Wireless Bridge

User Manual

Model: CPE902

Tips:

Thank you for ordering and using CPE902 Wireless Bridge, please read the manual carefully before use. If there are any problems during the use, please contact us in time. The installation of this device requires some network knowledge. If you can't install it, please let us know or contact a professional.

Customer Service Email: support@ueevii.com

Product Introduce

UeeVii CPE902 wireless bridge is a 5G high-performance, high-speed outdoor long-distance wireless network bridge. It has the characteristics of long transmission distance, strong penetrating ability, and strong anti-interference ability. It supports intelligent channel analysis and automatic optimal channel selection. Realize point-to-point and point-to-multipoint outdoor coverage and applications. Very suitable for Internet expansion and monitoring range expansion of garages, barns, shops, docks, etc.

Package List:

2 x CPE902 Bridge；2 x PoE Adapter; 2 x Network Cables；2 x Metal Hoop
1 x English User Manual

Product Features

- Supports intelligent channel analysis and automatic optimal channel selection with a maximum rate of 900Mbps.
- Adopt Qualcomm chip solution, greatly improving the data processing performance of the product.
- 15dBi directional antenna, which can satisfy long distance wireless transmission within 5KM, can realize point-to-point, point-to-multipoint outdoor coverage and application.
- The optimal heat dissipation design improves the stability of the product at high temperatures.
- Special TVS surge protection devices are used to improve product stability in harsh environments.

Product Specifications:

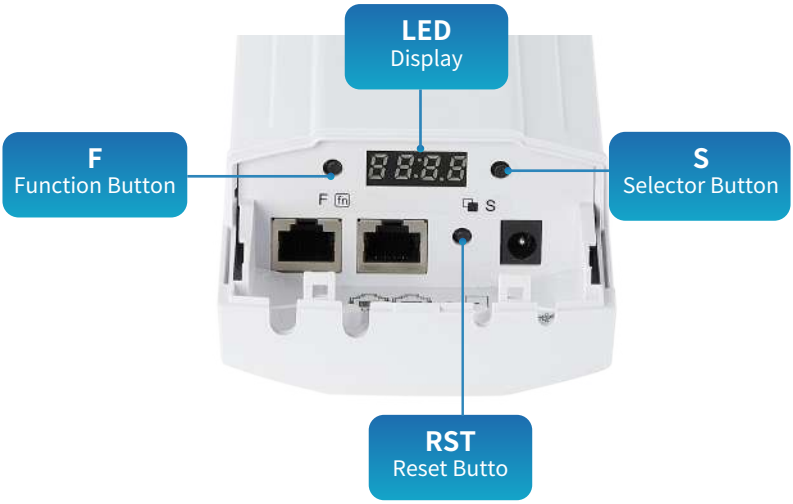
CPE902 Wireless Bridge	
Model	CPE902
CPU	QCA9563+QCA9886+8334
Flash	SPI NOR 16MB
DDR	DDR2-128MB
5G working frequency band	5.150GHz～5.850GHz
5G WIFI transmission protocol	QCA9563+QCA9886+8334
SSID hiding	support
Maximum speed	900Mbps
The antenna	Flat plate directional antenna gain: 15dBi
Maximum support for wireless access	50+

Maximum transmitted power	< 26dBm
Interface (WAN)	One 10/100/1000M adaptive WAN port that supports 48V POE power supply
Interface (LAN)	One 10/100/1000M adaptive LAN port
POE	48V 0.5A
DC	12V 1.5A
Digital display screen	F,S Button
	Display master/slave, channel, signal strength and other information
The keys	reset key (long press 10 seconds to restore factory default Settings)
Status indicator light	SYS light, WAN light, LAN light, 5G WIFI light
Maximum power consumption	< 15W
Dustproof and waterproof rating	IP65
size	260mm*85mm*45mm
Working Environment	Normal operating temperature :-30°C to 55°C Limit operating temperature :-40°C to 70°C Storage temperature: -40°C to 70°C Humidity: 5% ~ 95% (no condensation)

Interface & LED Details

1.1 WAN 10/100/1000Mbps RJ45 port, 1 LAN 10/100/1000Mbps RJ45 port，support PoE power supply.
2.4 LED Indicator lights included SYS light, LAN light, WAN light, 5G light
SYS Light: Solid means power supply is normal
LAN Light: Solid means LAN port has been connected
WAN Light: Solid means WAN port has been connected
5G Light: Blinking state indicates normal operation

Product Specifications:



Button Operation:

Button	Function	Operation
RST button	Reset wireless bridge	Long press the "RST" button for 10 seconds to reset
	PTP/PTMP pairing	After setting the master and slave bridge, within 1 minute, long-press the "RST" button of the master and slave bridges for 1 second to pair
F button	Modify channel	Click the "F" button twice, when the channel value flashes, click the "S" button to select the appropriate channel.
	Modify IP address	Click the "F" button 3 times, when the IP value flashes, click the "S" button to modify the appropriate IP address.
S button	Selector	Cooperate with "F" function button to select appropriate parameter value

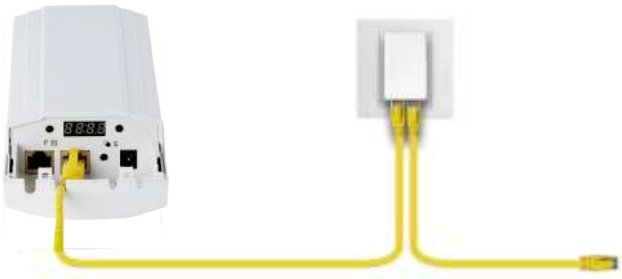
About Use

Simple Instructions:

One set as master bridge, and another set as slave bridge, then press “reset” button of them respectively for 1s within one minute, and waiting for pairing will be ok.

Quick Start

1. How to connect:



1. According to the requirements, prepare a long enough network cable （Recommended within 20 meters） to connect the wireless bridge and the PoE power supply. The PoE port of the PoE power supply is connected to the WAN port of the wireless bridge.
2. The LAN port of the PoE power supply is connected to the PC, router, and swtich.

2. How to set Master Bridge:

You can set one bridge as a master bridge by pressing “F” button to make digital “H” or “C” blink, and then press” S” button to change it to “H”. Then wait 5 seconds for the bridge to automatically save and restart.

3. How to set Slave Bridge:

You can set the bridge as a slave bridge by pressing “F” button to make digital “H” or “C” blink, and then press” S” button to change it to “C”. Then wait 5 seconds for the bridge to automatically save and restart.

Note:
1. After the network bridge is restored to factory settings, the IP address is 192.168.188.253.
2. The "F" button is the selection button. You can select the master/slave mode, channel, IP address, and signal value.
3. The "S" button is the set button. You can set to change the master/slave mode, channel, and IP address.

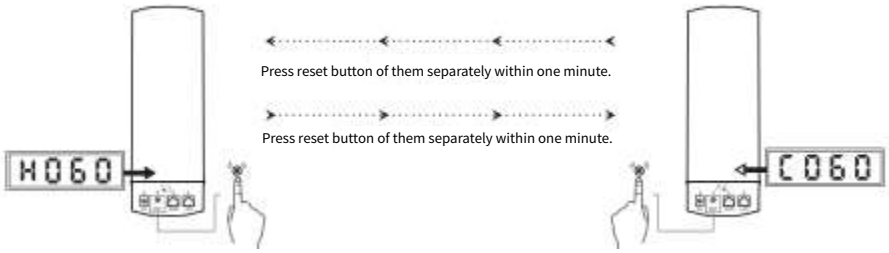
4. Point to point pairing:

After setting master bridge and slave bridge, please press the reset button for 1s for the master bridge and the slave bridge respectively(compelete with 1min) to initiate the pairing.

5. Point-to-multipoint pairing:

After setting master bridge and slave bridge, please press the reset button for 1s for the master bridge and multiple slave bridges respectively to initiate the pairing.

Note:
The reset button of bridges need to be pressed with one minute.



Master Bridge Slave Bridge

Note:
When you see these bridges start to show the same channel, and the master bridge show “H”, slave bridges show” C”, then it means they have been paired successfully.

(Generally speaking, if you just want to complete pairing, above step will be ok.)

Some Settings for CPE902

Modification of channel:

To avoid interference, it is necessary to stagger the channels. Just modify the master bridge channel will be ok. The slave bridge channel will automatically match the master bridge channel. First select the master bridge, then select the channel by pressing the "F" button twice. And later press the "S" button to change the channel value. After waiting 5 seconds, the bridge will automatically save and restart.

F--Master Bridge
060---channel60

C--Slave Bridge
060---channel60

IP address modification:

To avoid bridge IP conflict, you can change the bridge IP address by pressing "F" button three times to select IP, when IP blinking, then press "S"button to change the IP address. After waiting five seconds, the bridge will automatically save and restart.

How to reset the bridges:

You can reset the bridges by long pressing the “reset” button for 10s.

WIFI function:

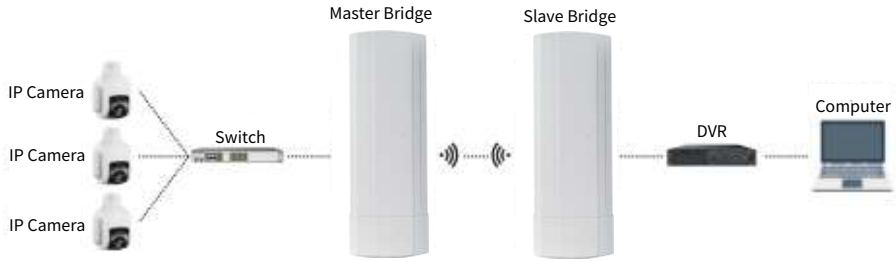
The WiFi function is turned on by default for the master bridge, and the WiFi function is turned off by default for the slave bridges (can be turned on).
Default WiFi SSID: Wireless 5.8G_xxxxxx
Default WiFi PWD: 66666666
You can access the wireless bridge through your computer or mobile phone to set the SSID and new WiFi password.

Installation:

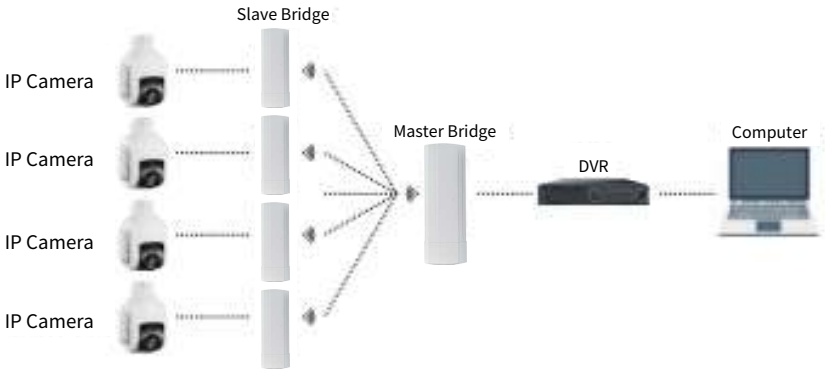
1. It is recommended to install the wireless network bridge by holding a pole;
2. The 2 wireless network bridges must be installed face to face as much as possible, with no architectural obstacles in between, strong electricity, and strong magnetism.
3. The theoretical working distance of CPE902 wireless bridge is 5KM, and the actual application should be less than 5KM.

Application Case:

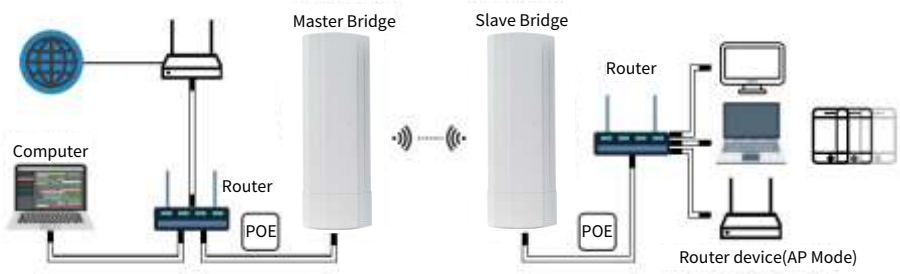
1. Point-to-point extended of surveillance cameras range



2. Point-to-multiple point extended of surveillance cameras range



3. Point-to-point extended network WiFi range, suitable for second buildings, garages, shops, barns, etc



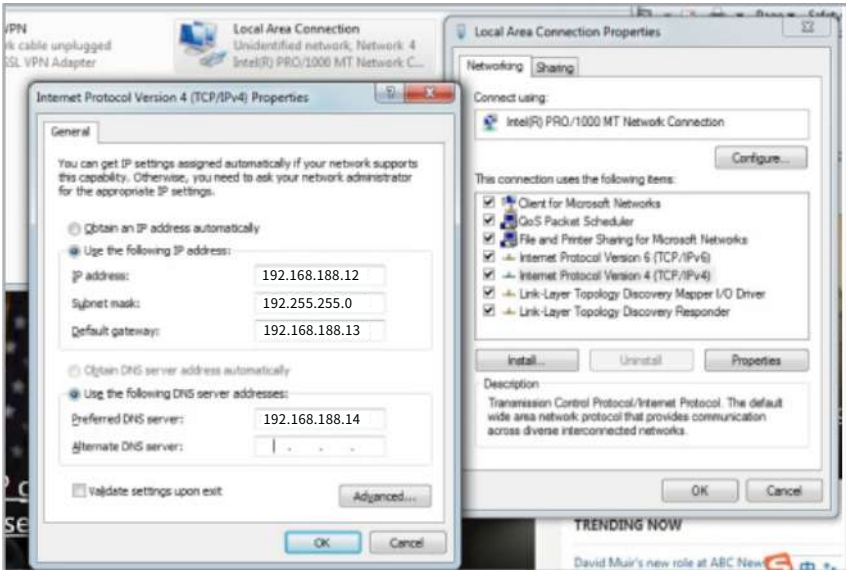
Advanced Settings

Note:
You can enable the device without advanced settings

Computer Access

1. Connect the CPE to the computer
Refer to the figure left to connect the CPE to the computer through a PoE adapter and an Ethernet cable.

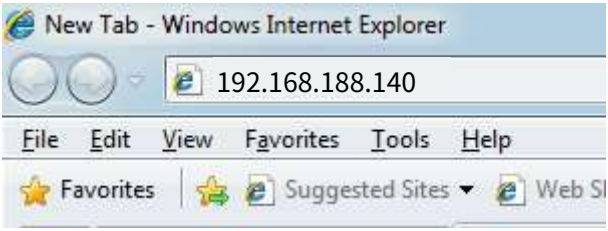
2. Modify your computer's IP address, make your computer's IP and the bridge's IP address be on the same network segment(LAN) so that you can access them.



Step 1: Find and open "Open Network and Sharing Center" on your computer.
Tips：click the network icon in the lower right corner of the computer.
Step 2: Find and open the "Change adapter settings", select "Local Area Connection" to right-click to open the network properties. Refer to the picture above to open.
Step 3: Find and double-click open the "Internet Protocol Version 4(TCP/IPv4)", choose the " Use the following IP address" and enter IP address, subnet mask, Default gateway, Preferred DDS server.

3. Change your computer's IP address to 192.168.188.xxx (192.168.188.xxx cannot be the same as the IP of the CPE), then entry IP address is 192.168.188.xxx, subnet mask is 255.255.255.0(Autofill), Default gateway is 192.168.188.xxx, Preferred DDS server 192.168.188.xxx （X needs to be 11-200).

4. Open a web browser. In the address bar of the web browser, enter the wireless bridge IP address (such as 192.168.188.253).
Find the IP address of the bridge by clicking the "F" button of the wireless bridge. Example: R140 is displayed on the screen, then the IP address of the bridge is 192.168.188.140.



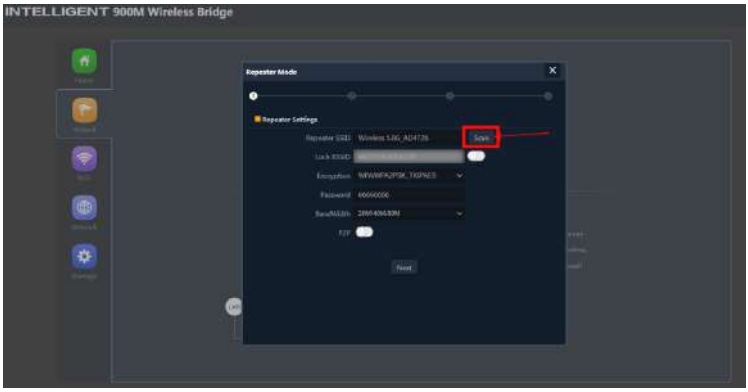
5. A login screen will appear, by default, the password of the wireless bridge is "admin", just entry password login.
Note: “admin” is not the password of the WiFi SSID, it is just the password for WEB access.

6. Login successful, go to setting.

Bridge Pairing through Web

1. Open the computer browser and enter the slave bridge's IP address to login in the web management page of slave bridge.

2. Find the Repeater Mode to scan the master bridge to finish pairing.



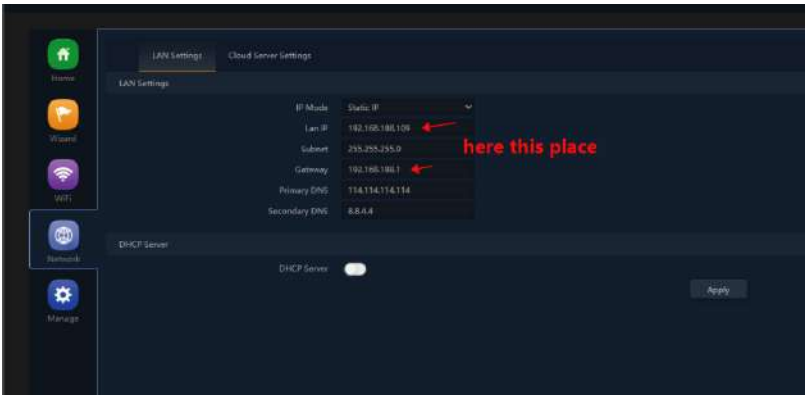
How Do You Change The Bridges IP Address to Your Own Existing Subnet and Finish Pairing?

Known: The default IP address of the master bridge is 192.168.188.253, and the default IP address of the slave bridge is 192.168.188.100, assuming that your subnet at the slave end is: 192.168.5.xxx

1. Log in to the web management system of the master and slave bridge respectively, and set the master and slave bridge as the subnet of your existing network

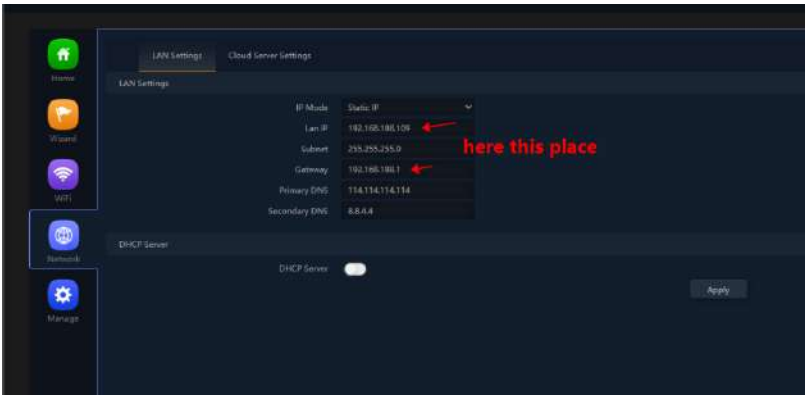
1)Enter the IP address of the master bridge in the browser: 192.168.188.253 to log in to the master bridge

2)After logging in, modify the IP address of the master bridge 192.168.188.253 to the existing subnet 192.168.5.xxx, assuming it is 192.168.5.7



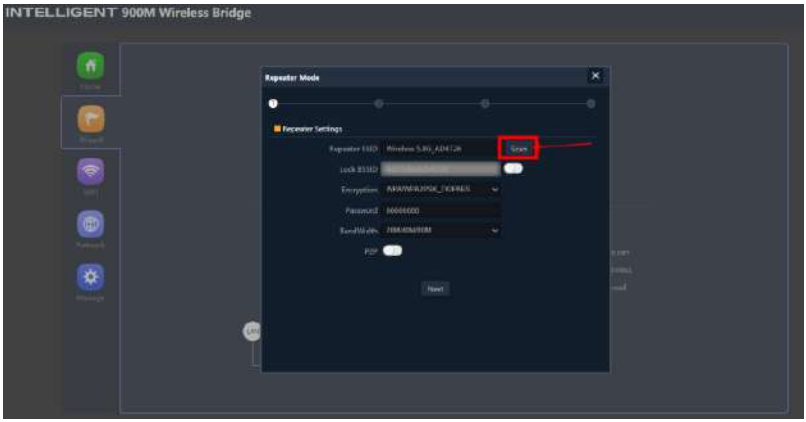
3)Enter the IP address 192.168.188.100 of the slave bridge in the browser to log in to the slave bridge

4)After logging in, change the IP address of the slave bridge from 192.168.188.100 to the existing subnet 192.168.5.xxx, assuming it is 192.168.5.121



2. Log in to the web management page of the slave bridge, scan the master bridge' SSID for pairing

1) At this time, the IP address of the master and slave bridge is your modified 192.168.5.xxx, enter the current IP address of the slave bridge 192.168.5.121 in the browser to log in to the slave bridge, and then scan the master bridge for pairing.



2) The pairing is successful. At this point, your bridge has been set to match the subnet of your slave's existing network.

3. Test before deployment
1) Set the IP of the laptop on the slave side to dynamic IP (DHCP), this is to confirm the router on Master side can push new IPs to the Slave side.

2) Connecting all components as a real, yet simple, network. Review the networking diagram as needed.
On the master side, it should be Internet->ALDS/Router->Master CPE
On the slave side, it should be Slave CPE -> (Switch) -> laptops or other devices

3)Your laptop should have IP as 192.168.5.xxx and be able to browse the Internet. If so, you're all set for deployment.

Troubleshooting

Trouble	Reason	Solution
Packet Latency	1. Wireless interference 2. Distance is too long, or there are some walls between them 3. CPE's angle in the wrong direction, weak signal	1. Use WiFi analysis to choose the best channel 2. CPE should be in the normal distance, and avoid the wall 3. Adjust the angle of CPE according to signal strength
Wrong Password	1. Forget the password 2. Input wrong password 3. Too much cookie 4. WiFi password is confused with the WEB access password	1. Press the "RST" button in 10s to reset the bridge, the default password is admin. 2. Re-input the password 3. Clear cookie, run arp -d to clear MAC table 4. WEB access password is "admin"
Can not login WEB	1. Local IP is not in the same network segment of CPE 2. IP is taken by other devices 3. LAN connection or ethernet cable has a problem 4. Too much cookie, MAC address haven't update	1. Ping 192.168.188.253 to see the connection status 2. Stop other devices or change to another IP address 3. Check LAN connection and Ethernet cable 4. Clear cookie, run arp -d to clear MAC address

System LED light off	1. PoE power supply is not working 2. Some problem in CPE's PoE port 3. Ethernet cable is loose, RJ45 port is wrong power current/ voltage lower or wrong	1. Check if the PoE adapter or PoE switch work 2. Check if the PoE port of CPE is ok 3. Check if Ethernet cable is loose if Ethernet cable plugged into PoE port 4. Check if the voltage is normal, if the socket has problem if the input voltage of the PoE adapter is normal
Low transmission Rate	1. Packet Latency 2. Ethernet cable circuit 3. Network virus attack 4. Too much access users	1. Adjust the distance, angle and channel to decrease latency 2. Check if port isolated to avoid network virus and broadcast storm 4. Decrease the access users
Device always dead	1. Static electricity 2. Running time too long （too much memory) 3. Lightning stroke	1. Make CPE or PoE adapter need a ground connection 2. Running time over 7 days, reboot it(You can set scheduled restart) 3. After lightning, device PoE port broken or unstable better to deploy lightning conductor

Technical support and service

A. Thank you for your order and for using our product, please read the manual carefully before use. If there are any problems during the use, please contact us in time;

B. The installation of this device requires some network knowledge. If you can't install it, please let us know or contact a professional.
Tech Service Email: **support@ueevii.com**

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