restart.

6. TROUBLESHOOTING

If you encounter issues with your AN5506-02-FG, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
No Power / Power LED Off	Power adapter not connected or faulty; power outlet issue.	Ensure power adapter is securely connected to the ONU and a working power outlet. Check the 'On/Off' button.
LOS LED is Red	Loss of optical signal; fiber cable disconnected or damaged.	Check the optical fiber connection to the PON port. Ensure it is clean and securely inserted. Contact your ISP if the issue persists.
PON LED is Off or Flashing	ONU not registered with OLT; service issue from ISP.	Wait a few minutes for the ONU to register. If it remains off or flashing, contact your ISP.
No Internet Access	PON/LOS issues; incorrect network settings; ISP outage.	Check PON and LOS LEDs. Restart the ONU. Verify network settings in the web interface. Contact your ISP.
Wi-Fi Not Working	Wi-Fi disabled; incorrect password; interference.	Ensure Wi-Fi is enabled (WiFi LED on). Check Wi-Fi password. Try restarting the ONU.
Phone Service Not Working	Phone cable disconnected; service not provisioned.	Check phone cable connection. Ensure Phone LED is on. Contact your ISP to verify voice service provisioning.

If these steps do not resolve your issue, please contact your Internet Service Provider for further assistance.

7. SPECIFICATIONS

Detailed technical specifications for the FiberHome AN5506-02-FG GPON ONU.

Feature	Description
Model Number	AN5506-02-FG

Feature	Description
GPON Standard	ITU-T G.984
Interfaces	1 GE (Gigabit Ethernet) Port, 1 FE (Fast Ethernet) Port, 1 POTS (Phone) Port, 1 FXS Port
Wi-Fi Standard	IEEE 802.11 b/g/n
Antennas	5DBI External Antennas
Voice Protocols	SIP, H.248
Security	AES-128 encryption, NAT, Built-in Firewall
Management	WEB, Telnet, TR-069, OMCI
Dimensions (Approx.)	10 x 9 x 3 inches (Package Dimensions)
Weight (Approx.)	1 pound (Item Weight)
Manufacturer	FiberHome

8. WARRANTY AND SUPPORT

This product is typically covered by a limited warranty provided by the manufacturer or your Internet Service Provider (ISP). Please refer to the warranty information provided at the time of purchase or contact your ISP for details regarding warranty coverage and duration.

Technical Support:

For technical assistance, troubleshooting beyond this manual, or service-related inquiries, please contact your Internet Service Provider (ISP). They are responsible for the network infrastructure and support for the ONU device. Have your model number (AN5506-02-FG) and any relevant account information ready when contacting support.

For general product inquiries or if you purchased the device independently, you may contact the manufacturer, FiberHome, or the seller for support. Refer to their official websites for contact information.

