Ruijie RG-AP840-L Access Point

Hardware Installation and Reference Guide

Document Version: V2.1
Date: August 22, 2025
Copyright © 2025 Ruijie Networks

Copyright

Copyright © 2025 Ruijie Networks

All rights are reserved in this document and this statement.

Any reproduction, excerption, backup, modification, transmission, translation or commercial use of this document or any portion of this document, in any form or by any means, without the prior written consent of Ruijie Networks is prohibited.

Trademark  and  are owned by Ruijie Networks.

All other trademarks or registered trademarks mentioned in this document are owned by their respective owners.

Disclaimer

The products, services, or features that you purchase are subject to commercial contracts and terms. It is possible that some or all of the products, services, or features described in this document may not be available for purchase or use. Unless agreed upon otherwise in the contract, Ruijie Networks does not provide any explicit or implicit statements or warranties regarding the content of this document.

The names, links, descriptions, screenshots, and any other information regarding third-party software mentioned in this document are provided for your reference only. Ruijie Networks does not explicitly or implicitly endorse or recommend the use of any third-party software and does not make any assurances or guarantees concerning the applicability, security, or legality of such software. You should choose and use third-party software based on your business requirements and obtain proper authorization. Ruijie Networks assumes no liability for any risks or damages arising from your use of third-party software.

The content of this document is subject to constant change due to product version upgrades or other reasons. Thus, Ruijie Networks reserves the right to modify the content of the document without prior notice or prompt.

This manual serves solely as a user guide. While Ruijie Networks endeavors to ensure the accuracy and reliability of the content when compiling this manual, it does not guarantee that the content of the manual is free of errors or omissions. All information contained in this manual does not constitute any explicit or implicit warranties.

Personal Data Statement

During the operation or troubleshooting of the products, services, or features you have purchased, certain personal data of users may be collected or used. Therefore, it is essential for you to establish and implement appropriate privacy policies, in compliance with the relevant laws and regulations of the applicable countries or regions, to ensure the complete protection of users' personal data.

If Ruijie Networks is involved in this process, we will strictly adhere to the relevant laws and regulations of the applicable countries or regions and take all necessary actions to safeguard users' personal data.

When discarding, reclaiming, or reusing a device, please ensure to back up or clear any stored data to avoid data leakage. For assistance, please contact our after-sales technical support.

Preface

Intended Audience

This document is intended for:

- Network engineers
- Technical support and servicing engineers
- Network administrators

Technical Support

- Ruijie Networks website: https://www.ruijie.com
- Online support center: https://ruijie.com/support
- Case portal: https://caseportal.ruijie.com
- Community: https://community.ruijie.com/
- Email support: service_rj@ruijie.com
- Live chat: https://www.ruijie.com/rita
- Documentation feedback: doc@ruijie.com.cn

Conventions

1. Signs

The signs used in this document are described as follows:

Warning

An alert that calls attention to important rules and information that if not understood or followed can result in data loss or equipment damage.

Caution

An alert that calls attention to essential information that if not understood or followed can result in function failure or performance degradation.

Note

An alert that contains additional or supplementary information that if not understood or followed will not lead to serious consequences.

Specification

An alert that contains a description of product or version support.

2. Note

The manual offers information (including model, port type and command line interface) for indicative purpose only. In case of any discrepancy or inconsistency between the manual and the actual version, the actual version prevails.

Contents

Preface I

1 Product Overview 1

1.1 About the RG-AP840-L Access Point 1

1.2 Hardware Features 1

1.3 Package Contents 4

1.4 Technical Specifications 4

1.4.1 Dimensions and Weight 4

1.4.2 Wi-Fi Radio 5

1.4.3 Bluetooth Radio 8

1.4.4 Ports Specifications 9

1.4.5 Power Supply and Consumption 10

1.4.6 Environment and Reliability 11

1.4.7 Regulatory Compliance 11

1.5 LED 12

1.6 SFP Module 13

2 Preparing for Installation 15

2.1 Safety Precautions 15

2.1.1 General Safety Precautions 15

2.1.2 Handling Safety 15

2.1.3 Electric Safety 15

2.2 Installation Environment Requirements 16

2.2.1 Bearing Requirements 16

2.2.2 Ventilation Requirements 16
2.2.3 Space Requirements 16
2.2.4 Temperature/Humidity Requirements 16
2.2.5 Cleanliness Requirements 16
2.2.6 Anti-interference Requirements 17
2.2.7 Lightning Protection Requirements 18
2.2.8 Installation Site Requirements 18
2.3 Installation Tools 18
3 Installing the Access Point 19
3.1 Installation Flowchart 19
3.2 Before You Begin 19
3.3 Precautions 20
3.4 Installing the Access Point 21
3.4.1 Ceiling Mount 21
3.4.2 Wall Mount 23
3.4.3 Removing the Access Point 24
3.5 Installing Other Modules 25
3.5.1 Installing the Securing Latch 25
3.5.2 Installing an SFP Module 26
3.6 Connecting Cables 27
3.7 Bundling Cables 27
3.7.1 Precautions 27
3.7.2 Steps 28
3.8 Checklist After Installation 28

3.8.1 Checking Access Point 28
3.8.2 Checking Cable Connection 28
3.8.3 Checking Power Supply 28
4 Verifying Operating Status 29
4.1 Setting up Configuration Environment 29
4.2 Powering on the Access Point 29
4.2.1 Checklist Before Power-on 29
4.2.2 Checklist After Power-on (Recommended) 29
5 Monitoring and Maintenance 30
5.1 Monitoring 30
5.1.1 LED 30
5.1.2 CLI Commands 30
5.2 Remote Maintenance 30
5.3 Hardware Maintenance 30
6 Common Troubleshooting 31
6.1 General Troubleshooting Flowchart 31
6.2 Common Faults 31
6.2.1 Ethernet Port Is Not Working After the Ethernet Cable Is Plugged In 31
6.2.2 LED Is Off for a Long Time 31
6.2.3 LED Is Solid Red 31
6.2.4 LED Is Solid Green 32
6.2.5 LED Keeps Blinking Blue at an Interval of 0.2s (in Fit Mode) 32
6.2.6 LED Does Not Turn Solid Blue or Blinking Blue 32
6.2.7 STAs Can Not Find the Access Point 32

7 Appendix 33

7.1 Connectors and Media 33

7.2 SFP Module and Specifications 35

7.3 Cabling 36

7.4 DC Connector Specifications 39

1 Product Overview

1.1 About the RG-AP840-L Access Point

The RG-AP840-L is a dual-radio Wi-Fi 6 wireless access point (AP) developed for indoor scenarios covering higher education, government, general education, finance, and business. Compliant with the IEEE 802.11ax standard, the AP works in both 2.4 GHz and 5 GHz frequency bands. It delivers a combined data rate of 5.378 Gbps, with up to 574 Mbps in the 2.4 GHz band and 4.804 Gbps in the 5 GHz band. This eliminates the performance bottleneck.

The RG-AP840-L provides wireless network security, RF control, mobile access, QoS guarantee, and seamless roaming. It works with a wireless access controller to perform data forwarding, security, and access control for wireless users.

The RG-AP840-L complies with IEEE 802.11n/ac/ax concurrently. The AP can be installed on a ceiling or wall. The RG-AP840-L adopts either local or PoE power supply. Users can flexibly select power supply modes based on various scenarios. The AP is an ideal choice for the scenarios including large-scale campuses, enterprise offices, and Wi-Fi hotspots.

1.2 Hardware Features

The RG-AP840-L provides two RF connectors, two electrical ports (LAN1 port supports PoE power supply in compliance with IEEE 802.3af/at/bt, and LAN2/IoT port can supply a maximum power of 12.95 W (48 V/1 A) to IoT units), one 5GE SFP port, one RJ45 console port, one power socket, one USB port, and one Reset hole.

Figure 1-1 Top View



Figure 1-2 Bottom View



Figure 1-3 Front View



Table 1-1 LED

No.	LED	Description
1	System status LED	Indicates the system operating status.

Figure 1-4 Side View

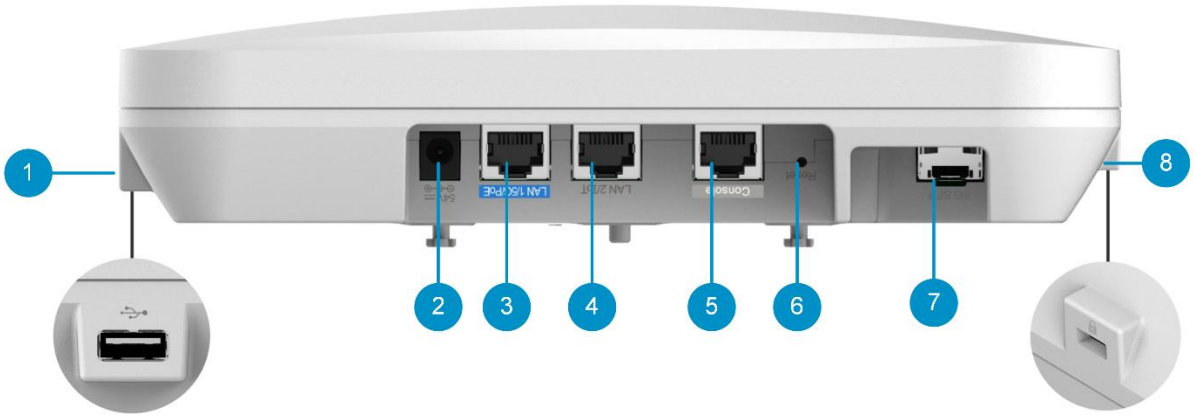


Table 1-2 Reset Hole and Ports

No.	Reset Hole and Ports	Description
1	USB port	Connected to a USB flash drive.
2	DC power connector	Connected to a 54 V DC power adapter to supply power to the AP.
3	LAN1/PoE electrical port	Uplink service port for wired connection and service data transmission, supporting PoE power supply in compliance with IEEE 802.3af/at/bt.
4	LAN2/IoT electrical port	Downlink service port for wired connection and service data transmission, supplying power to IoT units (48 V/12.95 W).
5	Console port	Connected to the serial port with a console cable for device management.
6	Reset hole	Restarts the AP or restores the AP to the factory settings.
7	5GE SFP port	Uplink service port for service data transmission.
8	Lock slot	Inserts the securing latch into the lock slot.

Note

The nameplate is at the bottom of the access point.

1.3 Package Contents

Table 1-3 Package Contents

Item	Quantity
Main unit	1
Mounting bracket	1
Wall anchor	4
4.2 mm x 20 mm Phillips pan head self-tapping screw	4
Warranty card and hazardous substance table	1
Quick Start Guide	1

1.4 Technical Specifications

1.4.1 Dimensions and Weight

Table 1-4 Dimensions and Weight

Dimensions and Weight	RG-AP840-L
Unit dimensions (W x D x H)	230 mm x 230 mm x 51 mm (9.06 in. x 9.06 in. x 2.01 in.)
Shipping dimensions (W x D x H)	535 mm x 406 mm x 269 mm (21.06 in. x 15.98 in. x 10.59 in.)
Unit weight	Main unit: 1.0 kg (2.20 lbs) Mounting bracket: 0.1 kg (0.22 lbs)
Shipping weight	13.67 kg (30.14 lbs)
Mounting	Wall/Ceiling-mount (a mounting bracket is delivered with the main unit)
Lock option	Kensington lock and securing latch
Mounting bracket dimensions (W x D x H)	120 mm x 120 mm x 8 mm (4.72 in. x 4.72 in. x 0.31 in.)
Mounting hole pattern	53 mm x 53 mm (2.09 in. x 2.09 in.). For details, see 3.2 Before You Begin.
Mounting hole diameter	6.5 mm (0.26 in.)

1.4.2 Wi-Fi Radio

Table 1-5 Wi-Fi Radio

Wi-Fi Radio	RG-AP840-L
Radio design	Dual-radio and up to six spatial streams: ● Radio 1: 2.4 GHz, two spatial streams, 2x2 MU-MIMO ● Radio 2: 5 GHz, four spatial streams, 4x4 MU-MIMO
Operating frequencies	802.11b/g/n/ax: ● 2.400 GHz to 2.4835 GHz, ISM 802.11a/n/ac/ax: ● 5.150 GHz to 5.250 GHz, U-NII-1 ● 5.250 GHz to 5.350 GHz, U-NII-2A ● 5.470 GHz to 5.725 GHz, U-NII-2C ● 5.725 GHz to 5.850 GHz, U-NII-3/ISM Note: Available frequency bands may vary with countries or regions. To use the above-mentioned frequency bands, ensure that they are supported in your country or region. For details, see *WLAN Country or Region Codes and Channel Compliance*.
Data rates	Combined peak data rate: 5.378 Gbps 5 GHz radio: ● Four spatial stream Single User (SU) MIMO for up to 4.804 Gbps wireless data rate to individual 4SS HE160 802.11ax client devices (maximum) ● Two spatial stream Single User (SU) MIMO for up to 1.201 Gbps wireless data rate to individual 2SS HE80 802.11ax client devices (typical) ● Four spatial stream Multi User (MU) MIMO for up to 4.804 Gbps wireless data rate to up to four 1SS or two 2SS HE160 802.11ax DL-MU-MIMO capable client devices simultaneously (maximum) ● Four spatial stream Multi User (MU) MIMO for up to 2.402 Gbps wireless data rate to up to four 1SS or two 2SS HE80 802.11ax DL-MU-MIMO capable client devices simultaneously (typical) 2.4 GHz radio: ● Two spatial stream Single User (SU) MIMO for up to 574 Mbps wireless data rate to 2SS HE40 802.11ax client devices (maximum) ● Two spatial stream Single User (SU) MIMO for up to 287 Mbps wireless data rate to 2SS HE20 802.11ax client devices (typical)
Data rate set	The following 802.11-compliant data rates in Mbps are supported: 2.4 GHz radio ● 802.11b: 1, 2, 5.5, 11 ● 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54 ● 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40) ● 802.11ax: 8.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40) 5 GHz radio ● 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 ● 802.11n: 6.5 to 600 (MCS0 to MCS31, HT20 to HT40)

Wi-Fi Radio	RG-AP840-L
	● 802.11ac: 6.5 to 3,467 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT160) ● 802.11ax: 8.6 to 4,803 (MCS0 to MCS11, NSS = 1 to 4, HE20 to HE160)
Packet aggregation	802.11n/ac/ax: A-MPDU and A-MSDU
Antenna type	Built-in omnidirectional antennas (two 2.4 GHz antennas and four 5 GHz antennas)
Antenna gain	2.4 GHz: 5 dBi 5 GHz: 6 dBi
Maximum transmit power	2.4 GHz radio: 27 dBm (24 dBm per chain) 5 GHz radio: 30 dBm (24 dBm per chain) Note: The transmit power is limited by local regulatory requirements. For details, see *WLAN Country or Region Codes and Channel Compliance*. Thailand 2.400 GHz to 2.4835 GHz, EIRP ≤ 20 dBm 5.150 GHz to 5.350 GHz, EIRP ≤ 23 dBm 5.470 GHz to 5.725 GHz, EIRP ≤ 30 dBm 5.725 GHz to 5.825 GHz, EIRP ≤ 30 dBm
Power increment	Configurable in increments of 1 dBm
Radio technologies	802.11b: Direct-Sequence Spread-Spectrum (DSSS) 802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM) 802.11ax: OFDMA with up to 16 resource units (for an 80 MHz channel)
Modulation types	802.11b: BPSK, QPSK, and CCK 802.11a/g/n: BPSK, QPSK, 16-QAM, and 64-QAM 802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, and 256-QAM 802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, and 1024-QAM

The following table lists the radio frequency performance of Wi-Fi including different frequency bands, protocols, and date rates. It is country-specific, and Ruijie Networks reserves the right of interpretation.

Table 1-6 Wi-Fi Radio Frequency Performance

Wi-Fi Radio Frequency Performance	RG-AP840-L		
Frequency Band and Protocol	**Data Rate**	**Maximum Transmit Power per Transmit Chain**	**Maximum Receive Sensitivity per Receive Chain**
2.4 GHz, 802.11b	1 Mbps	24 dBm	–96 dBm
	2 Mbps	24 dBm	–95 dBm
	5.5 Mbps	23 dBm	–93 dBm
	11 Mbps	22 dBm	–89 dBm
2.4 GHz, 802.11g	6 Mbps	24 dBm	–91 dBm
	24 Mbps	23 dBm	–85 dBm
	36 Mbps	23 dBm	–80 dBm
	54 Mbps	21 dBm	–74 dBm
2.4 GHz, 802.11n (HT20)	MCS0	24 dBm	–90 dBm
	MCS7	20 dBm	–70 dBm
2.4 GHz, 802.11n (HT40)	MCS0	24 dBm	–90 dBm
	MCS7	20 dBm	–70 dBm
2.4 GHz, 802.11ax (HE20)	MCS0	24 dBm	–90 dBm
	MCS11	16 dBm	–62 dBm
2.4 GHz, 802.11ax (HE40)	MCS0	24 dBm	–88 dBm
	MCS11	16 dBm	–60 dBm
5 GHz, 802.11a	6 Mbps	24 dBm	–91 dBm
	24 Mbps	23 dBm	–85 dBm
	36 Mbps	23 dBm	–80 dBm
	54 Mbps	21 dBm	–74 dBm
5 GHz, 802.11n (HT20)	MCS0	24 dBm	–90 dBm
	MCS7	20 dBm	–68 dBm
5 GHz, 802.11n (HT40)	MCS0	24 dBm	–88 dBm
	MCS7	20 dBm	–68 dBm
5 GHz, 802.11ac (VHT20)	MCS0	24 dBm	–90 dBm

Wi-Fi Radio Frequency Performance	RG-AP840-L		
Frequency Band and Protocol	**Data Rate**	**Maximum Transmit Power per Transmit Chain**	**Maximum Receive Sensitivity per Receive Chain**
	MCS9	18 dBm	–68 dBm
5 GHz, 802.11ac (VHT40)	MCS0	24 dBm	–88 dBm
	MCS9	18 dBm	–63 dBm
5 GHz, 802.11ac (VHT80)	MCS0	24 dBm	–85 dBm
	MCS9	18 dBm	–60 dBm
5 GHz, 802.11ax (HE20)	MCS0	24 dBm	–90 dBm
	MCS11	16 dBm	–60 dBm
5 GHz, 802.11ax (HE40)	MCS0	24 dBm	–86 dBm
	MCS11	16 dBm	–56 dBm
5 GHz, 802.11ax (HE80)	MCS0	24 dBm	–83 dBm
	MCS11	24 dBm	–53 dBm
5 GHz, 802.11ax (HE160)	MCS0	16 dBm	–81 dBm
	MCS11	16 dBm	–51 dBm

1.4.3 Bluetooth Radio

Table 1-7 Bluetooth Radio

Bluetooth Radio	RG-AP840-L
Bluetooth	Bluetooth 5.1
Antenna type	Integrated vertically polarized omnidirectional antenna
Maximum antenna gain	3.5 dBi, with a downtilt angle of roughly 30 degrees
Maximum transmit power	10 dBm (Class 1)
Receive sensitivity	–98 dBm

1.4.4 Ports Specifications

Table 1-8 Ports Specifications

Ports Specifications	RG-AP840-L
Fixed service port	1 x 100/1000/2.5G/5GBASE-T port ● Auto MDI/MDIX crossover ● NBASE-T/IEEE802.3bz-compliant 5 Gbps ● PoE-PD: 54 V DC (nominal value) 802.3af/at/bt (Class 3 or higher) ● 802.3az EEE 1 x 5GE SFP/RJ45 combo port, compatibility with 1GE and 2.5GE modules 1 x 10/100/1000BASE-T port ● Supplying 48 V/12.95 W power to an IoT unit ● Auto MDI/MDIX crossover ● 802.3az EEE
Fixed management port	1 x RJ45 console port (serial console port)
USB	USB 3.0 (Type-A connector)
Status LED	1 x multi-color system status LED
Button	1 x Reset button ● Press the button for shorter than 2 seconds. Then the device restarts. ● Press the button for longer than 5 seconds. Then the device restores to factory settings.

1.4.5 Power Supply and Consumption

Table 1-9 Power Supply and Consumption

Power Supply and Consumption	RG-AP840-L
Input power supply	The AP supports the following two power supply modes: ● 54 V DC/1.1 A power input over DC connector: The DC connector accepts 2.1 mm/5.5 mm center-positive circular plug. A DC power adapter needs to be purchased independently. ● PoE input over LAN 1: The power source equipment (PSE) complies with IEEE 802.3af/at/bt standard (PoE/PoE+/PoE++). Note: ● If both DC power and PoE are available, DC power is preferred. ● When powered by 802.3bt (PoE++), the AP operates with the optimal performance. ● When powered by 802.3at (PoE+), the AP starts up normally. LAN 2 and USB port cannot supply power to external devices. ● When powered by 802.3af (PoE), the AP starts up normally. Both 2.4 GHz and 5 GHz radio cards can work only in one spatial stream mode. LAN 2 and USB port cannot supply power to external devices.
PoE port	When powered by 802.3bt (PoE++), the LAN 2 port can source 48 V/12.95 W power to a unit.
USB port	When powered by 802.3bt (PoE++), the USB port can source 1 A/5 W power to an attached device.
Overall power consumption	Maximum power consumption: 40 W ● DC powered: 40 W ● PoE powered (802.3af): 12.95 W ● PoE+ powered (802.3at): 22 W ● PoE++ powered (802.3bt): 40 W ● Idle mode: 10.3 W

⚠ Caution

- If the AP is powered by PoE power supply, the power sourcing equipment (PSE) must be at least 802.3af-capable.
- The AP adopts a fanless design. Maintain a sufficient clearance around the AP for proper ventilation.

1.4.6 Environment and Reliability

Table 1-10 Environment and Reliability

Environment and Reliability	RG-AP840-L
Temperature	Operating temperature: –10°C to +50°C (14°F to 122°F) Storage temperature: –40°C to 70°C (–40°F to +158°F) Note: At an altitude in the range of 3,000–5,000 m (9,842.52–16,404.20 ft.), every time the altitude increases by 220 m (722 ft.), the maximum temperature decreases by 1°C (1.8°F).
Humidity	Operating humidity: 5% RH to 95% RH (non-condensing) Storage humidity: 5% RH to 95% RH (non-condensing)
Environment standard	Storage and shipment environment: NEBS GR-63-CORE_Issue3_2006 GB/T 2423.6-1995
Mean Time Between Failure (MTBF)	394,941 hours (45 years) at the operating temperature of 25°C (77°F)

1.4.7 Regulatory Compliance

Table 1-11 Regulatory Compliance

Regulatory Compliance	RG-AP840-L
Regulatory compliance	EN 55032, EN 55035, EN 61000-3-3, EN IEC 61000-3-2, EN 301 489-1, EN 301 489-3, EN 301 489-17, EN 300 328, EN 301 893, EN 300 440, FCC Part 15, EN IEC 62311, IEC 62368-1, EN 62368-1, EN 18031-1, and EN 18031-2

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.

Note: 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.

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

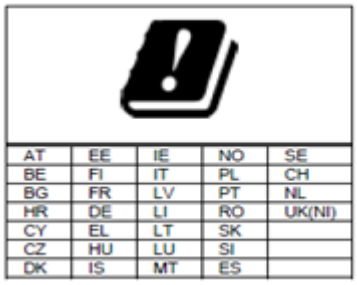
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with minimum distance 30cm between the radiator and your body.

Note

For more country-specific regulatory information and approvals, contact your local sales agency.

Note:

- EU simplified DoC: Hereby, [**Ruijie Networks Co., Ltd.**] declares that the radio equipment type [**RG-AP840-L**] is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://www.ruijie.com/.
- UK simplified DoC: Hereby, [**Ruijie Networks Co., Ltd.**] declares that the radio equipment type [**RG-AP840-L**] is in compliance with UK Radio Equipment Regulation 2017. The full text of the UK declaration of conformity is available at the following internet address: https://www.ruijie.com/.
- The functions of Wireless Access Systems including Radio Local Area Networks(WAS/RLANs) within the band 5150-5350 MHz for this device are restricted to indoor use only within all European Union countries (BE/BG/CZ/DK/DE/EE/IE/EL/ES/FR/HR/IT/CY/LV/LT/LU/HU/MT/NL/AT/PL/PT/RO/SI/SK/FI/SE/TR/NO/CH/IS/LI/UK(NI)





1.5 LED

Note

LED status descriptions are applicable to both Fit and Fat APs, unless otherwise specified.

Table 1-12 LED

Color	Status	Description
Off	N/A	● The AP is not powered on. ● The AP is powered on, but the status LED is turned off through the software.
Solid green	N/A	The software system is being initialized.

Color	Status	Description
Solid red	N/A	The system is running normally, but the uplink service port of the AP is Down.
Slow blinking in red	On for 3s Off for 1s	In Fit AP mode, CAPWAP tunnel establishment between the AP and the AC has timed out.
Fast blinking in blue	On for 0.2s Off for 0.2s	In Fit AP or MACC AP mode, the software system is being updated.
Solid blue	N/A	The software system is running normally. The AP is working normally but no STA is online.
Blinking blue	On for 1s Off for 1s	The software system is running normally. The AP is working normally and STAs are online.
Fast blinking in red	On for 0.2s Off for 0.2s	In Fit AP mode, LED locating function is enabled on the AP to discover a specific AP.

1.6 SFP Module

The peer device that is directly connected to the 5GE SFP port of the AP supports electrical and optical ports. However, the negotiation rates are different when the devices at both ends use different port rates or use different SFP modules. For details, see Table 1-13 and Table 1-14.

Table 1-13 Rate Negotiation Result When the Peer is Electrical Port (Unit: bps)

AP SFP Port Rate	SFP Module Rate	Negotiation Rate Supported by Peer Port		
		1G	1G/10G/auto	1G/2.5G/5G/10G/auto
1G	3G	1G	1G	1G
1G	1G	1G	1G	1G
2.5G	3G	Not supported	Not supported	2.5G
2.5G	1G	1G	1G	1G
5G	6G	Not supported	Not supported	5G
5G	1G	1G	1G	1G

Table 1-14 Rate Negotiation Result When the Peer is Optical Port (Unit: bps)

AP SFP Port Rate	O/E Converter Rate	Negotiation Rate Supported by Peer Port		
		1G	1G/10G/auto	1G/2.5G/5G/10G/auto
1G	2.5G	Not supported	Not supported	Not supported
1G	1G	1G	1G	1G
2.5G	2.5G	Not supported	Not supported	2.5G
2.5G	1G	Not supported	Not supported	Not supported
5G	5G	Not supported	Not supported	5G
5G	1G	Not supported	Not supported	Not supported

Caution

- The 2.5GE SFP port of the AP does not support rate negotiation. When the O/E converter is used, ensure that the rates of AP, O/E converter, and peer port are the same.
- The AP provides a combo port. If Ethernet cables are connected to both uplink optical port and uplink electrical port, the optical port is preferentially selected for data transmission (the electrical port is automatically disabled). When the cable is removed from the optical port, the electrical port is automatically enabled.

2 Preparing for Installation

2.1 Safety Precautions

Note

- To avoid personal injury and device damage, carefully read the safety precautions before you install the device.
- The following safety precautions may not cover all possible dangers.

2.1.1 General Safety Precautions

- Do not expose the access point to high temperature, dusts, or harmful gases. Do not install the access point in an inflammable or explosive environment. Keep the access point away from EMI sources such as large radar stations, radio stations, and substations. Do not subject the access point to unstable voltage, vibration, and noises.
- The installation site should be free from water flooding, seepage, dripping, or condensation. The installation site should be selected according to network planning, communications equipment features, and considerations such as climate, hydrology, geology, earthquake, electrical power, and transportation.
- The installation site should be dry. It is not recommended that the access point be installed in a place near the sea. Keep the device at least 500 meters away from the ocean and do not face it towards the sea breeze.
- Do not place the device in walking areas.
- During the installation and maintenance, do not wear loose clothes, ornaments, or other items that may be hooked by the device.
- Keep tools and device away from walking areas.

2.1.2 Handling Safety

- Do not move the device frequently.
- Turn off all power sources and unplug all power sources and cables before moving or handling the device.

2.1.3 Electric Safety

Warning

- Improper or incorrect electric operations may cause a fire, electric shock, and other accidents, and lead to severe and fatal personal injury and device damage.
- Direct or indirect contact with high voltage or mains power supply via wet objects may cause fatal dangers.

- Observe local regulations and specifications during electric operations. Only personnel with relevant qualifications can perform such operations.
- Check whether there are potential risks in the work area. For example, check whether the ground is wet.

- Learn about the position of the indoor emergency power switch before installation. Cut off the power switch in case of accidents.
- Check the access point carefully before shutting down the power supply.
- Do not place the device in a damp or wet location. Do not let any liquid enter the chassis.
- Keep the access point far away from grounding or lightning protection devices for power equipment.
- Keep the access point away from radio stations, radar stations, high-frequency high-current devices, and microwave ovens.

2.2 Installation Environment Requirements

Use the access point indoors to ensure normal operation and a prolonged service life. The installation site must meet the following requirement.

2.2.1 Bearing Requirements

Evaluate the weight of the device and its accessories (such as the bracket and power supply), and ensure that the ground of the installation site meets the requirements.

2.2.2 Ventilation Requirements

Reserve sufficient space in front of the air vents to ensure normal heat dissipation. After various cables are connected, bundle the cables or place them in the cable management bracket to avoid blocking air inlets.

2.2.3 Space Requirements

Maintain a minimum clearance of 0.4 m (15.75 in.) around the device to ensure proper cooling and ventilation.

2.2.4 Temperature/Humidity Requirements

To ensure normal operation and a prolonged service life of the access point, maintain an appropriate temperature and humidity in the installation environment.

The installation environment with too high or too low temperature and humidity for a long period of time may damage the access point.

- In an environment with high relative humidity, the insulating material may have bad insulation or even leak electricity.
- In an environment with low relative humidity, the insulating strip may dry and shrink, loosening screws.
- In a dry environment, static electricity is prone to occur and damage the internal circuits of the access point.
- Too high temperatures can accelerate the aging of insulation materials, greatly reducing the reliability of the access point and severely affecting its service life.

Note

The ambient temperature and humidity of the device are measured at the point that is 1.5 m (59.06 in.) above the floor and 0.4 m (15.75 in.) before the device when there is no protective plate in front or at the back of the device.

2.2.5 Cleanliness Requirements

Dust poses the top threat to the running of the device. The indoor dust falling on the device may be adhered by the static electricity, causing poor contact of the metallic joint. Such electrostatic adherence may occur more easily when the relative humidity is low, not only affecting the service life of the device, but also causing communication faults. The following table shows the requirements for the dust content and granularity in the equipment room.

Table 2-1 Requirements for Dust

Dust	Unit	Content
Dust particles (diameter ≤ 0.5 μm)	Particles/m^3	≤ 1.4×10^7
Dust particles (0.5 μm ≤ diameter ≤ 1 μm)	Particles/m^3	≤ 7×10^5
Dust particles (1 μm ≤ diameter ≤ 3 μm)	Particles/m^3	≤ 2.4×10^5
Dust particles (3 μm ≤ diameter ≤ 5 μm)	Particles/m^3	≤ 1.3×10^5

Apart from dust, the salt, acid and sulfide in the air in the equipment room must also meet strict requirements; as such poisonous substances may accelerate the corrosion of the metal and the aging of some parts. The equipment room should be protected from the intrusion of harmful gases (for example, SO_2, H_2S, NO_2, NH_3, and Cl_2), whose requirements are listed in the following table.

Table 2-2 Requirements for Gases

Gas	Average (mg/m^3)	Maximum (mg/m^3)
Sulfur dioxide (SO_2)	0.2	1.5
Hydrogen sulfide (H_2S)	0.006	0.03
Nitrogen dioxide (NO_2)	0.04	0.15
Ammonia gas (NH_3)	0.05	0.15
Chlorine gas (Cl_2)	0.01	0.3

Note

The **Average** refers to the average value of harmful gas in one week. The **Maximum** value is the upper limit of the harmful gas in one week, and maximum value can last for up to 30 minutes every day.

2.2.6 Anti-interference Requirements

- Take interference prevention measures for the power supply system.
- Keep the access point away from the grounding equipment or lightning and grounding equipment of the power device as much as possible.
- Keep the access point far away from high-frequency current devices such as the high-power radio

transmitting station and radar launcher.

- Take electromagnetic shielding measures when necessary.

2.2.7 Lightning Protection Requirements

The access point can guard against lightning strikes. As an electric device, too strong lightning strikes may still damage the device. Take the following lightning protection measures.

- Ensure that the neutral point of the AC power socket is in good contact with the ground.
- You are advised to install a power lightning arrester in front of the power input end to enhance the lightning prevention for the power supply.

2.2.8 Installation Site Requirements

Regardless of whether the device is installed on a wall or ceiling, the following requirements must be met.

- Sufficient space is reserved at the air inlet and air vents of the device, to facilitate heat dissipation of the device.
- The installation site allows for proper cooling and ventilation.
- The installation side is sturdy enough to support the weight of the device and its accessories.
- The access point is properly grounded.

2.3 Installation Tools

Table 2-3 Tool List

Common Tools	Phillips screwdriver, power cables, Ethernet cables, cage nuts, diagonal pliers, and binding straps
Dedicated Tools	Anti-static gloves, wire strippers, crimping pliers, and wire cutters
Meters	Multimeter and bit error rate tester (BERT)
Related Devices	PC, display, and keyboard

Note

The RG-AP840-L is delivered without a tool kit. The tool kit is customer-supplied.

3 Installing the Access Point

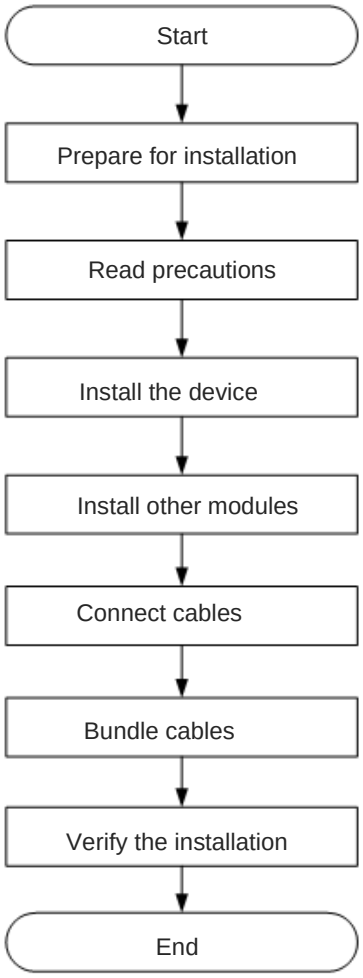
The RG-AP840-L must be used indoors and installed at a fixed position.

Caution

Ensure that you have carefully read the requirements described in Chapter 2, and the requirements have been met.

3.1 Installation Flowchart

Figure 3-1 Installation Flowchart



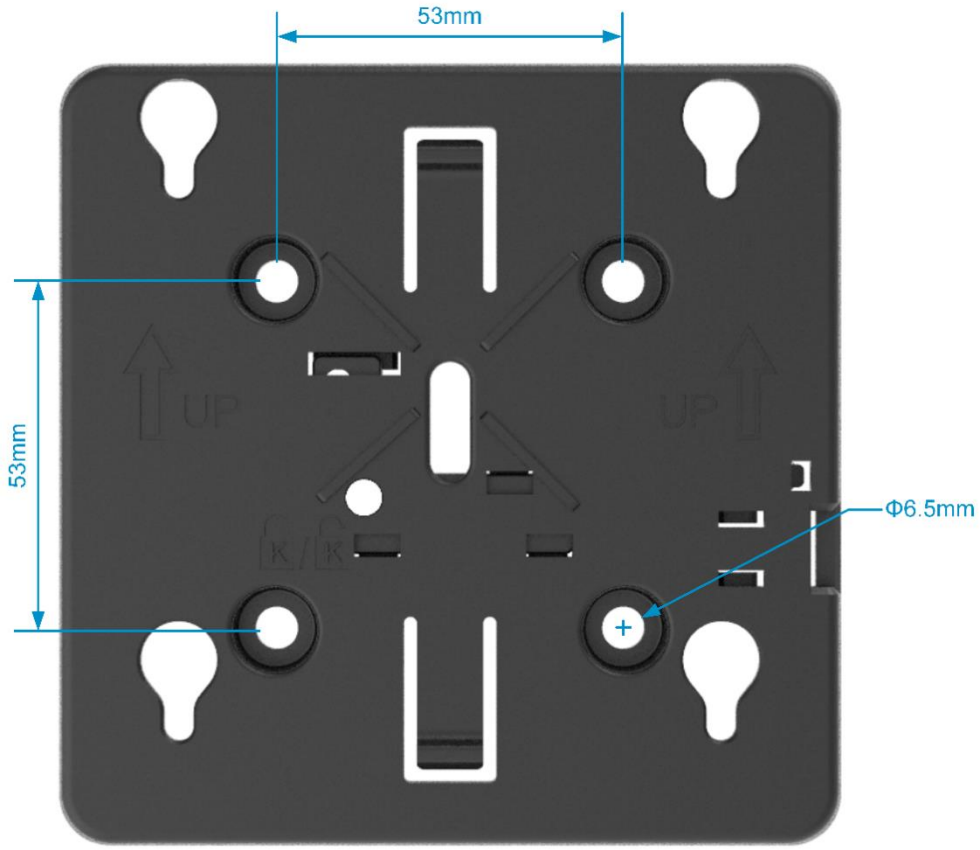
3.2 Before You Begin

Carefully plan and arrange the installation location, networking mode, power supply, and cabling before installing the device.

Confirm the following requirements before installation:

- The installation site can provides sufficient space for heat dissipation.
- The installation site meets the temperature and humidity requirements of the device.
- The power supply and required current are available at the installation site.
- The Ethernet cables have been deployed in the installation site.
- The selected power supply meets the system power requirements.
- Learn about the position of the indoor emergency power switch before installation. Cut off the power switch in case of accidents.
- For ceiling-mount or wall-mount access points, the dimensions of the mounting bracket, mounting hole pattern, and mounting hole diameter should meet the requirements described in Table 1-4 Dimensions and Weight.

Figure 3-2 Dimensions of Mounting Bracket



3.3 Precautions

To ensure the normal operation and prolonged service life of the access point, observe the following safety precautions.

- Do not power on the device during installation.
- Place the device in a well-ventilated environment.
- Do not expose the device to high temperatures.

- Keep the device far away from high-voltage power cables.
- Install the device indoors.
- Do not expose the device to a thunderstorm or strong electric field.
- Keep the device clean and dust-free.
- Cut off the power switch before cleaning the device.
- Do not wipe the device with a damp cloth.
- Do not wash the device with liquid.
- Do not open the enclosure when the device is working.
- Secure the device properly.

3.4 Installing the Access Point

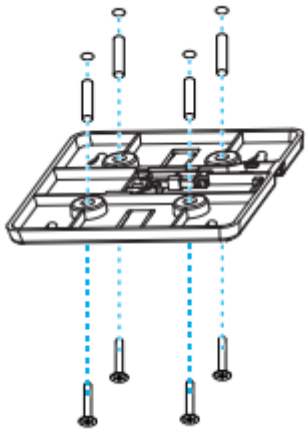
Note

- You are advised to install the access point where you can get the optimal Wi-Fi coverage.
- In indoor scenarios, the Wi-Fi coverage of a ceiling-mount AP is larger than that of a wall-mount AP. You are advised to install the AP on a ceiling.

3.4.1 Ceiling Mount

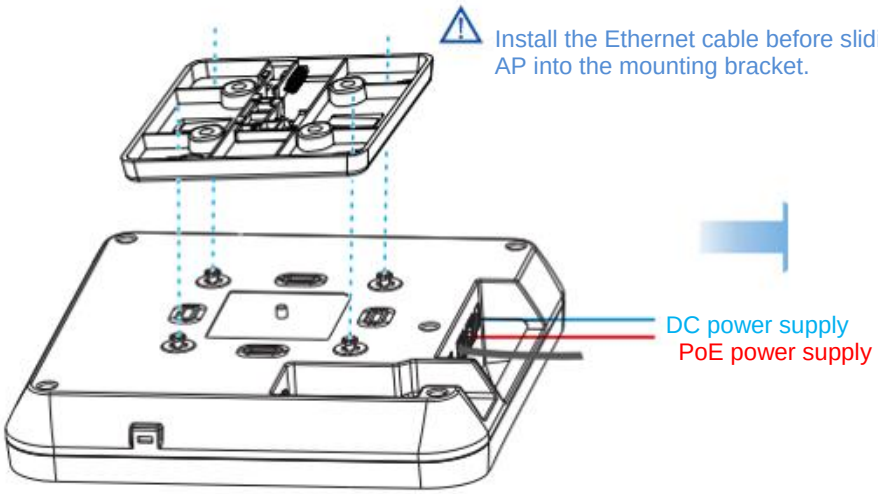
(1) Drill four holes with a diameter of 6.5 mm (0.26 in.) at 53 mm (2.09 in) spacing on a ceiling. Tap four wall anchors into the mounting holes. Drive the screws into the wall anchors to secure the mounting bracket to the ceiling.

Figure 3-3 Securing the Mounting Bracket to a Ceiling



(2) Align the feet on the rear of the AP over the mounting holes on the bracket.

Figure 3-4 Aligning the AP with the Mounting Bracket

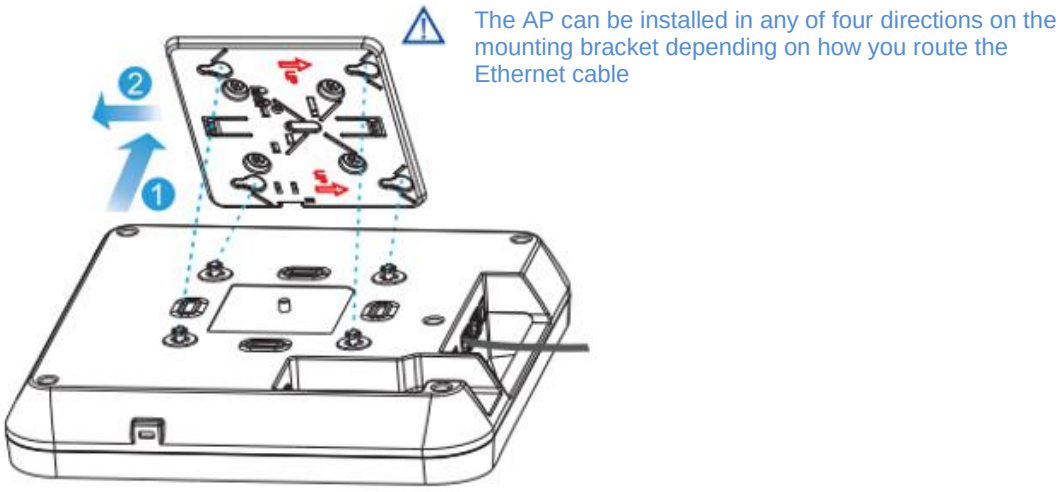


Caution

Install the Ethernet cable properly before sliding the AP into the mounting bracket.

(3) Slide the AP into the mounting bracket in the opposite direction against the arrow on the bracket until the AP clicks into place.

Figure 3-5 Sliding the AP into the Mounting Bracket



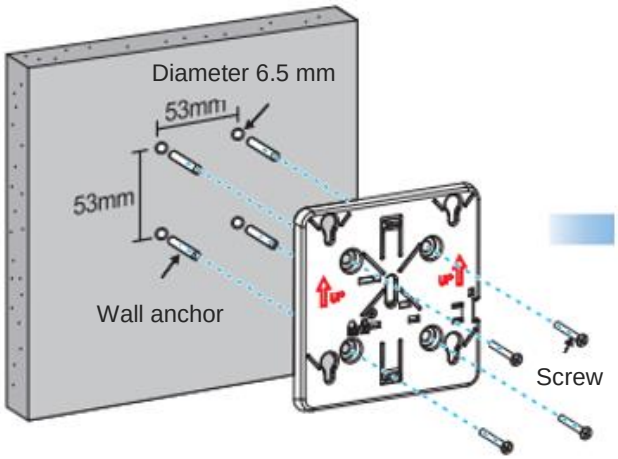
Caution

- The AP can be installed in any of four directions on the mounting bracket depending on how you route the Ethernet cable.
- The feet of the AP should fit easily into the mounting holes. Do not force the feet into the mounting holes.
- After installation, verify that the access point is secured properly.

3.4.2 Wall Mount

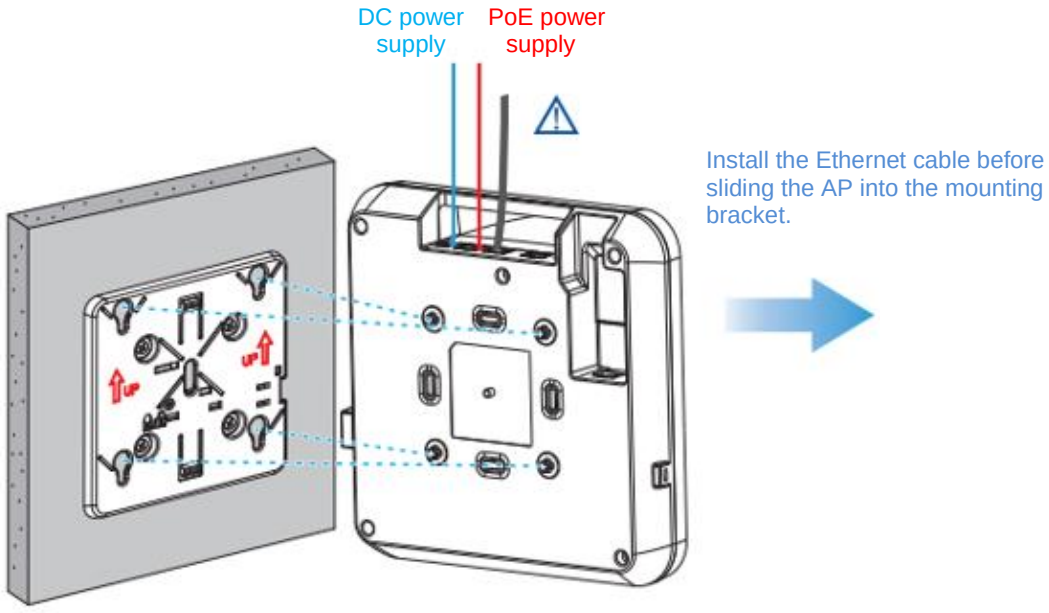
(1) Drill four holes with a diameter of 6.5 mm (0.26 in.) at 53 mm (2.09 in) spacing on a wall. Tap four wall anchors into the mounting holes. Drive the screws into the wall anchors to secure the mounting bracket to the wall.

Figure 3-6 Securing the Mounting Bracket to a Wall



(2) Align the feet on the rear of the AP over the mounting holes on the bracket.

Figure 3-7 Aligning the AP with the Mounting Bracket



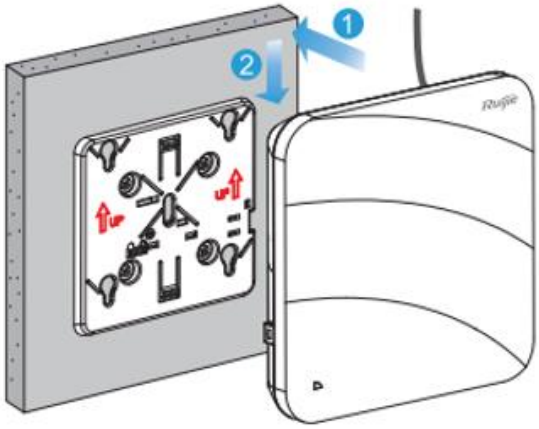
⚠ Caution

Install the Ethernet cable before sliding the AP into the mounting bracket.

(3) Slide the AP into the mounting bracket in the opposite direction against the arrow on the mounting bracket until the AP clicks into space.

Figure 3-8 Sliding the AP into the Mounting Bracket

⚠ Keep the **Ruijie** logo on top when installing the AP on a wall.



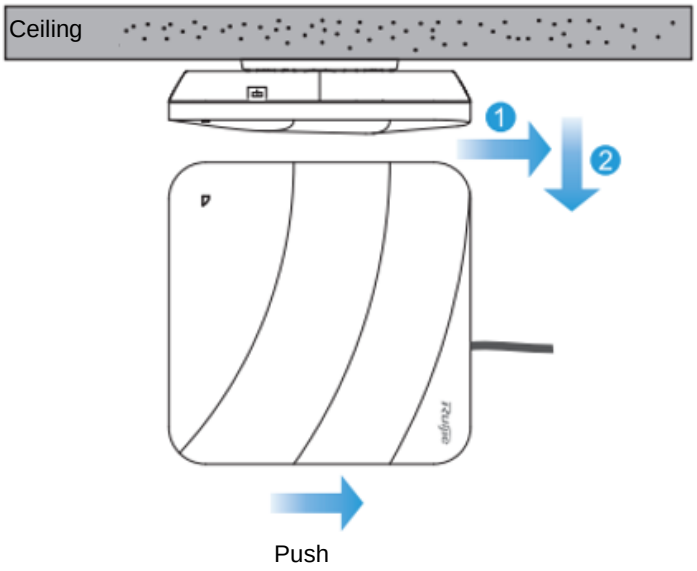
⚠ Caution

- Keep the **Ruijie** logo on top when installing the AP on a wall.
- The AP can be installed in any of four directions on the mounting bracket depending on how you route the Ethernet cable.
- After installation, verify that the access point is secured properly.

3.4.3 Removing the Access Point

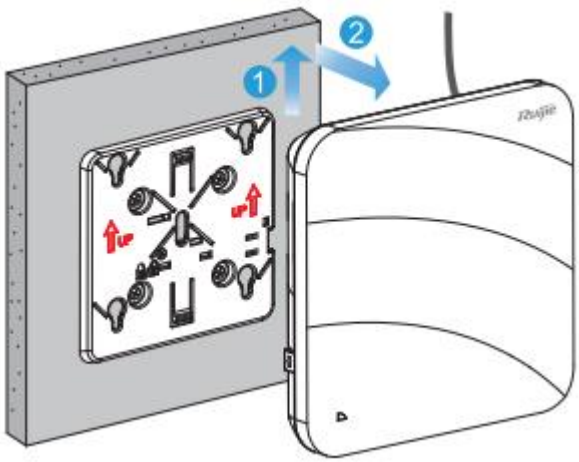
(1) Hold the ceiling-mount AP in your hands and push it out of the mounting bracket in the direction of the Ethernet port.

Figure 3-9 Removing the Ceiling-Mount AP from the Mounting Bracket



(2) Hold the wall-mount AP in your hands and push it out of the mounting bracket in the direction of the Ethernet port.

Figure 3-10 Removing the Wall-Mount AP from the Mounting Bracket

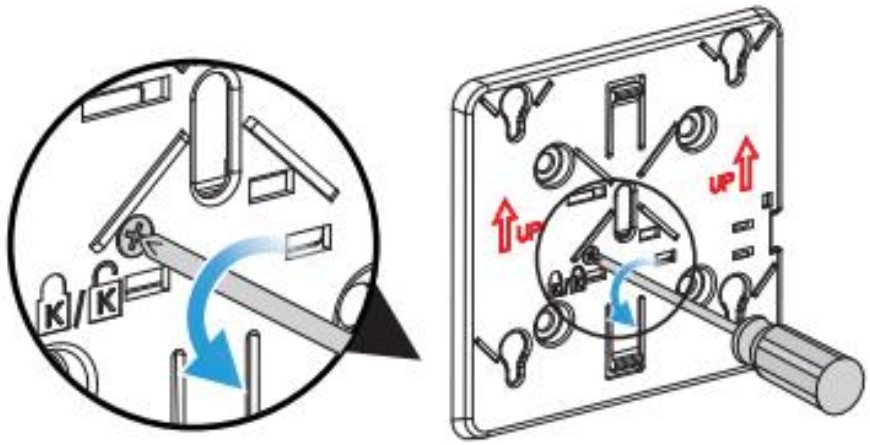


3.5 Installing Other Modules

3.5.1 Installing the Securing Latch

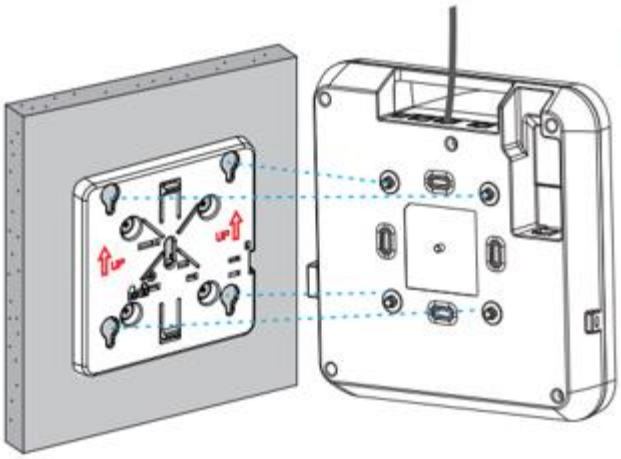
(1) Loosen the screw and engage the securing latch.

Figure 3-11 Engaging the Securing Latch



(2) Align the feet on the rear of the AP over the mounting holes on the bracket. Slide the AP into the mounting bracket in the opposite direction against the arrow on the bracket until the AP clicks in place.

Figure 3-12 Sliding the AP into the Mounting Bracket



Install the Ethernet cable before sliding the AP into the mounting bracket.

Align the feet on the rear of the AP over the mounting holes on the bracket.

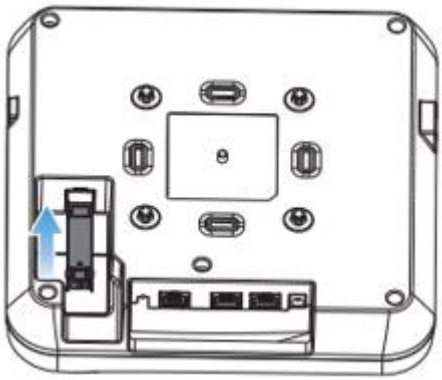
Caution

- Install the Ethernet cable before sliding the AP into the mounting bracket.
- Engage the securing latch as required.

3.5.2 Installing an SFP Module

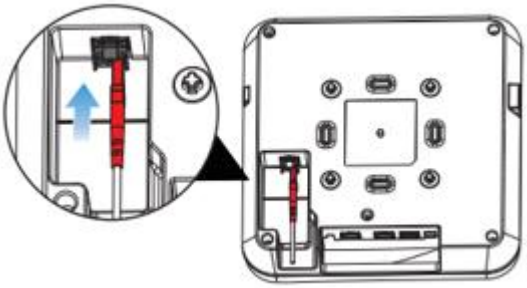
(1) Insert an SFP module into the SFP port.

Figure 3-13 Inserting an SFP Module into the SFP Port



(2) Connect a fiber-optic cable to the SFP module.

Figure 3-14 Connecting a Fiber-Optic Cable to the SFP Module



3.6 Connecting Cables

Connect a twisted pair cable to the LAN/PoE port of the AP. For details about the twisted pairs, see 7.1 Connectors and Media.

⚠ Caution

The console port of the AP supports a baud rate of 9600, data bits of 8, parity check (none), stop bit of 1, and flow control (none) by default. The parameters need to be set only when the AP is manually configured.

3.7 Bundling Cables

3.7.1 Precautions

- The power cords and other cables should be bound in a visually pleasing way.
- When you bundle twisted pairs, make sure that the cables at the connectors have natural bends or bends of large radius.
- Do not over tighten cable bundle as it may reduce the cable life and performance.

3.7.2 Steps

(1) Bind the drooping part of the cables and place the bundle as near the LAN/PoE port as possible.

(2) Fasten the cables inside the cable management trough.

(3) Route the cables under the access point and run in straight line.

3.8 Checklist After Installation

3.8.1 Checking Access Point

- Verify that the external power supply matches with the requirement of the access point.
- Verify that the access point is secured properly.

3.8.2 Checking Cable Connection

- Verify that the UTP/STP cable matches with the port type.
- Verify that cables are properly bundled.

3.8.3 Checking Power Supply

- Verify that the power cord is properly connected and compliant with safety requirements.
- Verify that the access point is operational after power-on.

4 Verifying Operating Status

4.1 Setting up Configuration Environment

The AP adopts PoE or DC power supply.

- When the AP is powered by PoE or DC power supply, verify that the power supply functions properly and meets safety requirements.
- Connect the AP to a wireless controller through a twisted pair cable.
- When the console port of the AP is connected to the serial port of a PC for debugging, verify that the PC and PoE switch are properly grounded.

4.2 Powering on the Access Point

4.2.1 Checklist Before Power-on

- Verify that the power cord is properly connected.
- Verify that the input voltage meets with the requirement of the AP.

4.2.2 Checklist After Power-on (Recommended)

After power-on, check the following items:

- Verify that there are system logs printed on the terminal interface.
- Verify the LED status of the AP.

5 Monitoring and Maintenance

5.1 Monitoring

5.1.1 LED

When the AP is operating, monitor the system status by observing the LED.

5.1.2 CLI Commands

Run related commands on the CLI to monitor the AP, including:

- Port configuration and status
- System logs

Note

- For details about the commands, see the configuration guide.
- The AP supports remote maintenance.

5.2 Remote Maintenance

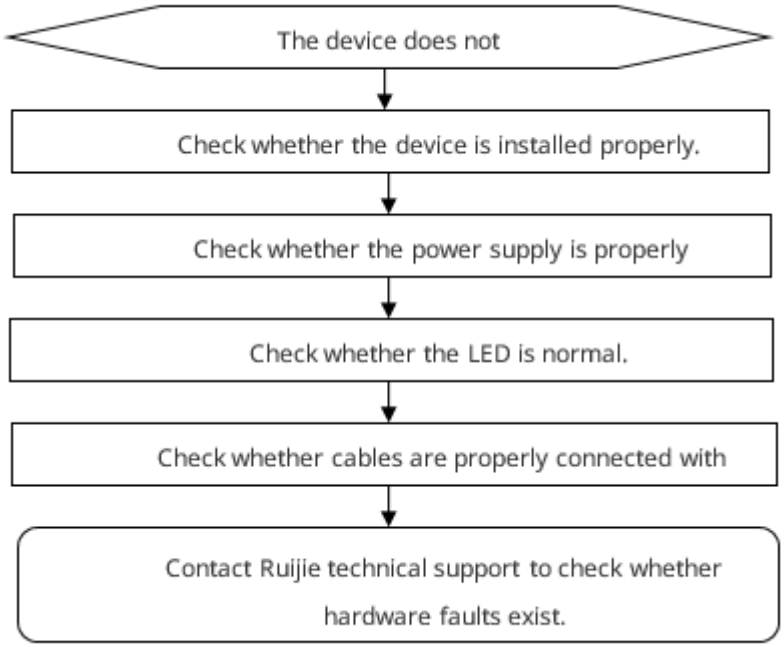
- When the AP works in the fat mode, log in to the AP for remote maintenance.
- When the AP works in the fit mode, use a wireless controller to manage and maintain the AP uniformly.

5.3 Hardware Maintenance

If the hardware is faulty, please contact Ruijie technical support for help.

6 Common Troubleshooting

6.1 General Troubleshooting Flowchart



6.2 Common Faults

6.2.1 Ethernet Port Is Not Working After the Ethernet Cable Is Plugged In

Verify that the peer device is working properly. And verify that the Ethernet cable is capable of providing the required data rate and is properly connected.

6.2.2 LED Is Off for a Long Time

- If the AP is powered by PoE, verify that the power sourcing equipment (PSE) is at least 802.3af-capable, and then verify that the Ethernet cable is properly connected.
- If the AP is powered by a DC adapter, verify that the adapter has mains input and works properly.

6.2.3 LED Is Solid Red

The LED keeps solid red for a long time, indicating that the Ethernet port is not connected. Verify the Ethernet port connection.

6.2.4 LED Is Solid Green

The AP needs to be initialized after power-on. During this period, the LED keeps solid green and does not turn blue until the initialization is completed. If the LED is still solid green after an hour, the device initialization fails and the device is faulty.

6.2.5 LED Keeps Blinking Blue at an Interval of 0.2s (in Fit Mode)

The software is being upgraded after the AP is powered on. During this period, the LED keeps blinking blue at an interval of 0.2s and does not turn solid blue until the upgrade is completed. Do not plug or unplug the power cord when the LED is blinking as software upgrade takes time. If the blinking persists for 10 minutes, software upgrade is not completed and the device is faulty.

6.2.6 LED Does Not Turn Solid Blue or Blinking Blue

If the LED does not turn solid blue or blinking blue after the system starts up, the access point probably has not established a proper CAPWAP connection with the wireless controller. Verify that the wireless controller is operational and configured properly.

6.2.7 STAs Can Not Find the Access Point

(1) Verify that the AP is properly powered.

(2) Verify that the Ethernet port is correctly connected.

(3) Verify that the AP is correctly configured.

(4) Move the STA closer to the access point.

7 Appendix

7.1 Connectors and Media

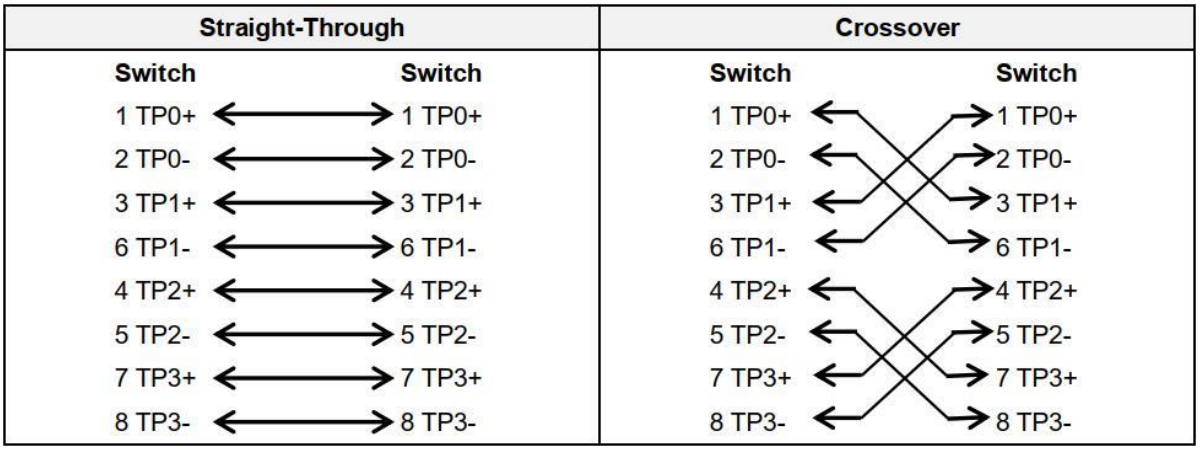
1000BASE-T/100BASE-TX/10BASE-T port

1000BASE-T/100BASE-TX/10BASE-T port is a 10/100/1000 Mbps port that supports auto-negotiation and auto MDI/MDIX Crossover.

Compliant with IEEE 802.3ab, the 1000BASE-T port requires Category 5/5e 100-ohm UTP or STP with a maximum distance of 100 meters (328.08 feet).

1000BASE-T port uses four twisted pairs for data transmission, all of which must be connected. Twisted pairs for the 1000BASE-T port are connected as shown in the following figure.

Figure 7-1 Four Twisted Pairs Connection



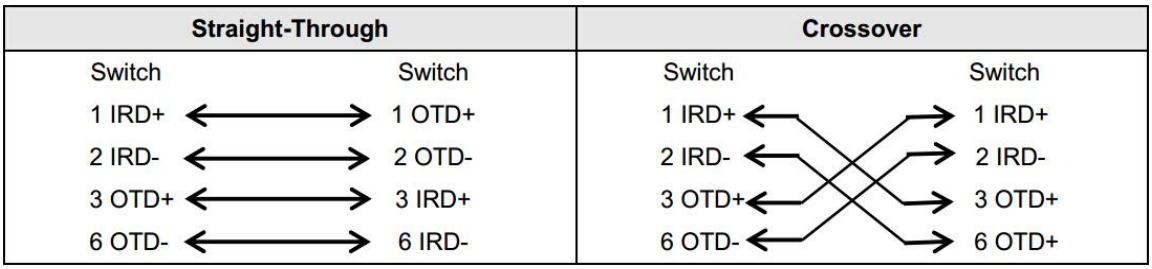
100BASE-TX/10BASE-T port can also be connected by cables of the preceding specifications. Besides, the 10BASE-T port can be connected by 100-ohm Category 3, Category 4, and Category 5 cables with a maximum distance of 100 meters (328.08 feet). 100BASE-TX port can be connected by 100-ohm Category 5 cables with a maximum distance of 100 meters (328.08 feet). The following figure lists definitions of pin signals for the 100BASE-TX/10BASE-T port.

Figure 7-2 100BASE-TX/10BASE-T Pin Assignments

Pin	Socket	Plug
1	Input Receive Data+	Output Transmit Data+
2	Input Receive Data-	Output Transmit Data-
3	Output Transmit Data+	Input Receive Data+
6	Output Transmit Data-	Input Receive Data-
4,5,7,8	Not used	Not used

The following figure shows feasible connections of the straight-through and crossover twisted pairs for a 100BASE-TX/10BASE-T port.

Figure 7-3 100BASE-TX/10BASE-T Connection



7.2 SFP Module and Specifications

We provide appropriate SFP modules according to the port types. You can select the module to suit your specific needs. The SFP module and specifications are provided for reference.

Table 7-1 Technical Specifications

Wavelength (nm)	Fiber Type	DDM	Transmit Power (dBm)		Receive Power (dBm)	
			Min	Max	Min	Max
1310Tx/1550Rx	SMF	Not supported	–9	–3	N/A	–18

Table 7-2 Cabling Specifications

Connector	Fiber Type	Core Size (um)	Max. Cable Distance
LC	SMF	9/125	0.3 km (984.25 ft.)

⚠ Caution

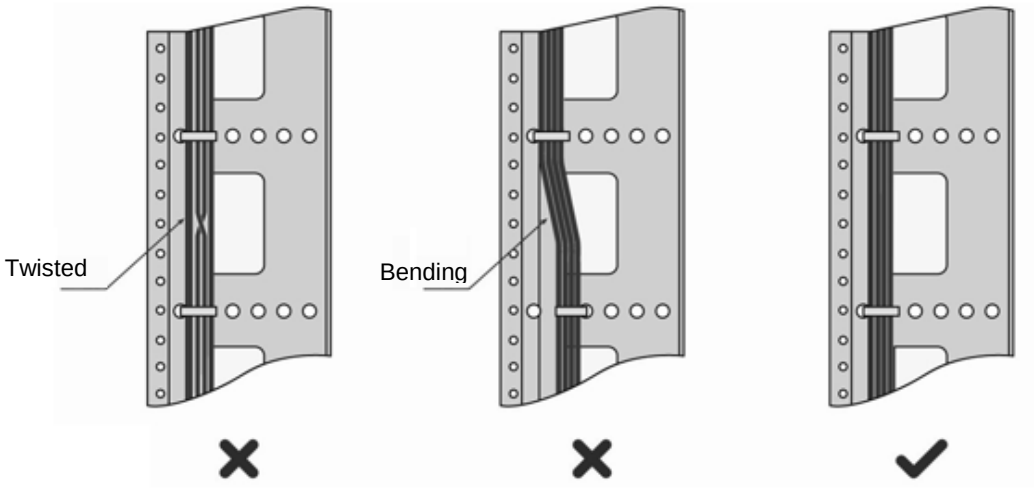
- For optical modules with a maximum cable distance of over 40 km (24.85 miles), install an optical attenuator to avoid overload when using short-distance SMFs.
- The SFP module is a laser transceiver. Do not look into the laser beam directly.
- To keep the SFP module clean and dust-free, install a dust cap on the SFP module when the fiber-optic cable is not connected.

7.3 Cabling

During installation, route cable bundles upward or downward along the sides of the rack depending on the actual situation in the equipment room. All cable connectors used for transit should be placed at the bottom of the cabinet rather than be exposed outside of the cabinet. Power cords are routed beside the cabinet, and top cabling or bottom cabling is adopted according to the actual situation in the equipment room, such as the positions of the DC power distribution box, AC socket, or lightning protection box.

- Requirements for Cable Bend Radius
  - The bend radius of a fixed power cord, network cable, or flat cable should be over five times greater than their respective diameters. The bend radius of these cables that are often bent or plugged should be over seven times greater than their respective diameters.
  - The bend radius of a fixed common coaxial cable should be over seven times greater than its diameter. The bend radius of the common coaxial cable that is often bent or plugged should be over 10 times greater than its diameter.
  - The bend radius of a fixed high-speed cable (such as an SFP+ cable) should be over five times greater than its diameter. The bend radius of the fixed high-speed cable that is often bent or plugged should be over 10 times greater than its diameter.
- Precautions for Cable Bundling
  - Before cables are bundled, mark labels and stick the labels to cables wherever appropriate.
  - Cables should be neatly and properly bundled in the rack without twisting or bending.

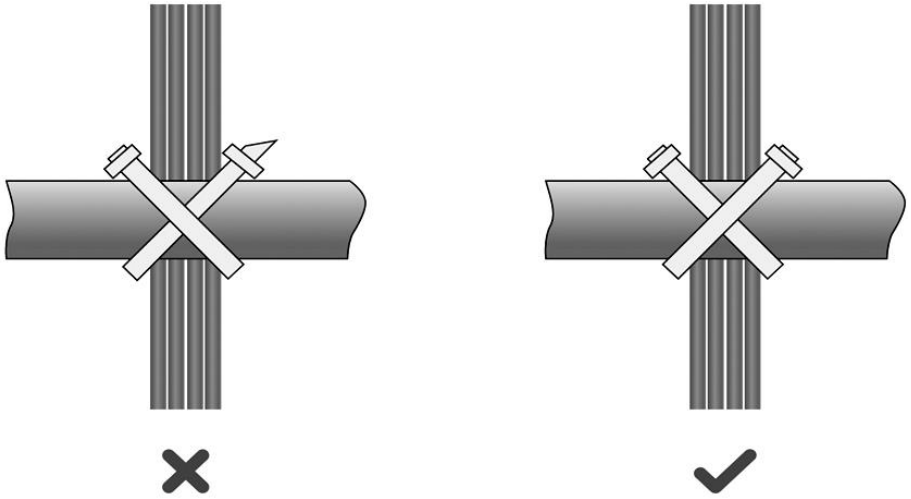
Figure 7-4 Bundling Cables



  - Cables of different types (such as power cords, signal cables, and grounding cables) should be separated in cabling and bundling. Mixed bundling is disallowed. When they are close to each other, you are advised to adopt crossover cabling. In the case of parallel cabling, maintain a minimum distance of 30 mm (1.18 in.) between power cords and signal cables.
  - The cable management brackets and cabling troughs inside and outside the cabinet should be smooth without sharp corners.
  - The metal hole traversed by cables should have a smooth and fully rounding surface or an insulated lining.

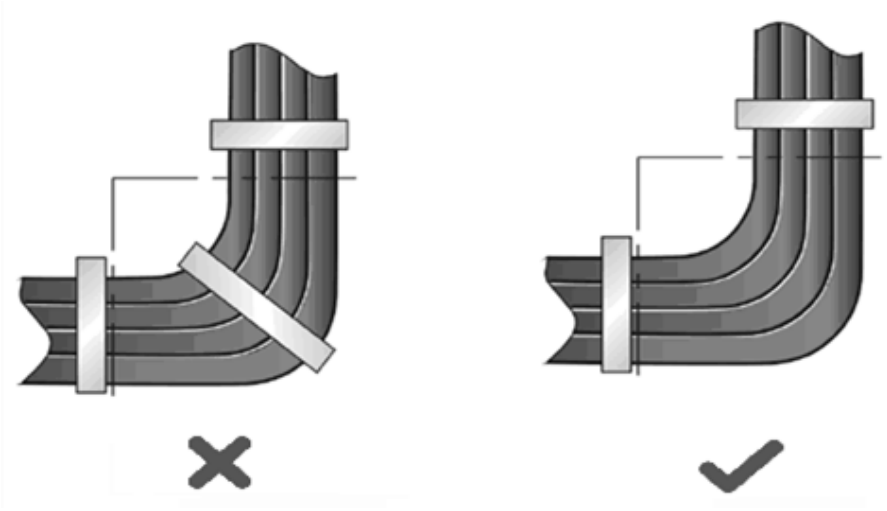
- Use cable ties to bundle up cables properly. Please do not connect two or more cable ties to bundle up cables.
- After bundling up cables with cable ties, cut off the remaining part. The cut should be smooth and trim, without sharp corners.

Figure 7-5 Bundling Cables



- When cables need to be bent, you should first bundle them up. However, the buckle cannot be bundled within the bend area. Otherwise, considerable stress may be generated in cables, breaking cable cores.

Figure 7-6 Bundling Cables

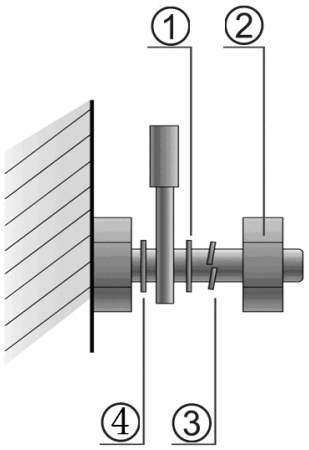


- Cables not to be assembled or remaining parts of cables should be folded and placed in a proper position of the rack or cable trough. The proper position refers to a position that does not affect device running or damage the device or cable.
- 220 V and –48 V power cords must not be bundled on the guide rails of moving parts.
- The power cords connecting moving parts such as grounding cables should be reserved with some access after being assembled to avoid suffering tension or stress. After the moving part is installed, the remaining cable part should not touch heat sources, sharp corners, or sharp edges. If heat sources cannot be avoided, high-temperature cables should be used. If heat sources cannot be avoided, high-

temperature cables should be used.

- When screw threads are used to fasten cable terminals, the anchor or screw must be tightly fastened.

Figure 7-7 Cable Fastening



①	Flat washer	③	Spring washer
②	Nut	④	Flat washer

- Hard power cords should be fastened in the terminal connection area to prevent stress on terminal connection and cable.
- Do not use self-tapping screws to fasten terminals.
- Power cords of the same type and in the same cabling direction should be bundled up into cable bunches, with cables in cable bunches clean and straight.
- Bind the cords with buckles according to the following table.

Table 7-3 Cable Bunch

Cable Bundle Diameter (mm)	Distance between Every Binding Point
10 mm (0.39 in.)	80 mm to 150 mm (3.15 in. to 5.91 in.)
10 mm to 30 mm (0.39 in. to 1.18 in.)	150 mm to 200 mm (5.91 in. to 7.87 in.)
30 mm (1.18 in.)	200 mm to 300 mm (7.87 in. to 11.81 in.)

- No knot is allowed in cabling or bundling.
- For wiring terminal blocks (such as air switches) of the cold pressing terminal type, the metal part of the cord end terminal should not be exposed outside the terminal block when assembled.

7.4 DC Connector Specifications

- Input voltage: 54 V DC
- Rate current: 1.1 A

Table 7-4 DC Connector Specifications

Inner Diameter	Outer Diameter	Depth	Polarity Symbol
2.1 mm (0.08 in.)	5.5 mm (0.22 in.)	9.5 mm (0.37 in.)	Center (tip) of the output plug: Positive (+) Barrel (ring) of the output plug: Negative (-)

Figure 7-8 DC Connector Dimensions

