

Product Overview

This series AP product can be powered by PoE port, power injector or DC power supply. It comes with 2 Ethernet ports and supports ceiling and wall-mounted installation, it can well suitable for enterprises, hotels, restaurants and shopping mall where need indoor wireless networking.

They can either work independently as standalone APs or be centrally managed by AC Controller from PUSR. It's plug-and-play.

NR310 is equipped with 5G module, it can connect to Internet via 5G network.

Product Appearance

• Front View

There is a two-color system indicator on the front of the AP.



Figure1 Front View



Figure2 Back View

• Bottom View

There are 1 x Power Socket, 1 x WAN/LAN1(PoE), 1 x LAN2, 2 x ETH port indicator and 1 x Reset Button on the bottom of the AP device.

Product Appearance

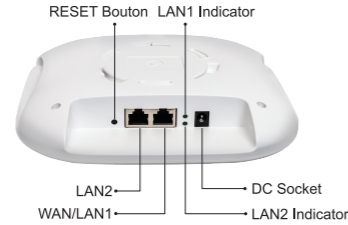


Figure 3. Partial Enlarged Details

Indicators Description

Indicator Description					
Indicators	Description	Status 1	Status 2	Status 3	Status 4
System/Internet Indicator	To indicate the running status and Internet status of AP	RED/BLUE ON: Power on	RED/BLUE Blinking: The AP is starting up	BLUE ON & RED OFF: Can access Internet successfully	BLUE OFF & RED ON: Can't access Internet successfully
ETH Port Indicator	To indicate working status of ETH ports/status of AP	ON: Device is linked to the corresponding port.	Blinking: Transmitting or receiving data	OFF: No device is linked to the corresponding port.	None

• RESET Button

When the AP is powered on, hold on this button for 5~10s (the system indicator blinks rapidly), and then release the button, the AP will reset to factory Settings and restart. After the restart is complete, the system indicator blinks slowly, and the system starts to work normally.

• DC Power Socket

When using DC power supply to power the AP, 48VDC 0.5A or above power adapter is recommended. (The power adapter needs to be purchased by yourself).

Indicators Description

• ETH Port Description

Interface	Num	Function
WAN/LAN1(PoE)	1	Transmitting or receiving data, Connect a PoE switch to supply power to the AP, Connect the included PoE injector to supply power to the AP.
LAN2	1	If you want to connect such wired devices such as computers to the AP, connect it to the LAN2 port.

Application Topology

This device supports FAT AP mode and FIT AP mode, users can choose the appropriate mode according to their own network needs.

NR310 is equipped with 5G module, it can connect to Internet via 5G network.

This device can be powered by PoE power supply or DC power adapter, the following topology is based on PoE power supply.

• FAT AP Mode

When users need to build a small wireless network, they can use the FAT AP mode. In this mode, the AP supports Web management. Users can log in to the AP's Web management page to change wireless settings and manage wireless clients and etc.

Users can login to the webpage refer to the AP Management Webpage.

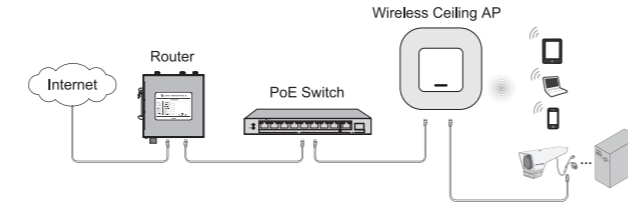


Figure 4 Typical Application Topology-FAT AP Mode

Application Topology

• FIT AP Mode

When users need to build a large-scale wireless network, it's tedious and complex to manage each AP individually. So it's recommended that users add an AC200 controller in the network to manage all the APs centrally. In this case, the APs only need to work in FIT AP mode.

For how to use the wireless controller (AC), please refer to the instructions of the AC200.

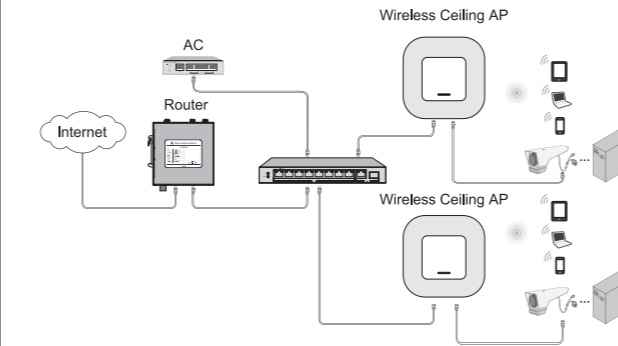


Figure 5 Typical Application Topology-FIT AP Mode

Note: In FIT AP mode, the AC should be connected to the WAN/LAN1 port of the AP.

Application Topology

• 5G NR Connectivity Mode

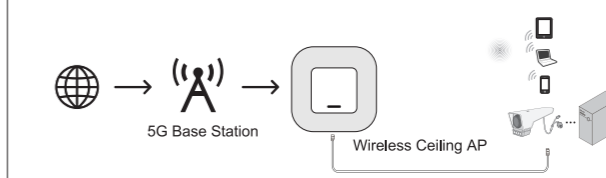


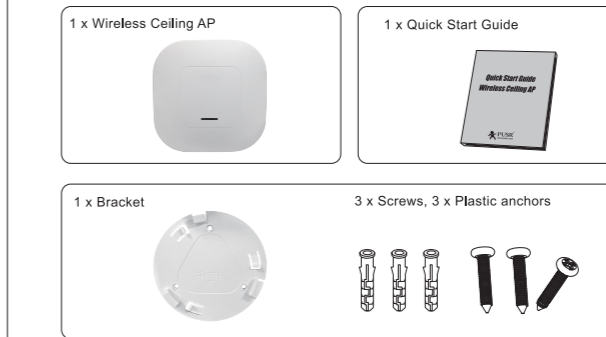
Figure 6 5G NR Connectivity Mode of NR310i

Note: This mode is only applicable to NR310i. Users need to open the back cover to install the sim card.

Installation Preparation

• Package Contents

The package contents of all models are listed here.



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Installation Preparation

• Installation Tools Preparation

You may need a rubber hammer, a marker, a hammer drill, a drill bit, a screwdriver, and a ladder for the installation. Please prepare them yourself.

• To check if the device can work well

Before installing the device, please connect the device to the power source to check if it can work properly. The AP series supports three power supply methods: standard POE, DC socket and power injector .

When power the AP with a standard PoE power supply device, use an Ethernet cable to connect the WAN/LAN1 port of the AP to a PoE power supply device, such as an Ethernet switch that supports PoE function, as shown in Figure 6;

When power the AP with DC power supply, the power adapter needs to be connected to the AP. As shown in Figure 7; When power the AP with a power injector, as shown in Figure 8.

Note:

Please use standard PoE power supply device to power on the wireless AP, otherwise the AP may be damaged;

This product does not include a power adapter. If you need to use DC power supply, please purchase a DC48V power adapter by yourself.

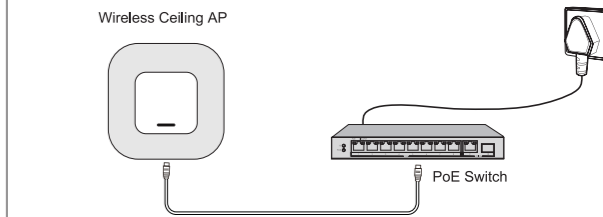


Figure 7 Power the AP with PoE

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Installation Preparation

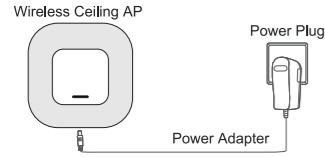


Figure 8 Power the AP with DC Socket

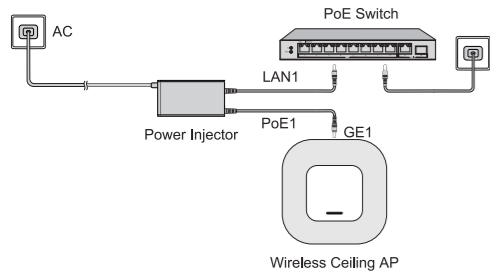


Figure 9 Power the AP with Power Injector

Installation Preparation

After the power is turned on, the AP will automatically initialize. At this time, the system indicator light will stay on for 12 seconds and the system will start.

It will keep flashing for about 90 seconds during the process. After the system startup is completed, the system indicator light turns solid red, indicating that the device Already working normally.

Please refer to Table 1 for detailed indicator light description.

Installation

Wireless ceiling APs can be installed in two ways: ceiling-mounted and wall-mounted.

• Special Note

1. The ceiling-mounted requires that the thickness of the ceiling must be less than 18mm, and the ceiling must be able to bear a weight of at least 5kg!
2. If the ceiling is made of weaker material, such as gypsum ceiling, the ceiling-mounted way is not recommended.

Due to environmental restrictions, this installation method must be used. Please add a layer of plate with better strength under the nut to ensure that the installation.

The equipment is installed firmly;

3. During use, please keep the AP face down and placed horizontally to avoid potential safety hazards.

• Ceiling Installation

1. Position the bracket on the ceiling and mark screw holes on the ceiling with a marker.
2. Drill holes in the marked positions using a hammer drill, and fix the bracket with screws.
3. Align the position of the AP network port with the direction of the text description, align the mounting bracket and the AP chassis bayonet, and embed the AP onto the mounting bracket, and then rotate clockwise to fix the AP;
4. Connect a PoE switch or PoE injector to the WAN/LAN1 port to supply power to the AP. Before powering on, check if the power sourcing equipment you use complies (if the power adapter DC power supply method is used, the power cord must also be connected and the power supply must be suitable for the orchestration is not standard).

Installation

• Wall-mounted Installation

In wall-mounted, plastic expansion tubes and self-tapping screws need to be used to fix the mounting bracket.

The specific installation steps are as follows:

1. Position the mounting bracket on the wall and mark the location of the holes where the screws need to be installed;
2. Use an impact drill to drill three holes with a diameter of 6.0mm and a depth of 30mm at the marked location;
3. Insert the expansion coil into the drilled hole, and tap one end of the expansion coil with rubber until the expansion coil is completely hammered into the wall;
4. Align the mounting hole of the mounting bracket with the expansion screw hole, and use self-tapping screws to pass through the corresponding mounting hole. Then tighten the screws. Align the mounting hole of the mounting bracket with the expansion screw hole, and use self-tapping screws to pass through the corresponding mounting hole. holes and tighten the screws;
5. Align the position of the AP network port with the direction of the text description, align the mounting bracket and the AP chassis bayonet, embed the AP into the mounting bracket, and then rotate the AP clockwise to fix it;
6. Connect a PoE switch or PoE injector to the WAN/LAN1 port to supply power to the AP. Before powering on, check if the power sourcing equipment you use complies (if the power adapter DC power supply method is used, the power cord must also be connected and the power supply must be suitable for the orchestration is not standard).

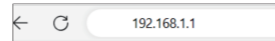
Log into the Web Page

• Log in to the web page of FAT AP

When working in FAT AP mode, you can log in to web page to manage the AP and set AP parameters.

The specific steps are as follows:

1. Start a web browser on your computer, and access 192.168.1.1.



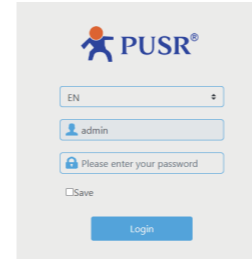
Log into the Web Page

2. Enter the username and password.

Username: admin

Password: admin

Note: The username is fixed with admin, users can modify the password as needed. The length must not be less than 6 characters (including a combination of English letters, numbers and symbols).



3. After logging in, click the menu bar on the right to configure the corresponding functions.



Warranty

We guarantee our products 12-month warranty period. The following situations are not covered by warranty and may require paid services from PUSR, please be aware.

- Exceeded the warranty period.
- Defects or malfunctions caused by inadequate installation, misuse, improper maintenance or storage - not following operating instructions.
- Dismantling and repairing the device without permission from PUSR.
- Defects or malfunctions caused by human behaviors such as improper input voltage, high temperature, water damage, mechanical damage, impact damage, severe oxidation or rusting of the product, etc.
- Damage caused by transportation, loading and unloading during the customer's return for repair
- Defects or malfunctions caused by catastrophes such as earthquakes, fires, floods, lightning strikes, etc.
- Other defects or malfunctions caused by factors other than the product's own design, technology, manufacturing, quality, etc.

This guide is for reference only. Specific functions and product images may be slightly different from the actual product. Please refer to the actual product.



Quick Start Guide Wireless Ceiling AP

Industrial IoT Gateways Ranked First in China by Online Sales for Seven Consecutive Years*

*Data from China's Industrial IoT Gateways Market Research in 2023 by Frost & Sullivan