Orayafid R7

Orayafid Solar Repeater User Manual

Outdoor Weatherproof Wi-Fi Range Extender - Model R7

1. Product Overview

The Orayafid Solar Repeater is an outdoor weatherproof Wi-Fi range extender designed to amplify your existing network coverage. It utilizes a high-efficiency solar panel and a large-capacity lithium battery to provide continuous operation, eliminating Wi-Fi dead zones in outdoor environments. This device supports IEEE 802.11 b/g/n technology, delivering robust Wi-Fi signals at speeds up to 300Mbps at 2.4GHz.



Figure 1.1: Orayafid Solar Repeater main unit.

1.1 Key Features

- **Overall Relay Functionality:** Extends Wi-Fi network range with speeds up to 300Mbps at 2.4GHz.
- **High-Quality Solar Panel:** 15W solar panel with 24% conversion efficiency, protected by durable tempered glass.
- **High-Capacity Lithium Battery:** 20000mAh rechargeable lithium battery for extended usage, even during cloudy periods, with a lifespan of up to 500 recharge cycles.
- **Waterproof Design:** IP65 waterproof rating ensures durability in extreme weather conditions (heavy rain, snow).
- **Easy Installation:** Features a 360-degree adjustable bracket for optimal signal reception and transmission.
- **Multi-Device Connectivity:** Capable of connecting up to 8 devices simultaneously.

1.2 What's in the Box

- Solar Repeater Unit

- Adjustable Wall-Mounted Bracket
- Screw Bag (for mounting)
- User Manual (this document)



Figure 1.2: Contents of the product package, including the solar repeater, mounting bracket, and screw bag.

2. Specifications

Feature	Specification
Model Number	R7
Product Dimensions	1.6 x 9.25 x 12.6 inches
Item Weight	4 pounds
Wireless Communication Standard	802.11bgn
Data Transfer Rate	300 Megabits Per Second
Frequency Band Class	Single-Band (2.4 GHz)

Feature	Specification
Solar Panel Power	15W (24% conversion efficiency)
Battery Type	Lithium Ion (20000mAh capacity)
Waterproof Rating	IP65
Connector Type	RJ45



Figure 2.1: Internal components and solar energy power supply mechanism.

3. Setup and Installation

Follow these steps to properly set up and install your Orayafid Solar Repeater for optimal performance.

3.1 Choosing an Installation Location

- Select a location that receives ample direct sunlight throughout the day to ensure efficient charging of the solar panel.
- The location should be within range of your existing Wi-Fi router to effectively extend the signal. Consider the repeater's maximum range of up to 150 meters.
- Ensure the location is clear of obstructions that might block the Wi-Fi signal or sunlight.
- The IP65 rating allows for outdoor installation, but avoid areas prone to excessive physical impact.



Figure 3.1: Illustrates the extended network coverage provided by the repeater.

3.2 Mounting the Repeater

1. **Assemble the Bracket:** Attach the adjustable wall-mounted bracket to the back of the solar repeater unit using the provided screws.
2. **Mark Drilling Points:** Hold the assembled unit against the chosen installation surface. Use a pencil to mark the drilling points for the bracket.
3. **Drill Holes:** Drill pilot holes at the marked points. Insert the wall anchors (if necessary for your surface type) into the drilled holes.
4. **Secure the Bracket:** Align the bracket with the drilled holes and secure it firmly to the surface using the screws from the

screw bag.

5. **Adjust Orientation:** Utilize the 360-degree adjustable bracket to orient the solar panel for maximum sun exposure and the repeater for optimal Wi-Fi signal reception and transmission.

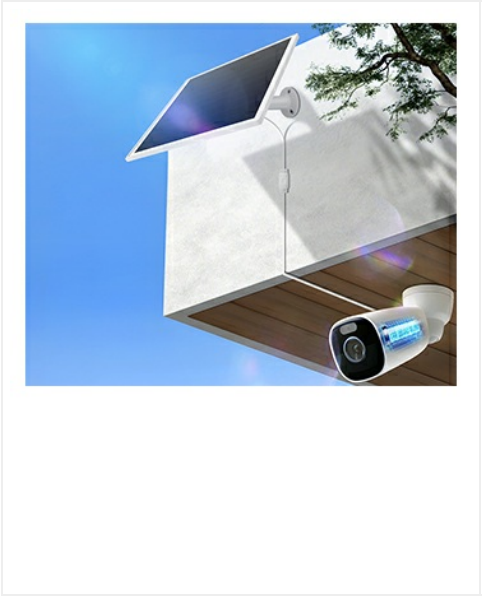


Figure 3.2: Example of the solar repeater mounted on an outdoor wall.

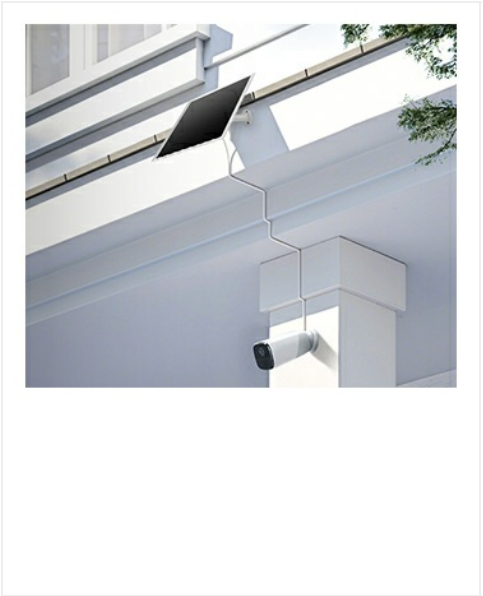


Figure 3.3: Illustrates cable routing for connected devices, if applicable.

3.3 Initial Power-Up

Once mounted, the solar repeater will begin charging its internal battery via the solar panel. Ensure the solar panel is exposed to direct sunlight for several hours before initial use to ensure sufficient charge.

4. Operating Instructions

The Orayafid Solar Repeater operates primarily as a Wi-Fi range extender. Its main function is to receive your existing Wi-Fi signal and re-broadcast it, extending coverage to areas with weak or no signal.

4.1 Connecting to Your Network

The repeater will automatically attempt to connect to the strongest Wi-Fi signal within its range. For initial setup or if you need to specify a network:

1. **Power On:** Ensure the repeater has sufficient power from the solar panel or internal battery.
2. **Access Setup:** Typically, you will connect to the repeater's default Wi-Fi network (SSID) from a computer or mobile device. This SSID and default password are usually found on a sticker on the device or in a quick start guide.
3. **Configure Repeater:** Open a web browser and navigate to the repeater's default IP address (e.g., 192.168.1.1 or 192.168.0.1). Log in using the default credentials.
4. **Select Network:** In the repeater's web interface, select the "Repeater" or "Extender" mode. Scan for available Wi-Fi networks and select your home or office network.
5. **Enter Password:** Enter the password for your selected Wi-Fi network.
6. **Save Settings:** Save the configuration. The repeater will restart and connect to your main network, then broadcast an extended signal. The extended network's SSID might be the same as your main network or have "_EXT" appended.

Note: Refer to the specific quick start guide included with your product for exact default SSIDs, IP addresses, and login credentials.

4.2 Connecting Devices to the Extended Network

Once the repeater is configured and broadcasting, you can connect your Wi-Fi enabled devices (e.g., security cameras, mobile phones, tablets, laptops) to the extended network just as you would to any other Wi-Fi network.

- Go to the Wi-Fi settings on your device.
- Select the SSID of the extended network (e.g., "YourNetworkName_EXT" or "YourNetworkName").
- Enter the Wi-Fi password (this will be the same as your main network's password if configured in repeater mode).
- Your device should now be connected to the extended Wi-Fi network.



Figure 4.1: The repeater supports connectivity for up to 8 devices, including security cameras, mobile phones, and laptops.

5. Maintenance

The Orayafid Solar Repeater is designed for minimal maintenance due to its durable and weatherproof construction.

- **Solar Panel Cleaning:** Periodically inspect the solar panel surface for dirt, dust, leaves, or snow accumulation. Clean the tempered glass surface gently with a soft, damp cloth to ensure maximum sunlight absorption and charging efficiency. Avoid abrasive cleaners or materials that could scratch the glass.
- **Physical Inspection:** Occasionally check the mounting bracket and screws to ensure they remain secure, especially after strong winds or storms.
- **Environmental Protection:** The IP65 rating provides protection against rain and dust. No special covering is needed during adverse weather conditions.



Figure 5.1: The IP65 rating ensures the device can withstand various outdoor elements.

6. Troubleshooting

If you encounter issues with your Orayafid Solar Repeater, refer to the following common problems and solutions.

Problem	Solution
No Power/Device Not Turning On	• Ensure the solar panel is receiving direct sunlight. • Allow several hours for the internal battery to charge, especially after initial installation or prolonged storage. • Check if the battery indicator (if available) shows sufficient charge.

Problem	Solution
Cannot Connect to Wi-Fi / Weak Signal	• Verify the repeater is within effective range of your main Wi-Fi router (up to 150 meters). • Ensure there are no major physical obstructions (thick walls, metal objects) between the repeater and your router. • Re-check the Wi-Fi password entered during the repeater's setup. Passwords are case-sensitive. • Try restarting both your main router and the solar repeater. • If you changed your main Wi-Fi password, you will need to reconfigure the repeater with the new password via its web interface.
Slow Internet Speed on Extended Network	• Ensure the repeater is placed in an optimal location, receiving a strong signal from your main router. • Reduce the number of devices connected to the extended network if performance is significantly degraded. • Check for interference from other 2.4GHz devices (e.g., cordless phones, microwaves).
Device Disconnects Frequently	• Ensure the repeater has a stable power supply from the solar panel/battery. • Check for signal interference or physical obstructions. • Update the firmware of the repeater if an update is available (check manufacturer's website).

7. Warranty and Support

For warranty information and technical support, please refer to the official Orayafid website or contact their customer service directly. Details regarding warranty periods and support channels are typically provided with your purchase documentation or on the manufacturer's product support pages.

Manufacturer: Al MATCH INTELLIGENT TECHNOLOGY CO., LTD

Brand: Orayafid

Website: Orayafid Store on Amazon (for general brand information)

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Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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