Indoor Wireless AP4600

Quick Installation Guide

CommSky
Technologies

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Preface

This guide is aimed to assist with hardware configuration, preparation for installation, installation using several methods, and system configuration of the CommSky AP 4600 Series Indoor intelligent Access Points.

The Preface includes the following contents:

Applicable models:

  CommSky AP 4600 series of products made by CommSky Technologies, Corp.

Intended audience:

  This guide is intended for the following audience:

- Network planners
- Field technical support and maintenance personnel
- Network administrators

Conventions

  1. GUI Conventions

Highlights	Meaning
< >	Button names are enclosed in angular brackets "< >"; for example: "click **<OK>**"。
【 】	Window name, menu title, and data table are enclosed in square brackets: "【 】", for example: "【New User】popup"。
/	Multi-level menus are separated by "/"; for example: 【File/New/Folder】 multi-level menu denotes 【File】menu's【New】sub-menu's【Folder】 selection。

  2. Sign Conventions

  This manual employs a variety of signs as user tips and warnings.

Icons	Levels	Description
⚡	Danger	This is a safety warning. Operation shall be strictly followed as described. Improper operation may result in personal injury.
⚠	Warning	This is a safety warning. Improper operation may result in equipment damage and/or loss of data.
✎	Note	Highlights supplemental information useful to perform operations; omission of which will not impaired operations.

Obtaining Further Information

Latest documentation can be downloaded from CommSky website (http://www.commsky.com). CommSky website and product related topics are as follows:

- 【Product Series】：to obtain product datasheets
- 【Technology Differentiation】：to obtain information regarding our product/technology differentiation
- 【Solution】：to obtain solution materials using our products
- 【Service and Support / Document Center】：to obtain configuration and maintenance information for our products

Technical Support

- Email：support@commsky.com
- Phone：400-826-8847
- Company Website：www.commsky.com

Feedback

CommSky, Corp. appreciates any feedback on problems and/or corrections with our documentation. You can contact us using the following methods:

- E-mail：info@commsky.com
- Technical support：400-826-8847

Contents

1 LEDs and Ports

✎ Note

Images in this manual are for reference only. Actual shipped units may have different exterior.

1.1 LEDs
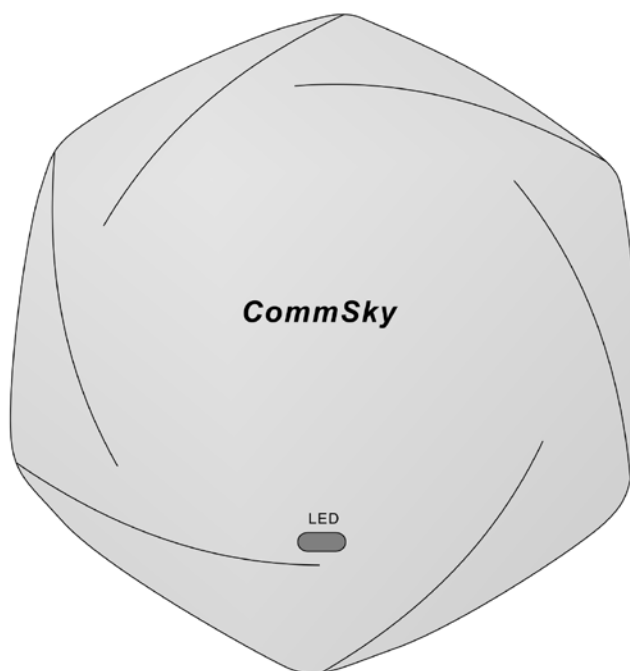
Figure 1 AP 4600 LEDs

Table 1 LED description

Color	Status	Description
Green	Blinking	A client is connected to the 2.4G port.
Blue	Steady on	The AP has been booted, and is in standby state.
	Blinking	A client is connected to the 5G port.
Red	Steady on	The AP is booting.
Alternating green and blue	Blinking	Clients are connected to both the 2.4G and 5G radio interfaces.

1.2 Ports
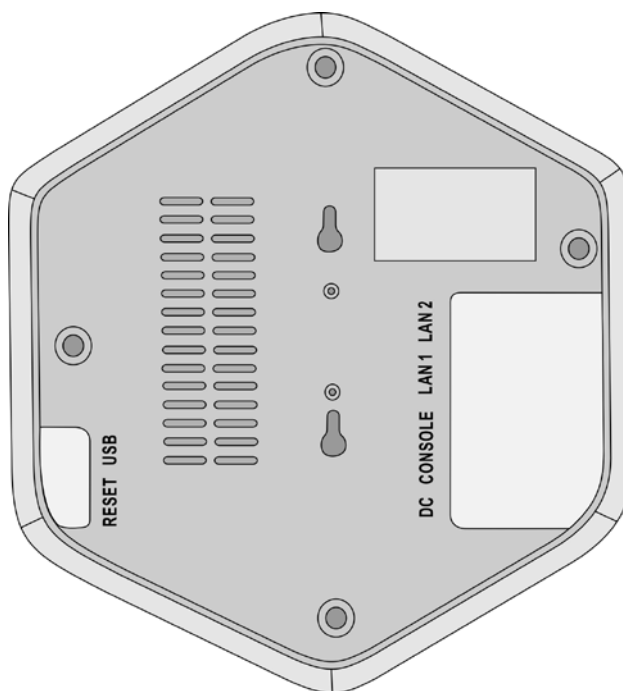
Figure 2 AP 4600 ports

Table 2 Port description

Port	Description
RESET	Reset button
USB	USB port
DC	The local power port is used for +48 VDC power supply to the device.
CONSOLE	The console port is used for configuration and management.
LAN 1（PoE）	The LAN 1 port can serve as an uplink interface to access the Internet or MAN, and as an 802.3at-compliant PoE port at the same time.
LAN 2	The LAN 2 port can serve as an downlink interface

2 Installation Preparation

2.1 Safety recommendations

- Take adequate safety measures to avoid bodily injury and access point damage.
- Make sure that the ground is dry and flat and anti-slip measures are in place.
- Keep the chassis clean and dust-free.
- Do not place the access point in a moist area and avoid liquid surrounding the access point.
- Keep the chassis and installation tools away from walkways.

2.2 Temperature and humidity

2.2.1 Temperature requirements

Proper indoor temperature is necessary to ensure correct AP operations. See Table 2-1 for required operating temperatures.

Table 1 Temperature requirements

Item	Required Range
Operating temperature	0℃ to 40℃（long-term）
Storage temperature	-40℃ to +70℃

⚠ Warning

If condensation occurs on AP as it moved from a cold environment to a warm environment, ensure AP is free of condensation prior to power on. This is to prevent any short circuit that may occur within the device.

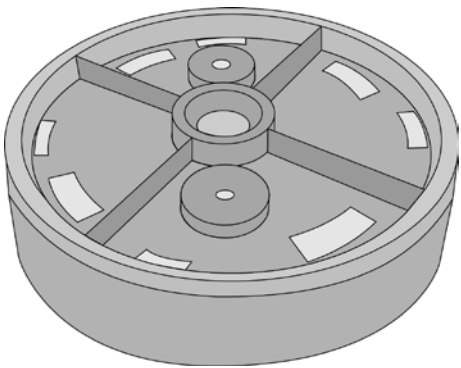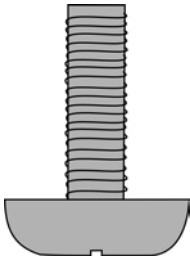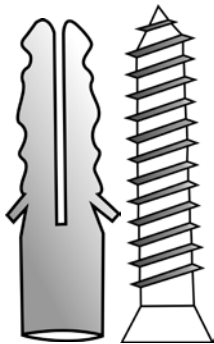### 2.2.2 Humidity requirements

Proper indoor humidity is necessary to ensure correct AP operations. See Table 2-2 for required operating humidity.

Table 2 Humidity requirements

Item	Required Range
Operating relative humidity	10% to 95%
Storage relative humidity	5% to 95%

2.3 Accessories provided with the AP

The following accessories are provided with the AP:

Circular support x 1 Unit	Pan head screw	Wall anchor kit
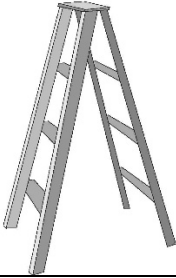
A packing list will be included with AP delivery. Please confirm all accessories on the packing list are present. If any part is damaged or missing, please contact your local dealer or technical support for replacement.

✎ NOTE

Power adapter, and power cable are user-supplied.

2.4 User-supplied installation tools and equipment

When you install a 4600 access point, you may need the following tools:

Phillips screwdriver	Rubber hammer	Level
Marker	Percussion drill with matching drills	Ladder

3 AP Installation

3.1 Installation pre-requisites

- You have read Section 2, *Installation Preparation.*
- All requirements in Section 2, *Installation Preparation,* are satisfied.

3.2 Check before installation

Prior to installing the AP, please check the following:

- Connect power cord to the AP and the network. Check the status LED to make sure the AP is operating properly. For more information about AP LEDs, see Section 1, *LEDs and ports.*
- Ensure all necessary cabling have been installed.
- AP4600 supports 802.at-compliant PoE. For best performance, Commsky recommends to only use GE connection to supply power to the device.
- Record the MAC address and serial number of the AP for future use. MAC address and serial number can be found on the bottom of the AP.

3.3 Determining location for installation

Determine positions to perform the installation:

- Leave as few obstacles (such as wall) as possible between APs and clients.
- Install APs away from electronic devices (such as microwave ovens) that may generate radio frequency (RF) noise.
- Install APs in place where they do not hinder daily work and life.
- Do not install AP in places where water is seeping, soaking, or condensing. Prevent water and moisture from entering the AP.

3.4 Installing the AP

3.4.1 Wall-mounted

Step 1

- Mark drilling locations on the wall, with a vertical separation of 65 mm to each other;
- Drill two 6.5 mm holes to a depth of approximately 30 mm;
- Insert two wall anchors and knock them down into the holes;
- Insert two screws, leaving a gap of approximately 2 mm between the wall and the base of the screw head.
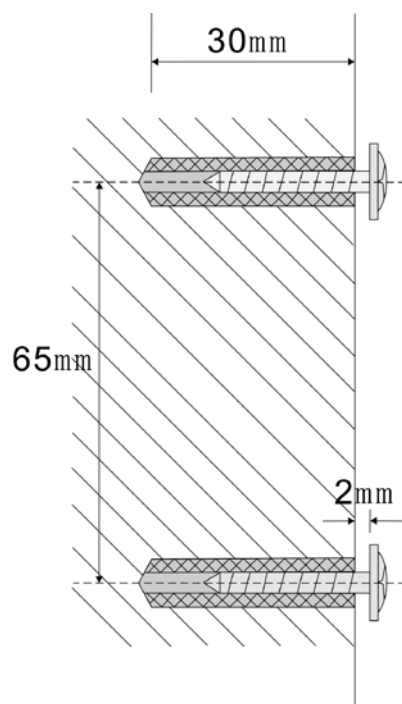
Figure 1 Drilling locations

Step 2

Locate the AP so that the wall screws go into the mounting holes, then push down a few mm to secure the AP into place.
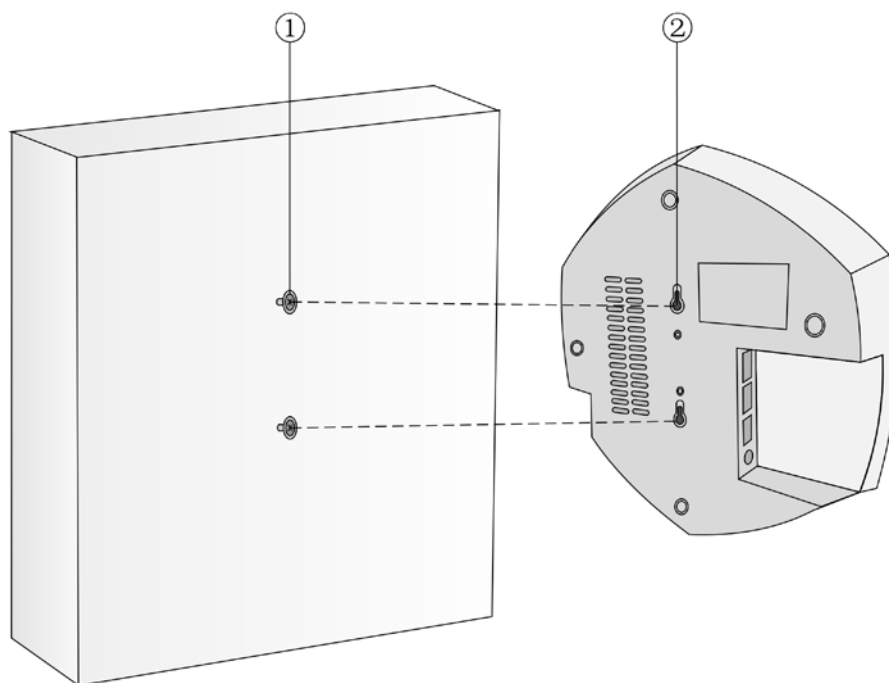
Figure 2 Mounting AP on screws

1：Screws	2：AP wall-hanging holes

3.4.2 Ceiling-mounted

Step 1

- Mark the drilling locations on the ceiling at a distance of 32 mm to each other.
- Drill two 6.5 mm holes to a depth of approximately 30 mm
- Insert two wall anchors and knock them down into the holes.
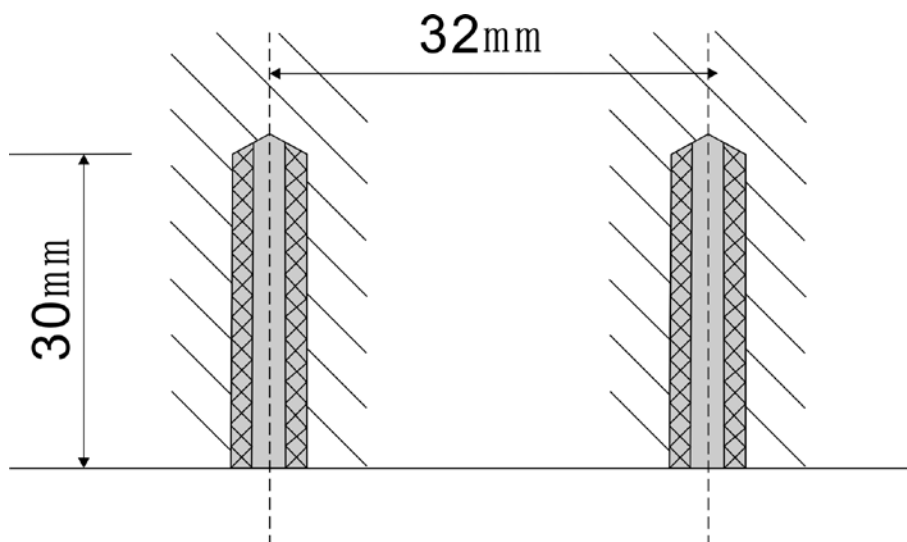
Figure 3 Drill holes locations

Step 2

Affix ceiling mount to ceiling using two screws.
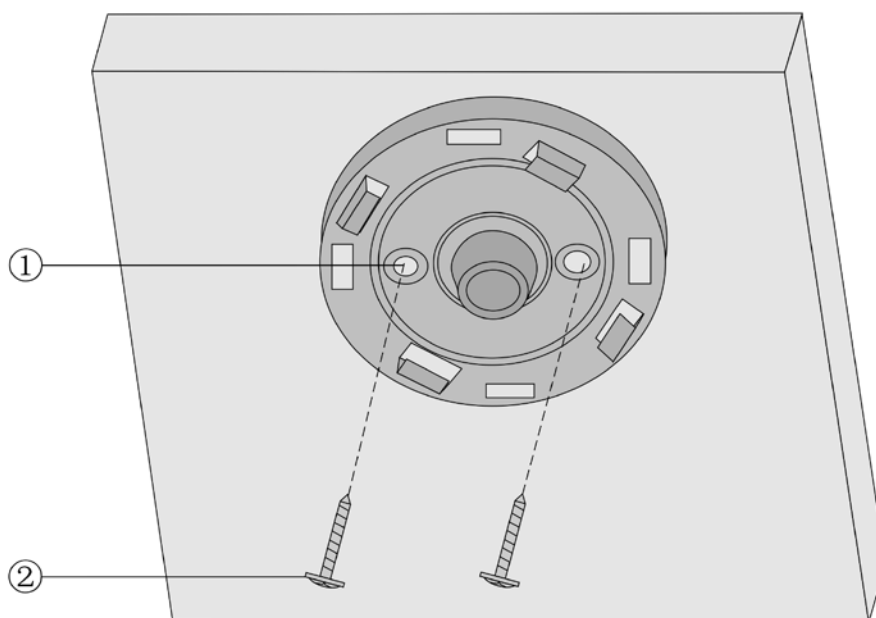
Figure 4 Affix ceiling mount

1： Mounting holes on the circular support	2： Expansion screws

Step 3

Affix hosing bracket to the back of the AP using two screws.
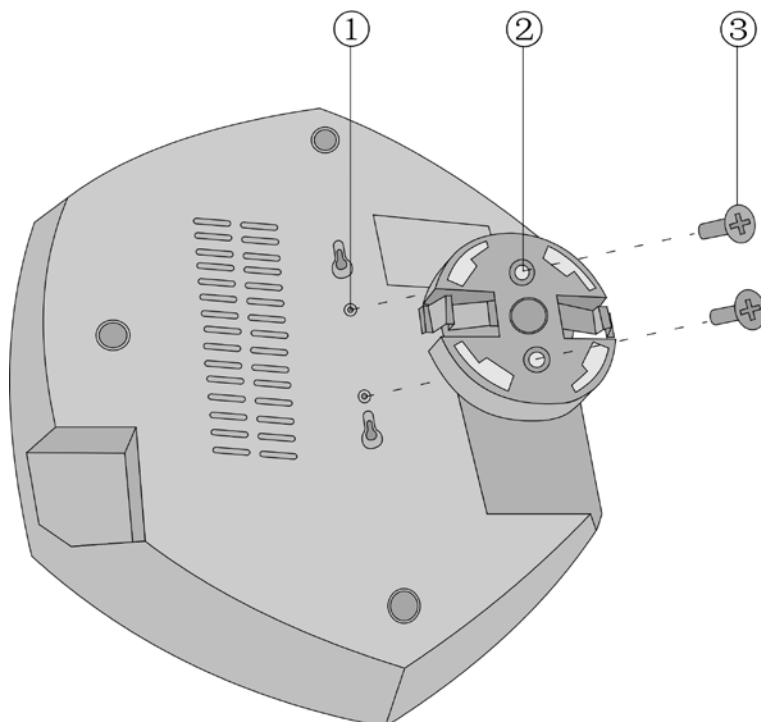
Figure 5 Affix housing bracket

1：AP mounting holes	2：Circular support mounting holes	3：Pan head screws

Step 4

At a slight counter-clockwise angle, match the housing bracket and the ceiling mount, then rotate the AP clockwise to secure in place.
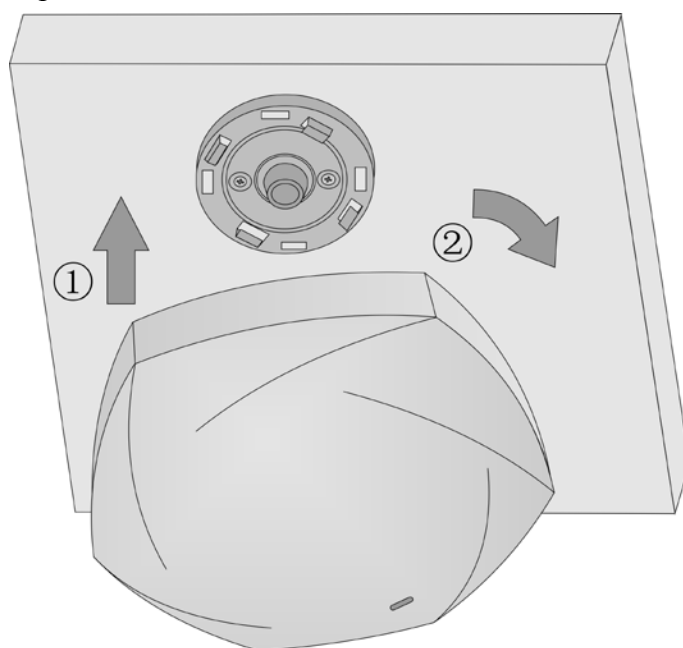
Figure 6 Secure AP to ceiling

3.5 Connecting the power supply

AP 4600 series products support IEEE 802.3at PoE, supplying power over Ethernet. Customer can select method of supplying power appropriate to the target network.

Prior to powering up, please ensure that there is a stable supply of power delivered to the equipment. Regardless of using public utilities, UPS, or private generators, CommSky recommends to centralize power supplied to the equipment. Such a power network is simple to use, safe to operate, flexibly configured, and easy to maintain.

The low-voltage power supply uses a single-phase three-wire system.

3.5.1 Pre-power-up checklist

After AP is installed, please verify each of the following items prior to powering up:
- If AP uses local power supply, make sure supply has a good connection to the power source.
- If AP uses PoE power supply, make sure PoE supply has a good connection to power source

3.5.2 Local power supply

✎ NOTE

Power adapter, and power cable are user-supplied.

Table 1 Power adapter specifications

Item	Description
Input	100 VAC to 240 VAC
Output	+48V --- 0.8A

The AP 4600 supports both AC and DC power adapters. You can connect the power port of the AP to the power source through a power adapter to supply power to the AP.
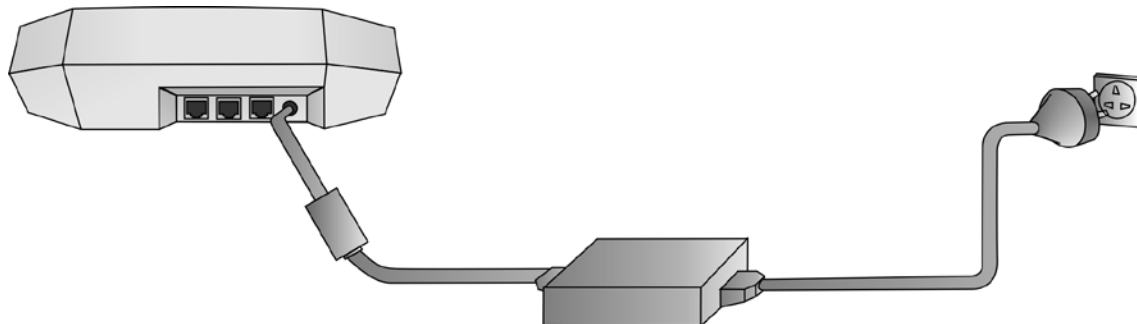

Figure 7 Local power supply connection

3.5.3 PoE power supply

If uplink device of an AP is a PoE switch, then use an Ethernet cable to directly connect Ethernet interface on the AP to the PoE device.

⚠ Warning

1. Do not connect PoE connector to the Console port. Doing so will damage the AP.

2. If you use PoE as primary power supply, there is no need to supply power through the power adapter connector: just connect one end of the network cable to AP's PoE interface and connect the other end to the PoE port on the PoE power supply.

4.5.4 PoE Supply Method of Connection

（1）PoE switch as power supply

First, connect one end of the Ethernet cable to AP's LAN1 port. Next, connect the same cable to the left most Ethernet ports on the PoE switch. Finally, power up the PoE switch by connecting it to a local power supply.
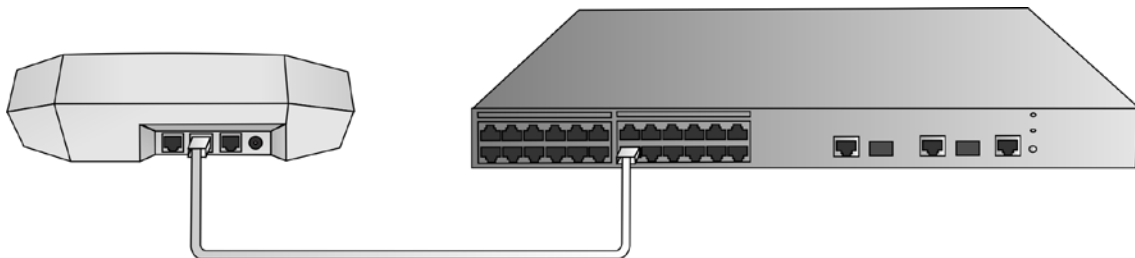
Figure 8 PoE connection

（2）PoE stand-alone power supply

1）Connect one end of Ethernet cable to AP's LAN1 port; then connect the other end to PoE P+D/OUT port.

2）Connect Data/IN port on the PoE supply to PC's ethernet port.

3）After connecting power to PoE supply's AC/IN port, power up the adapter to start PoE power delivery.
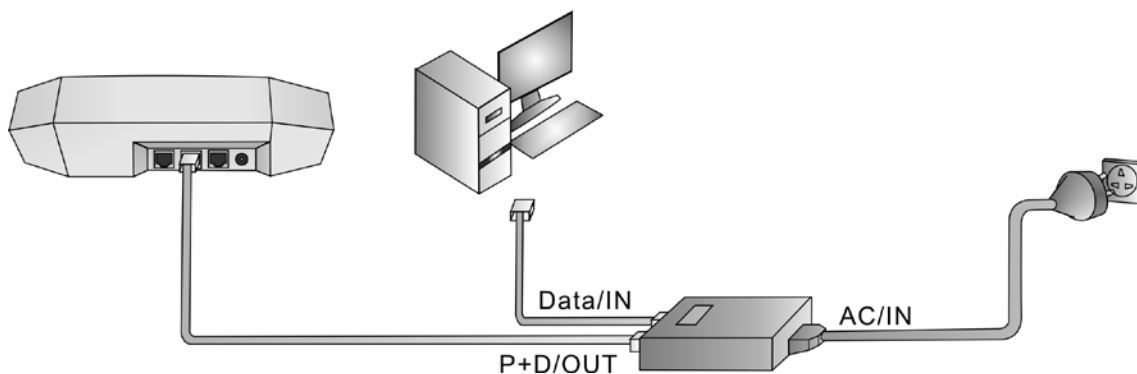
Figure 9 PoE connection

3.5.5 Post power-up checklist

Once AP is powered up, please make sure AP's LEDs are operating properly. For the list of AP LEDs and their purpose, please consult to Section 1: *LEDs and Ports*.

4 Configuration Guide

This section contains a superficial description of how to log on to the per-AP web-based manager. Please consult related manuals for additional information.

✎ Note

Configuration method below can only be used on Fat APs. When Thin APs powered up, they automatically register themselves to the AC. As such, please refer to AC User Guide for configuring Thin APs.

CommSky Technologies, Corp. designed and implemented three methods to configure AP:

- Cloud NMS
- Web based Element Manager
- CLI

This manual focuses on AP configuration using the web-based Element Manager.

4.1 Required tools

- Computer with an ethernet port and web browser;
- An Ethernet cable;
- A PoE module or PoE switch.

✎ Note

Due to lack of compatibility among different browsers, CommSky recommends using the Google Chrome browser, v20 or later, for best user experience.

4.2 Device default configuration

When factory default HTTP service is enabled on the AP, users can log in to the AP's web service interface using default login credential. The default web login information are:

- Username：admin；
- Password：admin；
- IP Address：192.168.0.50。

4.3 Configuration procedure

Step 1：Insert power, wait until Status LED turns blue;

Step 2：After 1 minute, directly connect computer's Ethernet port to AP's LAN1 port;

Step 3： change computer's wired interface to be in the same subnet as the AP, AP's default IP address is 192.168.0.50, recommend PC's management address is set as 192.168.0.100. Configuration procedure is:【Start】-> 【Control Panel】-> 【Network and Internet】-> 【Network and Sharing】-> 【Change Adapter Settings】-> 【Local Connection】, right click "Properties" to show the following panel:

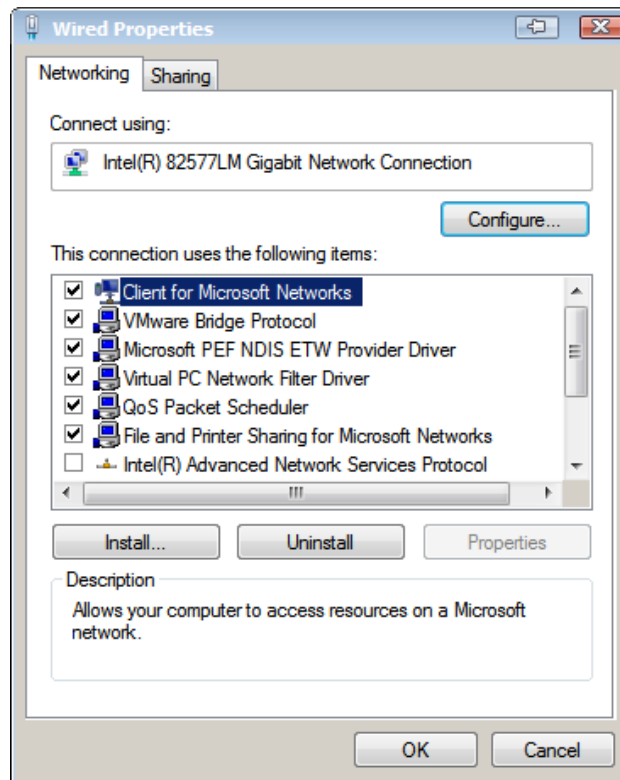Figure 5-1 Ethernet Interface

Double click on 【Internet（TCP/IPv4）】to configure static IP address and corresponding network mask, as show below:
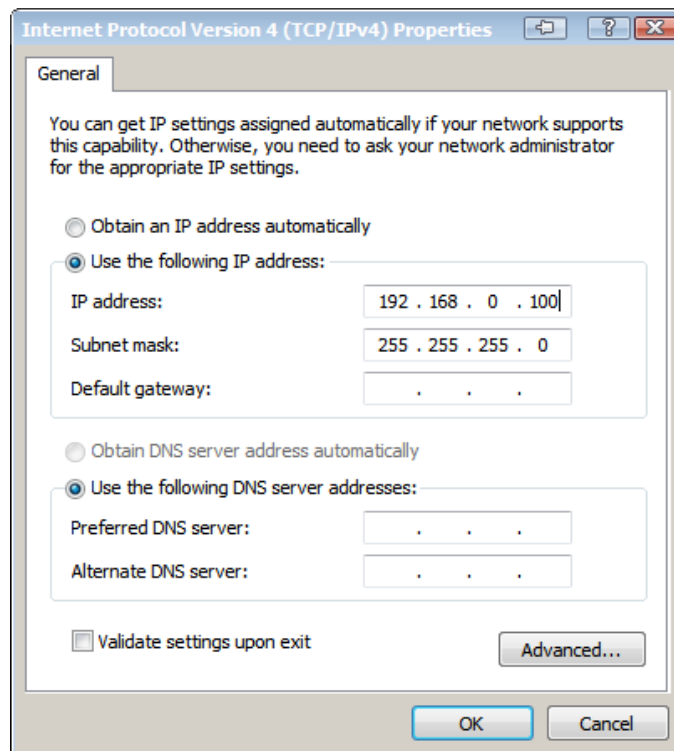
Figure 5-2 Internet Protocol (TCP/IPv4）

⚠ Warning

During AP configuration, avoid connecting AP to external network. If AP is connected to the external network, please modify AP's default IP address such that it is in a different subnet than the external network.

4.4 Login page

Open web page, enter the following IP address in the browser's address bar: 192.168.0.50. Browser will display the following panel, asking user to enter username and password. System default username is *admin*, default password is *admin*。

Figure 5-3 Login Web Page

After entering username and password, click <Log On> button or <Enter> key to perform logon. Once successfully logged on, user is ready to perform AP configuration.

Figure 5-4 Configuration Page

Appendices

A1 Factory Default Settings

Parameter	Default Value
LAN IP Address	192.168.0.50
LAN Network Mask	255.255.255.0
Login Web page username	admin
Login Web page password	admin
SSID (2.4GHz/5GHz)	CommSky_2.4G/CommSky_5G
WPA Pass Phrase	12345678
Telnet Service	Enabled
HTTP Service	Enabled

A2 List of Toxic and Hazardous Substances

List of toxic and hazardous substances 🔄50

Parts Name	Toxic, Hazardous Substances					
	Pb	Hg	Cd	Cr 6	PBB	PBDE
Chassis / separator / other metal and plastic parts	✕	◯	◯	◯	◯	◯
PCB	✕	◯	◯	◯	◯	◯
Wiring	✕	◯	◯	◯	◯	◯
Battery	◯	◯	◯	◯	◯	◯
Fan / fan tray	◯	◯	◯	◯	◯	◯
Power / power adapter	✕	◯	◯	◯	◯	◯
CF card	◯	◯	◯	◯	◯	◯
Optical module	✕	◯	◯	◯	◯	◯
Hard drive 🔄20	✕	◯	◯	◯	◯	◯
Power adapter 1 🔄10	✕	◯	◯	◯	◯	◯
Power adapter 2 🔄15	✕	◯	◯	◯	◯	◯
Power adapter 3 🔄30	✕	◯	◯	◯	◯	◯
Internal power 1 🔄10	✕	◯	◯	◯	◯	◯
Internal power 2 🔄15	✕	◯	◯	◯	◯	◯
Internal power 3 🔄25	✕	◯	◯	◯	◯	◯

Parts Name	Toxic, Hazardous Substances					
	Pb	**Hg**	**Cd**	**Cr 6**	**PBB**	**PBDE**
Internal power 4 (30)	✕	○	○	○	○	○
Redundant power 1 (10)	✕	○	○	○	○	○
Redundant power 2 (30)	✕	○	○	○	○	○
Video camera (10)	✕	○	○	○	○	○
Microphone (10)	✕	○	○	○	○	○
RAM (10)	✕	○	○	○	○	○
Antenna (10)	✕	○	○	○	○	○
Optical Module 1 (10)	✕	○	○	○	○	○
Optical Module 2 (15)	✕	○	○	○	○	○

○: Source materials used for this part contains toxic or hazardous substance whose level is lower than the SJ / T11363-2006 requirements.

✕: At least one source materials used for this part contains toxic or hazardous substances whose level is above the SJ / T11363-2006 prescribed limits.

Note: Environmental aging effect is determined in accordance with the referenced product under normal operating conditions (such as temperature and humidity).

A3 Warranty Card

<div align="center">

CommSky Technologies Corporation. Warranty Card

</div>

产品名称（Prod. Name）：　_____

型　号（Model Number）：　_____

条形码（Serial Number）：

| |
| |
| |

Warranty Terms and Conditions of Service：

CommSky provides high quality and performance network equipment to its customers. CommSky customers are legally entitled to receive the following support services:

1. Warranty Service：

    a. Warranty repairs: A 1 year complementary warranty service starting from date of purchase;

    b. DOA exchange: DOA products can be freely exchanged within 30 days of purchase;

    c. Power adapter limited warranty：180 days from date of purchase; returned supply adapter that shows clear damage not due to manufacturing defects, broken cable, or stripped cable are not replaced. Customer may purchase separately.

    Note: Above are limited to the primary product. Packaging, cabling, software, etc. are excluded from free repair/replacement.

2. Non-warranty service：CommSky will charge repair fees at market rate for any and all non-warranty repairs.

3. Please present either warranty card or purchase invoice when requesting warranty service. If you cannot provide an invoice or a valid warranty card, warranty start date will be set to 15 days after the date of product manufacture.

4. All CommSky exchanged / repaired products are entitled to 180 days of warranty service, counting from the day of exchange / repair, or continue with existing warranty service, whichever is longer.

5. Warranty does not cover the following:

    a. Non-CommSky products;

    b. Product whose bar code was torn or altered;

c. External damage, accidental damage, installation / usage in abnormal environment,

unauthorized product maintenance or modification, external power supply damage, or any other

abnormal damages;

d. Damages due to acts of god: earthquake, tsunami, fire, typhoon, and flood

6. Contact CommSky technical support at +86-400-826-8847 or website www.commsky.com to

obtain warranty service.

Warranty Service Locations：

Through your purchasing product agent / distributor, or contact CommSky service personnel.

※ **CommSky Technologies Corporation reserves the final right to interpret and modify**

contents of this warranty card.

Warning

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, and (2) this device must accept

any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance

could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device,

pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection

against harmful interference in a residential installation. This equipment generates, uses and can

radiate radio frequency energy and, if not installed and used in accordance with the instructions,

may cause harmful interference to radio communications. However, there is no guarantee that

interference will not occur in a particular installation. If this equipment does cause harmful

interference to radio or television reception, which can be determined by turning the equipment

off and on, the user is encouraged to try to correct the interference by one or more of the

following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver

is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

RF exposure statement
This equipment complies with FCC radiation exposure limits set forth for
an uncontrolled environment .

To maintain compliance with FCC's RF exposure guidelines, this equipment should
be installed and operated with a minimum distance of 20cm between the radiator
and your body.

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