WiFi Access Point

IN-APW1 / IN-APW2 / IN-AP6

Installation Manual

How to install the access point and how to configure it

What did you buy?

You have purchased a WiFi Access Point (hereinafter abbreviated AP) that allows you to create easily a wifi hot spot in your local network. Outdoor models are in a container IP54 rainproof which can be installed outdoors without any problems to expand your wireless network outside the building.

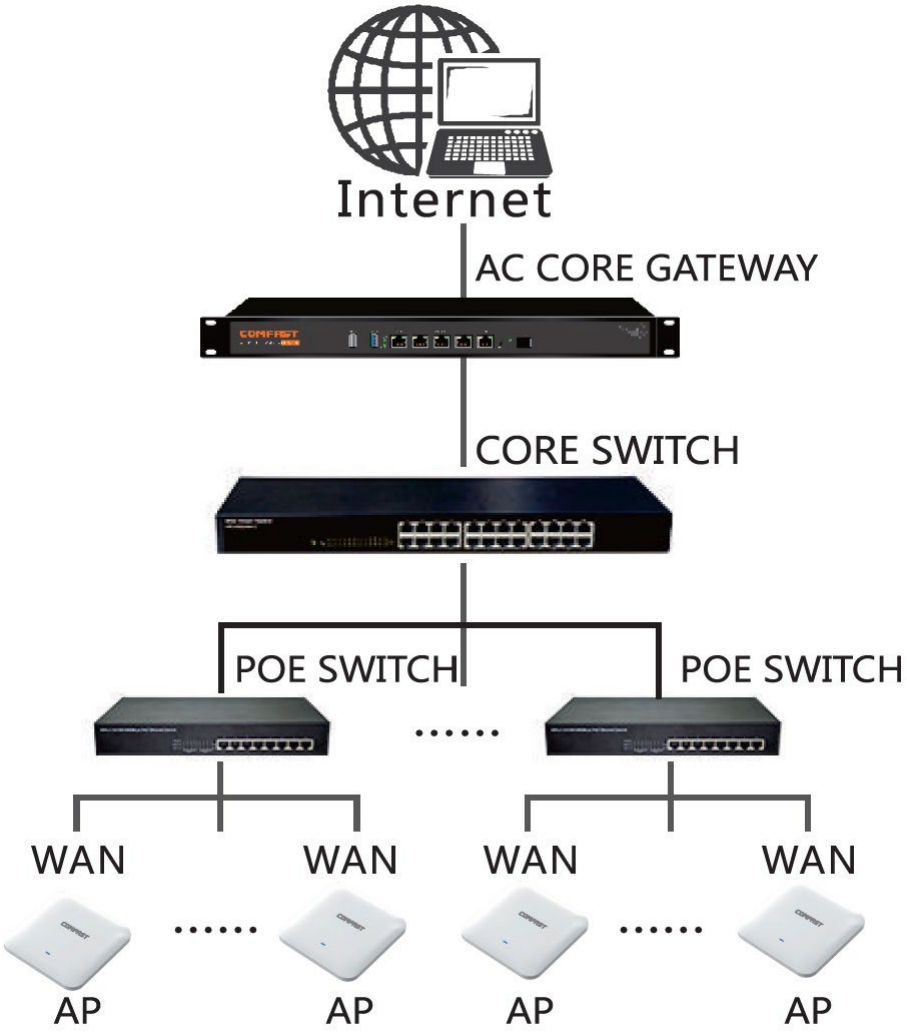
These access points are powered by POE by connecting them to a POE switch on the network or via the included poe injector if you connect it to a network port without POE, such as the one on your router example.
This AP is ideal when you want to connect wifi cameras or other outdoor devices to provide adequate wireless coverage. It is available in 2.4GHz (300Mbps) versions, ideal for wifi cameras, 2.4/5 GHz (300/1220 Mbps) and WiFi6 (3000 Mbps)

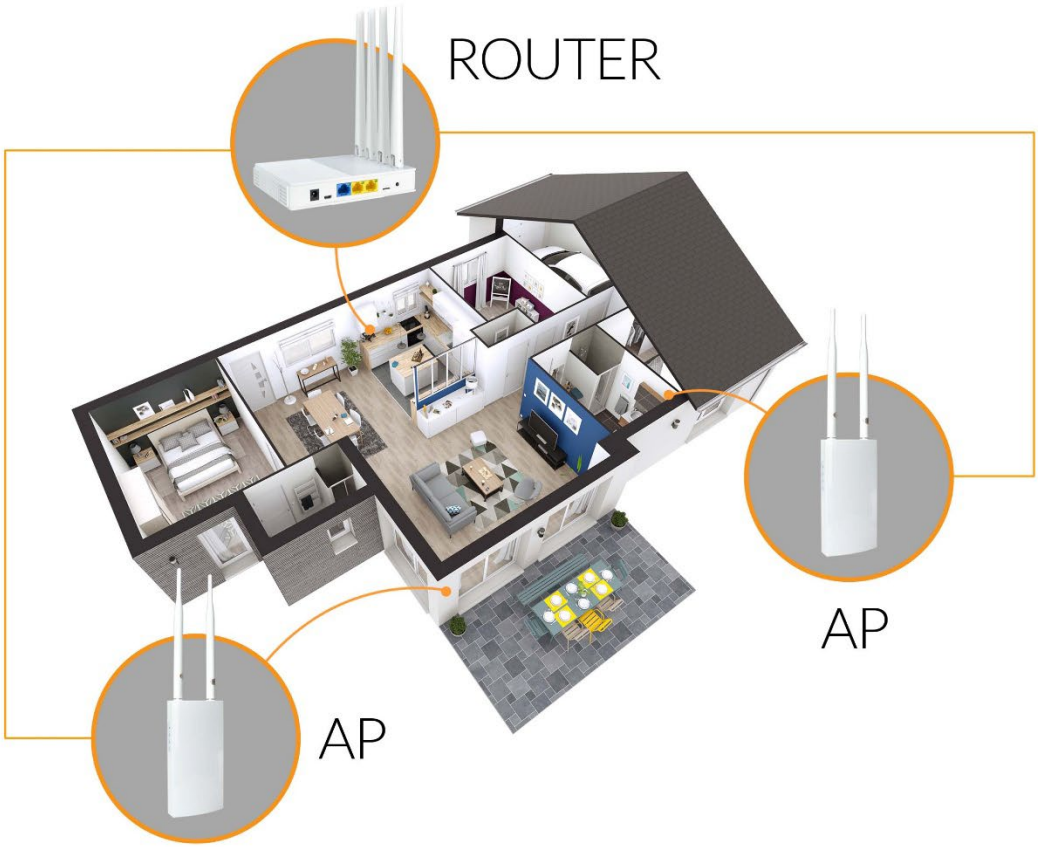
INCLUDED IN THE PACKAGE

- Access Point
- 2pcs Omnidirectional WiFi Antennas (Outdoor Models)
- POE Injector
- Network cable
- Stainless steel clamps for pole mounting (outdoor models)

Wiring

These Access Points (AP) are used to create wifi hotspots in an ethernet network. Here is a classic scheme of plant




ROUTER
AP
AP

The APs are equipped with 2 network ports named: LAN and WAN

POE-WAN–RJ45 port to connect the main wired network (switch, router). This port supports 48V POE power supply and normally needs to be connected to a POE switch on the network. If you connect this port to a POE switch the AP turns on, drawing power along the cable network. If you connect the AP to a switch without POE power, such as a router, you need insert the included POE injector.

POE LAN–RJ45 socket to connect a computer or the local wired network in the ways that the they foresee

POE INJECTOR INCLUDED–Among the included accessories is a POE injector. The injector should be used when the access point is connected to a switch or router that does NOT provide POE power supply. The injector should not be used if you connect the AP to a POE switch. Yes It also uses the POE injector when the device's operating mode does not provide a wired network connection, such as in Repeater mode. The injector has a 220C power socket, a POE port, to connect to the AP, and a LAN port to connect to the network (upstream switch/router)

RESET BUTTON–Press and hold for 10 seconds to restore factory settings. I reboot the AP and it goes back to factory router mode and it broadcasts its wifi network 192.168.10.1. The reset also deletes any custom login passwords. The first time you log in, prompted to set a new administrator password.

Assembly

The outdoor versions are equipped with a rear bracket that allows both surface mounting wall which can be fixed to a round pole using the supplied cable ties.

The indoor version is equipped with a hooking frame, to be removed and fixed to the wall or to the ceiling.

Connection

The wifi access point does not normally require any configuration. Just connect it to the network with a network cable so that it automatically acquires an IP address from the router (DHCP) and be ready for its hotspot function.

Connect the AP's WAN port to a POE switch with the network cable. Make sure the LED is on. power turns on. Wait a couple of minutes for the device to complete its boot.

1 – SEARCH THE NETWORK OF THE WIFI DEVICE

Search for wifi networks with your mobile phone and you will find the wifi network generated by our device at 2.4GHZ. In the 5GHZ model you will find 2 networks: one at 2.4 and one at 5GHz. You will see a name that starts with COM---- , as in this example.

2 – CONNECT TO THE DEVICE'S WIFI NETWORK

Connect to the device's WiFi network. By default, no password is required.

If the AP generates multiple wifi networks you can choose any one of them.

Normally, if your router has successfully assigned a DHCP IP to the AP, your device

It's already working and will give you immediate access to the network and the Internet.

If your mobile phone warns you that this network does not have Internet, then it means that

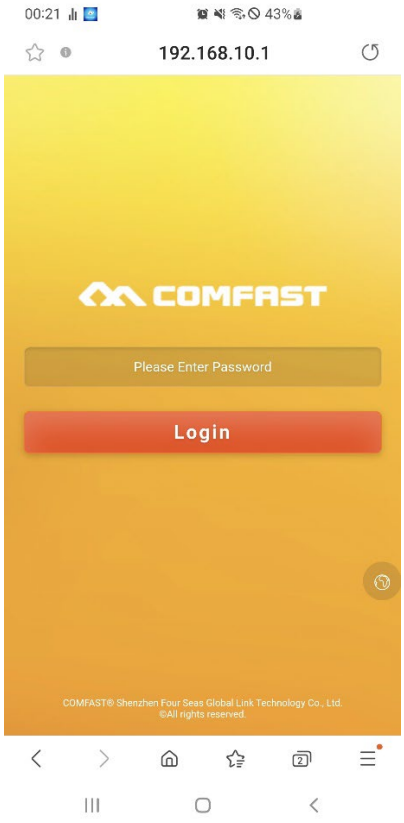
something is wrong and you need to change the configuration. Choose to continue anyway and maintain the connection to be able to access the product configuration later.

Access to configuration

The wifi access point requires almost no configuration and is ready to work immediately.
However, you can go into the setup to set a network access password.
wifi, to change the wifi network name (SSID) or to use the AP in other modes.

ACCESS THE CONFIGURATION WITH THE PHONE BROWSER

To configure the AP you do not need to download any app, just the Internet browser of the
your phone. Open your Internet browser and enter in the address bar:
192.168.10.1,which is the factory IP address of the AP.



First, if necessary, press the button with the world icon and select the
English language.
When you log in for the first time you are asked to set a passwordwhich you will use to log in
in future accesses. If in the future you forget your password, perform a reset with the button
of reset.

FACTORY SETTINGS:

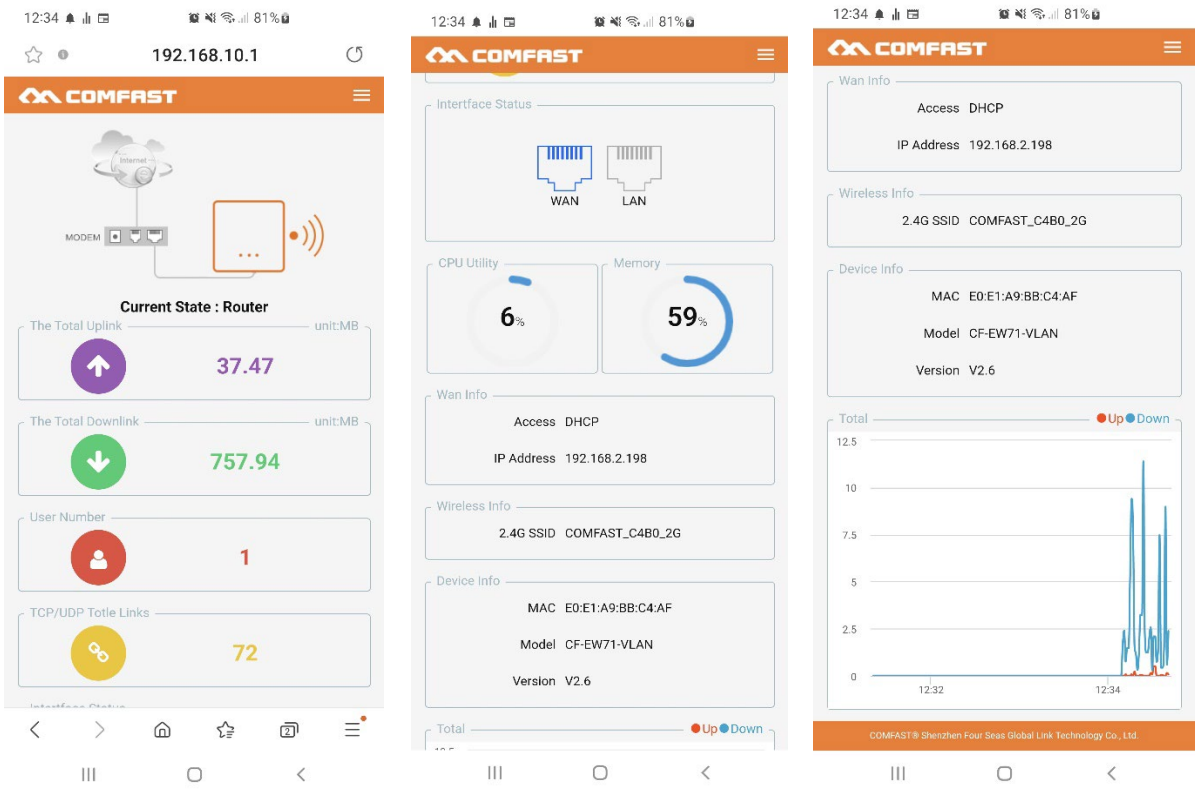
IP: 192.168.10.1

Password: to be set at first login

NOTE: If typing 192.168.10.1 into your browser does not bring up the login page, this
It means that you have not connected to the access point's wifi. Check the wifi connections of the phone that your phone has not for example restored the connection with another net.

STATUS - DEVICE STATUS

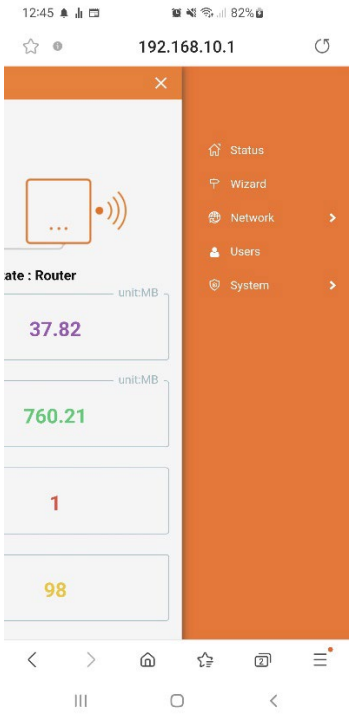
The first page of the setup shows you the current status of the device. You can scroll this page down to see all the device data



CURRENT STATE – This is the current operating mode. More on this later in the manual
We will explain the different modes of operation better.
INTERFACE STATUS – Shows which wired network port you are using
CPU MEMORY – Shows the device's resource usage
WEB INFO – Shows the network parameters of the wired network connection
WIRELESS INFO – Displays the name (SSID) of the wifi network generated by the device
DEVICED INFO – Shows product version information
GRAPH – Shows data traffic in real time.

Configuration menu

The menu button at the top right opens the menu bar with the following items



STATUS – This is the initial status page just seen in the previous chapter

WIZARD – Activates the wizards to change the operating mode that are described below.

NETWORK – View and change network settings

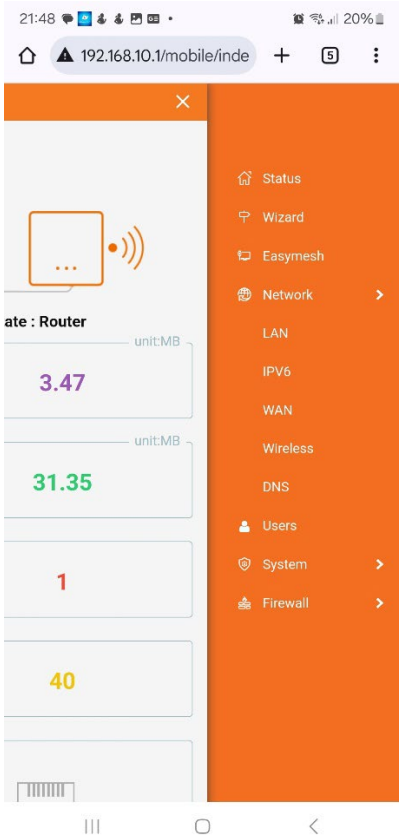
USERS – Change device access passwords

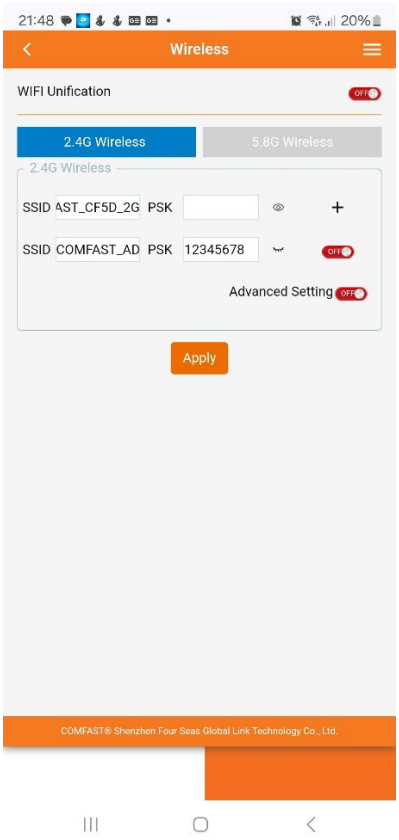
SYSTEM – Allows maintenance operations

Change WiFi settings

By default, the AP generates one or more WiFi networks with a standard name (SSID) and without a password.

You can change the parameters in the NETWORK / WIRELESS settings section





Here you can set the name of the wifi networks generated by the AP and their access password.

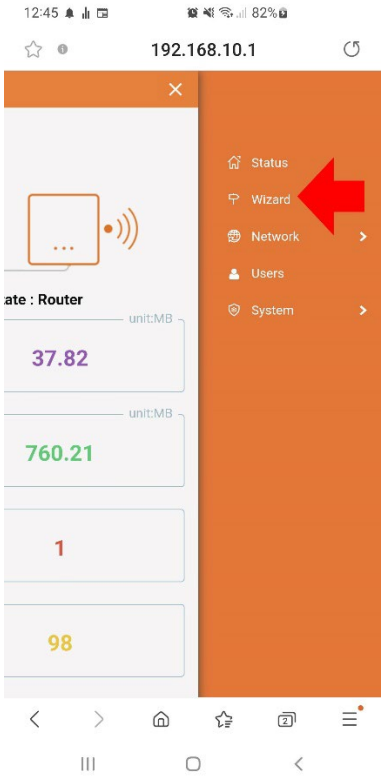
The button**WiFi Unification**allows you to generate a single wifi network, instead of different networks for 2.4 and 5GHz, where the frequency will be automatically set and optimized based on the device that connects.

The**+ button**allows you to create new wifi networks with different passwords and names

The button**Advanced Settings**opens the possibility of intervening in all the technical parameters of the wifi network and it is normally convenient not to change these parameters.

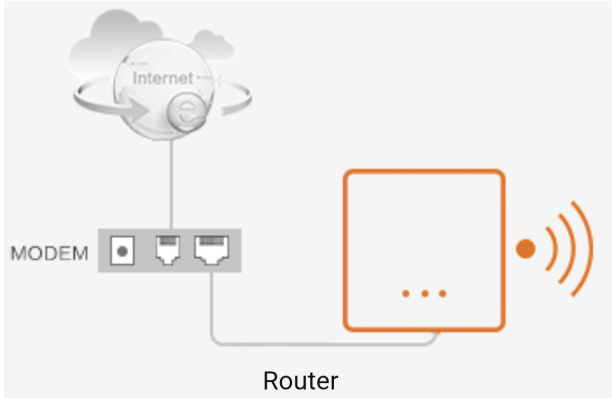
Operating modes

With the WIZARD button you can start the wizard to change the mode
operation of the device. This operation changes the factory operation of the
device and for this reason it is never recommended to perform it unless you are fully aware of the facts.



There are 4 operating modes available: ROUTER, BRIDGE, AP, REPEATER
By default, the APs are set to ROUTER mode, which offers the greatest safety in use.
as a hot spot and it is advisable not to modify.

ROUTER MODE



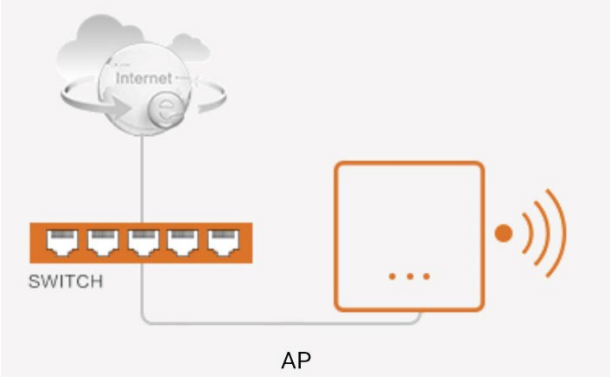
This is the factory mode. In this mode the device**connects to a wired network (port**

WAN) and creates its own local wifi network with IP addresses of a different class than to the main network. By default, in its internal network, the AP will assume the address 192.168.10.1 and will assign DHCP addresses with this class (192.168.10.xxx) to devices that connect to its WiFi network or to its LAN network port. If you connect with your mobile phone to the AP wifi network you can check the IP address assigned to you directly from your phone, as in the pictures below. Your phone will have an address like 192.168.10.xxx, different from the main wired network, but will still communicate to the internet because the AP acts as from router to upstream network.

The router mode wizard allows you to configure:
1 – The network setting of the AP in the main wired network on the WAN port (IP supported fixed or DHCP or PPPoE). It is advisable to leave the automatic factory setting DHCP in so that the AP receives an automatic IP from the router.
2 – The network setting of the AP in its local network (WiFi and LAN port). The setting of factory default is 192.168.10.1 and it is recommended not to change it unless absolutely necessary.
3 – Setting up the wifi network generated by the AP by customizing the name (SSID) and the password, if any.

Once the router mode is saved, you can access the AP configuration by connecting to the AP and recalling its internal network address, the factory default 192.168.10.1

AP MODE



In this mode the device**connects to a wired network (WAN port) and creates a own local wifi network with the same IP address class as the main network**. In In this mode, the IP addresses of the devices connecting to the AP will be assigned in DHCP from the upstream router and not from the AP. In this mode, you should assign the AP an address Valid fixed IP on the main network (WAN) by checking the class that the router network uses and that the IP is available.

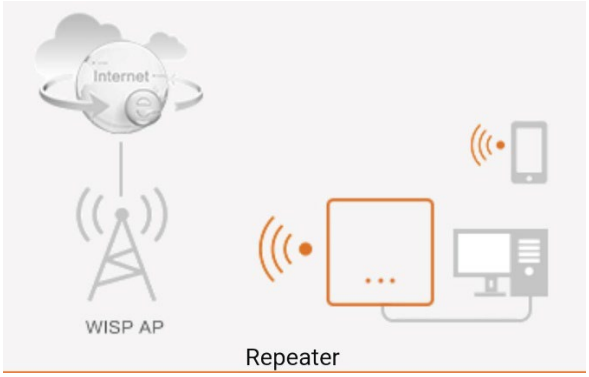
In the wizard you can set:

1 - the fixed IP of the device in the wired network connected to the WAN port (DHCP not supported in this mode). It is advisable to assign a valid IP address in the main network by checking before it is free. If you keep the factory IP, 192.168.10.1, the AP will work the same same, but you won't be able to easily access its configuration.

2 - Setting up the wifi network generated by the AP by customizing the name (SSID) and any password.

Once the AP mode is saved you can access the AP configuration by typing in the browser the fixed IP address you assigned during setup.

REPEATER MODE



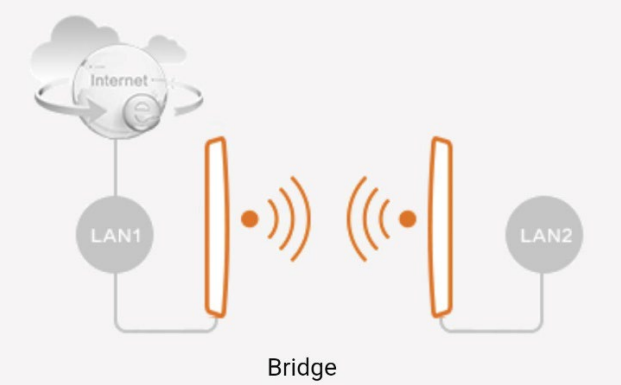
Choose this mode if you want to extend the range of a WiFi network.

In this mode the device**connects to a WiFi network and creates its own WiFi network**

with IP addresses of a different class than the main network. From the factory the AP will have address 192.168.10.1 and will assign DHCP addresses with this class 192.168.10...X to devices that connect.
Normally when the device is used as a repeater it will not have a wired connection to the network and will only be powered by the included POE injector on the LAN or WAN port.
The wizard allows you to
1 – Configure the IP of the device that will be used for the repeater's wifi network (factory default) 192.168.10.1). Do not set a network segment address of the main WiFi network, the wifi network created by the repeater must be different. It is advisable to keep the default.
2 – Search and connect to the main incoming WiFi network
3 - Set the parameters of the WiFi network generated by the repeater by customizing the name (SSID) and the password, if applicable.

Once you save the REPEATER mode, you will be able to access the AP configuration by connecting to the AP and calling its internal network address, the factory default 192.168.10.1

BRIDGE MODE



Bridge

Choose this mode if you want to create a wifi bridge to connect two networks together. From From an addressing point of view, a bridge behaves like a network cable, but with a transmitter and a receiver instead of a cable. This is an application that is used for example if you need to connect a wired IP camera to a wifi network by interposing a wifi bridge.
To make this configuration you need 2 APs, as in the drawing above.
The AP connected to the LAN1 network is the transmitter and must be set to AP mode, while The second AP, connected to LAN2, is the receiver and is set to BRIDGE mode.
In bridge mode the device**connects to a main wifi network and creates its own WiFi and wired network with the same IP address class as the WiFi network**main. In this mode the IP addresses of the connecting devices will be assigned by the upstream router

and not from the AP.

All devices that connect to the bridge, whether via WiFi or the LAN network port, will have an address assigned by the upstream router as the transmitting device in mode AP that the receiving device in BRIDGE mode will not intervene in the assignment of the addresses.

Bridge mode can only work with APs equipped with Qualcomm chipsets and It does not work with different chips. For this reason it is not recommended to use bridge mode having a different device as a transmitter, such as a router for example, because it might not work.

If you create a wifi bridge you will first have to configure the element in AP mode, following the instructions seen above for this mode, and then the element in Bridge mode.

In this wizard you can:

1 – Set the address and subnet mask of the AP in the incoming WiFi network (DHCP not supported in this mode). It is advisable to assign a valid IP address in the main network checking first that it is free, this way you can easily access the configuration.

Obviously do not assign the same IP that you assigned to the other device in AP mode which makes up the bridge.

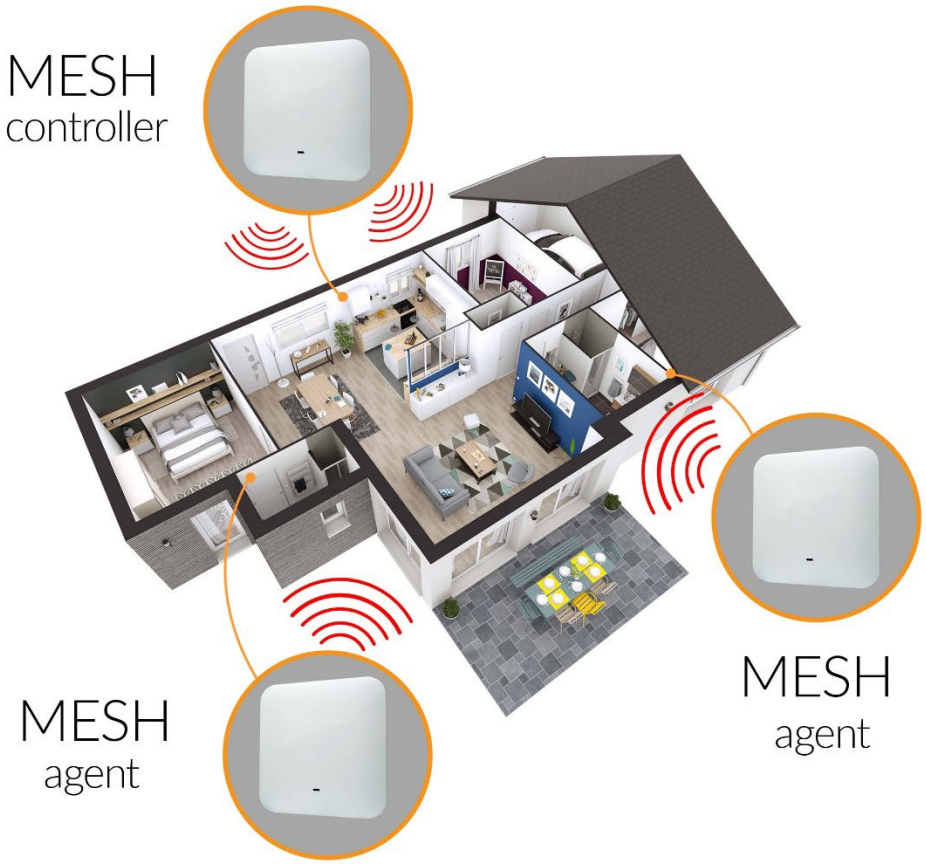
2 - Search and connect to the upstream wifi network. Select the network of the other device, in AP mode, and enter the access password you had set in its configuration.

3 - Set up the wifi network generated by the bridge device by customizing the name (SSID) and the password, if any.

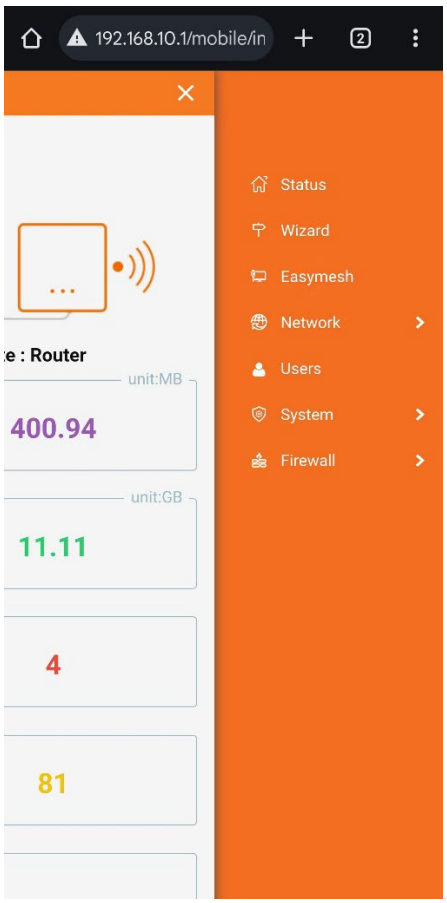
Once the BRIDGE mode is saved you will be able to access the AP element configuration and of the Bridge element by typing in the browser the fixed IP addresses that you assigned to them during the configuration.

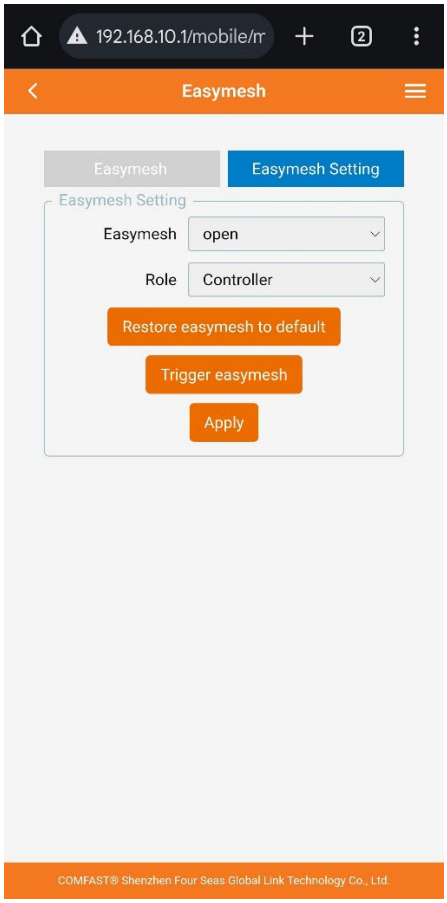
Easymesh

Some APs support the easymesh function which allows you to install multiple APs, connected each other in wifi, to cover a large property. One of the APs takes on the role of controller and It is connected to the network with the wired port. The other APs are configured as satellites (mesh agents) and they only require power because they connect to the controller normally via WiFi.
Although it is made up of several APs, the mesh network has only one name (SSID) and you can move from one AP to another without ever losing connection.



To create a mesh network, you first need to set up the AP connected to the wired network, which will act as a Controller. After connecting it to the network, access the configuration and optionally customize the name and password of the wifi network he generated, as seen in precedence. Keep the factory ROUTER mode. Enable Easymesh, by selecting the Role of Controller. Confirm by pressing apply.





After installing the AP controller, connect the first satellite access point of the mesh network to the its power supply, connect to its wifi network and access the configuration. Enable the function Easymesh , but this time selecting role Agent and press APPLY.

You are now ready to pair the mesh controller to the mesh agent. It is a good idea to do this operation with the two devices nearby and using two mobile devices to be able to access simultaneously with the mesh configuration of the 2 APs.

To pair the two mesh nodes, press the TRIGGER EASYMESH button on both devices.

Pairing is automatic and takes about 2 minutes.

After pairing is complete, the AP agent will stop generating its own wifi network and will replicate the AP controller network keeping the same name and password.

If you access the Easymesh page of the controller (192.168.10.1) you will see the composition of the your network. In this example there is the controller, 2 agents and 2 mobile clients, which are connected to the AP controller.

If you have done something wrong and you see that your mesh wifi network is not working well you can press the RESTORE EASYMESH TO DEFAULT button, which deletes all created associations, then you will reset the AP agent with the reset button and you will be able to redo the pairing.