

IPLoA-MESH-AG-W

User Guide



DKT COMEGA

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Introduction

IPLoA-MESH-AC-W, it is one product of the DKT HomeMesh family. It works in bridge mode. After connection to the 3rd residential gateway, it can establish a new home Wi-Fi network. In order to do so you need to first setup the SSID and password via web browser. Additional devices can be added to the network easily, by connecting the Ethernet cable or press the pairing button. Within the home network, the user can utilize the Wi-Fi service offering high throughput, stable- and seamless roaming between rooms.

Hardware specification

IPLoA-MESH-AC-W

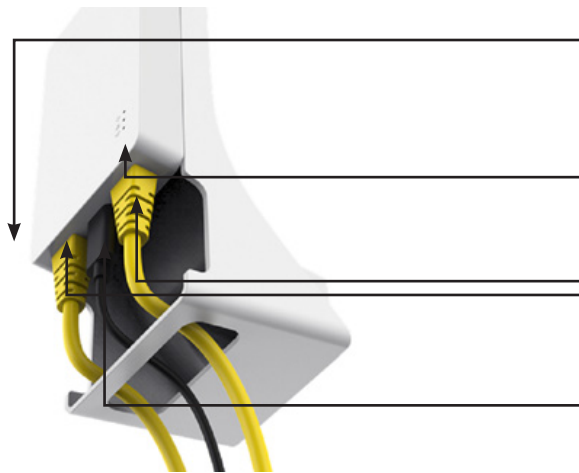
- 1 x USB type c, for 5V/2A DC in
- 2 x Gigabit Ethernet interface
- 3 x LEDs, POWER/LAN/Wi-Fi
- 1 x pairing button
- 2x2 2.4GHz 802.11b/g/n
- 2x2 5GHz 802.11a/n/ac
- Dual band internal antennas
- Desktop/wall mounting



Software feature

Subset	Feature
Ethernet	
	GE interface
	MDI/MDIX auto-sensing
Wi-Fi	
	2x2 2.4GHz 802.11b/g/n, 256QAM, up to 400Mbps
	2x2 5GHz 802.11a/n/ac, up to 867Mbps
	802.11ac MU-MIMO
	802.11k/v/r
	Single AP band steering
	Multi-AP coordinated steering
	After boot up, auto-channel selecting
	Video over wireless
	WPS
	Beamforming
Multi-Country code	
Network	
	Cooperate with existing home gateway
	All the devices work in L2 forwarding mode
	Central AP auto selection
	Guide SSID/web for initialize the central AP
	Setup the SSID/password of the home network via guide web
	Build home network via Wi-Fi interconnect
Auto-sync configuration from central AP to other devices	
LED	
	Power status LED
	LAN status LED
	Wi-Fi status LED
Upgrade	
	Local debugging upgrade for each device
Misc	
	Dual image
	SNTP client
	Factory reset by pressing button
App	
	Android
	iOS
	Display network topology
	Display devices in the home network
	Display clients in the home network
Update SSID/password of home network	

Interface



Pairing button:

- Pairing/Reset

LED:

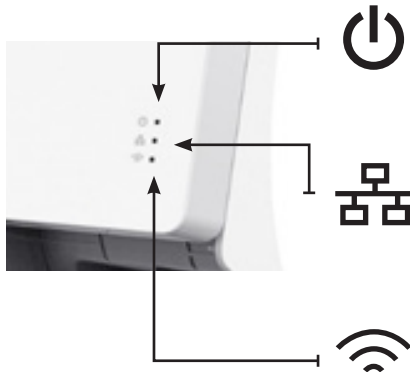
- Power
- LAN
- Wi-Fi

RJ 45 Connector x2:

- Input/Output for Ethernet signal (LAN)

DC Connector:

- Input 5V DC, 2A, USB-C



Label:	LED:	Indication:
Power	Off	Power off
	Green	Power on
	Amber blinking (50% on/off)	Processing Wi-Fi WPS pairing
LAN	Green off	No Ethernet link
	Green on	Ethernet is linked up at any port
	Green Slow blinking (95% on/5% off)	Ethernet linked up and activated as uplink
Wi-Fi	Amber On	Guide SSID enabled
	Green on	Home network SSID enabled
	Green Slow blinking (95% on/5% off)	Wi-Fi linked up

Pairing button

- Pressing the button more than 1s, less than 10 seconds (Amber Power LED starts blinking (50% on/off), then release it: Starts the Wi-Fi WPS pairing procedure and opens the configuration period.
- Pressing the button more than 10 seconds, All LEDs are ON, and then release it: Performs a factory reset.

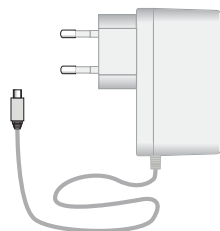
*Applicable if mesh via Wi-Fi is used

Pairing button



Power Supply

- Input 100-240VAC, 0,2A max
- Output 5VDC, 2A
- USB-C connector



Mounting

IPLoA-MESH-AC-W supports desktop mounting and wall mounting.

If you want to use the desktop mounting, please route all the Ethernet/power cables go through the backside hole of the bracket..



Desktop mounting



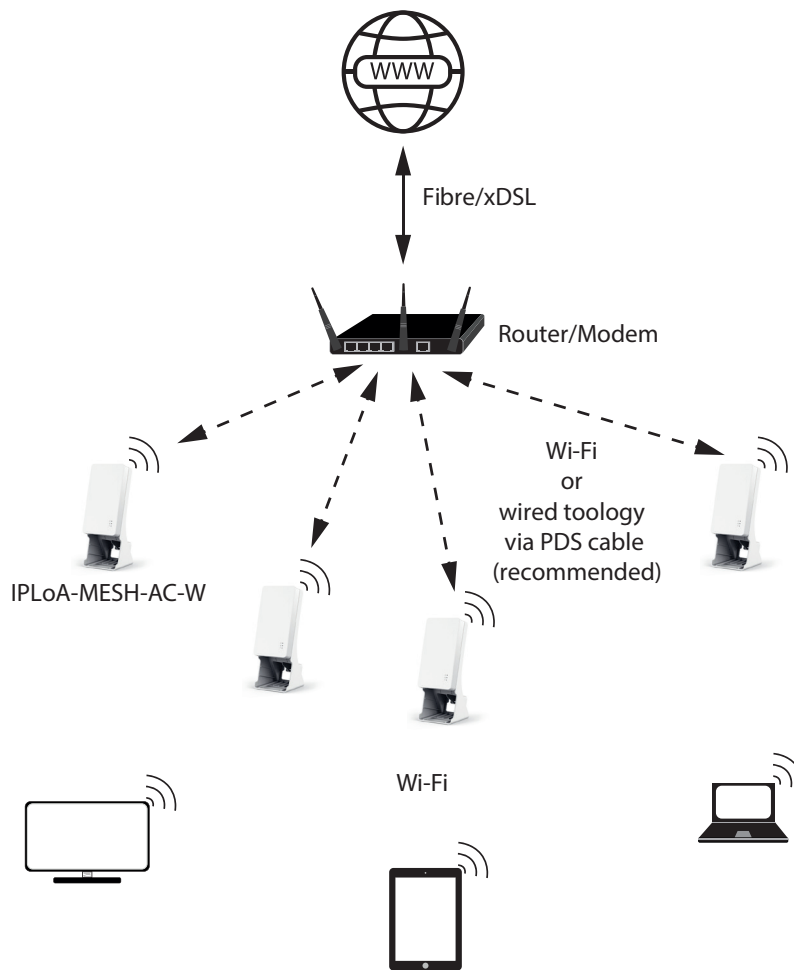
Wall mounting

If wall mounting is required then please install two screws on the wall horizontally, distance is 22mm and attach the device onto the screws. Make sure that all the Ethernet/power cables go through the bottom hole of the bracket.



Installation of the HomeMesh Network

The current IPLoA-MESH-AC-W can support the following topology:



One IPLoA-MESH-AC-W is connected to the 3rd party gateway via Ethernet cable and acts as the HomeMesh controller. Additional IPLoA-MESH-AC-Ws can be connected to the central IPLoA-MESH-AC-W via Wi-Fi or via the PDS.

All of these IPLoA-MESH-AC-W build the HomeMesh Wi-Fi network and they share the same SSID and password.

The Wi-Fi devices can join the Wi-Fi network, connect to any of the IPLoA-MESH-AC-W and roaming seamlessly among them.

The first installation guide explains, how to make the Home Mesh network via PDS, highly recommended.

The second installation guide explains, how to make the Home Mesh network via Wi-Fi.
Note: For optimized client performance on 5GHz it is recommended to establish mesh via PDS

Mesh installation via PDS cable, recommended

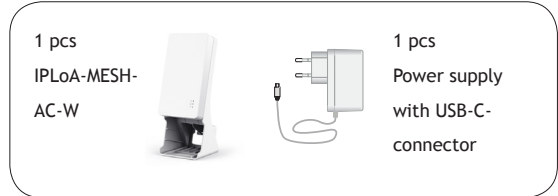
To achieve the best performance, you use a wired infrastructure as backbone such as:

- Power grid (Power Line Communication, PLC)(not applicable to IPLoA-MESH-AC-W model)
- PDS cabling (RJ-45)
- Coax/MoCA (used for Cable-TV or broadband services) (not applicable to IPLoA-MESH-AC-W model)

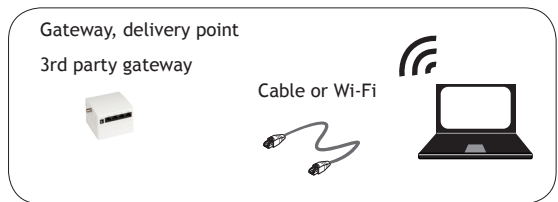
In this guide we use Ethernet cable between the router and all the IPLoA-MESH-AC-W units.

Step 1: Install the first IPLoA-MESH-AC-W

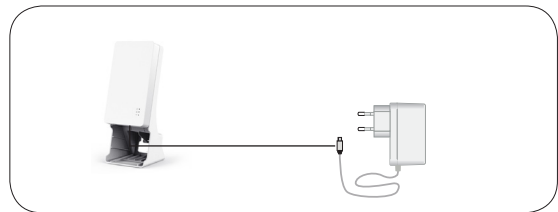
The following items should be found in your package:



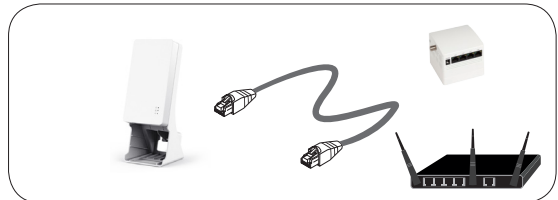
Check that the 3rd party gateway works normally and you are able to connect to it.



Plug in the supplied mains adapter to IPLoA-MESH-AC-W



Plug in IPLoA-MESH-AC-W to the existing ADSL / Broadband Gateway or your home Router with an Ethernet cable in LAN socket.

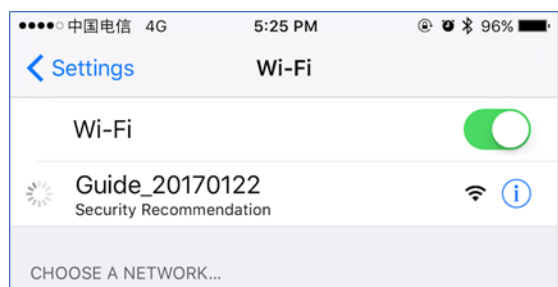


If the IPLoA-MESH-AC-W can access 3rd party gateway or your Router then the LAN LED will be Green slow blinking (95% on/5% off).

The Wi-Fi LED should be Amber. That means the Guide SSID is enabled.

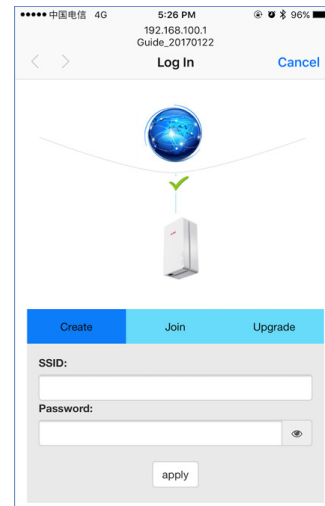


You can now scan and connect to the Guide SSID, the default Guide SSID is printed on the label of each IPLoA-MESH-AC-W.



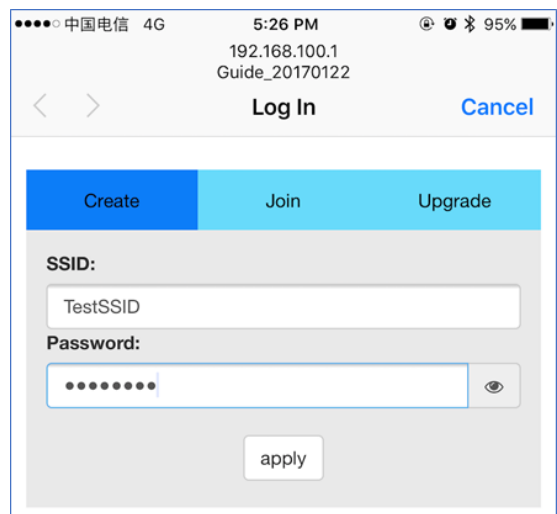
After connected to the IPLoA-MESH-AC-W, your computer or smartphone will pop up a new browser window. It is the web guide for Wi-Fi configuration.

If there is no pop-up window then please open your web browser and try to visit any website, you will get the web guide.

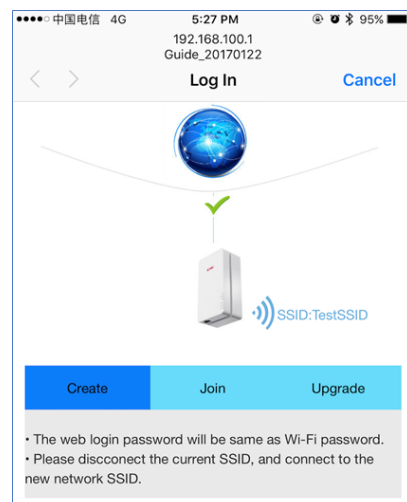


Please select 'Create new home network' to setup Wi-Fi SSID and password.

If you already have a Wi-Fi router in your home installation, it is recommended that you use an alternative SSID/Password for the new home mesh network.

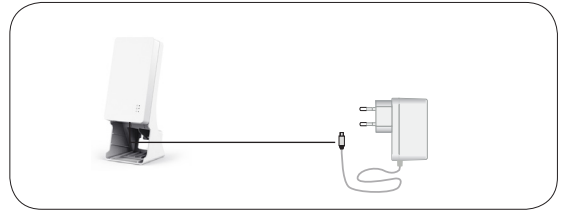


After that, please follow the instructions on the login screen.



Step 2: Add the second IPLoA-MESH-AC-W

Plug in the supplied mains adapter to the second IPLoA-MESH-AC-W



Plug in IPLoA-MESH-AC-W to the existing ADSL / Broadband Gateway or your home Router with an Ethernet cable in LAN socket.



If the IPLoA-MESH-AC-W can access 3rd party gateway or your home router then the LAN LED will be Green slow blinking (95% on/5% off).

The Wi-Fi LED should be Amber. That means the Guide SSID is enabled.

The unit will automatically receive SSID from the first unit



Step 3: Add the more IPLoA-MESH-AC-W

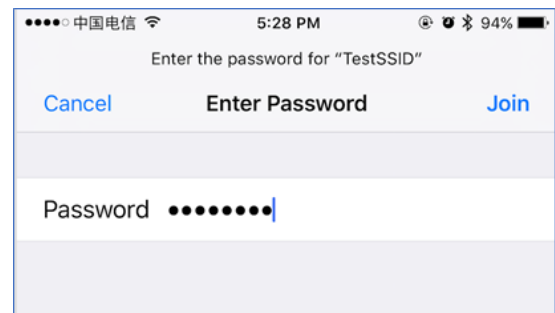
Please repeat Step 2 to add more IPLoA-MESH-AC-W.

Step 4: Scan and join the Wi-Fi network

Use your laptop or smartphone to scan available Wi-Fi networks.

Select the HomeMesh Wi-Fi network and input password.

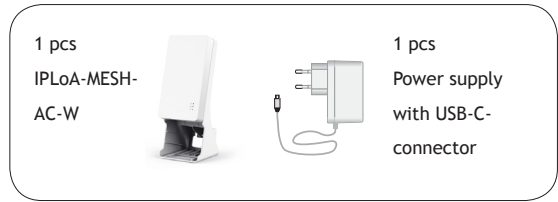
You will connect to the Wi-Fi network.



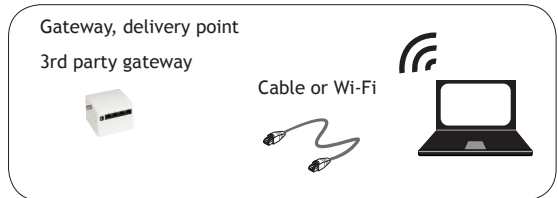
Mesh installation via Wi-Fi

Step 1: Install the first IPLoA-MESH-AC-W

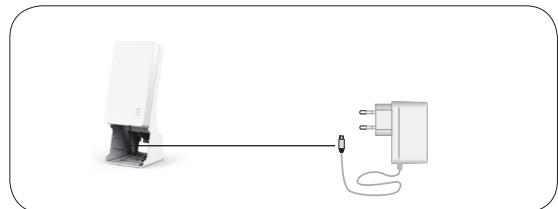
The following items should be found in your package:



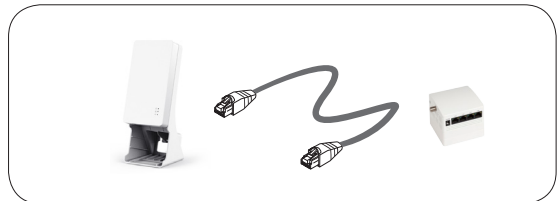
Check that the 3rd party gateway works normally and you are able to connect to it.



Plug in the supplied mains adapter to IPLoA-MESH-AC-W



Plug in IPLoA-MESH-AC-W to the existing ADSL / Broadband Gateway with an Ethernet cable in LAN socket.

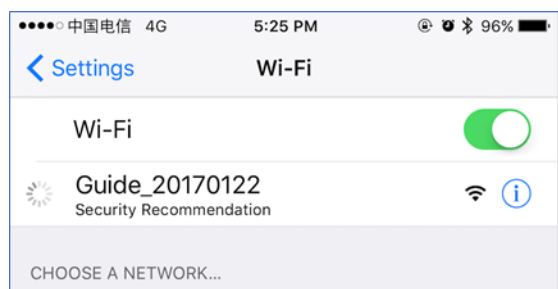


If the IPLoA-MESH-AC-W can access 3rd party gateway then the LAN LED will be Green slow blinking (95% on/5% off).

The Wi-Fi LED should be Amber. That means the Guide SSID is enabled.

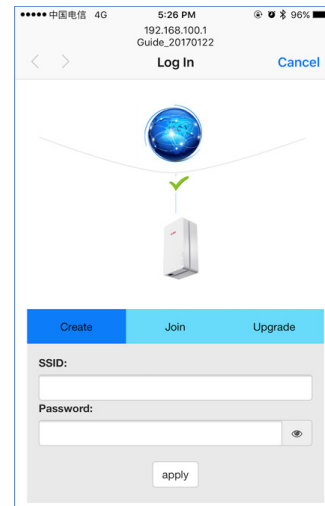


You can now scan and connect to the Guide SSID, the default Guide SSID is printed on the label of each IPLoA-MESH-AC-W.

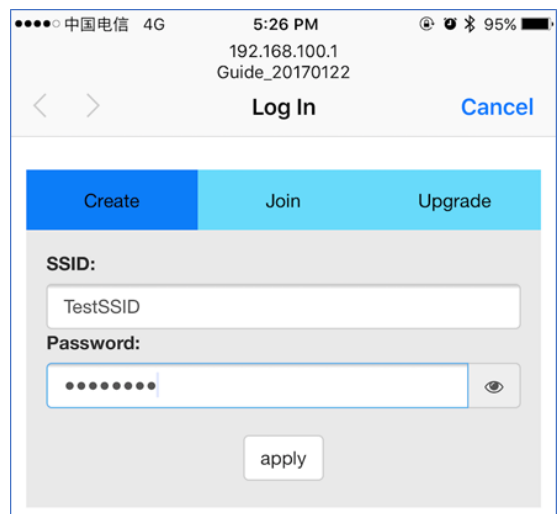


After connected to the IPLoA-MESH-AC-W, your computer or smartphone will pop up a new browser window. It is the web guide for Wi-Fi configuration.

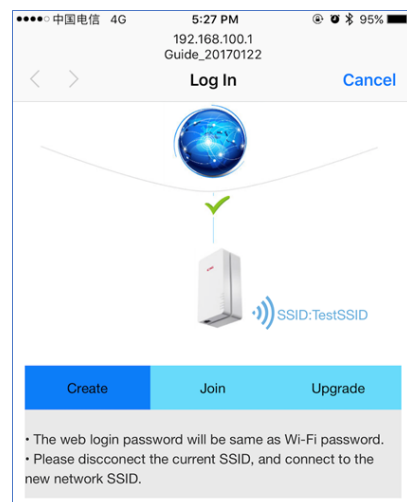
If there is no pop-up window then please open your web browser and try to visit any website, you will get the web guide.



Please select 'Create new home network' to setup Wi-Fi SSID and password.

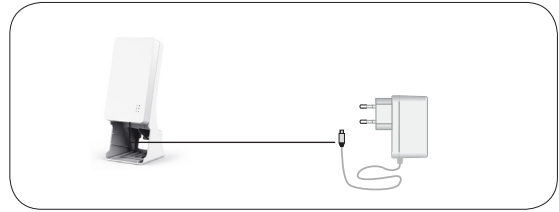


After that, please follow the instructions on the login screen.



Step 2: Add the second IPLoA-MESH-AC-W

Plug in the supplied mains adapter to the second IPLoA-MESH-AC-W



After you can see the Amber Wi-Fi LED, press the pairing button more than 1 second and less than 10 seconds.



At the same time, press the pairing button of the first IPLoA-MESH-AC-W.

Second IPLoA-MESH-AC-W pairing button

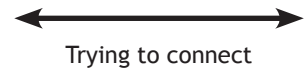
First IPLoA-MESH-AC-W pairing button

The second IPLoA-MESH-AC-W will try to connect to the first IPLoA-MESH-AC-W, and the power LED will be Amber blinking (50% on/off).



If the connection is completely set up then the Wi-Fi LED will be Green slow blinking (95% on/5% off).

The addition is successful.



Connection established

Step 3: Add the more IPLoA-MESH-AC-W

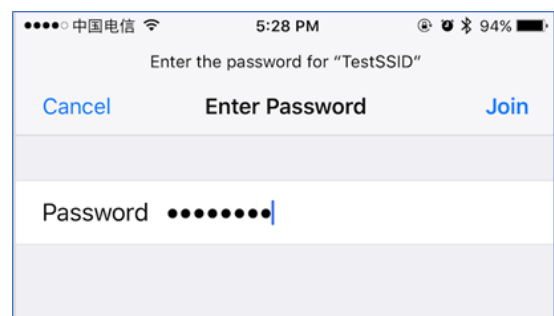
Please repeat Step 2 to add more IPLoA-MESH-AC-W.

Step 4: Scan and join the Wi-Fi network

Use your laptop or smartphone to scan available Wi-Fi networks.

Select the HomeMesh Wi-Fi network and input password.

You will connect to the Wi-Fi network.



Trouble shooting

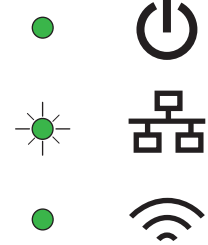
If you find your Wi-Fi network works abnormally. Please do the following check.

Step 1:

Check the status of central IPLoA-MESH-AC-W

The normal LED behavior should be:

- Power LED: Green on
- LAN LED: Green slow blinking (95% on/5% off)
- Wi-Fi LED: Green on



If Power LED is off then the hardware is broken, please use one of the other IPLoA-MESH-AC-W as the central controller, connect it to 3rd party gateway via Ethernet cable.

If LAN LED is not correct then please check the 3rd party gateway and the Ethernet cable.

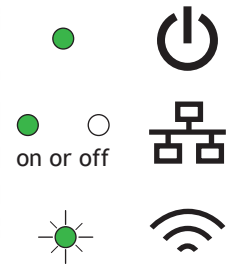
If Wi-Fi LED is not correct then please press the pairing button more 10s to do factory reset and after the device boot up, re-initialize the whole network.

Step 2:

Check the status of other IPLoA-MESH-AC-W

The normal LED behavior should be:

- Power LED: Green on
- LAN LED: Green on (Ethernet port connect to some device, such as a PC), or Off (no Ethernet link)
- Wi-Fi LED: Green slow blinking (95% on/5% off)



If Power LED is off then the hardware is broken. Please replace the hardware and do pairing with central IPLoA-MESH-AC-W again.

If Wi-Fi LED is not correct then please press the pairing button more 1s to do pairing with central IPLoA-MESH-AC-W again.