

IP-COM

Quick Installation Guide

Outdoor CPE Kit
CPE5/CPE6S/CPE12

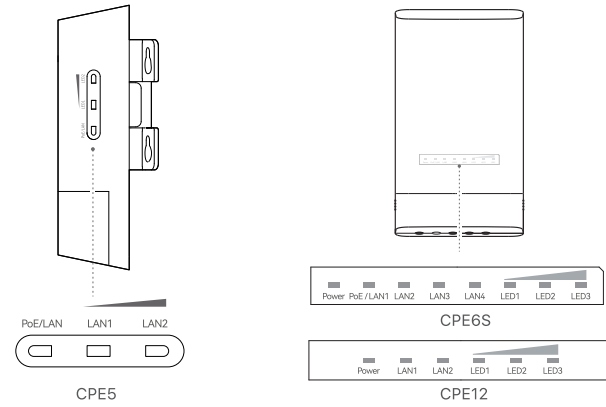
Package Contents

- CPE × 2
 - Power adapter × 2
 - PoE injector × 2
 - Plastic strap (CPE5: x 2; CPE6S/CPE12: x 4)
 - Expansion bolt × 4 (height: 6.6 mm, inner diameter: 2.4 mm, length: 26.4 mm)
 - Screw for fixing the PoE injector × 4 (thread diameter: 3 mm, length: 14 mm, head diameter: 5.2 mm)
 - Quick installation guide
- CPE6S is used for illustration here unless otherwise specified. The actual product prevails.

Get to Know Your Device

The CPE appearance varies with models. Please refer to the CPE you purchased.

Indicators

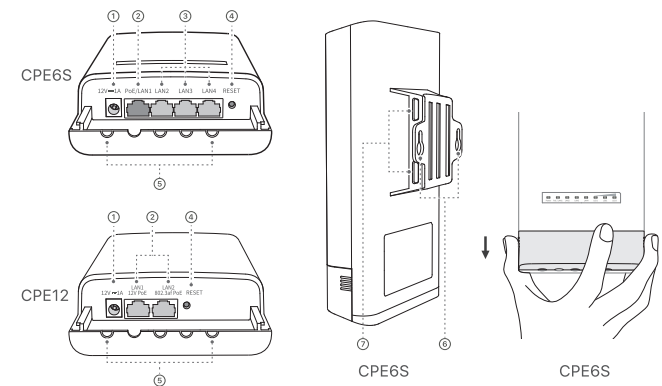


The following table lists all indicators that are used on the CPE. However, the indicators may vary with CPE models.

Indicator	Description
Power	Solid on: The CPE is powered on.
PoE/LAN	Solid on: The CPE is powered on. Blinking: Data is being transmitted over the port.
PoE/LAN1, LAN1, LAN2, LAN3, LAN4	Solid on: The port is connected. Blinking: Data is being transmitted over the port.
LED1, LED2, LED3 (Signal Indicator)	The CPE is bridged or connected to other devices. - Solid on: CPE working in AP or Router mode - Blinking: CPE working in Client, Universal Repeater or WISP mode The more indicators are on, the better the connection quality is. Tips - You can change the signal strength values for each indicator on the web UI of the CPE. - The quantity of indicators and available working modes vary with CPE models.

Ports, buttons and slots

CPE6S and CPE12 are used for illustration in the following figures.

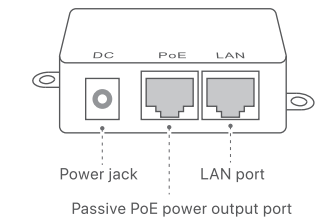


The following table lists all ports, buttons and slots that are used on the CPE. However, the ports, buttons and slots may vary with CPE models.

Port/Button/Slot	Description
① 12V 1A, DC	DC power jack. Connect the power adapter (if any) to this port for power supply.
② PoE/LAN, PoE/LAN1, LAN1 12V PoE, LAN2 802.3af PoE	Multiplexing port for power input and data transmission. - If passive PoE is used for power supply, connect this port to the PoE port of the PoE injector. - If standard PoE is used for power supply, connect this port to the PoE port of the IEEE 802.3af/at PoE power supply device. - If you power on the CPE using a power adapter, this port can be connected to a computer, switch or IP camera. Tips - If the CPE works in the Router mode (if supported), this port functions as a WAN port to connect an upstream network device. - LAN1 12V PoE supports passive PoE. LAN2 802.3af PoE supports standard PoE.
③ LAN2, LAN3, LAN4	Ethernet port for connecting to a computer, switch or IP camera.
④ RESET, Reset	Reset button. Used to restore the CPE to factory settings. For details, see Q2 in FAQ.
⑤ Cable grommet	Used to fix the power cord or Ethernet cable.
⑥ Wall mounting slots	Used to fix the CPE to a wall. Recommended specifications for expansion bolts and screws: - Expansion bolt: height: 6.6 mm, inner diameter: 2.4 mm, length: 26.4 mm - Screw: thread diameter: 3 mm, length: 14 mm, head diameter: 5.2 mm
⑦ Pole mounting slots	Used to fix the CPE to a pole using the included plastic straps.

Get to Know the PoE Injector

The included PoE injector may vary with CPE models.



Power on the CPE

Option 1: Use the PoE injector

Connect the PoE injector to the CPE as guided in **Connect the CPE**. See Q4 in FAQ for the maximum PoE power supply distance.

Tips
CAT5 Ethernet cables or above are recommended for higher speed.

Option 2: Use the power adapter

If the CPE has a DC power jack, use the included power adapter to power on the CPE.

Tips
Use the included power adapter to avoid damage to the CPE.

Option 3: Use standard PoE power supply

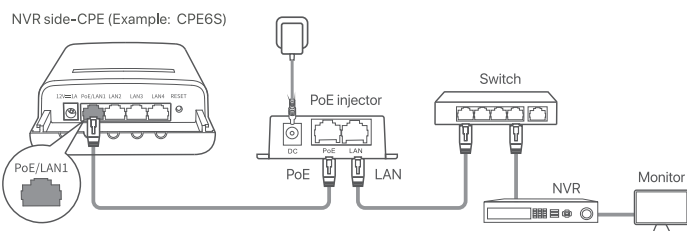
If the CPE supports standard PoE power supply, use a standard PoE power supply device (such as a standard PoE switch) to power on the CPE.

Connect the CPE

You can see the working mode of the CPE on its label. In the following figures, the CPE is powered on by the PoE injector.

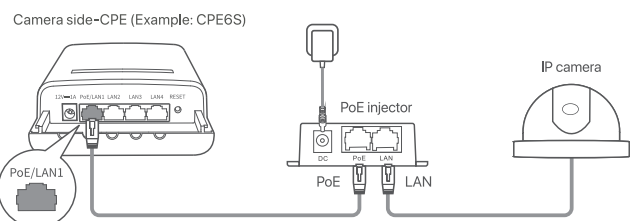
Connect the NVR side-CPE to the NVR

Connect the CPE labelled with **NVR Side** to the switch that connects to the NVR.



Connect the Camera side-CPE to the IP camera

Connect the CPE labelled with **Camera Side** to the switch that connects to the IP camera.



Application Scenarios

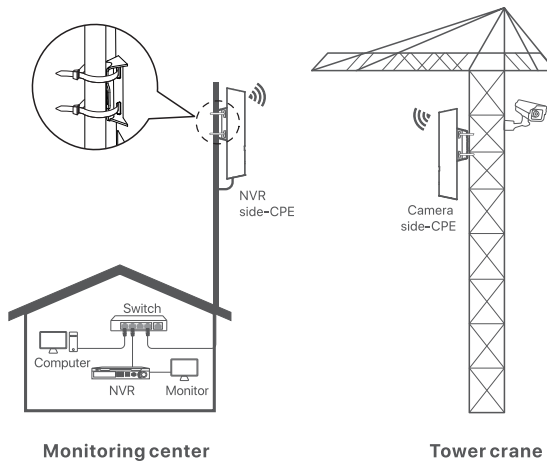
Install the CPE labelled with **NVR Side** at the NVR side and the CPE labelled with **Camera Side** at the camera side.

The following demonstrates how pole mounting enables monitoring in different scenarios. When using this method, route the plastic straps through slots at the back of the CPEs, and properly position the CPEs on the poles before tightening the straps. After successful installation, the bridging quality reaches the best when the CPEs' signal indicators (such as LED1, LED2 and LED3) all light up.

Tips
The two CPEs are pre-configured and ready for installation.

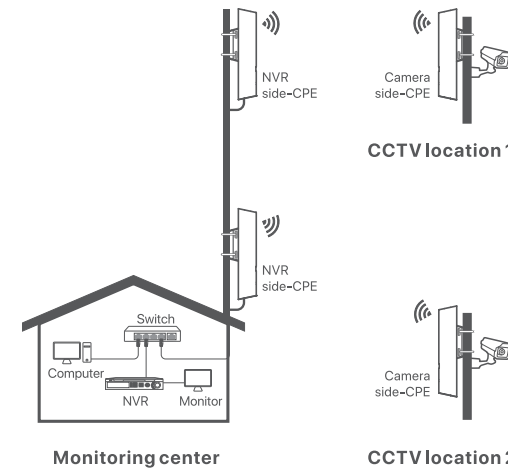
Construction tower crane

Example: CPE6S



Community, factory and farm

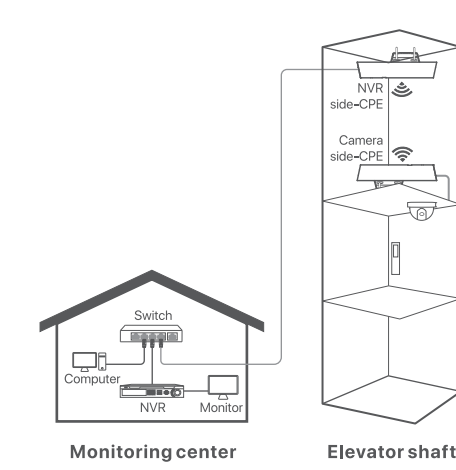
Example: CPE6S



Elevator

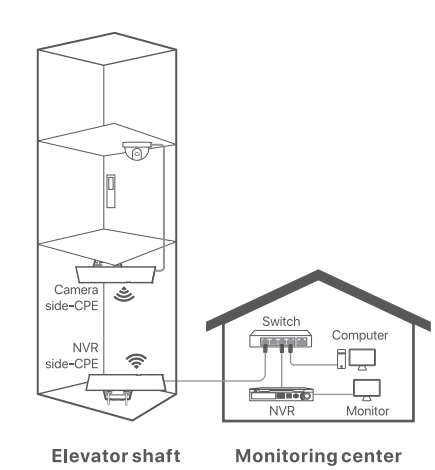
Scenario 1: The machine room located close to the top of the elevator shaft

Example: CPE6S



Scenario 2: The machine room located close to the bottom of the elevator shaft


Example: CPE6S



Log into the CPE

The following procedure describes how to log into the web UI of the CPE on a computer.

- ① Connect the computer to the LAN port of the CPE or the LAN port of the switch connected to the CPE.
- ② Set an IP address for the computer that belongs to the same network segment as the CPE. For example, if the CPE's IP address is 192.168.2.1, then the computer's IP address can be set to 192.168.2.X (X ranges from 3 to 254 and is unused), and the subnet mask is 255.255.255.0.
- ③ Start a web browser on the computer connected to the CPE and enter the default CPE's IP address (192.168.2.1 in AP mode or 192.168.2.2 in Client mode) in the address bar. Enter the username and password and click **Login**.

 Tips
<ul style="list-style-type: none">– You can also log into the web UI of the CPE using its WiFi. By default, the CPE WiFi name is IP-COM_XXXXXX or IP-COM_XXXXXX_MG (XXXXXX indicates the last six characters of the CPE MAC address). If you cannot find the WiFi network, try restarting the CPE.– If the login failed, refer to Q1 in FAQ.– To ensure network security, change your username and password after first login.

Get Support and Services



<https://www.ip-com.com.cn/en/service/default.html>

For technical specifications, user guides, GNU General Public License Notice and more information, please visit the product page or service page on **www.ip-com.com.cn**. Multiple languages are available.

You can see the product name and model on the product label.



CE Mark Warning

This is a Class A product. Warning: Operation of this equipment in a residential environment could 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 20 cm between the device and your body.

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 IP-COM Networks CO., LTD. declares that the device (CPE) 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://ip-com.com.cn/en/ce.html>

<p>English: Operating Frequency/Max Output Power Deutsch: Betriebsfrequenz/Max. Ausgangsleistung Italiano: Frequenza operativa/Potenza di uscita massima Español: Frecuencia operativa/Potencia de salida máxima Português: Frequência de Funcionamento/Potência Máxima de Saída Français: Fréquence de fonctionnement/Puissance de sortie maximale Nederlands: Bedrijfsfrequentie/Maximaal uitgangsvermogen Svenska: Driftsfrekvens / Max Uteffekt Dansk: Driftsfrekvens/Maks. Udgangseffekt Suomi: Toimintataajuus/maksimilähtöteho Magyar: Működési frekvencia/Maximális kimeneti teljesítmény Polski: Częstotliwość pracy / Maksymalna moc wyjściowa Čeština: Provozní frekvence/maximální výstupní výkon Ελληνικά: Συχνότητα Λειτουργίας/Μέγιστη Ισχύς Εξόδου Română: Frecvența de funcționare/Puterea maximă de ieșire Български: Работна честота/максимална изходна мощност Eesti: Toösagedus/Max väljundvõimsus Slovenščina: Delovna frekvenca/Največja izhodna moč Slovenčina: Prevádzková frekvencia/maximálny výstupný výkon Hrvatski: Radna frekvencija/Maksimalna izlazna snaga Latviešu: Operējošās frekvences/ Maksimālā jauda Lietuvių: Darbinis dažnis / maksimali išėjimo galia Türkçe: Çalışma Frekansı/Maks. Çıkış Gücü Українська: Робоча частота/максимальна вихідна потужність Русский: Рабочая частота/макс. выходная мощность</p>	<p>2412MHz~2472MHz/20dBm (CPE5V2.0/CPE6SV2.0/CPE12V3.0) 5150MHz~5250MHz (indoor use only)/ 23dBm (CPE5/CPE6S/CPE12) 5470MHz~5725MHz/ 27dBm (CPE5/CPE6S/CPE12)</p>
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FAQ

Q1: I cannot log into the web UI of the CPE. What should I do?

A1: Try the following solutions:

- Ensure that the device is connected to the CPE.
- Ensure that the device like computer and CPE are in the same network segment.
- Restore the CPE to factory settings by referring to **Q2**, 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: After the CPE completes startup, hold down the reset button for about 8 seconds and release it when all indicators light up. The CPE is restored to factory settings.

Method 2: Log into the web UI of the CPE, navigate to **Tools > Maintenance**, and click **Reset**.

Q3: How to check that the CPE is under the best connection status?

A3: **Method 1:** Observe the signal indicators (such as LED1, LED2 and LED3) of the CPE. The connection quality reaches the best when all signal indicators of the CPE light up.

Method 2: Log into the web UI of the CPE, and check the bridging status in **Status > Wireless Status**. Stronger signal strength (-60 dBm better than -70 dBm), less background noise (-100 dBm better than -90 dBm), and faster transmit/receive speed lead to better bridging signal.

Q4: What is the maximum distance for PoE power supply when a PoE injector is used for power supply?

A4: The following table is for your reference. You can check the power supply data on the CPE housing, power adapter or PoE injector.

Power supply mode	Input voltage	Maximum PoE power supply distance
9V 0.6A DC power supply/PoE power supply	9-13V	30m
12V 1A DC power supply/PoE power supply	9-13V	50m or 60m
24V 0.5A PoE power supply	18-25V	60m

	AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE
	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK(NI)

	UK
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English – Attention: In EU member states, EFTA countries, Northern Ireland and Great Britain, the operation in the frequency range 5150 MHz – 5250 MHz is only permitted indoors. The operation in the frequency range 5470 MHz – 5725 MHz is permitted both indoors and outdoors.

Deutsch – Achtung: In den EU-Mitgliedsstaaten, den EFTA-Ländern, Nordirland und Großbritannien ist der Betrieb im Frequenzbereich 5150 MHz - 5250 MHz nur in Innenräumen erlaubt. Der Betrieb im Frequenzbereich 5470 MHz – 5725 MHz ist sowohl im Innen- als auch im Außenbereich zulässig.

Italiano – Attenzione: Negli Stati membri dell'UE, nei Paesi EFTA, nell'Irlanda del Nord e in Gran Bretagna, il funzionamento nella gamma di frequenze 5150 MHz - 5250 MHz è consentito solo in ambienti chiusi. Il funzionamento nella gamma di frequenza 5470 MHz – 5725 MHz è consentito sia all'interno che all'esterno.

Español – Atención: En los estados miembros de la UE, los países de la AELC, Irlanda del Norte y Gran Bretaña, el rango de frecuencia operativa de 5150 MHz a 5250 MHz solo está permitido en interiores. El funcionamiento en el rango de frecuencia 5470 MHz – 5725 MHz está permitido tanto en interiores como en exteriores.

Português – Atenção: Nos estados membros da UE, países da EFTA, Irlanda do Norte e Grã-Bretanha, o funcionamento na gama de frequências 5150 MHz - 5250 MHz só é permitido no interior. A operação na faixa de frequência 5470 MHz – 5725 MHz é permitida tanto em ambientes internos quanto externos.

Français – Attention : Dans les États membres de l'UE, les pays de l'AELE, l'Irlande du Nord et la Grande-Bretagne, l'utilisation dans la gamme de fréquences 5150MHz - 5250 MHz n'est autorisée qu'en intérieur. Le fonctionnement dans la gamme de fréquences 5470 MHz – 5725 MHz est autorisé aussi bien à l'intérieur qu'à l'extérieur.

Magyar – Figyelem: Az EU-tagállamokban, az EFTA-oroszágokban, Észak-Írországban és Nagy-Britanniában az 5150 MHz–5250 MHz –es frekvenciatartományban való működtetés csak beltérben engedélyezett. Az 5470 MHz – 5725 MHz frekvencia tartományban bel- és kültéren egyaránt megengedett.

Polski – Uwaga: W państwach członkowskich UE, krajach Europejskiego Stowarzyszenia Wolnego Handlu (EFTA), Irlandii Północnej i Wielkiej Brytanii praca w zakresie częstotliwości 5150 MHz - 5250 MHz jest dozwolona tylko w pomieszczeniach. Praca w zakresie częstotliwości 5470 MHz – 5725 MHz jest dozwolona zarówno wewnątrz jak i na zewnątrz budynków.

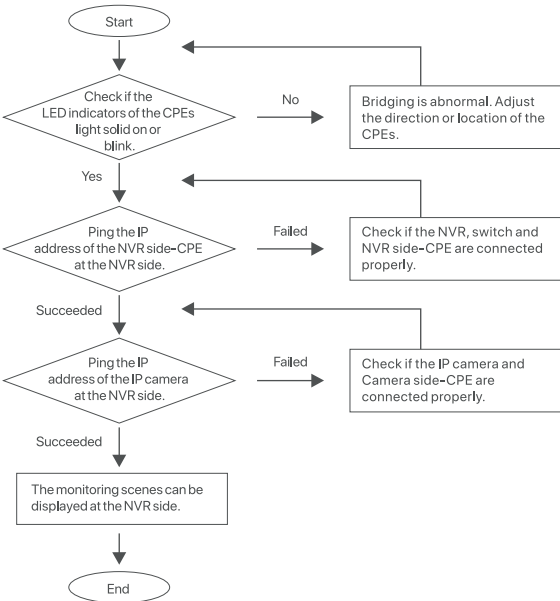
Čeština – Pozor: V členských státech EU, zemích ESVO, Severním Irsku a Velké Británii je provoz ve frekvenčním rozsahu 5150 MHz – 5250 MHz povolen pouze v interiéru. Provoz ve frekvenčním rozsahu 5470 MHz – 5725 MHz je povolen v interiéru i exteriéru.

Română – Atenție: În statele membre UE, țările EFTA, Irlanda de Nord și Marea Britanie, operarea în intervalul de frecvență 5150 MHz – 5250 MHz este permisă numai în interior. Funcționarea în intervalul de frecvență 5470 MHz – 5725 MHz este permisă atât în interior, cât și în exterior.

Q5: After the installation is finished, there is no display of the scenes monitored by IP cameras at the NVR side. What should I do?

A5: 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 initialized.
- If the IP camera cannot be scanned at the NVR side, refer to the following procedure to solve the issue.



Български – Внимание: В страните-членки на ЕС, страните от ЕАСТ, Северна Ирландия и Великобритания, работата в честотния диапазон 5150 MHz - 5250 MHz е разрешена само на закрито. Работата в честотния диапазон 5470 MHz – 5725 MHz е разрешена както на закрито, така и на открито.

Türkçe – Dikkat: AB üye ülkeleri, EFTA ülkeleri, Kuzey İrlanda ve Büyük Britanya’da 5150 MHz – 5250 MHz frekans aralığında çalışmaya yalnızca iç mekanlarda izin verilir. 5470 MHz – 5725 MHz frekans aralığında çalışmaya hem iç hem de dış mekanlarda izin verilir.

Українська – Увага: у країнах-членах ЄС, ЄАВТ, Північній Ірландії та Великій Британії робота в діапазоні частот 5150 МГц–5250 МГц дозволена лише в приміщенні. Робота в діапазоні частот 5470 МГц – 5725 МГц дозволена як в приміщенні, так і на вулиці.

Русский – Внимание: В государствах-членах ЕС, странах ЕАСТ, Северной Ирландии и Великобритании работа в диапазоне частот 5150 МГц – 5250 МГц разрешена только в помещении. Работа в диапазоне частот 5470 МГц – 5725 МГц допускается как внутри помещений, так и на открытом воздухе.



FCC Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.

Safety Precautions

Before operating, read and follow these precautions to prevent accidents.

- Do not use the device in a place where wireless devices are not allowed.
- CPE: Operating temperature: -30°C - 55°C (-22°F - 131°F); Operating humidity: (10% - 90%) RH, non-condensing; Storage temperature: -30°C - 70°C (-22°F - 158°F); Storage humidity: (10% - 90%) RH, non-condensing.
- Power adapter: Operating temperature: 0°C - 40°C (42°F - 104°F); Operating humidity: (5% - 95%) RH, non-condensing; Storage temperature: -20°C - 70°C (-4°F - 158°F); Storage humidity: (5% - 95%) RH, non-condensing.

- If you power on the CPE using a power adapter: the mains plug is used as the disconnect device and shall remain readily operable; the power socket shall be installed near the CPE and easily accessible.

- The CPE is used outdoors. The PoE injector and power adapter are used indoors.

- Keep the device away from fire, high electric field, high magnetic field, and inflammable and explosive items.

- While the device is designed to be waterproof, it is recommended to avoid long-duration water immersion to ensure its safety and longevity.

- Do not use the power adapter/PoE injector if its plug or cord is damaged.

- If such phenomena as smoke, abnormal sound or smell appear when you use the device, immediately stop using it and disconnect its power supply, unplug all connected cables, and contact the after-sales service personnel.

- Disassembling or modifying the device or its accessories without authorization voids the warranty, and might cause safety hazards.

- The device's marking information can be found on its surface.

For the latest safety precautions, see **Safety and Regulatory Information** on **www.ip-com.com.cn**.

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:

CPE5V2.0/CPE6SV2.0/CPE12V3.0: 2412–2462 MHz

CPE5/CPE6S/CPE12: 5150–5250 MHz, 5725–5850 MHz

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.

Technical Support

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Website: www.ip-com.com.cn

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