SkyNet-SR7161

User Manual & Product Manual

www.wirelessskynet.com

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1. Product Introduction

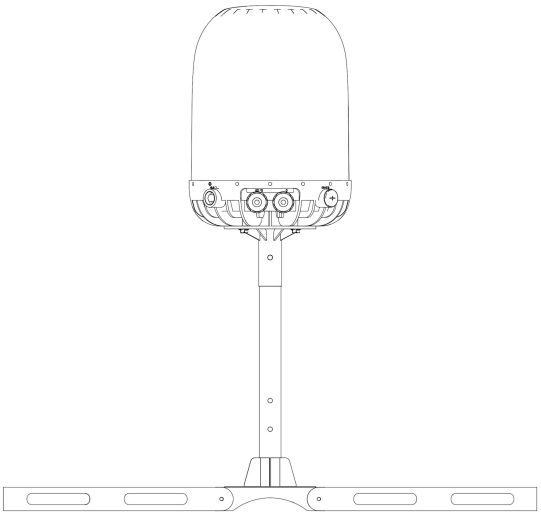
1.1 Product Overview

SkyNet-SR7161 is a Wi-Fi 7 wireless access product that supports the 802.11be standard protocol. Featuring a tri-radio design, it supports the 2/5/6 GHz frequency bands. This device utilizes Power over Ethernet (PoE) for power supply, making it convenient for customers to deploy in various application scenarios. It is suitable for parks, residential neighborhoods, and commercial zones.

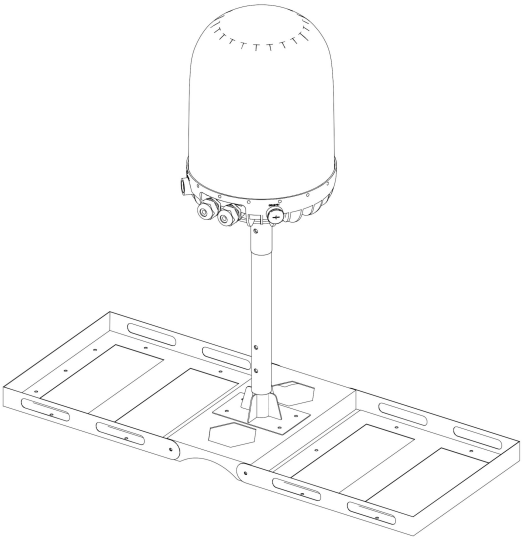
1.2 Product Appearance

The SkyNet-SR7161 device includes 3 RF ports, one 10GE adaptive Ethernet port that also supports PoE power supply, one 1GE adaptive Ethernet port, and a console management port.

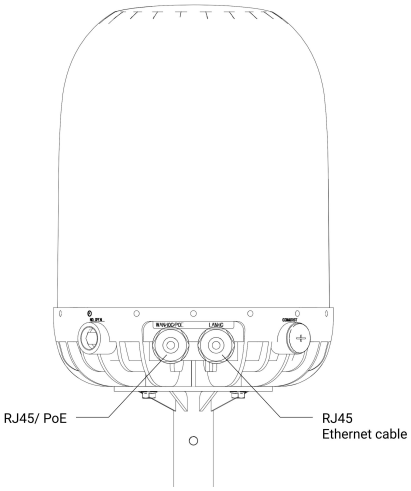
Product Appearance as below:



Main View



Side View



Front View of the Interface

No.	Interface	Function Description
1	WAN/10G/PoE++	Uplink the adaptive Ethernet interface for business data transmission. Supports IEEE 802.3af/at/bt standard PoE power supply.
2	Reset Button	Restart the device or Restore factory settings.
3	LAN/GE	Uplink the adaptive Ethernet interface for business data transmission.
4	Console	Used to access serial port management equipment.

Device Interface Function Description

1.3 Packing List of Equipment and Accessories

No.	Name	Quantity	Unit
1	SR7161	1	set
2	Cable	20	meter
3	Waterproof O-ring	2	pcs
4	PoE Power Supply	1	set
5	Kickstand	1	set

Main Equipment Packaging List

1. Product Introduction

No.	Name	Quantity	Unit
1	M8-50 HEX BOLT	3	pcs
2	M8-50 Nut	2	pcs
3	M6-50 HEX BOLT	8	pcs
4	M6-20 HEX BOLT	10	pcs
5	M6-50 Nut	16	pcs
6	M6-50 Sleeve Anchor	16	pcs
7	M8-50 Plastic Screws Nut	1	pcs
8	M6-M8 Double-ended Wrench	1	pcs
9	Accessories Packaging Bag	1	bag
10	38mm Steel Tube	1	pcs
11	Bases	1	pcs
12	Cable Tie	4	pcs
13	Waterproof Adhesive	1	pcs

Kickstand Packing List

1.4 Main Equipment Technical Specifications

1.4.1 Size & Weight

Parameter Name	SkyNet-SR7161
Product Dimensions (diameter * height)	282mm*390mm
Mainframe Weight	4.6kg
Supporting Frame Weight	4kg
Installation	Flat roof/Gable roof
Mounting Bracket Dimensions (Length Width Height)	930mm*370mm*490mm

1.4.2 Power and Consumption

Parameter Name	SkyNet-SR7161
Power Supply Type	PoE Ethernet power supply (compliant with 802.3af/at/bt Ethernet power standards)
Standard Power Consumption (Under Normal Conditions)	25W
Maximum Rated Power Consumption	42W

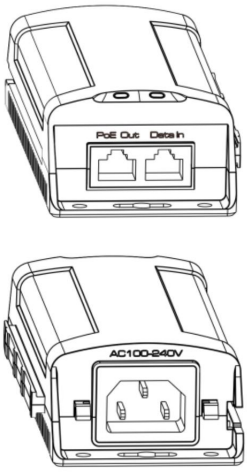
1.4.3 RF Specifications

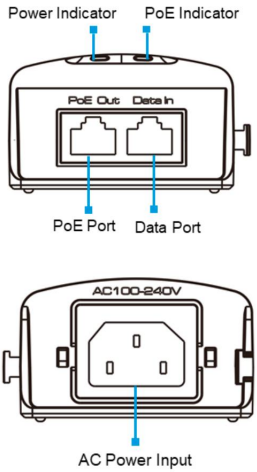
RF Specifications	SkyNet-SR7161
RF Design	Tri-band
	Supports 16 spatial streams
	Radio 0: 2.4GHz, four-port design, 4x4, MU—MIMO
	Radio 1: 5GHz, four-port design, 4x4, MU—MIMO
	Radio 2: 6GHz, eight-port design, 8x8, MU—MIMO
Frequency Range	Radio 0: 802.11b/g/n/be, 2.400GHz~2.483GHz Radio1: 802.11a/n/ac/ax/be, 5.150Ghz~5.350GHz, 5.470GHz~5.725GHz, 5.725GHz~5.850GHz Radio2: 802.11a/n/ac/ax/be, 6.525GHz~7.125GHz, 5.925GHz~6.425GHz
Transmission Rate	Radio0: 2.4GHz, 1.44Gbps Radio1: 5GHz, 5.76Gbps@160M Radio2: 6GHz, 5.76Gbps@160M
Antenna Type	Built-in omnidirectional antenna
Antenna Gain (Typical)	2.4GHz: 7dBi 5GHz: 8dBi 6GHz: 8dBi

1.5 PoE Power Specifications

Single-Port Multi-Gigabit 802.3bt PoE++ Injector (60W)

1.5.1 Appearance





Indicator	Color	Status	Description
PWR Indicator	Red	Solid On	The power is on.
		Off	The power is off.
PoE Indicator	Orange	Solid On	Orange Solid On The PoE output is 30-60W.
	Green	Solid On	Green Solid On The PoE output is 0-30W.

1.5.2 Specifications

Hardware Specifications	
Interface	1*10/100/1000/2.5GBASE-T PoE++ RJ-45(Auto-MDI/MDI-X)
	1*10/100/1000/2.5GBASE-T RJ-45(Auto-MDI/MDI-X)
Input Voltage	100~240V AC
Power Consumption	≤0.6W(System)
LED Indicator	1*power indicator
	1*PoE indicator
Dimensions (L*W*H)	160mm*64mm*37mm
Net Weight	0.24kg
Material	ABS plastic
Color	Black
Noise	≤40dB

PoE	
PoE Standard	IEEE 802.3af/at/bt
PoE Power Supply Type	Midspan
PoE Pin Assignment	3/6/4/5(+), 1/2/7/8(-)
PoE Budget	60W max

Reliability	
EMC	IEC61000-4-2, Level 3: Contact Discharge: ±6kV, Air Discharge: ±8kV
	IEC61000-4-3, Level 2: 3V/m
	IEC61000-4-4, Level 2: 1kV
	IEC61000-4-5, Line to earth: 6kV
	IEC61000-4-6, Level 2(0.15~80MHz)
Operating	-5°C~45°C, 5%~85%(Non-condensation)
Storage	-30°C~70°C, 5%~85%(Non-condensation)

2. Pre-installation Instructions

2.1 Safety Recommendations

- To avoid harm to people or the equipment, please read the safety recommendations in this manual carefully before installation.
- The following safety recommendations cannot cover all possible hazardous situations.

2.1.1 General Safety Recommendations

- Avoid installing the AP equipment in environments with high temperatures, excessive dust, harmful gases, flammable or explosive materials, significant electromagnetic interference (e.g., from large radar stations, transmitting stations, substations), unstable voltage, heavy vibration, or strong noise.
- Avoid wearing loose clothing, jewelry, or other items that could get caught in the equipment during installation and maintenance.
- Keep tools and devices away from pedestrian traffic areas.

2.1.2 Moving Safety

- Avoid frequent relocation of the equipment.
- Turn off all power and disconnect all cables before moving or handling.

2.1.3 Electrical Safety

- Carefully check for potential hazards in the work area, such as damp floors.
- Locate the emergency power switch in the area before installation. The power switch must be turned off first in case of an emergency.
- The AP should ideally be kept separate from grounding and lightning protection systems of electrical equipment and as far away as possible.

- Stay away from wireless transmitters, radar transmitters, high-current equipment, microwave ovens, and other high-power wireless devices.

2.2 Installation Environment Requirements

The equipment must be intended for outdoor used. The installation site must meet the following requirements.

2.2.1 Load-Bearing Requirements

The SkyNet-SR7161 device includes 3 RF ports, one 10GE adaptive Ethernet port that also supports PoE power supply, one 1GE adaptive Ethernet port, and a console management port.

2.2.2 Space Requirements

To ensure better signal reception, it is recommended to install the device in an open area.There should be no obstructions around the device.

2.2.3 Anti-interference Requirements

- The device should not be installed below high-voltage power lines.
- Ensure the equipment's grounding is separate from that of power systems and lightning protection, keeping them as far apart as possible.
- Stay away from high-power radio transmitters, radar systems, and other high-frequency current devices.

2.2.4 Mandatory Requirements

- The operation of this device is prohibited on oil platforms, cars, trains, boats, and aircraft.
- Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

2.3 Installation Tools

The table below lists commonly used installation tools, with some tools required to be provided by the user:

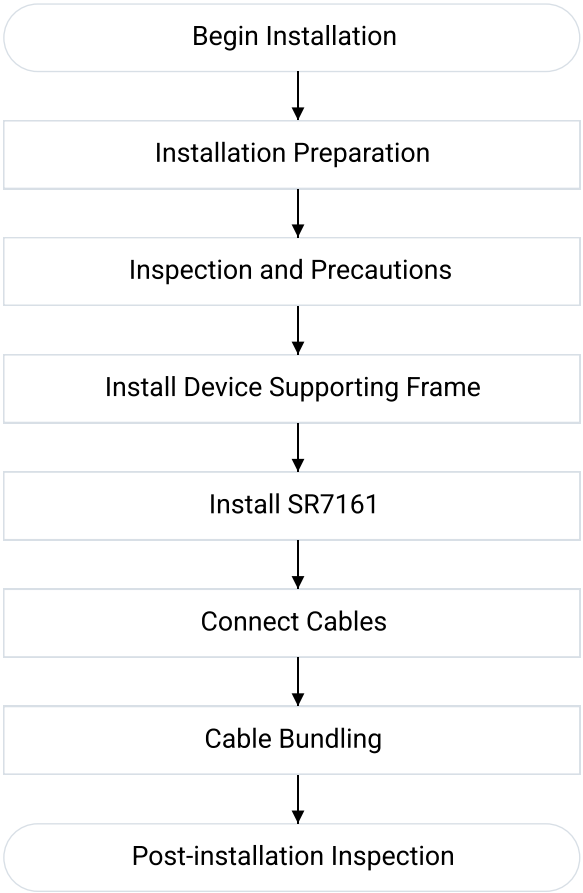
No.	Name	Quantity	Already included
1	M6 Hex Key	1	Yes
2	M8 Hex Key	1	Yes
3	Diagonal Cutting Pliers	1	No
4	Electric Hand Drills	1	No
5	Cable Ties	4	Yes
6	M6-M8 Double-ended Wrench	1	Yes
7	Monkey Wrench	1	No

3. Installation

SkyNet-SR7161 must be used outdoors and is recommended to be installed and securely fixed on the roof.

3.1 Installation Steps

The equipment installation process is as follows:

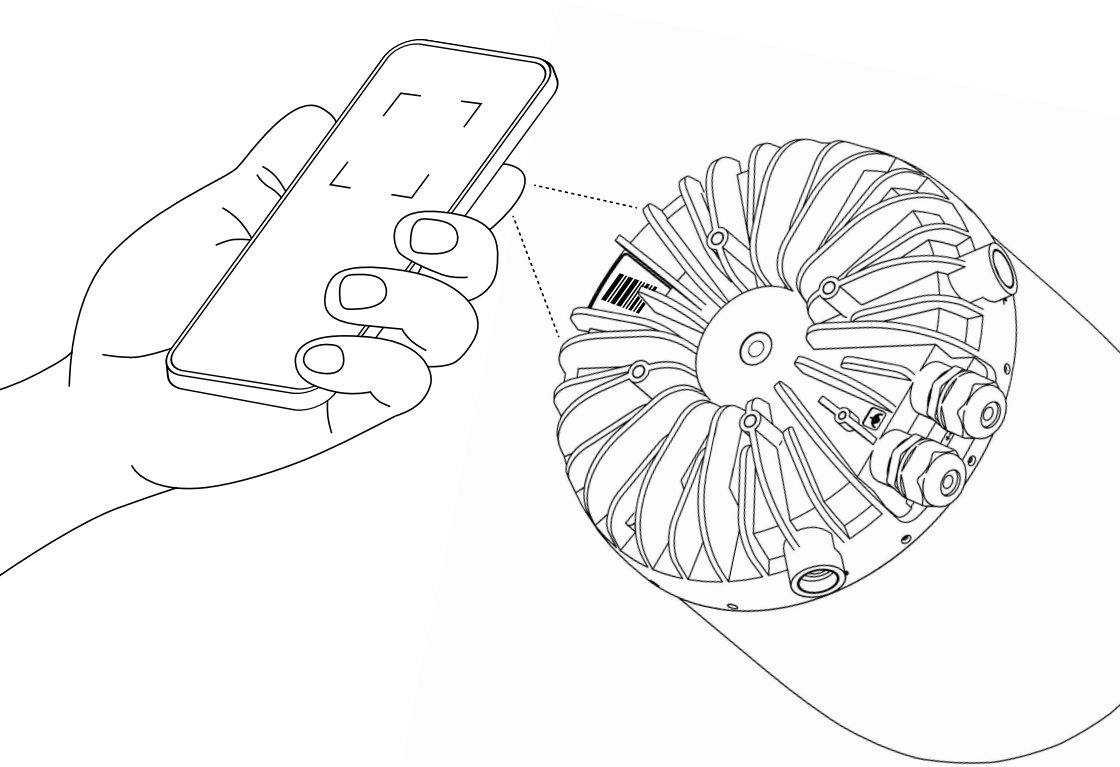


3.2 Installation Preparation

Make thorough planning and arrangement for the installation site, network configuration, power supply, and cable routing before installing the equipment.

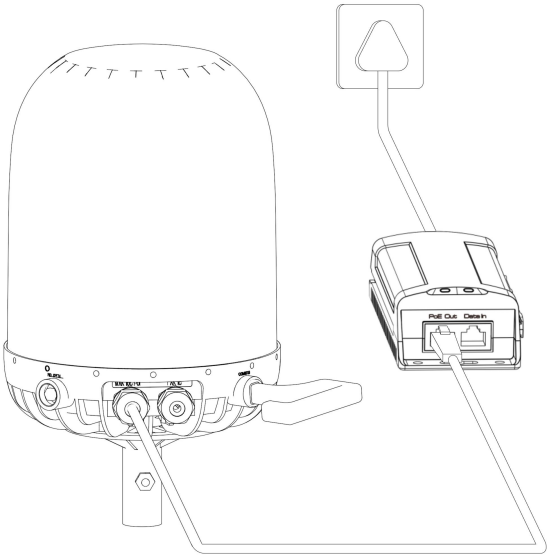
3.2.1 Scan Device SN

- Download SkyNet app before official installation.
- Use SkyNet app to log in to your personal account.
- Scan the SN code, and bind your personal account with the device.

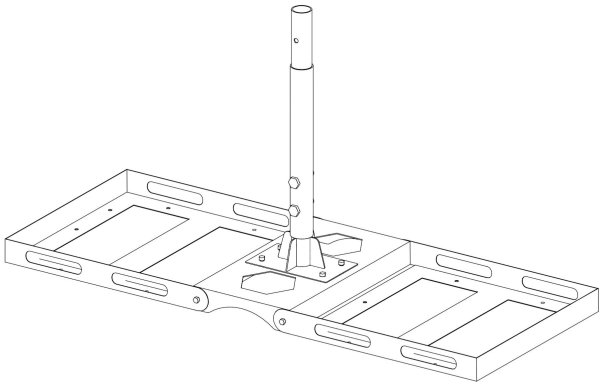


3.2.2 Device Schematic

Complete set of equipment schematic:



Kickstand diagram:



3.3 Precautions

To ensure the wireless AP operates correctly and has a prolonged lifespan, please follow these precautions:

- Do not power the device on when installation.
- Keep the device away from high-voltage cables.
- Protect the device from severe thunderstorms and strong electric fields.
- Ensure the device is securely mounted.
- During installation, ensure personal safety to prevent falls from heights.
- Please carefully verify the PoE power port connections before proceeding with the wiring.

3.4 Installing the Equipment Supporting Frame and Main Equipment

Note: Assemble the accessories on the ground first to ensure accuracy before moving the equipment to the roof for installation.

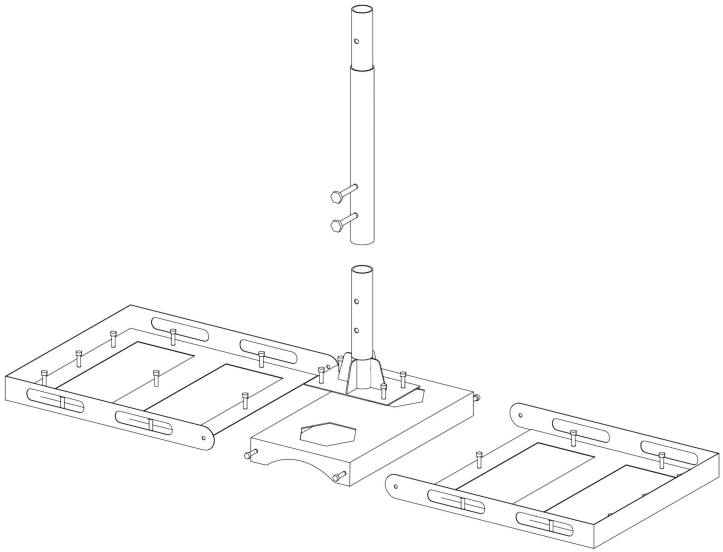
3.4.1 Check Equipment and Main Accessories

1. Check that all installation tools listed in Section 2.3 are available.

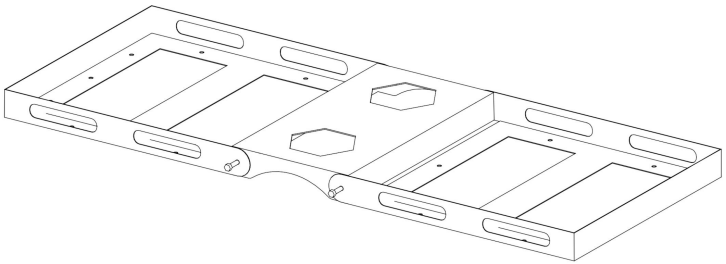
2. Ensure all items listed in the main equipment and supporting frame packaging lists (Section 1.3) are complete.

3.4.2 Installation of Kickstand

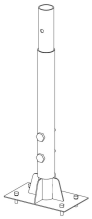
1.Illustration of the various components of the kickstand.

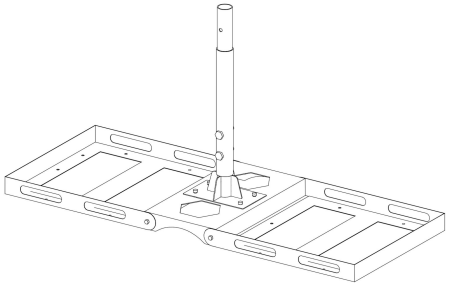


2.Install the base parts.

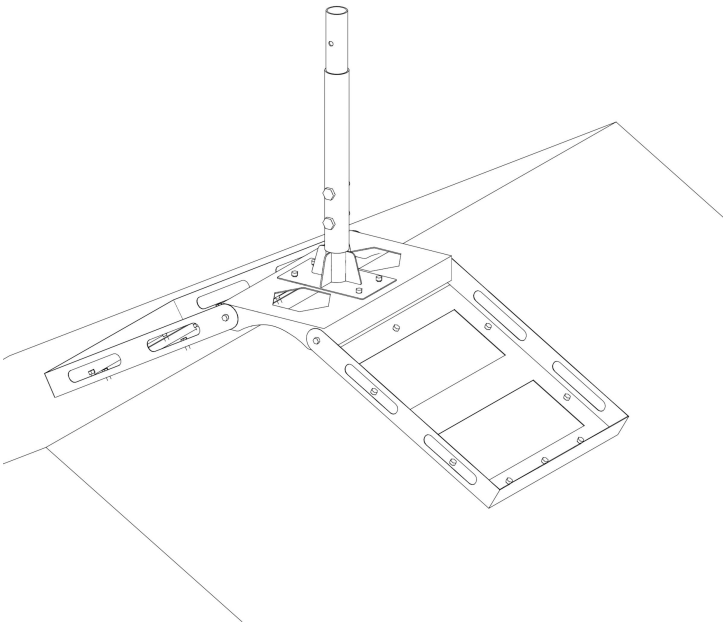


3.Install support parts.

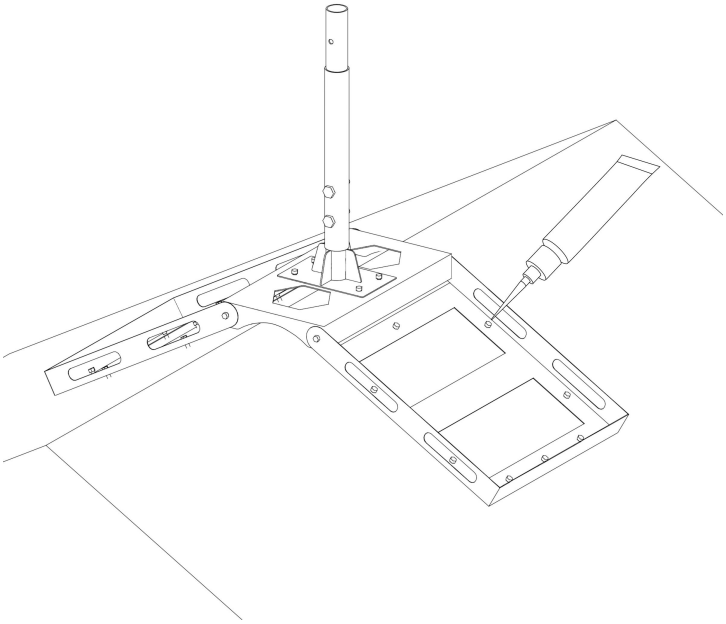




4.Fixed on the roof.



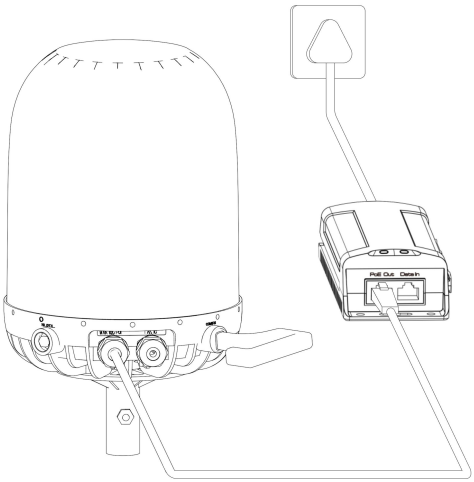
5.Apply waterproof glue.



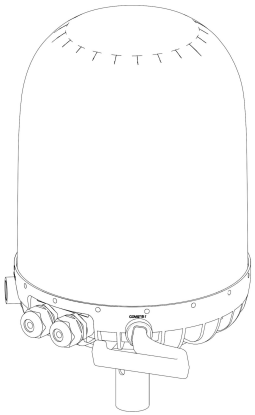
Note: At room temperature, the waterproof adhesive needs to cure for 24 hours after application.

3.4.3 Installation of Main Equipment Components

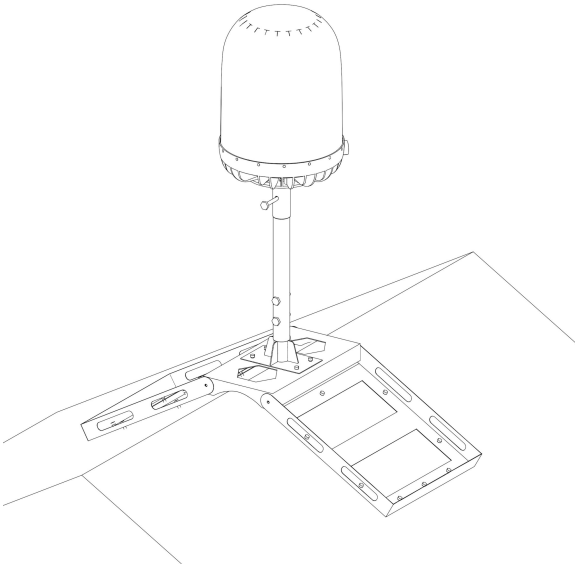
1.Disassembly diagram of main equipment components.



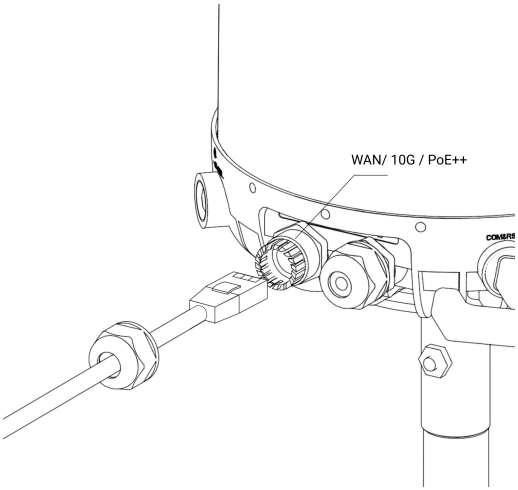
2.Install the handle into the main equipment.



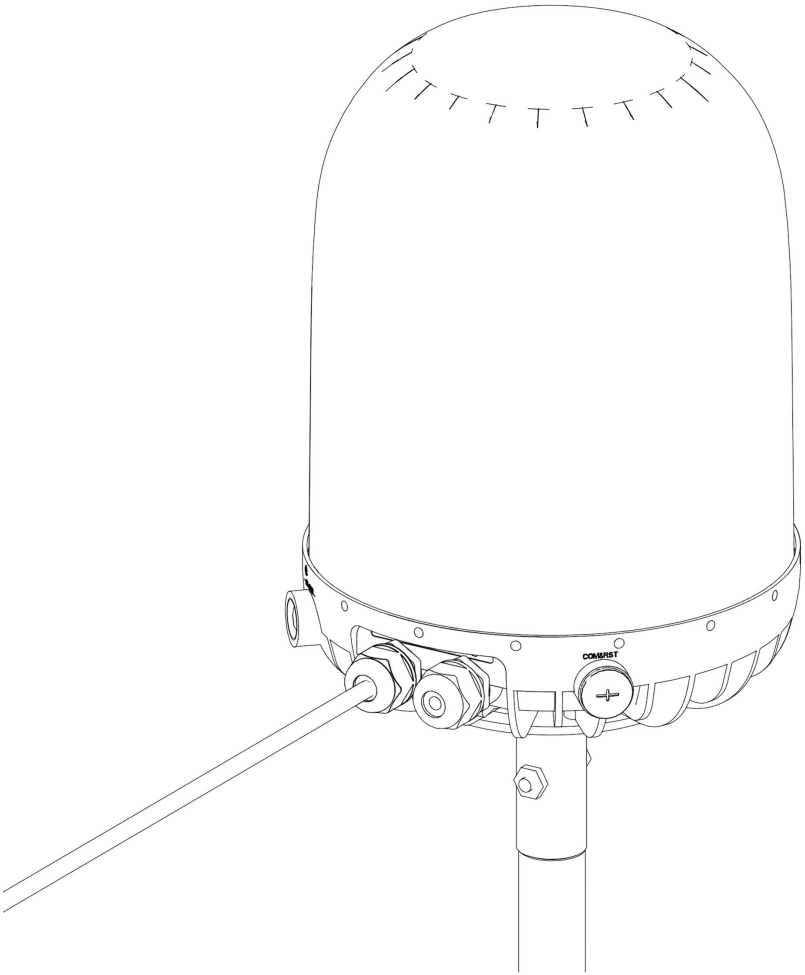
3. Once the main equipment is placed on the roof, connect it to the supporting frame and fasten it using M8 screws.



4.Slide the waterproof gasket onto the network cable in the direction shown in the diagram.

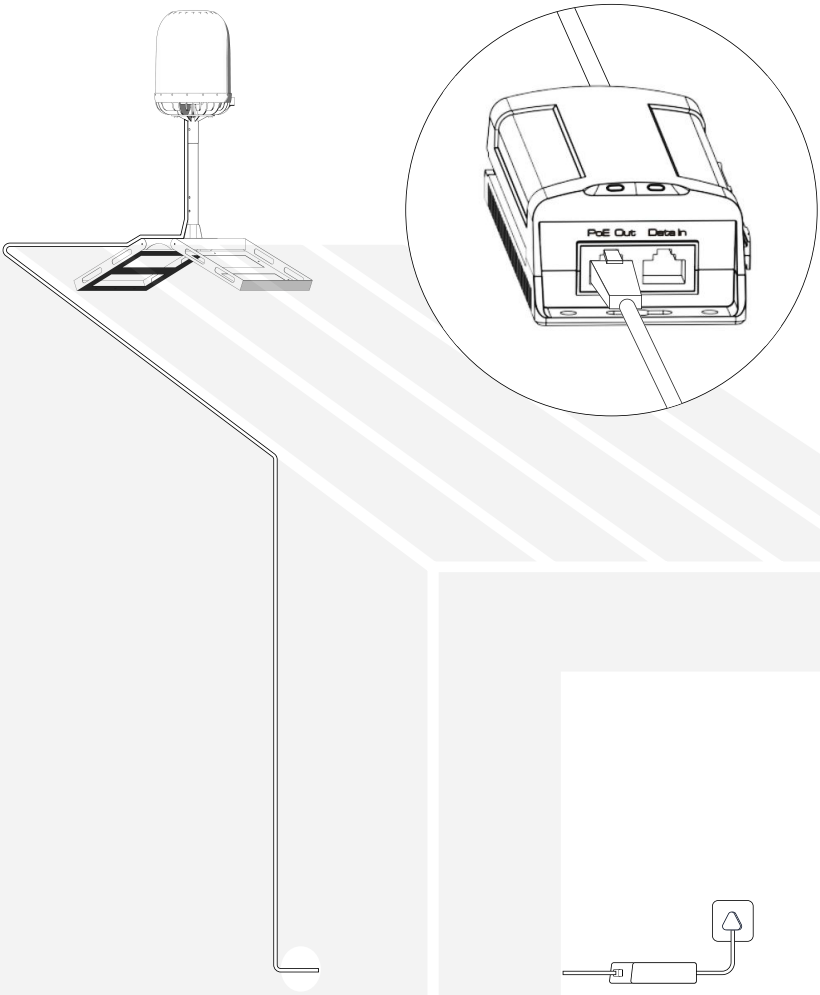


5. Connect the network cable to the device's WAN/10G/PoE++ port, then secure the waterproof cover. Remove the handle and replace it with a waterproof cover. Verify that all waterproof covers are tightly secured.



6. Bundle the network cable.

7. Connect the indoor network cable to the PoE Outport for power. Ensure that the device is correctly connected to the power supply and proceed to check the network connection.



Precautions

- Ensure cable bundling is neat and organized.
- Maintain a natural or large-radius curve at the connectors when bundling twisted-pair cables.
- Avoid bundling cables too tightly to prevent compression, which will affect their lifespan and performance.

Cable Bundling Steps

- Keep the cable close to the supporting frame of the device and as straight as possible.
- Use nails to secure the cable along wall surfaces.
- Leave a U-shaped bend in the cable when entering the building to prevent rainwater from entering the interior.

3.5 Confirm Network Connectivity

3.5.1 Device Access

Skynet devices automatically connect to the internet. Wait a few minutes for this process to complete.

3.5.2 Network Checking

Use one of the following methods to confirm network connectivity.

(1) Using a Mobile Phone

Open Wi-Fi settings on your phone and look for "SkyNet_Access". Connect using your account and password.

a. If you can access the internet successfully, the device is properly connected, and your network setup is complete.

b. If SkyNet_Access does not appear in the list of available networks, check the connection between the PoE power source and the device.

c. If you connect to SkyNet_Access but cannot access the internet, wait 30 minutes and try again. If the issue persists or the app does not connect, call the customer service hotline at +1-213-676-9157. Our technician will visit to resolve the issue at the scheduled time after scheduling an appointment.

(2) Using a Computer/Router

Set your computer/router to automatically obtain an IP address. Connect it to the LAN port of the PoE power supply with an Ethernet cable.

a. If your computer or router obtains an IP address and can access the internet, your network setup is complete.

b. If your computer or router obtains an IP address but cannot access the internet, wait 30 minutes and try again. If the issue persists, call the customer service hotline at +1-213-676-9157. Our technician will visit at the arranged time to resolve the issue after scheduling an appointment.

c. If no IP address is obtained and the PoE power supply lights are off, ensure the power supply is connected to an outlet.

4. Troubleshooting General Process

4.1 The Ethernet Port Not Working After Connecting to PoE Power

- Ensure the device on the other end of the Ethernet cable is operational. Confirm that the Ethernet cable meets the required speed standards and is properly connected.
- Ensure DHCP mode is enabled on the connected device.

4.2 Device Indicator or PoE Indicator Not Lighting Up for a Long Time

- Confirm that the PoE power is correctly connected to the device's WAN/10G/PoE++ port.
- Ensure that the Ethernet cable is properly connected and functioning.

4.3 Computer/Router Cannot Connect to Network

- Verify that your home power supply is working.
- Check that both the PWR and PoE indicators on the PoE power supply are lit.
- Ensure your computer or router is configured to use DHCP.

4.4 Restart the Device

Please try restarting the device by disconnecting and reconnecting the power if all checks are normal.

4.5 Contact Us

Call +1-213-676-9157 for remote assistance. If the issue remains unresolved, our technician will visit at the appointed time to fix the problem according to your appointment for door-to-door service.

Contact Us

- SkyNet Website: https://www.wirelessskynet.com/
- SkyNet Service and Support: https://www.wirelessskynet.com/support
- SkyNet 7*24h Technical Service Hotline: +1 213 676 9157
- SkyNet Technical Support: techsupport@wirelessskynet.com