

SOLAR WIFI EXTENDER USER MANUAL





Safety Instructions

WARNING: To reduce the risk of fire, electric shock, or personal injury, always follow these safety precautions.

1:Installation & Operation

- Lightning Protection: Do not install or operate the device during thunderstorms.
- Electrical Safety: Keep all connectors dry and avoid liquid contact.
- Environmental Conditions: Operate within the specified temperature and humidity range outlined in the product specifications.
- Physical Safety: Installation at heights must be performed by professionals using proper safety equipment.

2. Maintenance & Care

- Cleaning: Clean the solar panel with a soft cloth. Do not use chemicals or abrasive materials.
- Servicing: There are no user-serviceable parts inside. Do not disassemble the device; contact qualified personnel for servicing.

3. RF Exposure

- The device shall be installed to provide a separation distance of at least 20 cm from all persons to comply with RF exposure requirements.

1. Product Overview

1.1 Product Description

The Solar-Powered WiFi Extender is an outdoor-grade networking device designed to extend existing 2.4GHz WiFi coverage in areas with limited access to electrical infrastructure. The unit integrates photovoltaic power collection and signal repeating functions for deployment in gardens, agricultural sites, remote work locations, and similar environments.

1.2 Specifications & Compatibility

- Power Source: Integrated solar panel with backup battery storage.
- Wireless Standard: 2.4GHz WiFi (802.11 b/g/n) Only.
- Maximum Link Rate: 300Mbps.
- Typical Operational Range: Up to 200 Feet (varies with environmental conditions).
- Supported Devices: Compatible with common 2.4GHz clients including smartphones, tablets, network cameras, and select IoT sensors.
- Enclosure Rating: IP65 (dust-tight and protected against water jets).

1.3 Intended Applications

- Providing network connectivity to outdoor security camera systems.
- Extending WiFi coverage to peripheral areas of properties.
- Enabling basic connectivity for environmental sensors in field locations.
- Supporting temporary networking needs at remote work sites.

1.4 Important Usage Notes

- Performance varies based on distance, obstacles, and existing signal strength.
- Solar charging efficiency depends on weather conditions and panel exposure.
- Users must ensure proper configuration of security settings on connected devices.
- Installation must comply with local regulations regarding outdoor wireless equipment.

2. YDS300 Solar WiFi Extender Specifications

Item	Description		
Main Chip	MTK7628KN	Built-in Battery	27,000mAh Rechargeable Lithium Battery
IEEE Standards	IEEE 802.11b/g/n	Solar Panel	12W Solar Panel
Operating	2.412GHz~2.4835GHz	Transmission Distance	Up to 200 Feet
Modulation	802.11b: cck, DQPSK, DBPSK 802.11g: 64-QAM, 16-QAM, QPSK,BPSK 802.11n: 64-QAM, 16-QAM, QPSK, BPSK	WiFi Hotspot	Solar-Extender-XXX
Rx Sensitivity / TX	-96dBm (Min) / 16dBm (Max)	Setting Page	Auto Redirect Or Enter 192.168.11.1 in the Browser
Power Input	5V-12V / 2A	Power Consumption	170mA @ 5V (Typ.)
Antenna Type	2 X 5dB External Antenna	Temperature	Working Temp: -10°C to + 50°C Storage Temp: -40°C to + 70°C
Power Supply	Solar Panel+Battery	Color Box Size / G.W	353mm*223mm*90mm / 1.8KG

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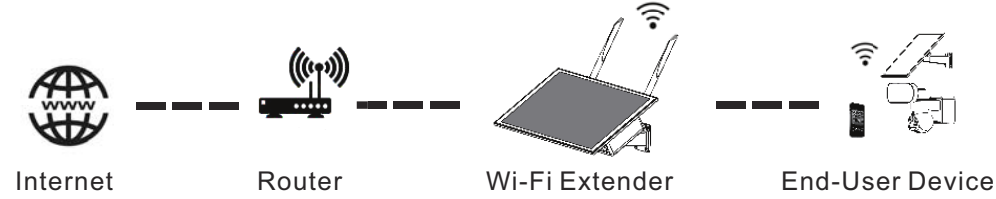
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3. Installation Setup



3.1 Product Overview

3.1.1. Device Components Overview



3.1.2. LED Indicators

LED TYPE	STATESTATE	DESCRIPTION
Power LED	Red Light Solid ON	Battery Charging
	Blue Light Solid ON	Battery Fully Charged
Stats LED	Green Light Solid ON	System Operating Normally
	Green Light Flashing	System Booting Up or Searching For A Network

3.1.3. Reset Button To perform a network reset:

- I. Locate the Reset button.
 - II. Press and hold the Reset button for 5-10 seconds.
 - III. Release the button. The LED indicator will turn a steady green for one second.
 - IV. The LED will then briefly turn off for one second before resuming flashing green.
- This indicates a successful reset.

3.1.4. Type C Charging Port

For flexible power input, the device features two Type-C ports (5V-12V). While one is used for the provided solar panel, the second port empowers customers to add an optional solar panel to suit their needs, offering both flexibility and charging redundancy.

3.2 Network Connection

This section explains how to establish a connection between the Solar Wi-Fi Extender and the router. For optimal performance during setup, we recommend ensuring the device is fully charged. This can be done by connecting a power source via the Type-C port (5V-12V), or by placing the device in direct sunlight for approximately 4-6 hours. Adequate charge is critical for uninterrupted operation during the configuration process.

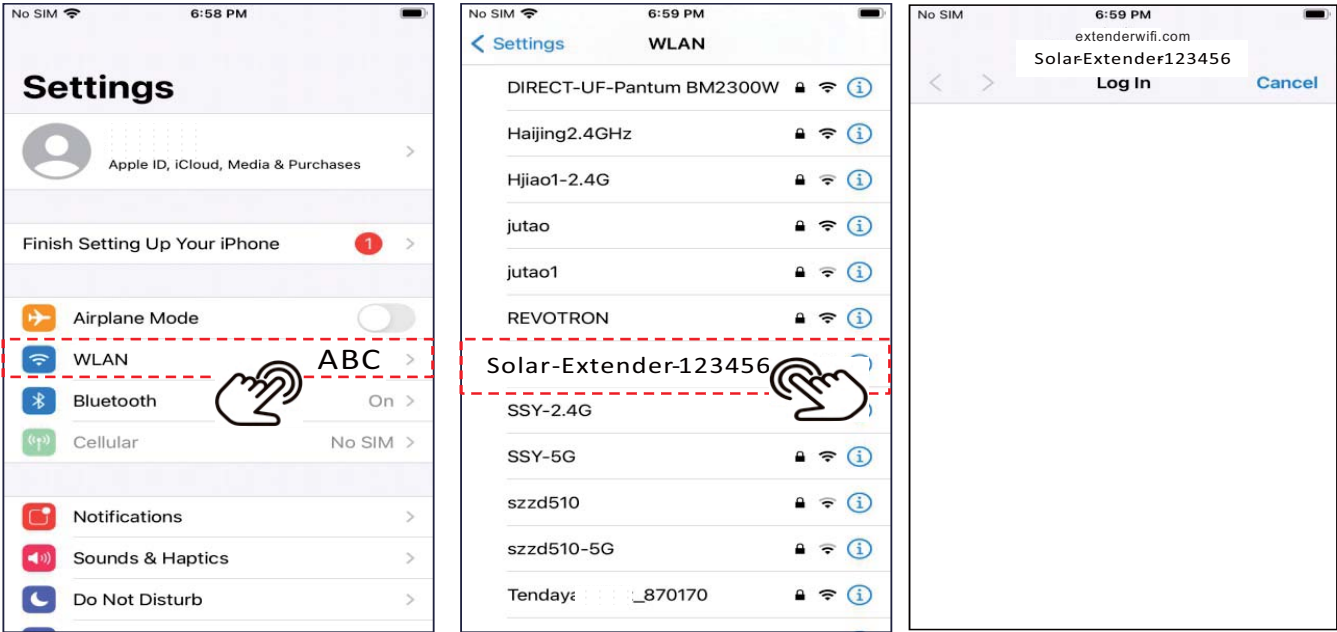
3.2.1. Activate the Solar WiFi Extender

Activate the device by turning the power switch to the “ON” position. The power indicator will illuminate and begin flashing green, signaling that the unit is initializing.



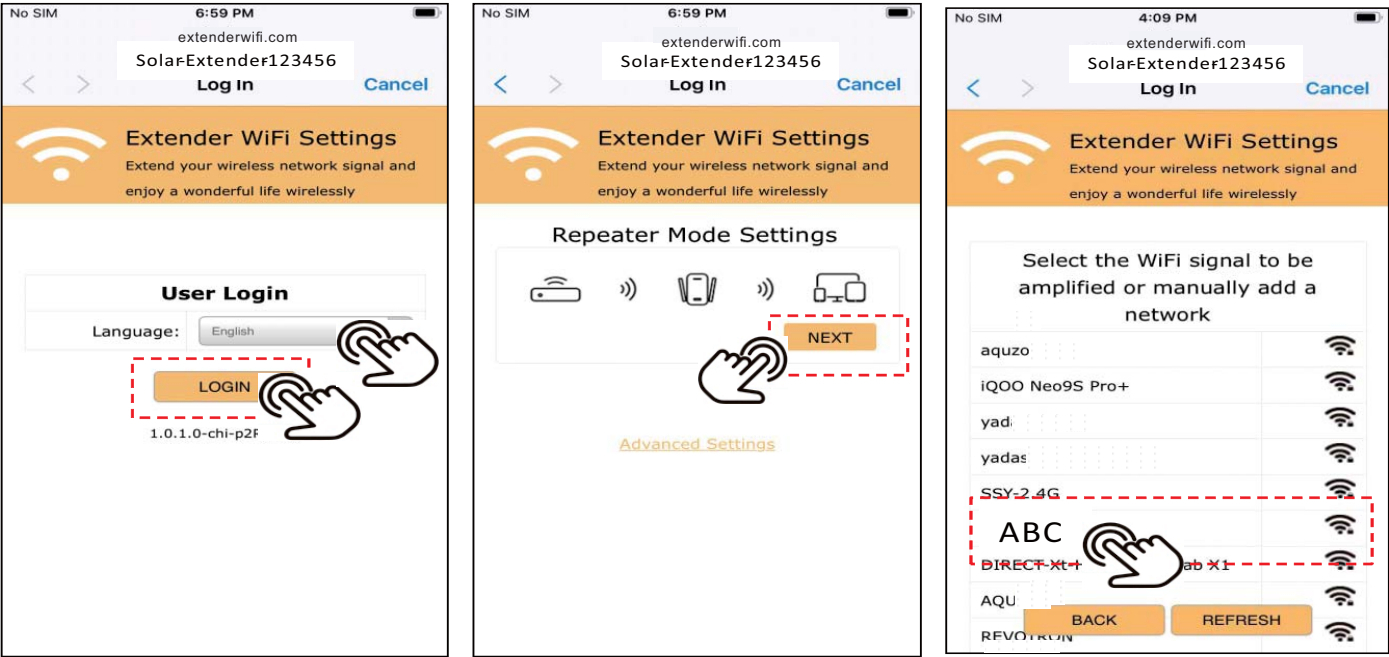
3.2.2. Locate the Solar-Extender-XXX Network

Wi-Fi devices (smartphone, tablet, computer, etc.) must first be connected to the original router to ensure that the Wi-Fi extender can later be bridged with it. On a smartphone, for example, go to Settings > Wi-Fi and select "Solar-Extender-XXX" (where XXX is the device's unique identifier). The screen will temporarily turn blank before loading the extender's configuration interface. (If the configuration page does not appear automatically, manually open your browser and enter the common gateway address 192.168.11.1 in the address bar).

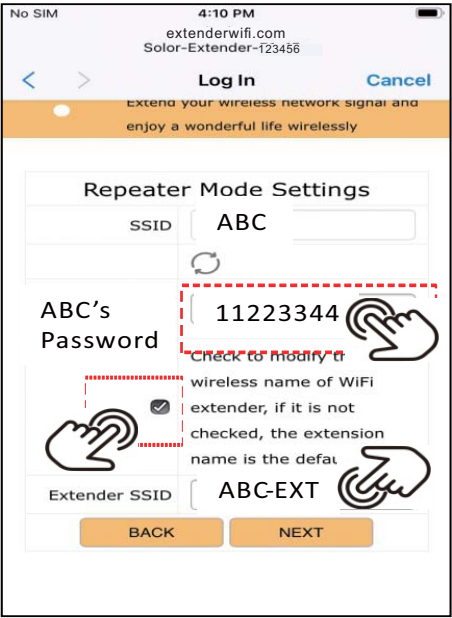


3.2.3. Connect the Extender to the Router’s Network

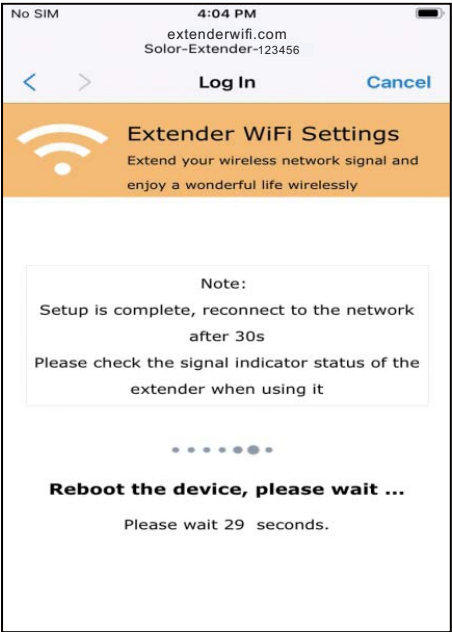
Select the Language, then click “LOGIN”. Press Next, and Select the router’s WiFi Name (SSID).(Note: If the router’s WiFi Name does not appear in the list, please press “REFRESH”.



- Verify SSID & Password: Confirm the SSID matches your router's main or 2.4GHz network name. Enter the corresponding password.
- Enable Unified SSID: Check the box to auto-name the extender network as "[Main SSID]-EXT". You can also set a custom name for the Extender's SSID. If unchecked, the extender will share the same name as your main network.
- Click Next to continue.
- Click Finish to complete the Installation.
Note: The extender must use the same password as your main router.

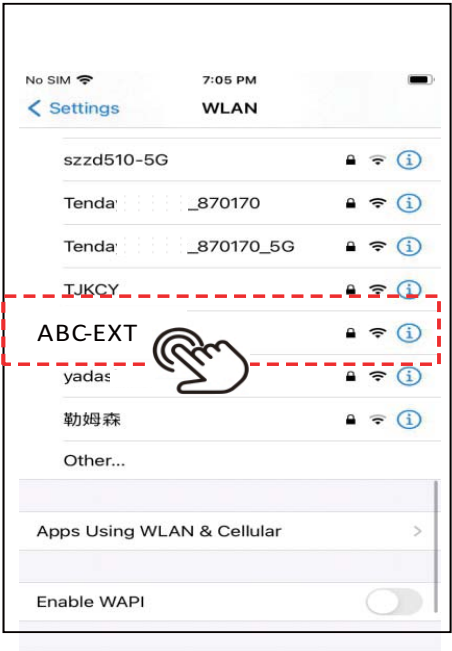


- Setup complete. The extender will now reboot (the green light will remain solid).
- You may now exit the setup interface and reconnect to your new Wi-Fi network.
- Important: Manually exit the configuration page after the countdown, as it will not close automatically.

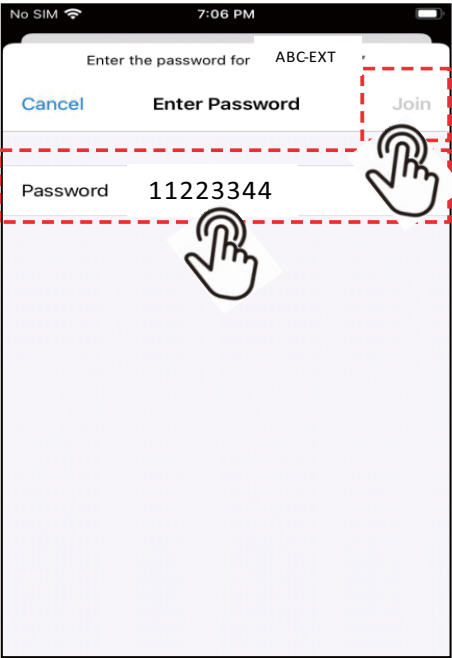


3.2.4. Connect a device to the WiFi Extender

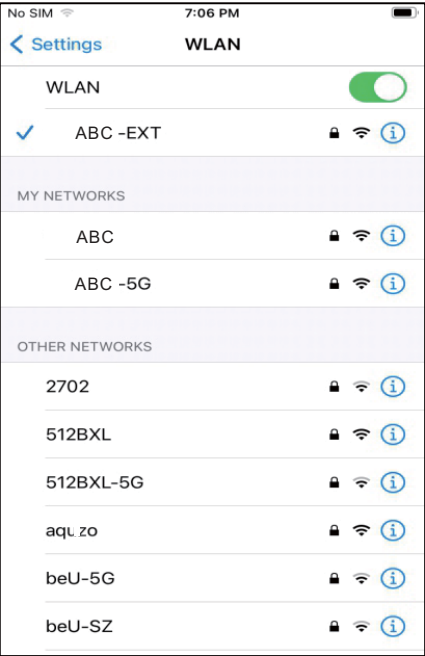
- Find the Extender's Network: On your device, go to Wi-Fi settings and select the extender's network. Its name will be your router's SSID followed by "-EXT", a custom name you set, or the same as your router's name, depending on your setup choice.



- Enter Extender Password And Click "Join".
It is the same password as your main Wi-Fi network.



- The connection is successful.
The Wi-Fi icon on your device should show a successful connection. You can open a web browser to test the internet.



4. Operation & Usage

Location Selection Guidelines

Device performance is directly correlated with installation positioning, requiring simultaneous optimization of both solar reception and wireless signal transmission.

Solar Energy Requirements

- Installation site: must receive minimum 4-6 hours of direct daily sunlight.
- Recommended installation points: south-facing patios, fence posts, or garden grounds.

Device Activation Sequence

- Adjust solar panel to optimal sky-facing orientation.
- Illuminated power indicator confirms charging initiation.
- For initial charge, connect to a Type-C power source (5V-12V) or expose to direct sunlight for approximately 4-6 hours.

Maintenance Protocol

- Periodic maintenance: clean solar surface bi-weekly with damp cloth.
- Status monitoring: real-time operational status through indicator lights.
- Performance assurance: maintained panel cleanliness ensures peak charging efficiency.

5. Maintenance & Care

Proper maintenance is essential for ensuring the long-term performance and durability of your Solar Wi-Fi Extender. Please adhere to the following guidelines.

5.1. Solar Panel Care

- Regular Cleaning: Gently wipe the solar panel surface with a soft, damp cloth every two weeks to remove dust, dirt, bird droppings, or other debris. This is critical for maintaining optimal photoelectric conversion efficiency. Use only clean water for cleaning.

5.2. Physical Inspection & Housing

- Periodic Check: Regularly inspect the device, cables, and connectors for any signs of physical damage, cracking, or wear.
- Housing Cleaning: Clean the external housing with a dry or slightly damp cloth. Ensure the device is completely dry before re-powering if cleaned with moisture.

5.3. Environmental Considerations

- Extreme Conditions: While designed for outdoor use, during severe weather conditions such as hurricanes, hail, or severe thunderstorms, it is advisable to temporarily relocate the device to a protected area if possible.
- Optimal Angles: Periodically adjust the bracket and panel angle with the changing seasons to ensure the panel continues to face the sun directly for maximum energy harvest.

5.4. Storage

- Long-Term Storage: If the device will not be used for an extended period, fully charge the battery and store it in a cool, dry place away from direct sunlight.
- Battery Care: For optimal battery health, it is recommended to perform a full charge-discharge cycle at least once every three months during storage.

5.5. Software & Performance

- Firmware Updates: Periodically check for and install the latest firmware updates via the device's web management interface. These updates often include performance enhancements and security patches.
- Performance Monitoring: Monitor the charging efficiency and Wi-Fi signal strength through the management interface. A significant drop in performance may indicate that the solar panel requires cleaning or that the device location needs re - evaluation.

6. Troubleshooting

This section addresses common issues and their solutions. Please review these steps before contacting support.

Problem 1: No Power / Indicator Lights Not On.

- Possible Cause:** Insufficient solar power; completely drained battery.
- Solution:**
 - Ensure the solar panel is exposed to direct sunlight.
 - Verify the panel is clean and free of obstructions.
 - For a quick start, connect the device to the 5V/2A power adapter for initial charging.
 - Allow the device to charge in the sun for several hours before attempting to power on again.

Problem 2: No Internet Access (Connected but No DataFlow).

- Possible Cause 1:** The extender has lost connection to the main router.
- Solution 1:**
 - Check the Wi-Fi indicator light. If it is red or blinking, the connection is weak or lost.
 - Move the extender closer to the main router to ensure a stable connection.
 - Restart both the main router and the extender.
- Possible Cause 2:** Incorrect main Wi-Fi password stored in the extender.
- Solution 2:** Please reset the WiFi Extender and restart connection (Check 3.2 Section).

Problem 3: Cannot Find the Extender's Wi-Fi Network (SSID).

- Possible Cause:** The extender is in a faulty state or was reset.
- Solution:**
 - Perform a power cycle by turning the device off and on.
 - If the network does not reappear, perform a factory reset. Press and hold the Reset button for 5-10 seconds until the indicator lights flash rapidly.
 - After resetting, you will need to reconfigure the extender from the beginning.

Problem 4: Slow Internet Speed or Unstable Connection.

- Possible Cause:** The extender is located in an area with a weak signal from the main router.
- Solution:**
 - Reposition the Extender: This is the most critical step. Find a new location that is closer to the router while still receiving adequate sunlight.
 - Reduce Interference: Keep the extender away from large metal objects, microwaves, Bluetooth devices, and thick walls.
 - Check the signal strength in the web management interface; aim for a "Fair" or "Good" rating.

Problem 5: Intermittent Operation (Device Turns Off at Night).

- Possible Cause:** The internal battery is not sufficiently charged during the day to sustain operation through the night.
- Solution:**
 - Ensure the device receives the recommended 4-6 hours of direct sunlight daily.
 - Clean the solar panel to maximize charging efficiency.
 - If the problem persists, the battery may be degraded. Please contact customer support.

7. Warranty & Service

7.1.Warranty Coverage

This product is backed by a 12-month limited warranty from the date of original purchase. The warranty covers defects in materials and workmanship under normal use and service conditions. The manufacturer's liability shall not exceed the actual purchase price paid for the product. We shall not be liable for any consequential or incidental damages.

7.2. Warranty Service Process

- Contact our Customer Support team with your proof of purchase (receipt/invoice).
- Provide the product model and serial number.
- Describe the nature of the defect or malfunction.
- Our support team will guide you through the troubleshooting process and determine the appropriateservice solution.

7.3. What Your Warranty Covers

- Repair or replacement of defective components.
- Labor costs associated with warranty repairs.
- Return shipping for repaired or replaced units.

7.4. What Is Not Covered

This warranty does not apply to:

- Damage resulting from accident, misuse, or improper installation.
- Damage from exposure to liquids, extreme temperatures, or environmental factors.
- Unauthorized modifications or repairs.
- Normal wear and tear, including gradual battery capacity reduction.
- Cosmetic damage that does not affect functionality.
- Use with non-approved accessories or power adapters.

FCC warning statements:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.