Tenda

Quick Installation Guide

2km Outdoor Point to Point CPE
Model: O2

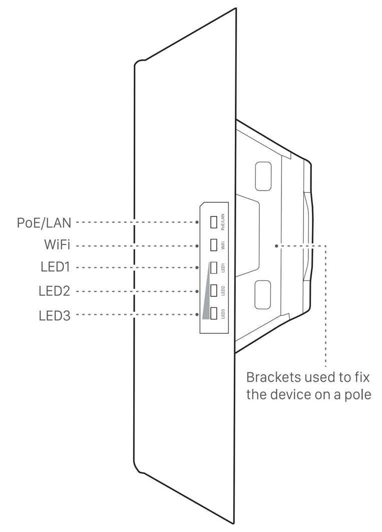
Package Contents

- CPE * 1
- PoE injector * 1
- Power adapter * 1
- Quick installation guide * 1
- Screw * 2 (Used to fix the PoE injector)
- Expansion anchor * 2 (Used to fix the PoE injector)
- Pole mounting strap * 2

Please read this quick installation guide before you start. You can visit our website at *http://www.tendacn.com* for more information about the device.

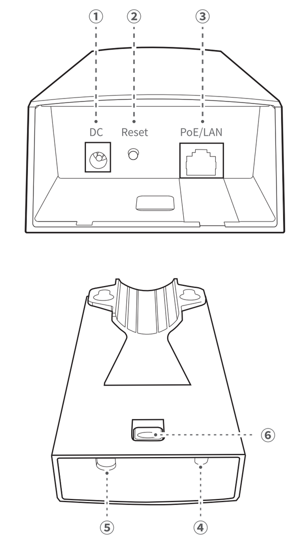
Getting to Know the Device

▶ LED Indicators



LED Indicator	Status	Description
PoE/LAN	Solid on	The CPE is being powered properly, and no data is being transmitted.
	Blinking	Data is being transmitted over the port.
	Off	The CPE is not powered on.
WiFi	Solid on	The wireless function is enabled, and no data is being transmitted.
	Blinking	Data is being transmitted in a wireless manner.
	Off	The wireless function is disabled.
LED1 LED2 LED3	Solid on/ Blinking	Signal strength LED indicators. **Solid on** indicates the CPE works in AP, P2MP, Repeater or Router mode while **blinking** indicates the device works in Client, Universal Repeater or WISP mode. • LED1, LED2 and LED3 are solid on/blinking: Good signal • LED1 and LED2 are sold on/blinking, and LED3 is off: Fair signal • LED1 is solid on/blinking, and LED2 and LED3 are off: Weak signal. Please adjust the direction or location of your CPEs.
	Off	No WiFi-enabled clients are connected to your CPEs.

▶ Ports & Button



ID	Port/Button	Description
①	DC	DC power jack. Used to connect the device to a power supply using the included power adapter.
②	Reset	Reset Button. After the device is powered on for 1 minute, hold down this button for about 8 seconds. When all the LED indicators light up and then turn off, the device is restored to factory settings.
③	PoE/LAN	It is used to supply power or transmit data. • To power on the device using PoE, connect this port to the PoE port of the included PoE injector. • If the device is powered on using a DC power adapter, this port can be connected to a switch or other wired devices.
④	/	Power cord inlet.
⑤	/	Ethernet cable inlet.
⑥	/	Cover opening button.

Scenario 1: CCTV Surveillance or Point to Point Data Transmission

1 Setting up the CPEs (AP + Client Mode)

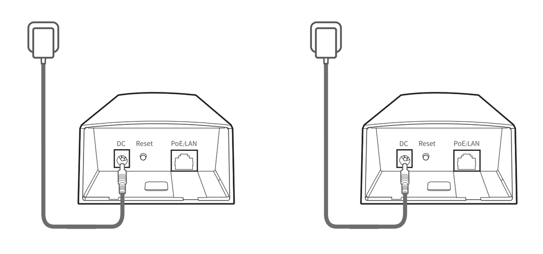
Tips: At least two CPEs are required for bridging.

Option 1: Automatic Bridging (Recommend)

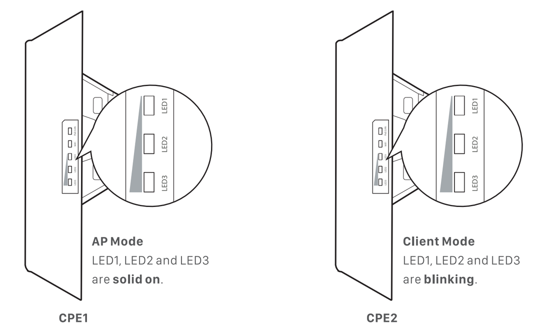
Tips:
- Ensure that there are only two powered on CPEs nearby when performing peer-to-peer bridging. Otherwise, peer-to-peer bridging may fail.
- Automatic bridging is only applicable when the CPEs are in factory settings.
- A CPE in AP mode can bridge to 15 CPEs at most.
- If the bridging succeeds, the DHCP servers of the bridged CPEs are disabled, and the IP addresses of the CPEs working in Client mode are changed to 192.168.2.2.

Peer-to-peer bridging (Two CPEs)

Step1: Place the two CPEs next to each other.
Step2: Remove the cover of each CPE, and use the included power adapters to power them on. When the **WiFi** LED indicator lights up, the CPE completes startup.

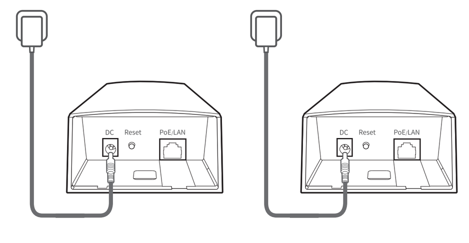


Step3: The two CPEs bridge to each other automatically. Wait until the signal LED indicators display the following status.

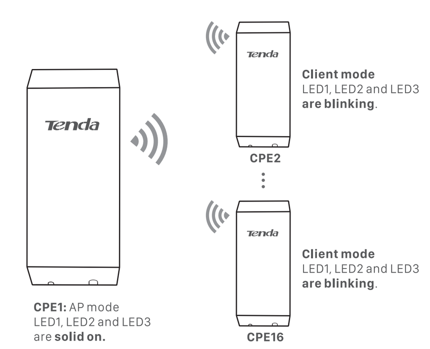


Peer-to-multi peer bridging (Multiple CPEs)

Step1: Choose any two CPEs, perform **Peer-to-peer bridging**, and select the CPE that works in AP mode (LED1, LED2 and LED3 are **solid on**).
Step2: Within 3 minutes after peer-to-peer bridging succeeds, put the other CPEs near the CPE that works in AP mode, and power them on.

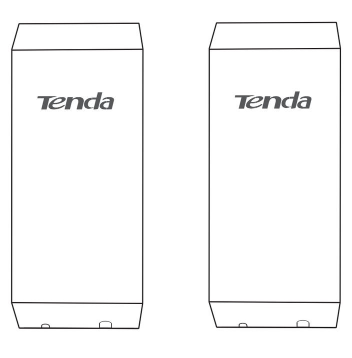


Step3: Wait for about 1 minute.
1 minute later, if the LED1, LED2, and LED3 of these CPEs keep blinking, the bridging succeeds.



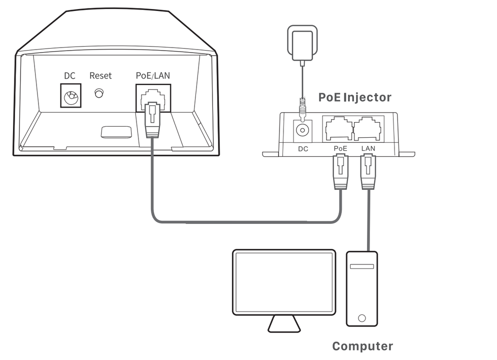
Option 2: Setting up the CPEs Using Web UI

Step 1: Place the two CPEs next to each other.



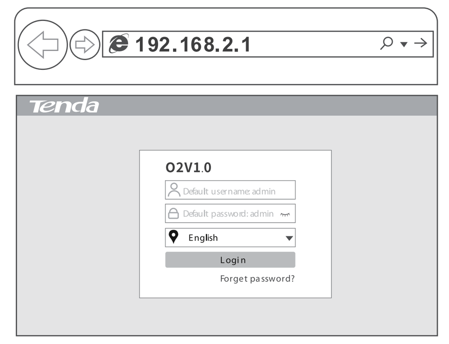
Step 2: Connect the computer to CPE1.

① Remove the cover of CPE1.
② Use an Ethernet cable to connect the **PoE/LAN** port of CPE1 to the **PoE** port of the PoE injector.
③ Use the included power adapter to connect the PoE injector to a power socket. The **PoE/LAN** LED indicator of the CPE1 lights up.
④ Use an Ethernet cable to connect your computer to the **LAN** port of the PoE injector.



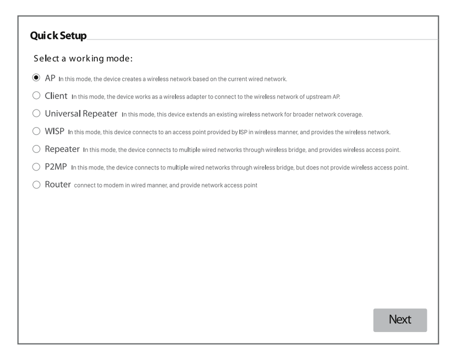
Step 3: Set CPE1 to AP Mode.

① Start a web browser on the computer, and visit **192.168.2.1**. Enter your user name and password, and click **Login**.

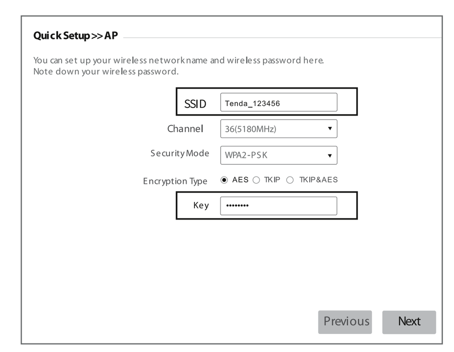


Tips:
If the login page does not appear, please refer to **Q1** in **FAQ**.

② Select **AP**, and click **Next**.



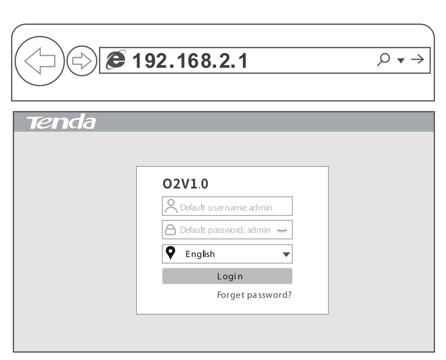
③ Set an SSID, which is **Tenda_123456** in this example,**Security Mode** (WPA2-PSK is recommended), and **Key**, and click **Next**.



④ Click **Save**, and wait until the CPE reboots automatically to activate the settings.

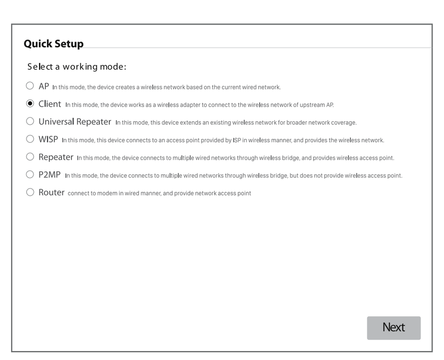
Step 4: Set CPE2 to Client Mode.

① Perform **Step 2 Connect the computer to CPE1** to connect the computer to CPE2.
② Start a web browser on your computer, and visit **192.168.2.1**. Enter the login user name and password, and click **Login**.

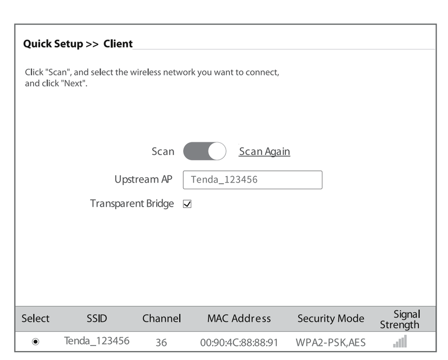


Tips:
If the login page doesn't appear, please refer to **Q1** in **FAQ**.

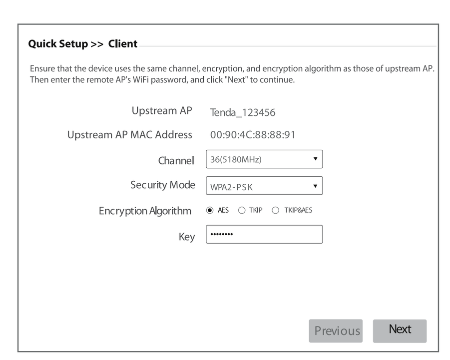
③ Select **Client**, and click **Next**.



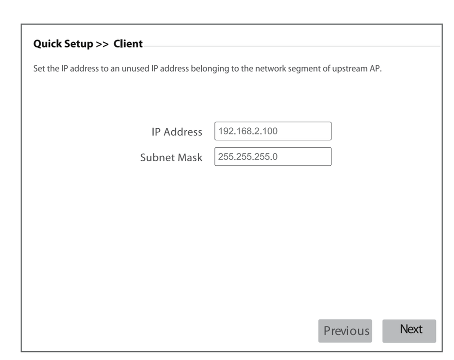
④ Select the SSID you set on CPE1, which is **Tenda_123456** in this example, and click **Next**.



⑤ Enter the WiFi password you set on CPE1 in the **Key** text box, and click **Next**.



⑥ Set the IP address to an unused IP address belonging to the same network segment as that of CPE1. For example, if the IP address of CPE1 is 192.168.2.1, you can set this CPE's IP address to 192.168.2.X (X ranges from 2 to 254).
Then click **Next**.



⑦ Click **Save**, and wait until the CPE reboots to activate the settings.
When LED1, LED2, and LED3 of CPE1 are solid on, and LED1, LED2, and LED3 of CPE2 are blinking, the bridging succeeds.
If you want to perform peer-to-multi peer bridging, refer to **Step4: Set CPE2 to Client Mode** to set the other CPEs.

2 Installing the CPEs

- The CPE (transmitter in AP mode) with LED1, LED2 and LED3 solid on should be connected to the switch connecting to a network video recorder (NVR). See **Figure 1**.
- The CPE (receiver in Client mode) with LED1, LED2 and LED3 blinking should be connected to the switch connecting to an IP camera. See **Figure 2**.

Detailed procedures are as follows:
Step1: Place the transmitter in the elevated, open air at the point where the NVR is located. Place the receiver in the elevated, open air at the point where the IP camera is located.
Step2: Remove the cover of the CPEs, and connect the **PoE/LAN** ports of the CPEs to PoE injectors respectively. The **PoE/LAN** LED indicators light up.
Step3: Adjust the CPEs' direction or location until the LED1, LED2 and LED3 of the CPEs light up.
Step4: Use the pole mounting straps to fix the CPEs.

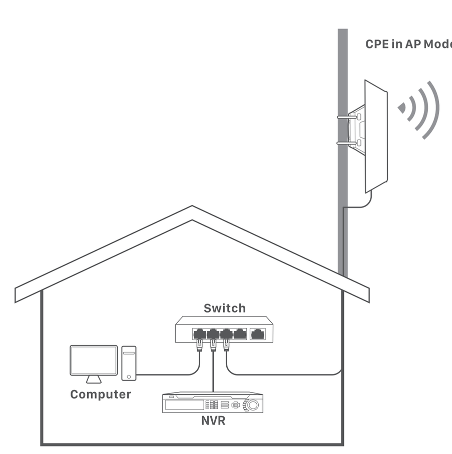


Figure 1: Monitor Center

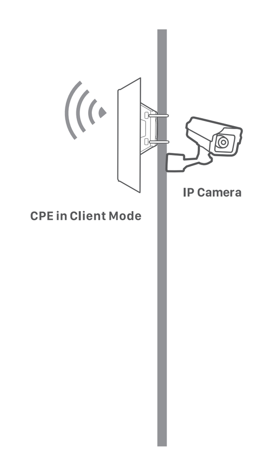


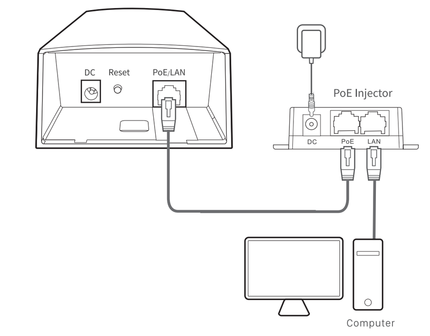
Figure 2

Scenario 2: Wireless ISP Hotspot Access

1 Setting up the CPE

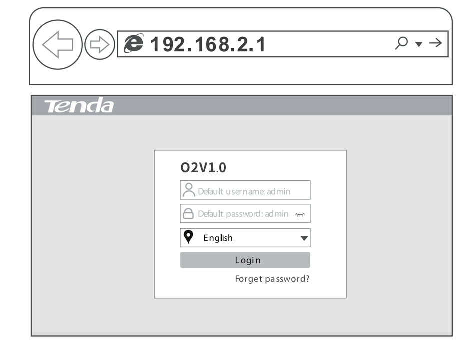
Step 1: Connect the computer to the CPE.

① Remove the cover of the CPE.
② Use an Ethernet cable to connect the **PoE/LAN** port of the CPE to the PoE port of the **PoE** injector.
③ Use the included power adapter to connect the PoE injector to a power socket. The **PoE/LAN** LED indicator of the CPE lights up.
④ Use an Ethernet cable to connect your computer to the **LAN** port of the PoE injector.



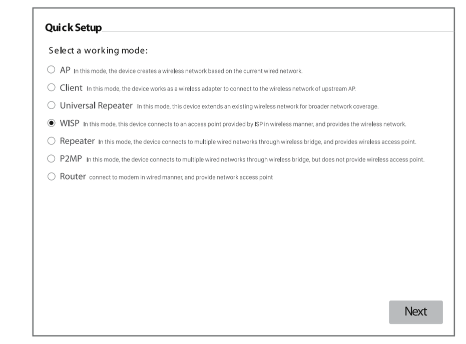
Step 2: Set the CPE to WISP Mode.

① Start a web browser on your computer, and visit **192.168.2.1**. Enter your user name and password (default: **admin**), and click **Login**.

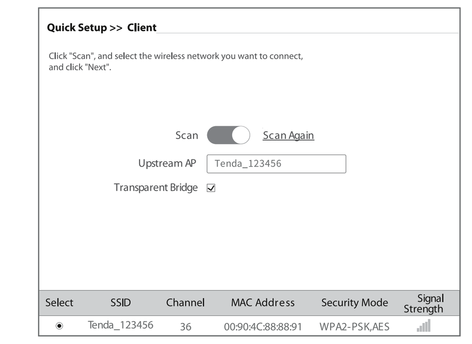


Tips: If the login page does not appear, please refer to **Q1** in **FAQ**.

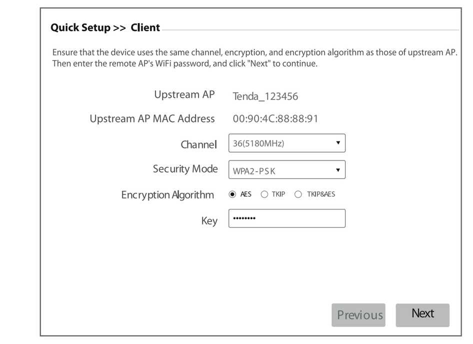
② Select **WISP**, and click **Next**.



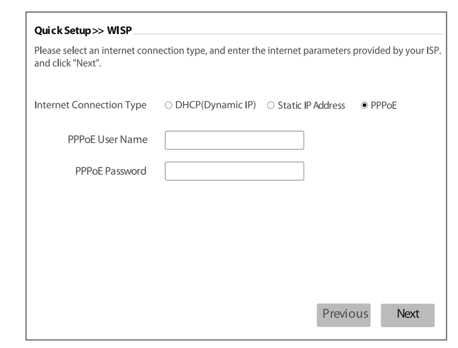
③ Select the SSID of your ISP (Internet Service Provider) hotspot, which is **Tenda_123456** in this example, and click **Next**.



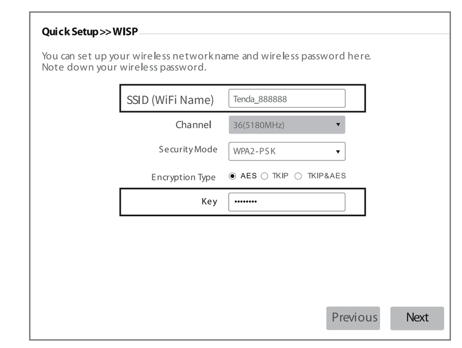
④ Enter the WiFi password of your ISP hotspot in the **Key** text box, and click **Next**.



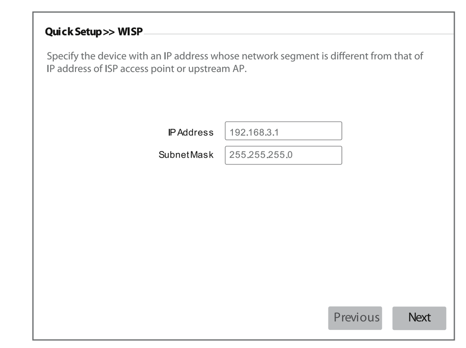
⑤ Select the **Internet Connection Type** of your ISP hotspot. **PPPoE** is used for illustration here. Enter the PPPoE user name and password provided by your ISP, and click **Next**.



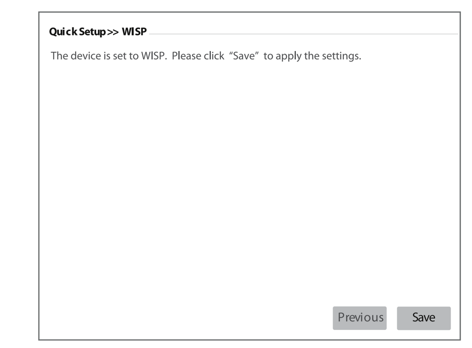
⑥ Customize the **SSID (WiFi Name)** and **Key**, and click **Next**.



⑦ Set an IP address belonging to different network segment as that of your ISP hotspot. For example, if the IP address of your ISP hotspot is 192.168.2.1, you can set this CPE's IP address to 192.168.X.1 (X ranges from 0 to 254 excluding 2).
Then click **Next**.

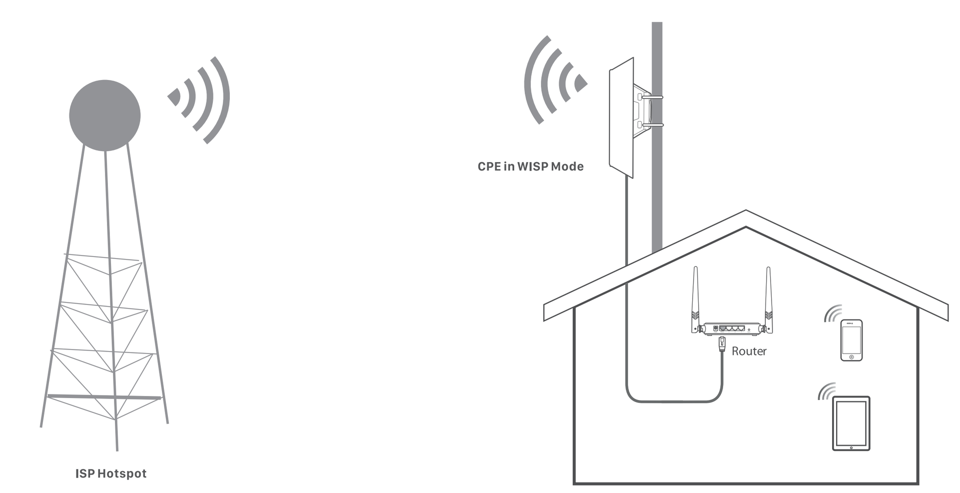


⑧ Click **Save**, and wait until the CPE reboots to activate the settings.
When LED1, LED2, and LED3 of the CPE are blinking, the CPE is connected to your ISP hotspot successfully.



2 Installing the CPE

① Place the CPE over the roof.
② Remove the cover of the CPE, and connect the **PoE/LAN** port of the CPE to the WAN port of your wireless router. The **PoE/LAN** LED indicator lights up.
③ Adjust the direction or location of the CPE on the selected pole until the LED1, LED2 and LED3 indicators light up.
④ Use the pole mounting straps to attach the CPE to the pole.



FAQ

Q1: I cannot log in to the web UI of the CPE by entering 192.168.2.1. What should I do?

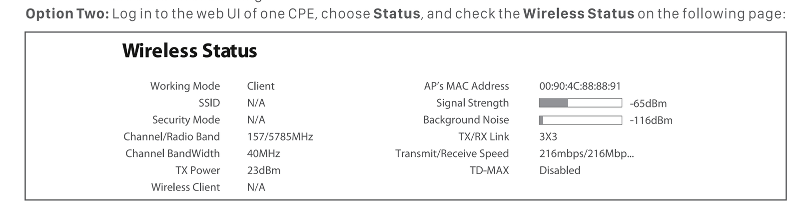
Try the following methods:
- Ensure that the CPE has been connected to the power supply and the computer properly.
- Ensure that the IP address of the login computer is 192.168.2.X (X ranges from 2 to 254).
- Restore the CPE to factory settings.

Q2: How to reset the CPE to factory settings?

Note: Resetting the CPE clears all settings, and you need to configure it again.
Method One: 1 minute after the CPE is powered on, remove the cover of the CPE, and hold down the **Reset** button for about 8 seconds. When all LED indicators light up once, the CPE is restored to factory settings.
Method Two: Log in to the web UI of the CPE, choose **Tools > Maintenance**, and click the **Reset** button.

Q3: How to determine whether the signal strength LED indicators are optimal when the CPEs are used for CCTV surveillance?

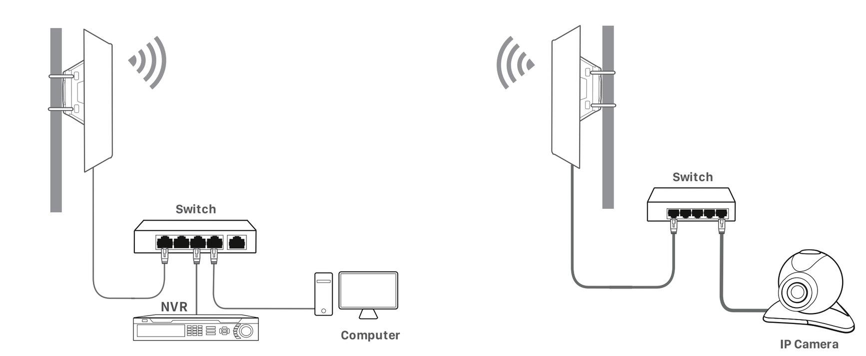
Option One: Observe the LED indicators of the CPEs. The bridging signal is optimum when all of the LED1, LED2 and LED3 indicators are solid on or blinking.
Option Two: Log in to the web UI of one CPE, choose **Status**, and check the **Wireless Status** on the following page:

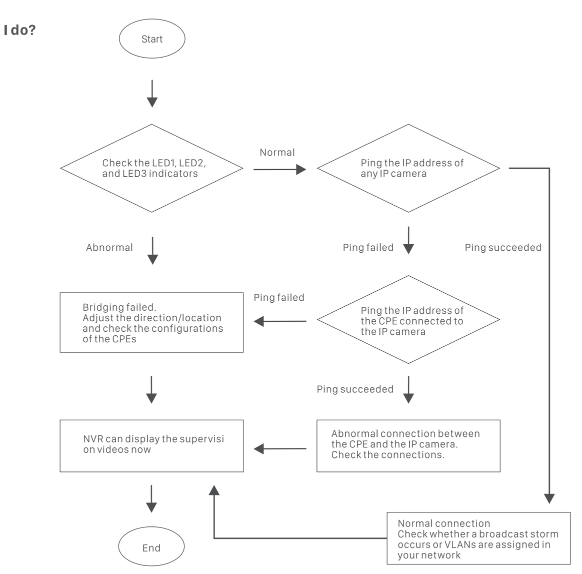


Stronger signal strength (-60 is better than -70) and less background noise (-100 is better than -90) lead to better bridging signal.

Q4: After the installation succeeds, the IP cameras connected to the NVR cannot display the surveillance videos. What should I do?

Try the following solutions:
-Ensure that all devices are working normally, and connected properly.
-Refer to the following figure to find the problem. Ensure that the IP addresses of computer, NVR, and IP cameras are in the same network segment.





CE Mark Warning
This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.
Operations in the 5.15-5.35GHz band are restricted to indoor use only.
This equipment should be installed and operated with a minimum distance 20cm between the device and your body.
WARNING: The mains plug is used as disconnect device, the disconnect device shall remain readily operable.
NOTE:
(1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.
(2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.
Declaration of Conformity
Hereby, SHENZHEN TENDA TECHNOLOGY CO., LTD. declares that the radio equipment type O2 is in compliance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address: http://www.tendacn.com/en/service/download-cata-101.html
Operating Frequency: EU/5150-5250MHz (CH36-CH48); EIRP Power (Max.): 22.98dBm
EU/5470-5725MHz (CH100-CH140); EIRP Power (Max.): 26.98dBm
Software Version: V1.0.0.1

Caution:
Adapter Model: BN036-A12012E, BN036-A12012B
Manufacture: SHENZHEN HEWEISHUN NETWORK TECHNOLOGY CO., LTD.
Input: 100 - 240 V AC, 50/60 Hz 0.4 A
Output: 12 V DC, 1 A
⎓ : DC Voltage

FCC Statement
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.
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.

Radiation Exposure Statement
This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules.
This equipment should be installed and operated with minimum distance 20cm between the device and your body.

Caution:
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
Operating frequency: 5150-5250MHz, 5725-5850MHz

NOTE:
(1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.
(2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.

FCC Statement
This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.
User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.

Operating Temperature: -30 °C - 60 °C
Operating Humidity: 10% - 90% RH, non-condensing

For EU/EFTA, this product can be used in the following countries:

BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV
LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK

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