deco 5G

Deco X50-5G

Superior Mesh Wi-Fi, Everywhere

5G Wi-Fi 6

works with Google Home

Compatible with amazon alexa

HomeShield

User Guide

5G AX3000 Whole Home Mesh Wi-Fi 6 Gateway



tp-link

1910013460 REV1.0.0 © 2023 TP-Link

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About This Guide

This guide provides a brief introduction to 5G AX3000 Whole Home Mesh Wi-Fi 6 Gateway and regulatory information.
Features available in Deco may vary by model and software version. Deco availability may also vary by region or ISP. All images, steps, and descriptions in this guide are only examples and may not reflect your actual Deco experience.

Conventions

In this guide, the following conventions are used:

Convention	Description
Deco	Stands for Deco Whole Home Mesh Wi-Fi System/ Unit.
Underline	Hyperlinks are in teal and underlined. You can click to redirect to a website or a specific section.
Teal	Key information appears in teal, including management page text such as menus, items, buttons and so on.
Note:	Ignoring this type of note might result in a malfunction or damage to the device.
Tips:	Indicates important information that helps you make better use of your device.

More Info

- Specific product information can be found on the product page at https://www.tp-link.com.
- A Technical Community is provided for you to discuss our products at https://community.tp-link.com.
- Our Technical Support contact information can be found at the Help center of the Deco app and the Contact Technical Support page at https://www.tp-link.com/support.

5G Speed Disclaimer

Maximum 5G download and upload speeds depend on external factors such as the local 5G network coverage, data plan, real-time network capacity, client limitations, and environmental factors.

5G Band Disclaimer

Supported 5G frequency bands: n1/n3/n5/n7/n8/n20/n28/n38/n40/n41/ n75/n76/n77/n78. Actual supported frequency bands may vary slightly in different regions due to certifications.

Speed/Coverage/Device Quantity Disclaimer

Maximum wireless signal rates are the physical rates derived from IEEE Standard 802.11 specifications. Actual wireless data throughput and wireless coverage, and quantity of connected devices are not guaranteed and will vary as a result of network conditions, client limitations, and environmental factors, including building materials, obstacles, volume and density of traffic, and client location.

Wi-Fi 6 Disclaimer

Use of Wi-Fi 6 and other features including OFDMA, MU-MIMO, 1024-QAM, and BSS Color require clients to support the corresponding features.

Seamless Roaming Disclaimer

Clients need to support 802.11k/v/r and may require additional set up. Performance may vary depending on the client device.

WPA3 Disclaimer

Use of WPA3 encryption requires clients to also support the corresponding feature.

HomeShield Disclaimer

HomeShield includes the Free Basic Plan. Fees apply for the Pro Plan. Visit https://www.tp-link.com/homeshield/ for more information.

Appearance

Each Deco has an LED that changes color according to its status, three RJ-45 Ethernet ports, two external antenna ports, a SIM card slot, a power slot, and a Reset button.

Tip: The product label can be found at the bottom of the product.

Pulse Yellow:
Deco is resetting.

Solid Yellow:
Deco is starting up.

Pulse Blue:
Deco is ready for setup or WPS in progress.

Solid Blue:
Deco is setting up.

Pulse Green:
Deco is upgrading firmware.

Solid Green:
Deco is all set up and connected to 4G / WAN.

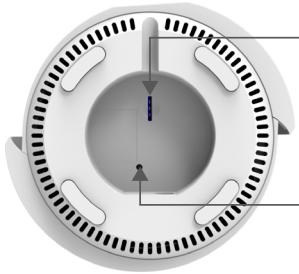
Solid White:
Deco is all set up and connected to 5G.

Pulse Red:
The satellite Deco is disconnected from the main Deco.

Solid Red:
Deco has an issue.







SIM Card Slot:
For inserting a Nano SIM card (not included in the package) to Deco.

Reset Button:
Press for 1 second and release to reset Deco to factory default settings. The light changing from pulsing yellow to solid yellow indicates a successful reset.

5G/4G/3G External SMA-F Antenna Ports:
For connecting external SMA-F antennas (not included in the package) to your Deco.
Note: Make sure you have installed two external antennas to ensure that Deco's 5G network works properly.

1 Gigabit Ethernet Port:
For connecting to your modem, the Ethernet outlet, or for other internet services.
Note: All WAN/LAN ports will operate as either WAN or LAN ports. Only one port can serve as a WAN port at a time.

2.5 Gigabit Ethernet Port:
For connecting to your modem, the Ethernet outlet, or for other internet services.
Note: All WAN/LAN ports will operate as either WAN or LAN ports. Only one port can serve as a WAN port at a time.

Power Slot:
For connecting Deco to the power socket via the provided power adapter.

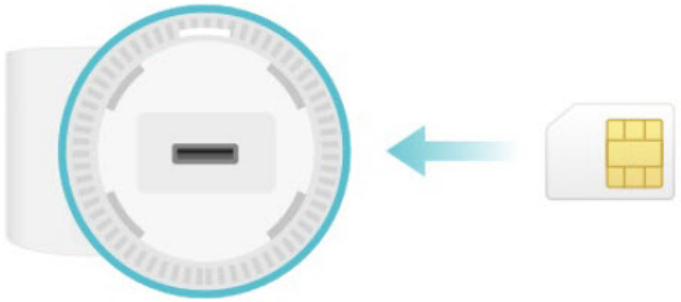
Before You Start

You can set your Deco as a 4G/5G router or a Wi-Fi router to meet the needs of different network scenarios.

4G/5G Router Mode

When working in 4G/5G Router mode, Deco connects to the internet via a SIM card inserted.

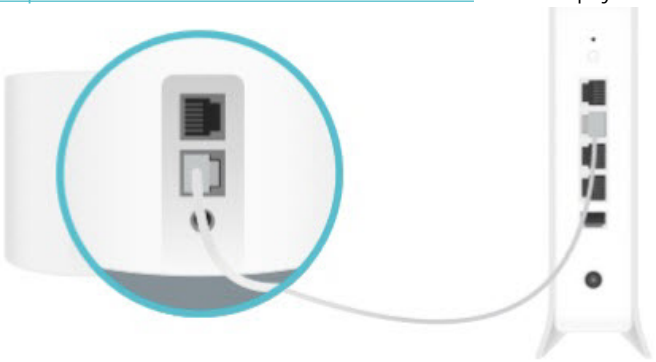
Follow Set Up Your Deco for 4G/5G Router Mode to set up your Deco.



Wi-Fi Router Mode

When working in Wi-Fi Router mode, Deco connects to the internet via an Ethernet cable. If you already have a modem or your internet comes via an Ethernet cable from the wall, you can set the Deco as a regular Wi-Fi router to share the internet.

Follow Set Up Your Deco for Wi-Fi Router Mode to set up your Deco.



Set Up Your Deco for 4G/5G Router Mode

When working in 4G/5G Router mode, Deco connects to the internet via a SIM card inserted. The intuitive Deco app guides you through an easy setup process that gets each unit up and all your devices connected and online.

Follow the steps below to set up your Deco for 4G/5G Router mode.

1. Download and install the Deco app

Scan the QR code below or go to Google Play or the App Store to download the Deco app. Install the app on your Android or iOS smartphone or tablet.

or

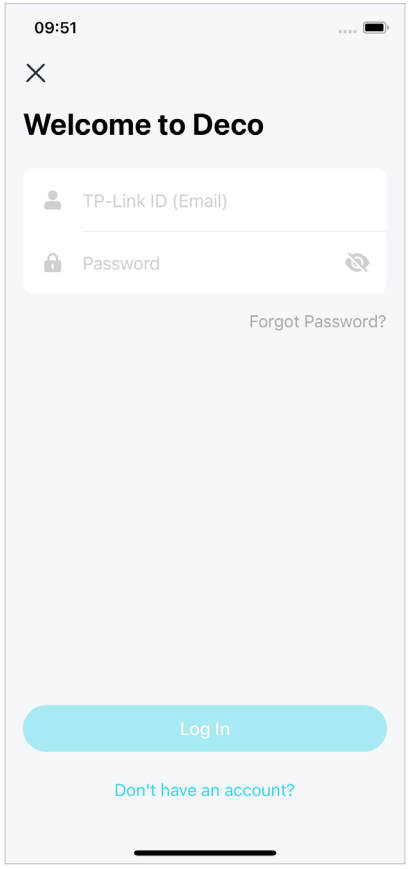
GET IT ON Google Play

Download on the App Store

2. Log in or sign up with TP-Link ID

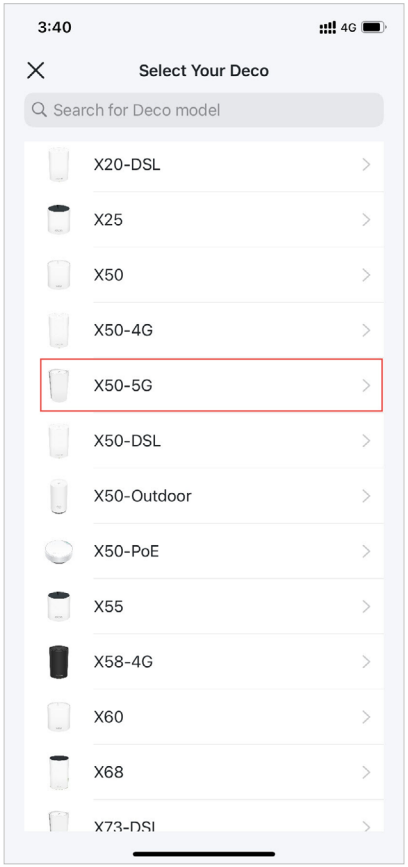
Open the app and log in with your TP-Link ID. If you don't have a TP-Link ID, create one first.

Note: If you forgot your login password, tap Forgot Password?. The app will help you reset your password.



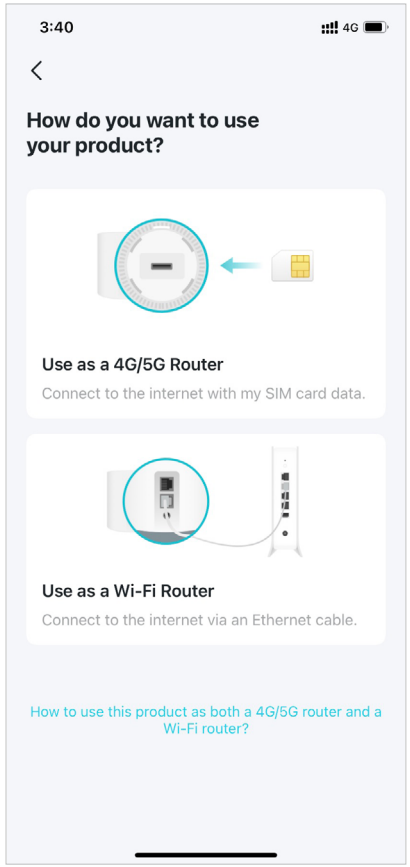
3. Select your Deco model

Search for and select your Deco model. If you have more than one Deco model, tap the question below the search box to check how to maximize the overall network.



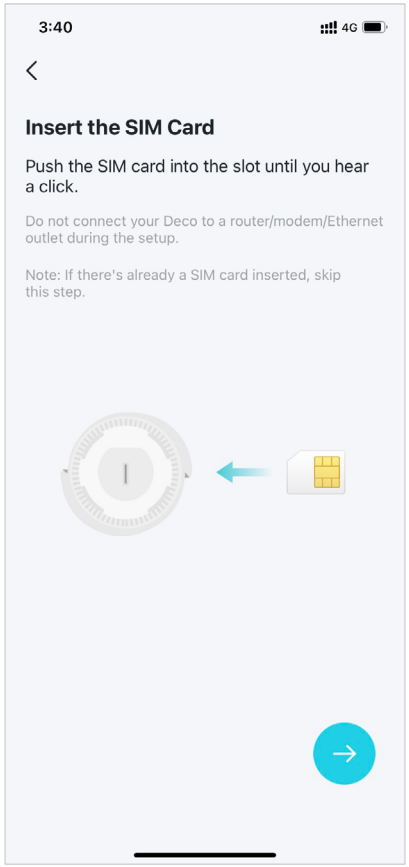
4. Choose an operation mode

Select Use as a 4G/5G Router.



5. Insert the SIM card

Push the SIM card into the slot of Deco.



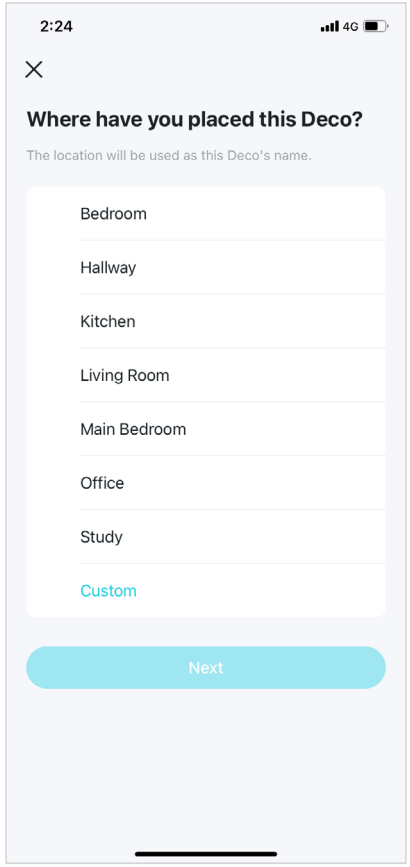
6. Power on Deco

Power on your Deco and wait until the LED pulses blue.



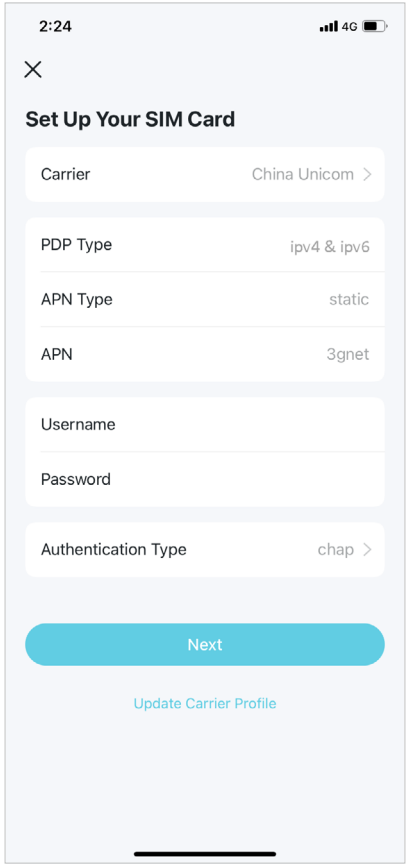
7. Specify your Deco's location

Select or custom a location for your Deco. The location will be used as the name of your Deco.



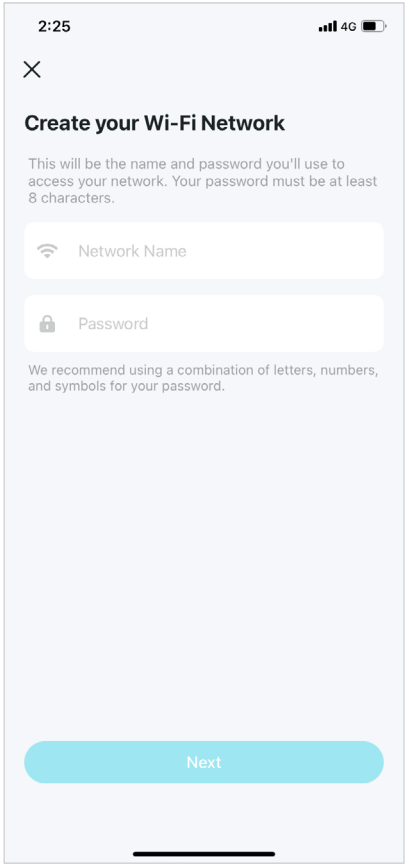
8. Set up your SIM card

Confirm or customize the SIM card information. If you are not sure, contact your ISP.



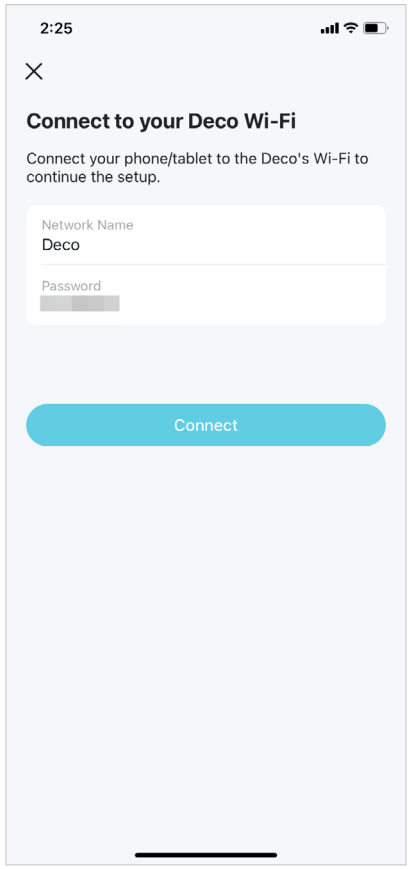
9. Create your Wi-Fi network

Set a network name and a password. These will be the name and password you use to connect your devices to Wi-Fi.



10. Connect to your Wi-Fi network

Connect your smartphone/tablet to the Deco's Wi-Fi.



11. Setup complete

Your Deco network is now up. Connect all devices to the network.



Set Up Your Deco for Wi-Fi Router Mode

When working in Wi-Fi Router mode, Deco connects to the internet via an Ethernet cable. If you already have a modem or your internet comes via an Ethernet cable from the wall, you can set the Deco as a regular wireless router to share the internet.

Follow the steps below to set up your Deco for Wi-Fi Router mode.

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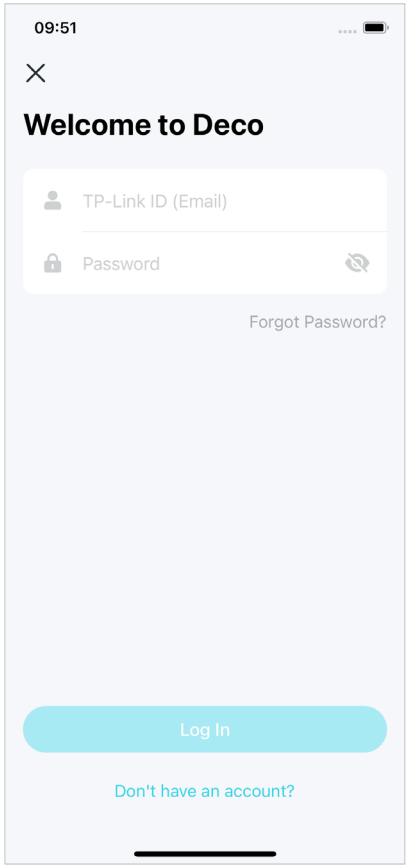
GET IT ON Google Play

Download on the App Store

2. Log in or sign up with TP-Link ID

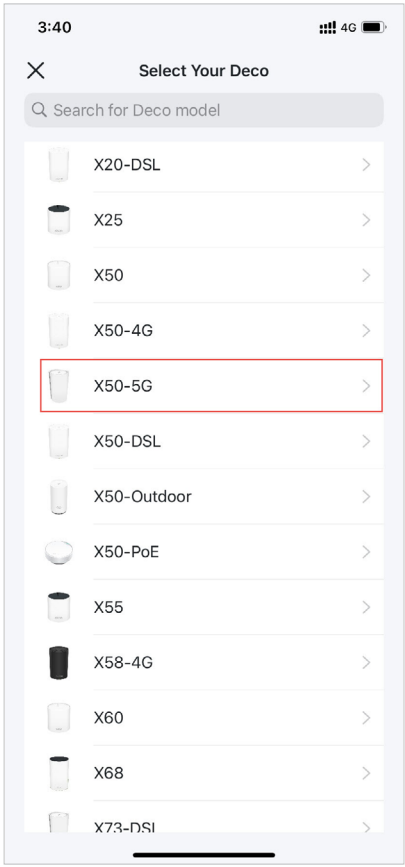
Open the app and log in with your TP-Link ID. If you don't have a TP-Link ID, create one first.

Note: If you forgot your login password, tap Forgot Password?. The app will help you reset your password.



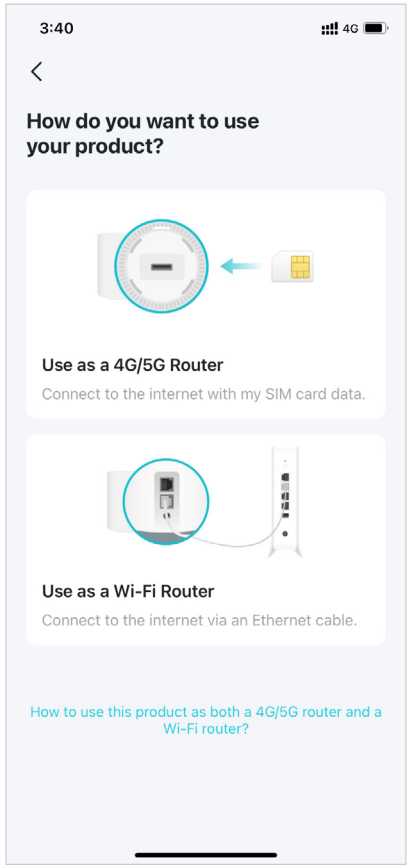
3. Select your Deco model

Search for and select your Deco model. If you have more than one Deco model, tap the question below the search box to check how to maximize the overall network.



4. Choose an operation mode

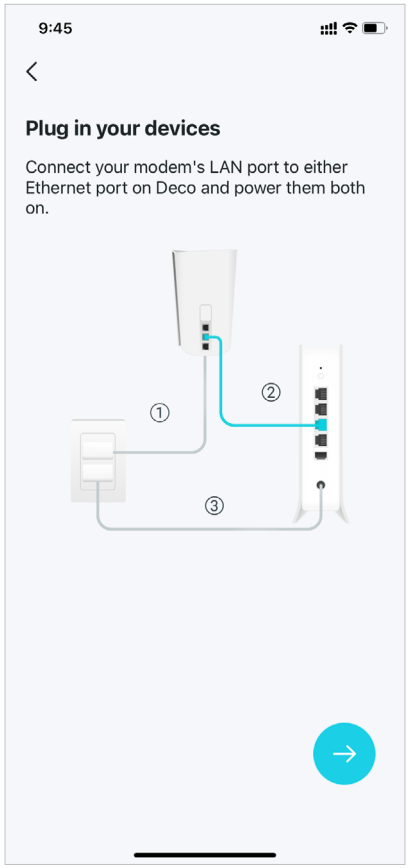
Select Use as a Wi-Fi Router.



5. Plug in and power on Deco

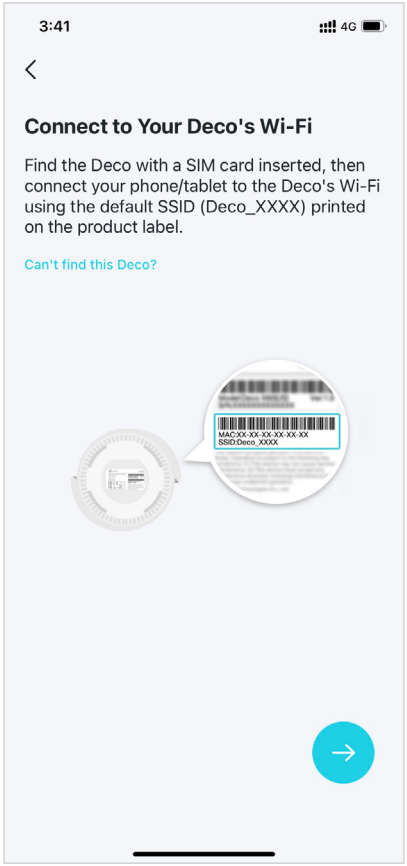
Power off your modem. Connect your Deco to the modem and power them both on.

If you don't have a modem, connect your Deco directly to the Ethernet outlet.



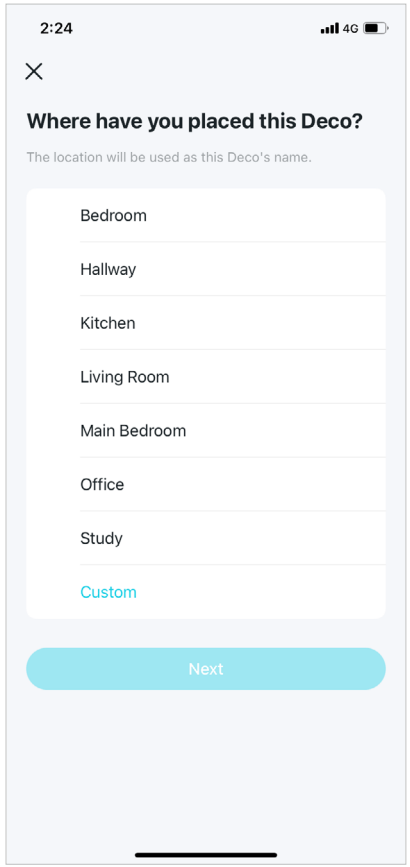
6. Connect to the Deco's Wi-Fi

Connect to the Deco's Wi-Fi using the default SSID printed on the product label.



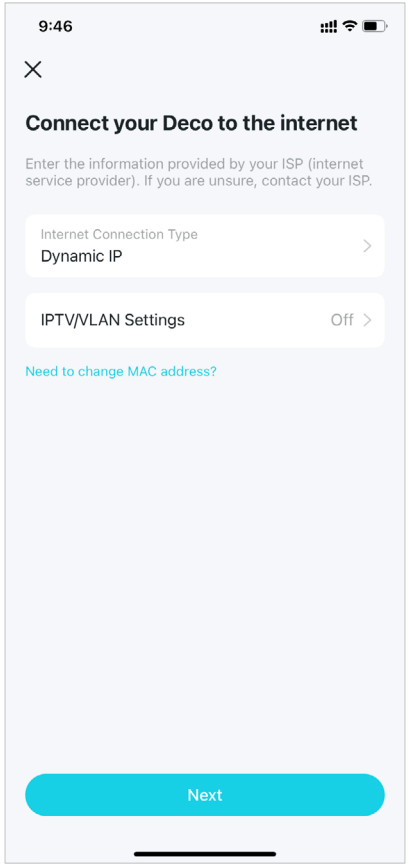
7. Specify your Deco's location

Select or custom a location for your Deco. The location will be used as the name of your Deco.



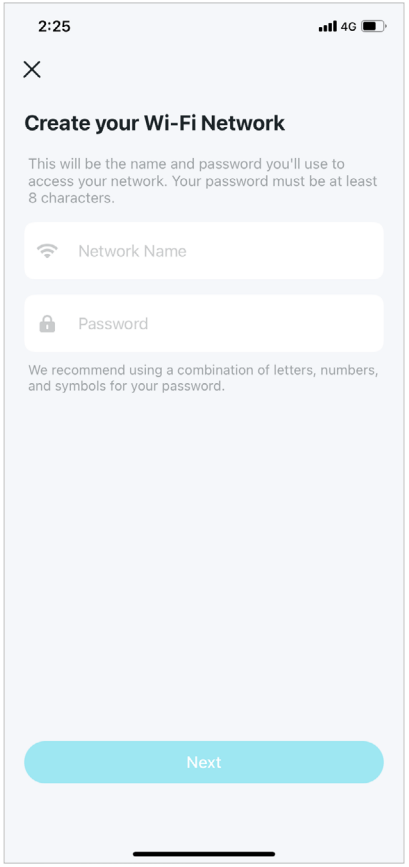
8. Connect your Deco to the internet

Select the internet connection type and enter the information. If you are not sure, contact your internet service provider.



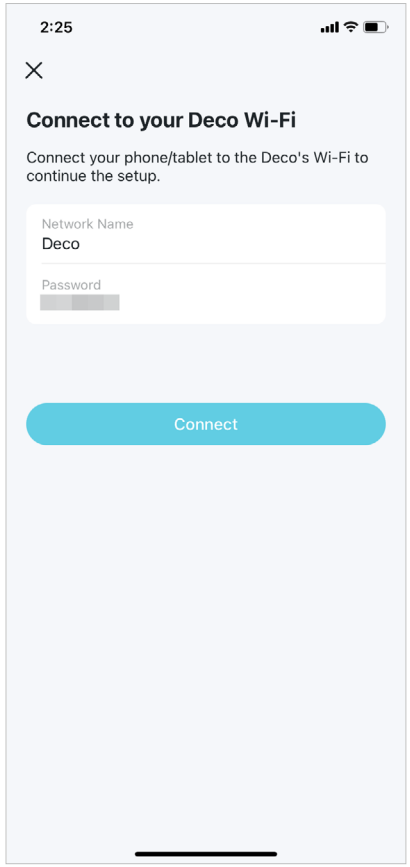
9. Create your Wi-Fi network

Set a network name and a password. These will be the name and password you use to connect your devices to Wi-Fi.



10. Connect to your Wi-Fi network

Connect your phone/tablet to the Deco's Wi-Fi.



11. Setup complete

Your Deco network is now up. You can connect your devices to the Deco network.



Troubleshooting

Solutions to common problems during setup or use are provided here for reference. Follow the steps and the provided link below to diagnose and solve problems you might experience with your Deco.

If problems still exist, contact us: https://www.tp-link.com/support

Q1. What should I do if I fail to connect to the internet over the mobile connection?

- Verify that your SIM card is an NR or LTE card.
- Make sure that the nano SIM card is inserted correctly into Deco and the Deco is operating in 4G/5G Router mode.
- Check with your ISP to ensure that your SIM card is in your ISP's service area.
- Check with your ISP to ensure that your 4G/5G mobile plan is available.
- Move your Deco to a different location such as closer to the window or door to see whether it gets better signal strength.
- Launch the Deco app, go to More > Data Settings to verify if the Total/Monthly Used exceeds the Total/Monthly Data Usage Limit. If it does, set Total/Monthly Data Usage to 0(zero), or disable Total/Monthly Data Usage Limit.
- Launch the Deco app, go to More > Internet to verify Mobile Data is enabled.
- Confirm with your ISP if you are in a roaming service area. If you are, go to Advanced > Internet in the Deco app to verify Data Roaming is enabled.

Q2. What should I do if I fail to configure the satellite Deco and get stuck on "We couldn't find another Deco"?

- For Deco which is operating in 4G/5G Router mode and set as the main Deco, disconnect the Ethernet cable (if any) connected to the front-end router with DHCP Server function from the Deco's Ethernet port and try again. If it doesn't work, try the following guide.
- Refer to the guide https://www.tp-link.com/support/faq/1447/ or video https://youtu.be/iVgDzoo16T4

Q3. What should I do if I fail to configure the main Deco and get stuck on "Testing Internet Connection"?

- Refer to the video https://youtu.be/OSUrGdWH-i0

- Follow Q5 and try again.

Q4. What should I do if my wireless devices cannot connect to Deco?

Refer to https://www.tp-link.com/support/faq/2718/

Q5. What should I do if Deco suddenly lost internet access?

- Visit 192.168.68.1 on a web browser and log in with your TP-Link ID. Tap Internet and check the Internet IP Address.



If the Interent IP address is not 0.0.0.0, try the following methods:

1) Make sure that the SIM card is working stably when it's inserted in your phone at the same place or confirm with your ISP that the SIM is working properly.

2) Launch the Deco app and go to More > Advanced > DHCP Server, change the Primary DNS to 8.8.8.8, and change the Secondary DNS to 8.8.4.4.

If the Internet IP address is 0.0.0.0, try the following methods:

1) Check with your ISP to make sure that your SIM card supports the network type which your Deco supports. Also, make sure the SIM card works properly when it's inserted to your phone.

2) Contact your ISP to get the PIN Code of your SIM card , then go to More > Advanced > PIN Management > PIN Code on the Deco app to fill it in.

3) Launch the Deco app, go to More > Advanced > Internet > Mobile ISP to create a new profile. Contact your ISP for the necessary information.

Q6. How can I find a suitable spot for my Deco?

Refer to https://www.tp-link.com//support/faq/1446/

Q7. What can I do if the Deco app isn't working properly?

Refer to https://www.tp-link.com/support/faq/1456/

Authentication

CE Mark Warning

CE

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

OPERATING FREQUENCY (the maximum transmitted power)

2400~2483.5MHz/20dBm

5150~5250 MHz(Indoor use only)/23dBm

5250~5350 MHz(Indoor use only)/23dBm

WCDMA Band 1,5,8 / 24 dBm + 1/-3 dB

LTE Band 1,3,5,7,8,20,28,40 / 23 dBm ±2 dB

LTE Band 38,41,42,43 / 23 dBm ±2 dB &26dBm±2dB

LTE Band 32

5G n1,3,5,7,8,20,28,40 / 23 dBm ±2 dB

5G n38,41,77,78 / 23 dBm ±2 dB &26dBm±2dB

5G n75, n76

EU Declaration of Conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/53/EU, 2009/125/EC, 2011 /65/EU and (EU) 2015/863.

The original EU Declaration of Conformity may be found at https://www.tp-link.com/en/support/ce/

RF Exposure Information

This device meets the EU requirements (2014/53/EU Article 3.1a) on the limitation of exposure of the general public to electromagnetic fields by way of health protection.

The device complies with RF specifications when the device used at 20 cm from your body.

National restrictions

Frequency band: 5150 - 5250 MHz:

Indoor use: Inside buildings only. Installations and use inside road vehicles and train carriages are not permitted. Limited outdoor use: If used outdoors, equipment shall not be attached to a fixed installation or to the external body of road vehicles, a fixed infrastructure or a fixed outdoor antenna. Use by unmanned aircraft systems (UAS) is limited to within the 5170 - 5250 MHz band.

Frequency band: 5250 - 5350 MHz:

Indoor use: Inside buildings only. Installations and use in road vehicles, trains and aircraft are not permitted. Outdoor use is not permitted.



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)

UKCA Mark

UK
CA

UK Declaration of Conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Radio Equipment Regulations 2017.

The original UK Declaration of Conformity may be found at https://www.tp-link.com/support/ukca/

National restrictions

Attention: This device may only be used indoors in Great Britain.



Antennas

If you want to add the external antennas for used, we suggest that you select the appropriate antenna according to the following parameters.

Electrical Characteristics	
Frequency	700MHz ~ 2690MHz 3300MHz ~ 4200MHz
Connector	SMA
Impedance	50 Ohm
S.W.R.	<=2.0
Antenna Type	Dipole
Antenna Gain	2.4dBi @700MHz ~ 1.0 GHz 3.4dBi @1.0 GHz ~ 2.65 GHz 8.1dBi @3.4GHz ~ 3.8 GHz
Polarization	Linear
Radiation pattern	Omni-Directional

Warning: The antenna must be installed such that 32 cm is maintained between the antenna and users.



Korea Warning Statements:

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice & BSMI Notice:

注意!

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前述合法通信，指依電信管理法規定作業之無線電通信。

低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

應避免影響附近雷達系統之操作。

減少電磁波影響，請妥適使用。

安全諮詢及注意事項

- 請按照本產品注明的電源類型使用本產品。
- 清潔本產品之前請先切斷電源。請勿使用液體、噴霧清潔劑或濕布進行清潔。
- 注意防潮，請勿將水或其他液體潑灑到本產品上。
- 插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。
- 請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。
- 不要私自拆開機殼或自行維修，如產品有故障請與原廠或代理商聯繫。

限用物質含有情況標示聲明書

設備名稱： Equipment name: 5G AX3000 Whole Home Mesh Wi-Fi 6 Gateway	型號（型式）： Type designation (Type) Deco X50-5G

單元 Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛 Lead (Pb)	汞 Mercury (Hg)	鎘 Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
PCB	○	○	○	○	○	○
外殼	○	○	○	○	○	○
電源供應器	—	○	○	○	○	○
其他及其配件	—	○	○	○	○	○

備考1. 超出0.1 wt %” 及 “超出0.01 wt %” 系指限用物質之百分比含量超出百分比含量基準值。

Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2.“○”系指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3.“－”系指該項限用物質為排除項目。

Note 3：The “－” indicates that the restricted substance corresponds to the exemption.

Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

EAC

Safety Information

- Keep the device away from water, fire, humidity or hot environments.

- Do not attempt to disassemble, repair, or modify the device. If you need service, please contact us.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended.
- Do not use the device where wireless devices are not allowed.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
- Operating Temperature: 0°C~40°C (32°F~104°F)
- This product uses radios and other components that emit electromagnetic fields. Electromagnetic fields and magnets may interfere with pacemakers and other implanted medical devices. Always keep the product and its power adapter more than 15 cm (6 inches) away from any pacemakers or other implanted medical devices. If you suspect your product is interfering with your pacemaker or any other implanted medical device, turn off your product and consult your physician for information specific to your medical device.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

Explanation of the symbols on the product label

Symbols may vary from products.

Note: The product label can be found at the bottom of the product and its I.T.E. power supply.

Symbol	Explanation
	Class II equipment
	Class II equipment with functional earthing
	Alternating current
	DC voltage

Symbol	Explanation
	Polarity of output terminals
	Indoor use only
	Dangerous voltage
	Caution, risk of electric shock
	Energy efficiency Marking
	Protective earth
	Earth
	Frame or chassis
	Functional earthing
	Caution, hot surface
	Caution
	Operator’s manual
	Stand-by

Symbol	Explanation
	“ON”/”OFF” (push-push)
	Fuse
	Fuse is used in neutral N
	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.
	Caution, avoid listening at high volume levels for long periods
	Disconnection, all power plugs
m	Switch of mini-gap construction
μ	Switch of micro-gap construction (for US version) Switch of micro-gap / micro-disconnection construction (for other versions except US)
ε	Switch without contact gap (Semiconductor switching device)