

**TP-LINK<sup>®</sup>**

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**Installation Guide**

Wireless N Gigabit Access Point

EAP120 / EAP220



# CONTENTS

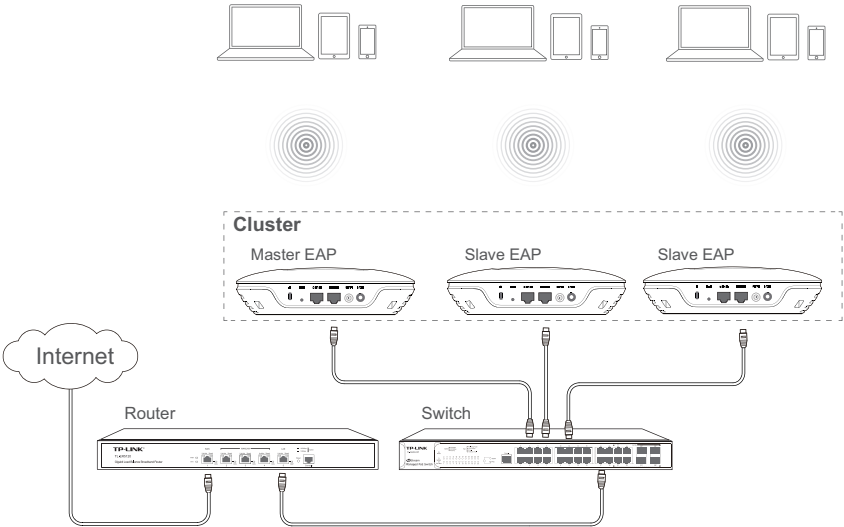
Network Topology Requirements	01
Overview	02
Hardware Installation	04
1. Installation Requirements	04
2. Mounting Bracket	04
3. Installation	05
4. Powering Mode	09
Getting Started with the EAP	11
Q&A	14
Specifications	15
Technical Support	16

## About This Installation Guide

This guide is designed to familiarize you with the general layout of the EAP, describe how to deploy the device in your network and how to configure the device. Your EAP has more features and functionalities which can be found in the User Guide.

# Network Topology Requirements

Typical topology for the EAP is described below.



Typical Topology

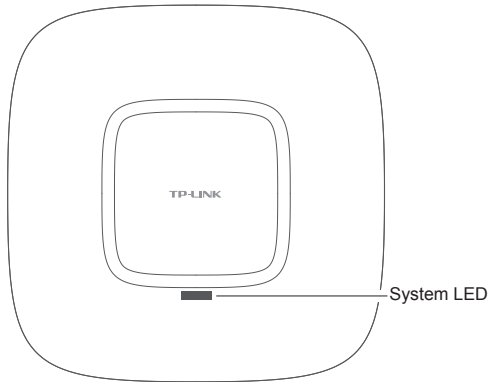
The EAP120 and EAP220 provide two management modes: Cluster and Standalone. By default, the management mode is Cluster. In this mode, all the EAPs in the same LAN will form a Cluster, and a Master EAP will be elected among them to manage the other EAPs, called Slave EAPs.

A DHCP server is required in the local network to assign IP addresses to the EAPs. A router usually acts as the DHCP server.

Typically, a PoE switch can be used to provide Power over Ethernet for each EAP. Or, each EAP must be powered with a power adapter individually.

# Overview

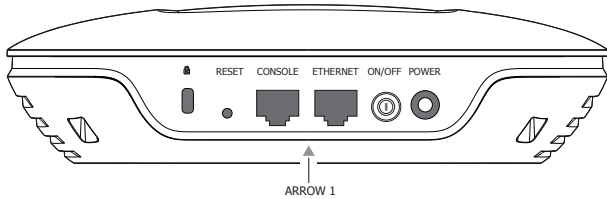
- LED Explanation



Top View of the EAP

LED Status	Indication
Quickly flashing green	System initialization is complete.
Solid green	The device is working properly.
Slowly flashing red	The system is abnormal. RAM, Flash, Ethernet, WLAN or firmware may be malfunctioning.
Quickly flashing yellow	Firmware is being updated.
Alternating red/green/yellow twice	The device is being reset.

- Interface Panel



Interface Panel of the EAP

The interface panel components of the EAP, from left to right, are described in the following list:

### Kensington Security Slot

Secure the lock into the slot to prevent the device from being stolen.

## **RESET**

With the device powered on, press and hold the RESET button for about 8 seconds, and then release the button. The device will restore to factory default settings.

## **CONSOLE**

This port is used to connect with the serial port of a computer or a terminal to check and monitor simple system information of the device.

## **ETHERNET**

This port is for connection to a router or switch to transmit and receive data as well as to a PSE device for power supply. Power sourcing equipment (PSE) is a device such as a switch that provides power over Ethernet cables to linked devices.

## **ON/OFF**

Press this button to power on/off the device. Please remember to press it to use the device.

## **POWER**

The power jack is for connection to the power adapter. Please use the power adapter provided. Refer to **Powering Mode** to learn how to power the device via PoE and power adapter.

## **ARROW 1**

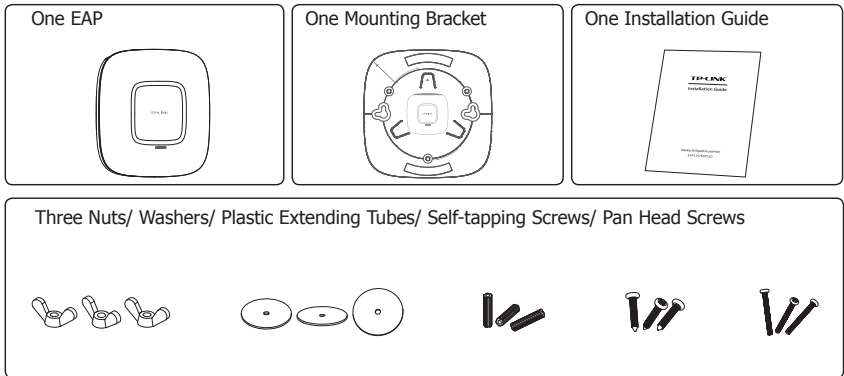
To align with ARROW 2 in the mounting bracket before the EAP locks into place. Please refer to **Mounting Bracket** to locate ARROW 2.

# Hardware Installation

The EAP can be wall or ceiling mounted and can be powered via a PSE device or the provided adapter. Please suitably arrange your wire layout before the mounting.

## 1. Installation Requirements

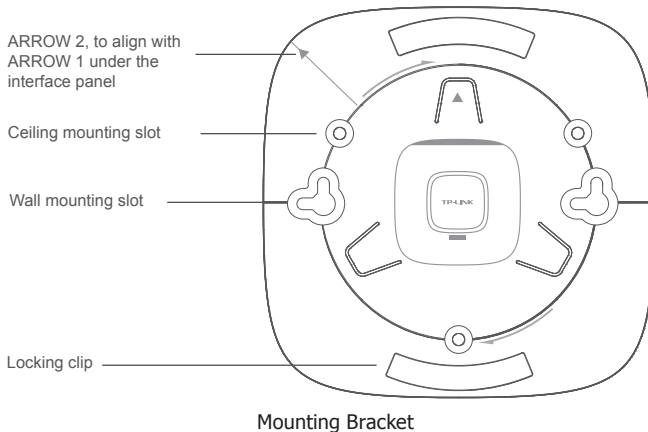
Check and prepare the following items in the package for installation.



Besides the above installation kits, these tools may be needed for hardware installation: pencil, ruler, drill, hammer, screwdriver and ladder.

## 2. Mounting Bracket

The following figure describes the structure of the mounting bracket.



# 3. Installation

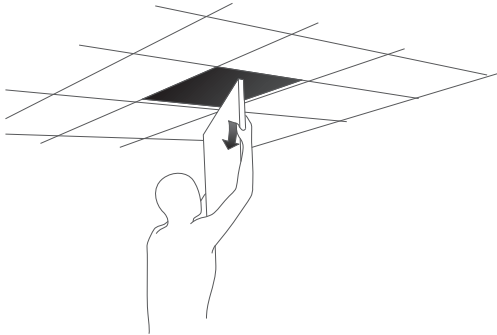
## ■ Ceiling Mounting



**Note:**

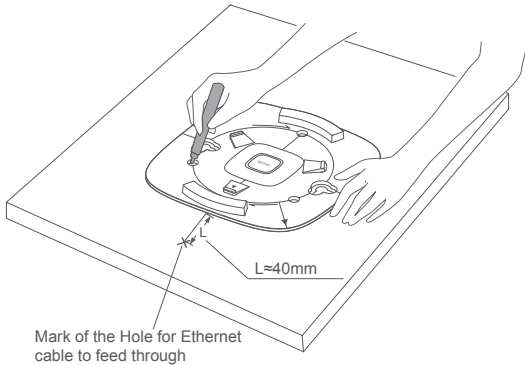
- Make sure the thickness of the ceiling is less than 18mm and the ceiling can bear at least five kilograms.
- If the ceiling is made of low-strength material like gypsum, it is not recommended to mount the EAP on the ceiling. If it has to do, add a layer of strong material under the nut to ensure the EAP is mounted solidly.

1. Remove the ceiling tile.



Remove the Ceiling Tile

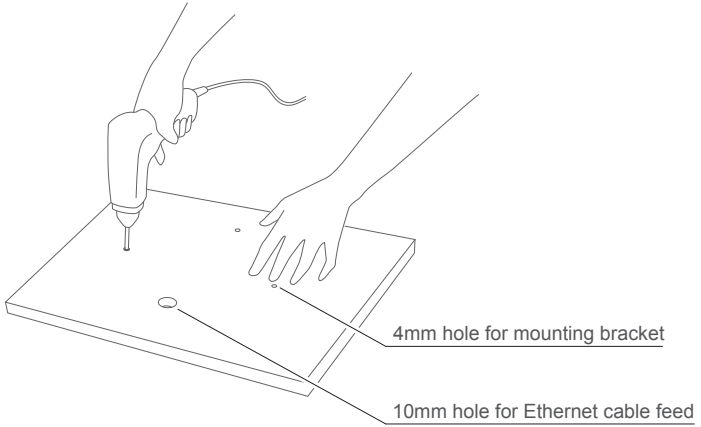
2. Place the mounting bracket at the center of the ceiling tile. Mark the positions of three mounting slots and the hole for Ethernet cable to feed through.



Mark the Positions

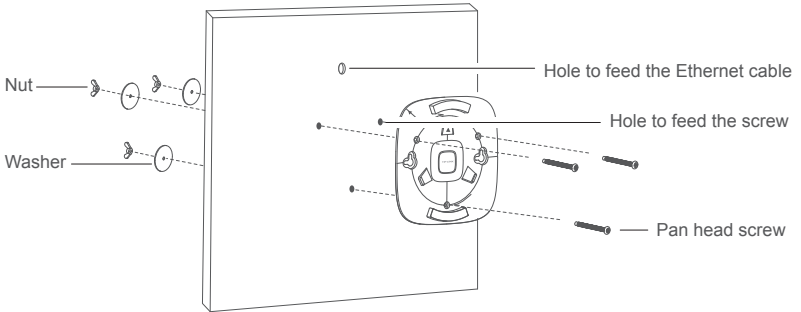


3. Use a drill bit to drill three holes for screws, and drill a 10mm hole for the Ethernet cable to feed through.



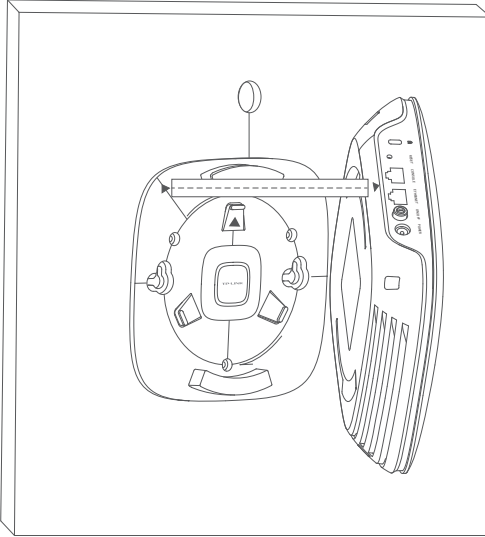
Drill the Holes

4. Secure the mounting bracket to the ceiling board with nuts, washers and pan head screws as shown below.



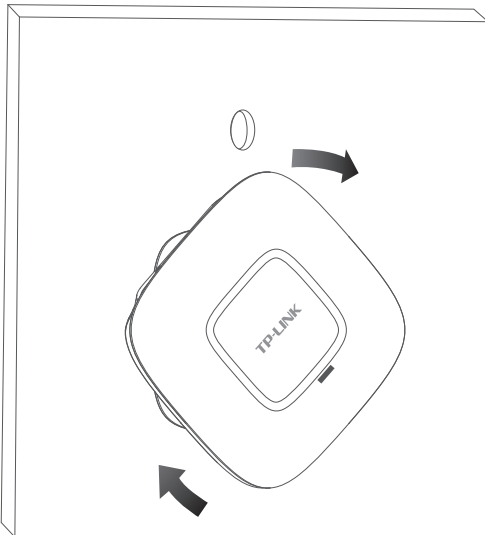
Secure the Mounting Bracket

5. Align ARROW 1 with ARROW 2 as shown below, then press the EAP into the mounting bracket.



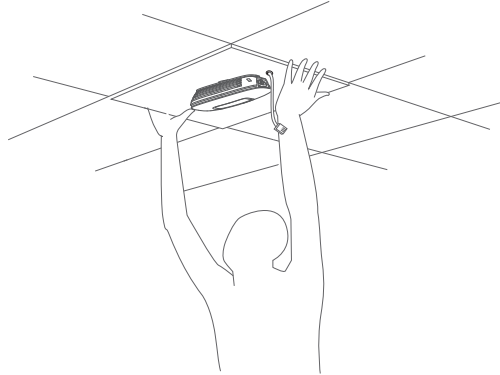
Align Two Arrows

6. Turn the EAP clockwise until it locks into place.



Make the EAP Lock into Place

7. Feed the cable through the hole and set the ceiling tile back into place.



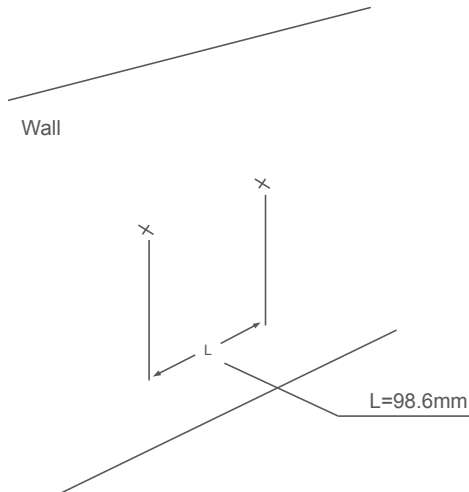
Fix the Ceiling Tile

8. Connect the Ethernet cable to the Ethernet port and ceiling mounting is done.

## ■ Wall Mounting

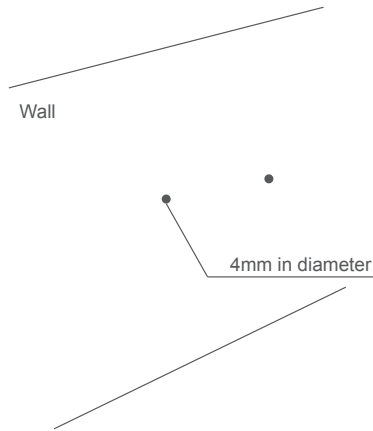
There are two wall-mounting slots at the bottom of the EAP. To mount the EAP on a wall, please follow the steps below.

1. Make two small pencil marks on the wall. The distance between the two marks should be 98.6mm.



Mark on the Wall

2. Use a drill bit to drill two holes through the center of your marks. The diameter of both holes should be 4mm.



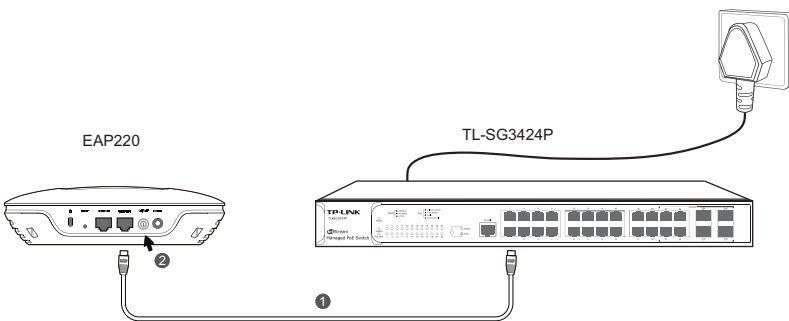
Drill Two Holes

3. Insert the plastic extending tubes into the 4mm holes and drive the screws into the tubes.
4. As **Ceiling Mounting** shows, press the EAP into the mounting bracket and turn it clockwise until it locks into place.
5. Simply hang your EAP and the wall mounting is done.

## 4. Powering Mode

The EAP can be powered via a PSE device (e.g., a PoE switch) or a power adapter.

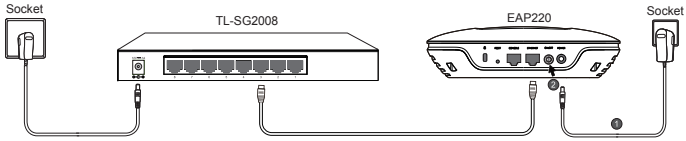
### ■ Via PSE Device



Power the EAP via a PoE

1. Connect the EAP to a PSE device through an Ethernet cable.
2. Press the ON/OFF button on the interface panel of the EAP.

### ■ Via Power Adapter



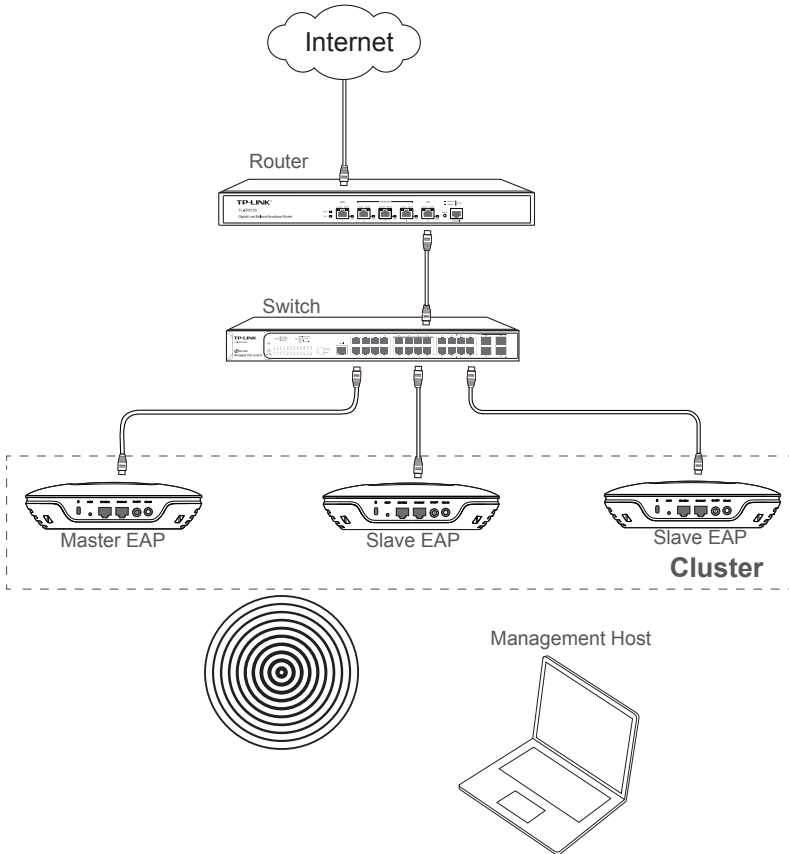
Power the EAP via a Power Adapter

1. Plug one end of the provided power adapter into the power jack of the EAP, and the other end to a standard electrical wall socket.
2. Press the ON/OFF button on the interface panel of the EAP.

# Getting Started with the EAP

How do you quickly build a wireless network with several EAPs? The following content will instruct you on how to do network connection and software configurations on EAPs. Management host can be connected to the EAPs wirelessly or with wires. Wireless Login is recommended conveniently.

## Option 1: Wireless Login



Sample Network Diagram for Wireless Login

### Step 1: Power on

Power on the EAPs. The EAP with system initialization first completed will be elected as the Master.

### Step 2: Wireless Access

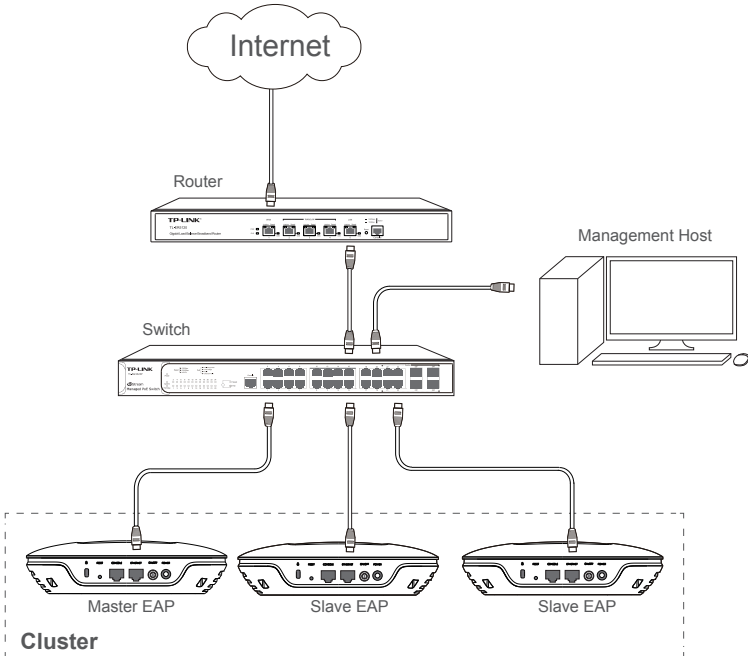
1. Make sure the management host is set to obtain IP address automatically.
2. Join the wireless network. The default SSID and password are shown below.  
SSID: TP-LINK\_2.4GHz\_XXXXXX or TP-LINK\_5GHz\_XXXXXX for EAP220; TP-LINK\_2.4GHz\_XXXXXX for EAP120. XXXXXX is the last 6 characters of EAP's MAC address.  
Password: Password is empty.

### Step 3: Quick Setup

1. Open a web browser and type in **http://tplinkeap.net** to log in to the EAP. The default user name and password are **admin**. In the Cluster mode, the login will be directed to the Master EAP.
2. Create a new user name and password.
3. Follow instructions step by step to complete Quick Setup.

Congratulations! The above configurations on the Master EAP will be synchronized to all the other EAPs automatically. Now you can enjoy the wireless network.  
If you want to perform more configurations, please connect to the new SSID.

### Option 2: Wired Login



Sample Network Diagram for Wired Login

### **Step 1: Power on**

Power on the EAPs. The EAP with system initialization first completed will be elected as the Master.

### **Step 2: Wired Access**

1. Make sure the management host is set to obtain IP address automatically.
2. Access your DHCP server and locate the IP address of the EAPs.

### **Step 3: Quick Setup**

1. Open a web browser, in the address field type in any IP address of the EAPs to log in the web server. The default user name and password are **admin**. In the Cluster mode, the login will be directed to the Master EAP.
2. Create a new user name and password.
3. Follow instructions step by step to complete Quick Setup.

Congratulations! The above configurations on the Master EAP will be synchronized to all the other EAPs automatically. Now you can enjoy the wireless network.



# Q&A

## **Q1. Can Master EAP work as an access point?**

Yes. In addition to managing and monitoring Slave EAPs, the Master EAP is equipped with the features and functions of an AP, providing wireless access to clients.

## **Q2. What is the maximum number of EAPs in a Cluster?**

The maximum number of EAPs in a cluster is 24.

## **Q3. Can EAP120 be in the same Cluster with EAP220?**

No, EAP120 and EAP220 cannot be in the same cluster. Only the EAPs of the same model can be clustered together.

# Specifications

Models	EAP120	EAP220
<b>HARDWARE FEATURES</b>		
Interface	10/100/1000Mbps Ethernet port (RJ-45) Console port (RJ-45) Power connector (DC-2) Kensington lock slot	
Buttons	RESET ON/OFF (for power supply)	
Power Supply	PoE or External 12VDC / 1A Power Supply	PoE or External 12VDC / 1.5A Power Supply
PoE Compatible	802.3af	802.3af
Maximum Power Consumption	4.4W	9.6W
Antenna	2*4dBi Embedded	4*4dBi Embedded
Mounting	Ceiling/Wall mounting (Kits included)	
Certification	CE FCC RoHS	
Operating Temperature	0°C~40°C (32°F~104°F)	
Operating Humidity	10%~90% non-condensing	
<b>WIRELESS FEATURES</b>		
Wireless Frequency	2.4GHz	2.4GHz & 5GHz
Wi-Fi Standard	IEEE 802.11b/g/n	IEEE 802.11a/b/g/n
Maximum Data Rate	Up to 300Mbps	Up to 600Mbps
Max RF Transmission Power <sup>(1)</sup>	23dBm	2.4GHz:23dBm 5GHz:20dBm
Multiple SSIDs	Up to eight per radio	
Captive Portal Authentication	Support	
Wireless Security	WEP WPA/WPA2-personal WPA/WPA2-enterprise	
Cluster	Support, up to 24 APs in a cluster	



Maximum transmission power may vary in different countries or regions.

# Technical Support

- For more help, please go to: <http://www.tp-link.com/en/support/faq>
- To download the latest firmware, driver, utility and user guide, please go to: <http://www.tp-link.com/en/support/download>
- For all other technical support, please contact us by using the following details:

Global	Tel: +86 755 2650 4400 Fee: Depending on rate of different carriers, IDD. E-mail: <a href="mailto:support@tp-link.com">support@tp-link.com</a> Service time: 24hrs, 7 days a week
Australia/New Zealand	Tel: AU 1300 87 5465 (Depending on 1300 policy.) NZ 0800 87 5465 (Toll Free) E-mail: <a href="mailto:support.au@tp-link.com">support.au@tp-link.com</a> (Australia) <a href="mailto:support.nz@tp-link.com">support.nz@tp-link.com</a> (New Zealand) Service time: 24hrs, 7 days a week
Brazil	Toll Free: 0800 608 9799 (Portuguese Service) E-mail: <a href="mailto:suporte.br@tp-link.com">suporte.br@tp-link.com</a> Service time: Monday to Saturday, 09:00 to 20:00; Saturday, 09:00 to 15:00
France	Tel: 0820 800 860 (French service) Fee: 0.118 EUR/min from France Email: <a href="mailto:support.fr@tp-link.com">support.fr@tp-link.com</a> Service time: Monday to Friday 9:00 to 18:00 *Except French Bank holidays
Germany/Austria	Tel: +49 1805 875 465 (German Service) +49 1805 TPLINK +49 820 820 360 Fee: Landline from Germany: 0.14EUR/min. Landline from Austria: 0.20EUR/min. E-mail: <a href="mailto:support.de@tp-link.com">support.de@tp-link.com</a> Service time: Monday to Friday, 9:00 to 12:30 and 13:30 to 17:30. GMT+ 1 or GMT+ 2 (DST in Germany) *Except bank holidays in Hesse
Indonesia	Tel: (+62) 021 6386 1936 Fee: Depending on rate of different carriers. E-mail: <a href="mailto:support.id@tp-link.com">support.id@tp-link.com</a> Service time: Monday to Friday 9:00 to 18:00 *Except public holidays
Italy	Tel: +39 023 051 9020 Fee: Depending on rate of different carriers. E-mail: <a href="mailto:support.it@tp-link.com">support.it@tp-link.com</a> Service time: Monday to Friday, 9:00 to 13:00 and 14:00 to 18:00
Malaysia	Toll Free: 1300 88 875 465 Email: <a href="mailto:support.my@tp-link.com">support.my@tp-link.com</a> Service time: 24hrs, 7 days a week
Poland	Tel: +48 (0) 801 080 618 +48 223 606 363 (if calls from mobile phone) Fee: Depending on rate of different carriers. E-mail: <a href="mailto:support.pl@tp-link.com">support.pl@tp-link.com</a> Service time: Monday to Friday 9:00 to 17:00. GMT+1 or GMT+2 (DST)

Russian Federation	<p>Tel: 8 (499) 754 5560 (Moscow NO.)  8 (800) 250 5560 (Toll-free within RF)  E-mail: support.ru@tp-link.com  Service time: From 09:00 to 21:00 (Moscow time)  *Except weekends and holidays in RF</p>
Singapore	<p>Tel: +65 6284 0493  Fee: Depending on rate of different carriers.  E-mail: support.sg@tp-link.com  Service time: 24hrs, 7 days a week</p>
Switzerland	<p>Tel: +41 (0) 848 800 998 (German Service)  Fee: 4-8 Rp/min, depending on rate of different time.  E-mail: support.ch@tp-link.com  Service time: Monday to Friday, 9:00 to 12:30 and 13:30 to 17:30. GMT+ 1 or GMT+ 2 (DST)</p>
Turkey	<p>Tel: 0850 7244 488 (Turkish Service)  Fee: Depending on rate of different carriers.  E-mail: support.tr@tp-link.com  Service time: 9:00 to 21:00, 7 days a week</p>
UK	<p>Tel: +44 (0) 845 147 0017  Fee: Landline: 1p-10.5p/min, depending on the time of day.  Mobile: 15p-40p/min, depending on your mobile network.  E-mail: support.uk@tp-link.com  Service time: 24hrs, 7 days a week</p>
Ukraine	<p>Tel: 0800 505 508  Fee: Free for Landline; Mobile: Depending on rate of different carriers.  E-mail: support.ua@tp-link.com  Service time: Monday to Friday 10:00 to 22:00</p>
USA/Canada	<p>Toll Free: +1 866 225 8139  E-mail: support.usa@tp-link.com  Service time: 24hrs, 7 days a week</p>

## 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.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference.
- 2) This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **FCC RF Radiation Exposure Statement:**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

## CE Mark Warning

**CE 1588** ⓘ or **CE 1588**

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

## IC Statement

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.



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## Safety Information

- 1) When product has power button, the power button is one of the way to shut off the product; When there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- 2) Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- 3) Avoid water and wet locations.

## NCC Notice & BSMI Notice

### 注意!

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，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或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行；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。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

減少電磁波影響，請妥適使用。

### 安全諮詢及注意事項

- 請使用原裝電源供應器或只能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拔掉電源線。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。
  - 請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。
- 此為甲類資訊技術設備，于居住環境中使用時，可能會造成射頻擾動，在此種情況下，使用者會被要求採取某些適當的對策。

This product can be used in the following countries:

AT / BG / BY / CA / CZ / DE / DK / EE / ES / FI / FR / GB / GR / HU / IE / IT  
LT / LV / MT / NL / NO / PL / PT / RO / RU / SE / SK / TR / UA / US



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