Tenda

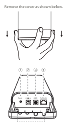
Quick Installation Guide

5GHz 16dBi 11ac Gigabit Outdoor CPE

O6

Get to know your device

▶ Ports/button



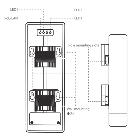
Item	Port/Button	Description
①	Reset	Reset button. Used to restore the CPE to factory settings. When the **PoE/LAN** LED indicator lights solid on or blinks, hold down the **Reset** button for about 8 seconds and release it when all LED indicators light up. The CPE is reset successfully.
②	12V ⎓ 1A	DC power jack. You can connect the power adapter to this port for power supply.
③	GND	Grounding terminal. Use a grounding cord and included grounding screw to connect the grounding terminal to the earth or building for surge and lightning protection.
④	PoE/LAN	10/100/1000 Mbps auto negotiation port for both power input and data transmission. –When the power socket is far away from the CPE installation location, you can use an Ethernet cable (CAT5e or better Ethernet cable is recommended) to connect this port and the PoE injector for power supply. The length of the Ethernet cable should not exceed 60 meters. –If you power on the CPE using a power adapter, this port can be connected to a computer, switch or IP camera.
⑤	Power cord/ grounding cord/Ethernet cable inlet	Used to fix the power cord of the power adapter, grounding cord, or Ethernet cable.

Package contents

- CPE x 1
- Power cord x 1
- Grounding screw x 1 (PM3*6 mm)
- PoE injector x 1
- Plastic strap x 2
- Quick installation guide x 1

For product or function details, please go to www.tendacn.com.

▶ LED indicators/slots



LED indicator/Slot	Status	Description
PoE/LAN	Solid on	The CPE is powered on properly, but no data is being transmitted.
	Blinking	The CPE is powered on properly, and data is being transmitted over the port.
	Off	The CPE is not powered on or not powered on properly.
LED1, LED2, LED3 (Received signal strength indicator)	Solid on/ blinking	The CPE is successfully bridged or connected to other devices. –Solid on: The CPE works in AP, Repeater, P2MP or Router mode. –Blinking: The CPE works in Client, Universal repeater or WISP mode. Each LED indicator is set with a received signal strength value, which is the threshold for the corresponding LED indicator to light up. You can judge the connection quality through the status of these indicators. The default values are shown below. -90dBm -80dBm -70dBm LED1 LED2 LED3 You can change the values on the **Wireless** > **Advanced** page in the web UI of the CPE.
	Off	No device is connected to the CPE in a wireless manner, or the received signal strength does not reach the minimum value (-90dBm by default) for any LED indicator to light up.
Wall mounting slots	/	Used for wall mounting. You should prepare 4 expansion bolts and 4 screws for wall mounting. Recommended specifications: –Expansion bolt: outer diameter: 6 mm; length: 40 mm –Screw: PA3*20 mm, 5.5 mm < head diameter < 8.5 mm
Pole mounting slots	/	Used for pole mounting. You can thread the two included plastic straps through these slots to attach the CPE to the pole.

Scenario 1: CCTV surveillance or point to point data transmission

1.Set up the CPEs (AP mode + Client mode)

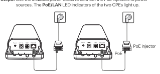
Tips: At least two CPEs are required for bridging.

Option 1: Automatic bridging (recommended)

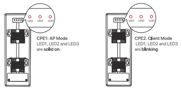
Tips:
- Automatic bridging only works for CPEs in factory settings.
- Peer-to-peer automatic bridging could fail if three or more powered CPEs in factory settings are placed nearby.

Peer-to-peer bridging

Step1: Place two CPEs in factory settings next to each other.
Step2: Use Ethernet cables to connect the **PoE/LAN** port of the CPEs to the **PoE** port of the PoE injectors.
Step3: Use the included power cords to connect the PoE injectors to power sources. The **PoE/LAN** LED indicators of the two CPEs light up.



About 1 minute later, when the LED1, LED2 and LED3 indicators of one CPE light solid on and those of the other CPE keep blinking, the automatic bridging succeeds.
After the bridging succeeds, the DHCP server of the CPEs will be disabled automatically. The IP address of the CPE working in AP mode remains 192.168.2.1, and the IP address of the CPE working in Client mode is changed into 192.168.2.2.



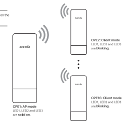
Tips: If the automatic bridging fails, restore the two CPEs to factory settings and try again.
Reset method: When the **PoE/LAN** LED indicator lights solid on or blinks, hold down the **Reset** button for about 8 seconds and release it when all LED indicators light up. The CPE is restored to factory settings.

Peer-to-multiple peers bridging

Tips:
- For peer-to-multiple peers bridging, perform peer-to-peer bridging first, and then power on the rest CPEs within 30 minutes. Otherwise, the bridging may fail.
- One CPE can bridge to 15 CPEs at most.

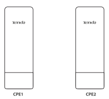
Step1: Choose any two CPEs, then perform **Peer-to-peer bridging**.
Step2: Within 30 minutes after peer-to-peer bridging succeeds, put other CPEs near the CPE working in AP mode (LED1, LED2 and LED3 are solid on), and power them on.

About 1 minute later, if the LED1, LED2, and LED3 of these CPEs keep blinking, the bridging succeeds.
After the bridging succeeds, the DHCP servers of the CPEs are disabled, and the IP addresses of CPEs working in Client mode are all changed into 192.168.2.2. You can visit www.tendacn.com to download the CPE management software and install it on your computer to change the IP addresses in batches.



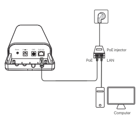
Option 2: Manual bridging

Step1: Place two CPEs next to each other.



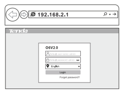
Step2: Power on CPE1 and connect it to a computer.

1. Use an Ethernet cable to connect the **PoE/LAN** port of the CPE1 to the **PoE** port of the PoE injector.
2. Use the included power cord to connect the PoE injector to a power source. The **PoE/LAN** LED indicator of CPE1 lights up.
3. Use an Ethernet cable to connect the **LAN** port of the PoE injector to a computer.



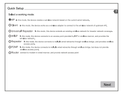
Step3: Set CPE1 to **AP** mode.

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

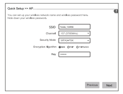


Tips: If the login page does not appear, please refer to **Q1** in **FAQ**.

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



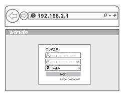
3. Customize your **SSID** (WiFi name) and **Key** (WiFi password), select a **Channel**, a **Security Mode** (WPA2-PSK is recommended), and an **Encryption Algorithm**. Click **Next**. Record the **SSID** and **Key** for later setup.



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

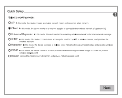
Step4: Set CPE2 to **Client** mode.

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

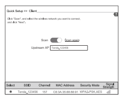


Tips: If the login page does not appear, please refer to **Q1** in **FAQ**.

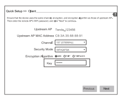
3. Select **Client**, and click **Next**.



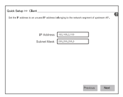
4. Select the **SSID** of CPE1, which is **Tenda_123456** in this example, and click **Next**.



5. Enter the **Key** of CPE1, and click **Next**.



6. Set the IP address to an unused one 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 device'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.

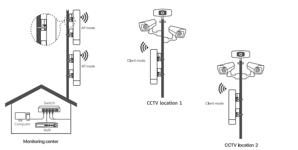
When the LED1, LED2 and LED3 indicators of CPE1 light solid on, and the LED1, LED2 and LED3 indicators of CPE2 blink, the bridging succeeds and the DHCP servers of the two CPEs are disabled automatically.

2.Install the CPEs

Pole mounting is used for illustration here.

1. Choose the elevated, open location for installation.
2. Thread the two plastic straps through the pole mounting slots on the brackets of the CPE, and attach the CPE onto the selected pole. Adjust the CPE's location and direction, and tighten the straps to fix the CPE.
3. Connect the PoE injector to a power source and its **PoE** port to the **PoE/LAN** port of the CPE using an Ethernet cable. The **PoE/LAN** LED indicator of the CPE lights up.
4. Connect the CPEs with the LED1, LED2 and LED3 indicators solid on (AP mode – the transmitting end) to the switch which is connected to an NVR (Network Video Recorder).
5. Connect the CPEs with the LED1, LED2 and LED3 indicators blinking (Client mode – the receiving end) to IP cameras or a switch which is connected to IP cameras.

After successful installation, the connection quality reaches the best when the LED1, LED2 and LED3 indicators of the CPEs light solid on or blink.

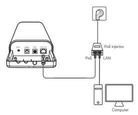


Scenario 2: Wireless ISP hotspot access

1. Set up the CPE

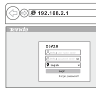
Step1: Power on the CPE and connect it to a computer.

1. Use an Ethernet cable to connect the **PoE/LAN** port of the CPE to the **PoE** port of the PoE injector.
2. Use the included power cord to connect the PoE injector to a power source. The **PoE/LAN** LED indicator of CPE lights up.
3. Connect a computer to the **LAN** port of the PoE injector.



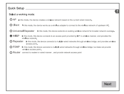
Step2: Set the CPE to **WISP** mode.

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

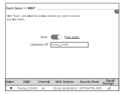


Tips: If the login page does not appear, please refer to **Q1** in **FAQ**.

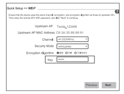
2. Select **WISP**, and click **Next**.



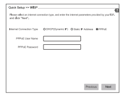
3. Select the SSID of the ISP (Internet Service Provider) hotspot, which is **Tenda_123456** in this example, and click **Next**.



4. Enter the password for the ISP hotspot in the **Key** box, and click **Next**.

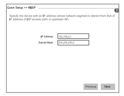


5. Select the **Internet Connection Type** of your ISP hotspot. **PPPoE** is used for illustration here. Enter the PPPoE user name and password provided by your ISP, and click **Next**.

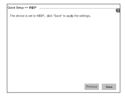


6. Customize the **SSID (WiFi Name)**, select a **Security Mode** (WPA2-PSK is recommended), customize a **Key**, and click **Next**.

7. Set the IP address to an unused one belonging to a different network segment as that of the ISP hotspot. For example, if the IP address for the 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.



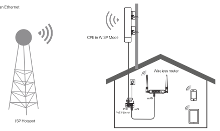
When LED1, LED2, and LED3 indicators of the CPE keep blinking, the CPE is connected to the ISP hotspot successfully.

3.Install the CPE

Pole mounting is used for illustration here.

1. Place the CPE over the roof.
2. Thread the two plastic straps through the pole mounting slots on the brackets of the CPE, and attach the CPE onto the selected pole. Adjust the CPE's location and direction, and tighten the straps to fix the CPE.
3. Connect the PoE injector to a power source and its **PoE** port to the **PoE/LAN** port of the CPE using an Ethernet cable. The **PoE/LAN** LED indicator of the CPE lights up.
4. Connect the **LAN** port of the PoE injector to the **WAN** port of your wireless router.

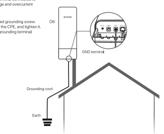
The connection quality reaches the best when the LED1, LED2 and LED3 indicators of the CPE blink.



Grounding

Connect the GND terminal of the CPE to a grounding terminal connected to the earth or building, to protect the CPE from overvoltage and overcurrent caused by lightning.

1. Connect one side of the grounding cord to the included grounding screw.
2. Connect the grounding screw to the GND terminal of the CPE, and tighten it.
3. Connect the other side of the grounding cord to the grounding terminal connected to the earth or building.

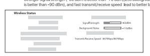


FAQ

Q1: I cannot log in to the web UI of the CPE by entering 192.168.2.1. What should I do?
A1: Try the following solutions:
- Ensure that the CPE is connected to a power source and your computer properly.
- Ensure that the IP address of the computer is set to 192.168.2.X (X ranges from 2 - 254 and is unused).
- Restore the CPE to factory settings, and try again.

Q2: How to reset the CPE ?
A2: Note: Resetting the CPE clears all settings, and you need to configure it again.
Method 1: When the **PoE/LAN** LED indicator lights solid on or blinks, hold down the **Reset** button for about 8 seconds and release it when all LED indicators light up. The CPE is restored to factory settings.
Method 2: Log in to the web UI of the CPE, choose **Tools** > **Maintenance**, and click the **Reset** button.

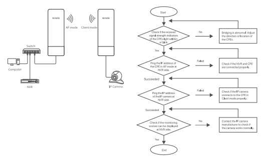
Q3: How to check that the CPE is under the best connection status?
A3: Try the following methods:
Method 1: Observe the LED indicators of the CPE. The connection quality reaches the best when the LED1, LED2 and LED3 indicators of the CPEs light solid on or blink.
Method 2: Log in to the web UI of one CPE (the default IP address is 192.168.2.1), check the bridging status in **Status** > **Wireless Status**.
Stronger signal strength (-60 dBm is better than -70 dBm),less background noise (-100 dBm is better than -90 dBm), and fast transmit/receive speed lead to better bridging signal.



Q4: The automatic bridging fails. What should I do?
A4: Try the following solutions:
- Peer-to-peer bridging: If the peer-to-peer bridging fails, restore the two CPEs to factory settings, and try again.
- Peer-to-multiple peers bridging: After peer-to-peer bridging succeeds, ensure that the rest CPEs are powered on within 30 minutes.
  - For the CPEs that fail to bridge within 30 minutes after peer-to-peer bridging succeeds, reset them and try again.
  - Beyond 30 minutes after peer-to-peer bridging succeeds, refer to **Option 2: Manual bridging** to set the rest CPEs to Client mode, and then connect them to the wireless network of the CPE whose LED1, LED2, and LED3 are solid on.

Q5: After the bridging succeeds, the LED1, LED2 and LED3 indicators do not light up or only some of them do. What should I do?
A5: Try the following solutions:
- Ensure that the bridging distance between the CPEs is within the normal range.
- Place the CPEs in an elevated location at the same height with few obstacles nearby.
- Make slight direction adjustment of the CPEs by moving it vertically and horizontally. Change the direction with an interval of 20 - 30 s each time in order to observe the change of LED1, LED2 and LED3 indicators until the best signal is received.

Q6: After the installation succeeds, there is no display of the scenes monitored by IP cameras at the NVR side. What should I do?
A6: Try the following solutions:
- Ensure that all devices are working normally, and connected properly.
- Ensure that the computer, NVR and IP camera are in the same network segment, and the NVR configuration and IP camera configuration are correct.
- If the IP camera can be scanned but cannot be added at the NVR side, ensure that the **Transparent Bridge** function is enabled and the IP camera is already in initialization (active) state.
- If the IP camera cannot be scanned at the NVR side, please refer to the following procedure to solve the issue.



CE Mark Warning
This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.
This equipment should be installed and operated with a minimum distance 20cm between the device and your body.
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 O6 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
Operating Frequency: EU/5470-5725MHz (CH100-CH116, CH132-CH140)
EIRP Power (Max.): 26.98dBm
Software Version: V1.0.0.10

Caution:
Adapter Model: BN060-P12024
Manufacture: SHENZHEN HEWEISHUN NETWORK TECHNOLOGY CO., LTD.
Input: 100-240V ~ 50/60Hz 0.3A
Output: 24V ⎓ 0.5A
⎓ :DC Voltage

FCC Statement
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.
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.

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 the 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.

RECYCLING
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.

erating Temperature: -30°C - 60°C
Forerating Humidity: (10% - 90%) RH, non-condensing

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

Technical Support
Shenzhen Tenda Technology Co., Ltd.
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USA hotline: 1-800-570-5892
Toll Free: 7 x 24 hours
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