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**MOXA**
**AWK-3262A**
**Series Wireless**
**AP/Bridge/Client**

# MOXA AWK-3262A Series Wireless AP/Bridge/Client Installation Guide

**Contents**

**MOXA**®

**MOXA AWK-3262A Series Wireless AP/Bridge/Client**

## Product Usage Instructions

- Insert the upper lip of the DIN-rail kit into the mounting rail.
- Press the AWK-3262A towards the mounting rail until it snaps into place.
- Remove the DIN-rail attachment plate from the AWK-3262A.
- Attach the wall-mounting plates with M3 screws.
- Insert the screw heads through the keyhole-shaped apertures and slide the AWK-3262A downwards or forwards for wall or ceiling mounting.
- Tighten the screws for added stability.

Ensure to disconnect the power cord before installing or wiring the AWK-3262A. Follow all electrical codes and guidelines to prevent overheating and damage to equipment.

## FAQ

- **Q:** How do I reset the AWK-3262A to factory settings?
- **A:** To reset the AWK-3262A, locate the reset button on the device and press and hold it for 10 seconds until the system LEDs blink. Release the button to complete the reset process.

## Overview

- The AWK-3262A Series is a Wireless AP/bridge/client with IEEE 802.11ax technology.
- This Series features concurrent dual-band Wi-Fi data transmissions up to 574 Mbps (2.4 GHz mode) and 1,201 Mbps (5 GHz mode) simultaneously, meeting the speed and flexibility requirements for industrial applications.
- In addition, the built-in dual band pass filter and the wide-temperature design ensure reliability and continuous operation in harsh environments.
- The dual redundant DC power inputs enhance availability while PoE support provides more flexibility for powering end devices and simplifying field-site deployments.
- Meanwhile, backward compatibility with 802.11a/b/g/n/ac/ax makes the AWK-3262A the ideal solution for constructing a versatile wireless data transmission system.

**Hardware Setup**

- This section covers the hardware setup for the AWK-3262A.

## Package Checklist

Moxa's AWK-3262A is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.
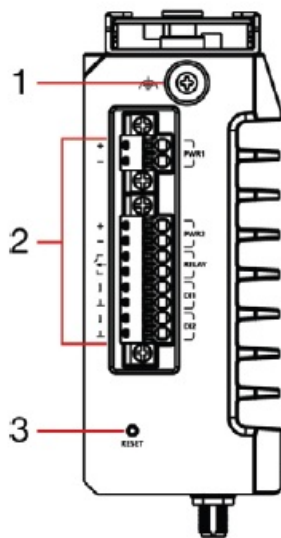
- 1 x AWK-3262A wireless AP/client
- 2 x 2.4/5 GHz antennas: ANT-WDB-ARM-0202
- DIN-rail kit (preinstalled)
- 1 x USB protective cap
- Cable holder with one screw
- Quick installation guide (printed)
- Warranty card
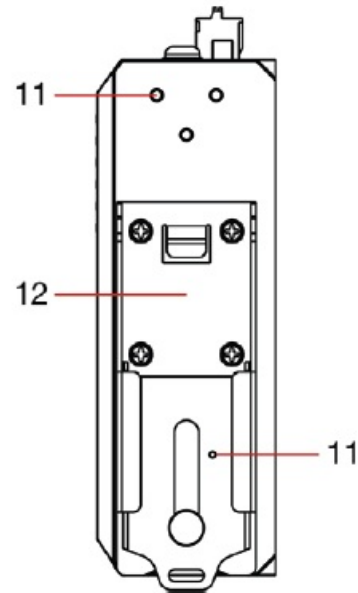
**Optional Mounting Accessories (Sold Separately)**

- Wall-mount kit including 6 screws (M3x6)

## Panel Layout of the AWK-3262A

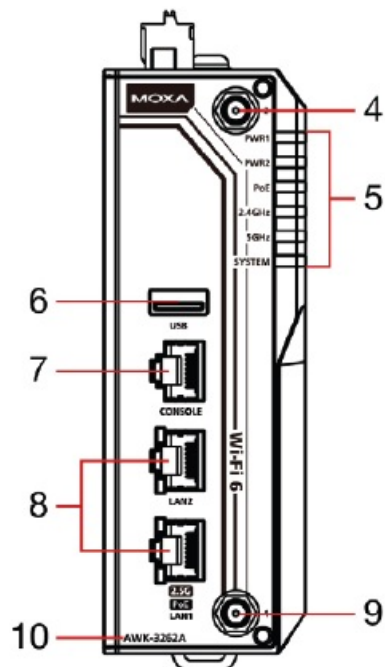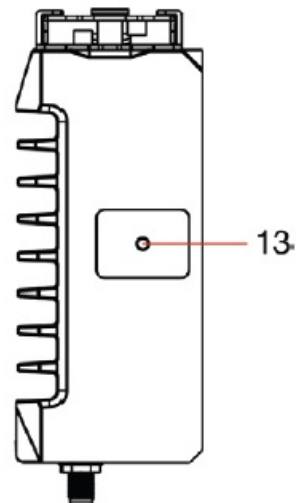## Top Panel View



## Rear Panel View



## Front Panel View



## Bottom Panel View



1. Grounding screw (M5)
2. Terminal blocks for PWR1, PWR2, relay, DI 1 and DI 2
3. Reset button
4. Antenna connector 2(RP-SMA)
5. System LEDs: PWR1, PWR2,PoE, 2.4GHz, 5GHz, SYSTEM
6. USB host (type A for ABC-02)
7. Console port (RS-232, RJ45)
8. LAN1(10/100/1000/2500BaseT(X)PoE port, RJ45),LAN2 (10/100/1000BaseT(X)port, RJ45)
9. Antenna connector 1(RP-SMA)
10. Model name
11. Screw holes for wall-mountingkit
12. DIN-rail mounting kit
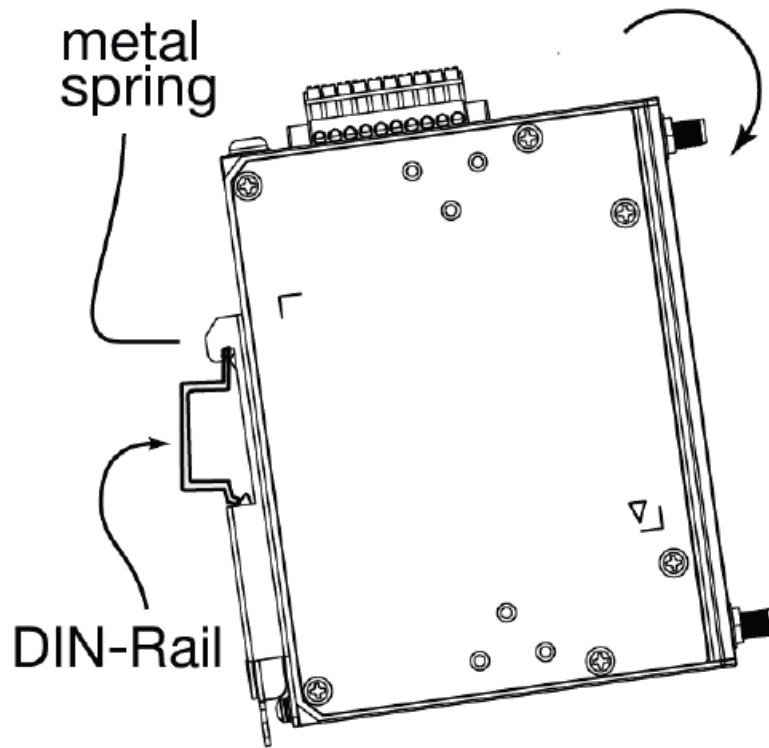13. Cable holder screw

## Mounting Dimensions

Unit: mm
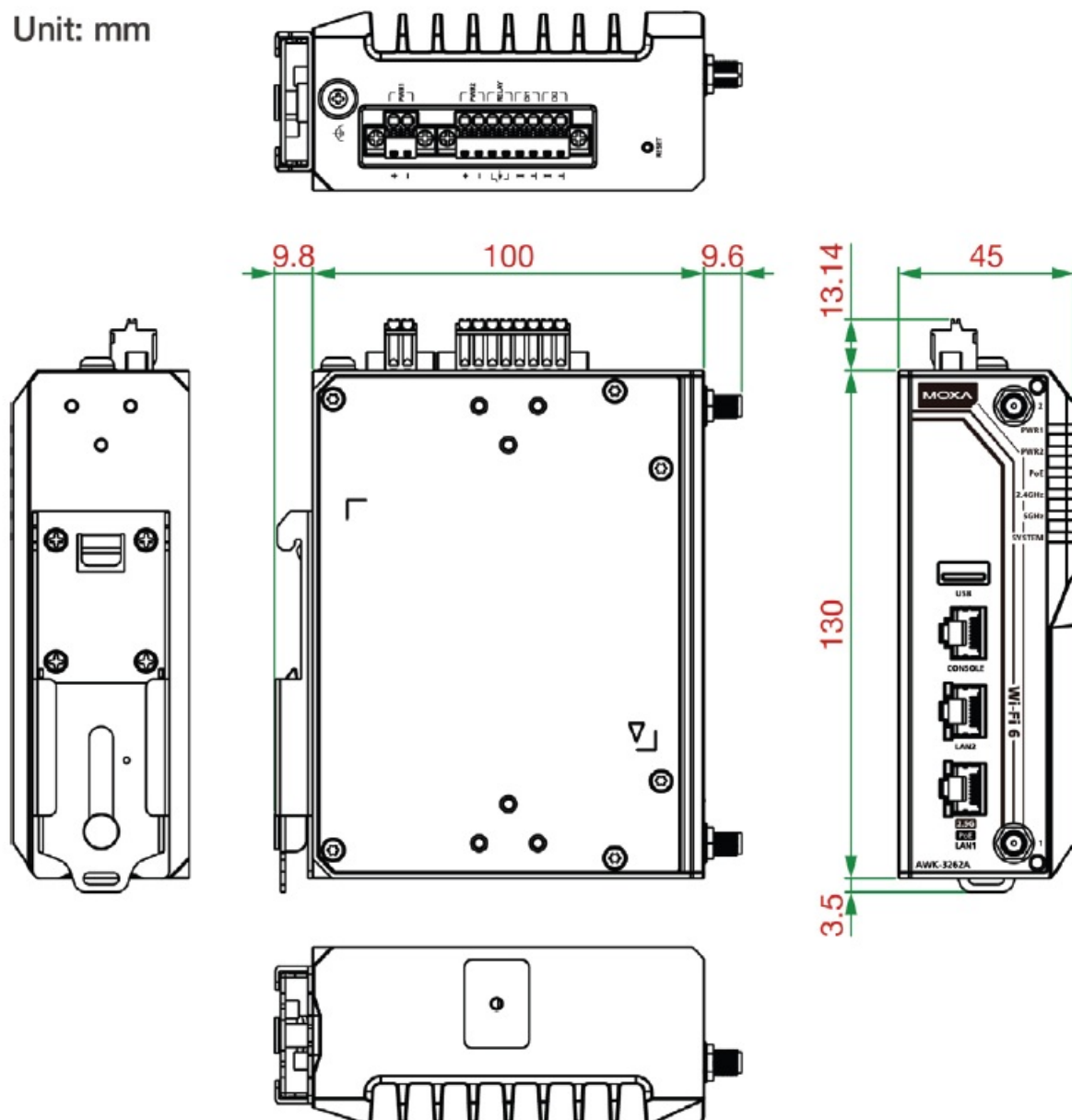


## DIN-rail Mounting

- When shipped, the metal DIN-rail mounting kit is fixed to the back panel of the AWK-3262A.
- Mount the AWK-3262A onto a corrosion-free mounting rail that adheres to the EN 60715 standard.
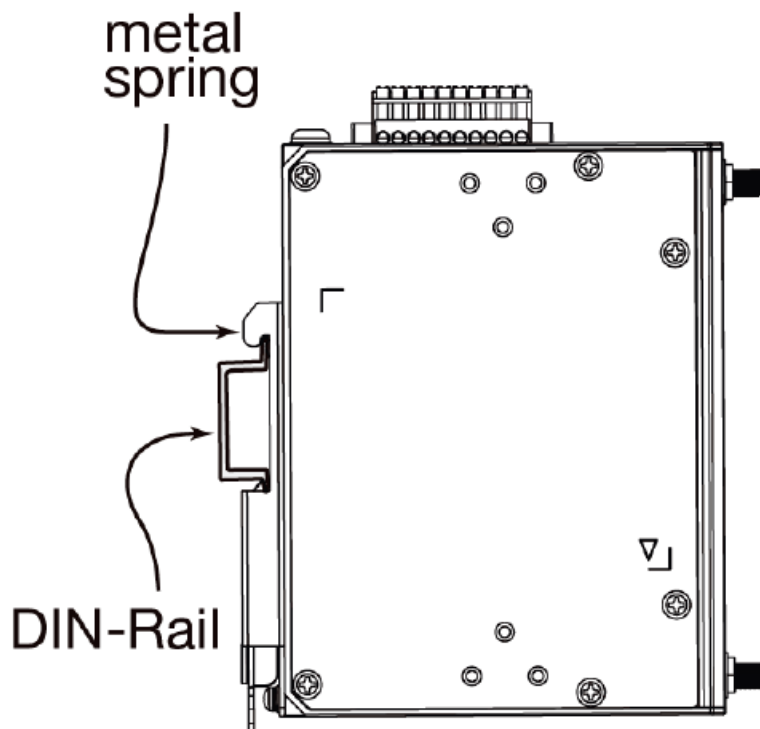
## STEP 1

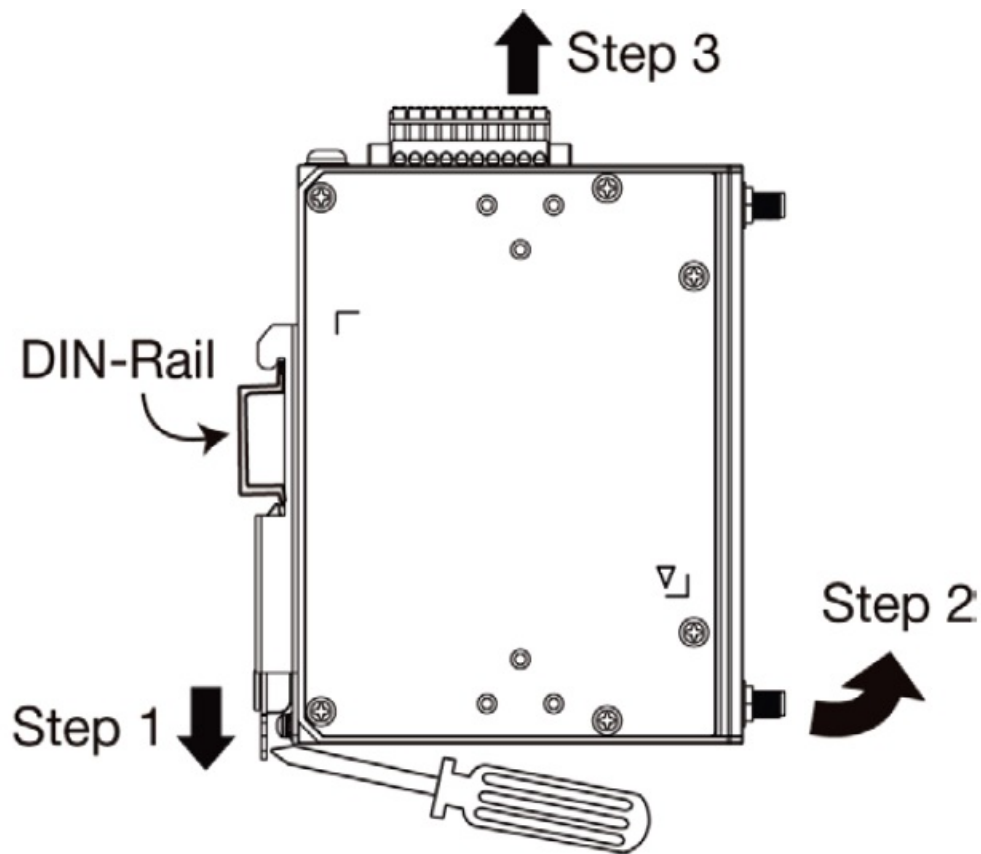- Insert the upper lip of the DIN-rail kit into the mounting rail.

**STEP 2**

- Press the AWK-3262A towards the mounting rail until it snaps into place.



To remove the AWK-3262A from the DIN rail, do the following:

- **STEP 1:** Pull down the latch on the DIN-rail kit with a screwdriver.
- **STEP 2 & 3:** Slightly pull the AWK-3262A backward and lift it up to remove it from the mounting rail.
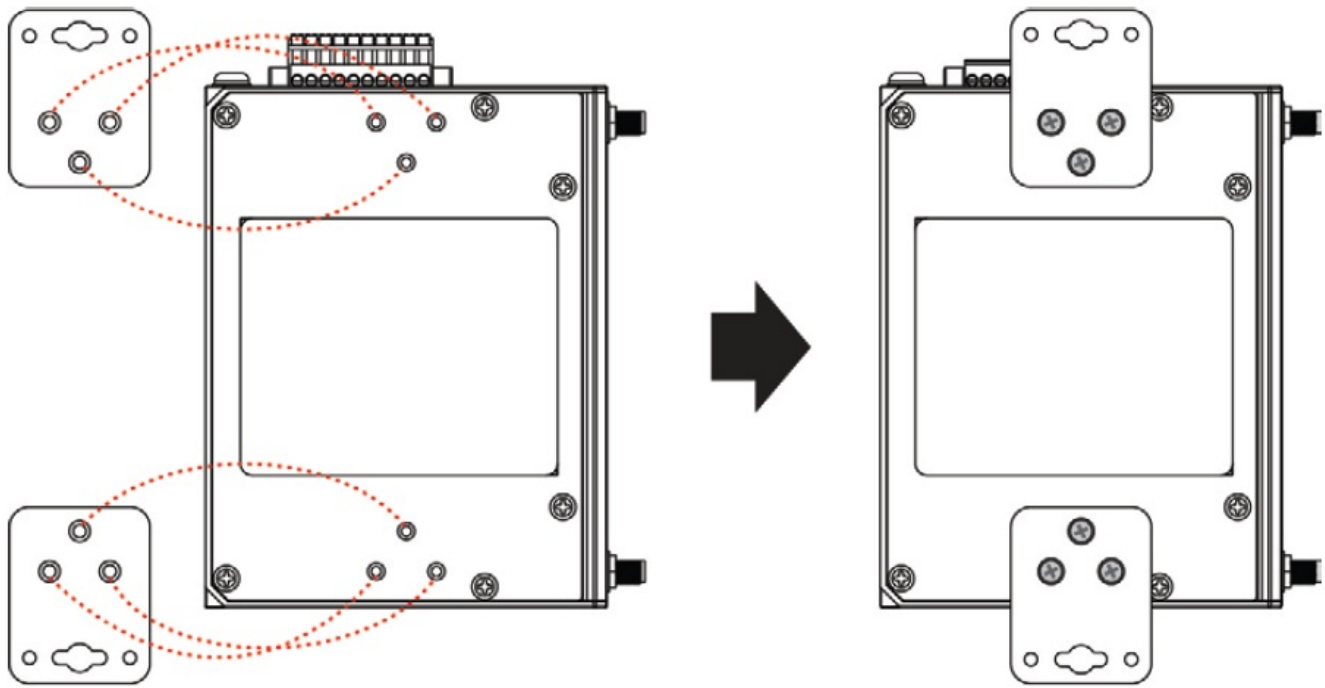
**Wall/Ceiling Mounting (Optional)**

- For some applications, it may be more convenient to mount the AWK-3262A to a wall or ceiling, as illustrated below.

**STEP 1**

- Remove the aluminum DIN-rail attachment plate from the AWK-3262A, and then attach the wall-mounting plates with M3 screws, as shown in the following diagrams.

**STEP 2**

- Mounting the AWK-3262A to a wall requires 2 screws. Use the AWK-3262A device, with wall-mounting plates attached, as a guide to mark the correct locations of the 2 screws on the wall. The heads of the screws should be less than 6.0 mm in diameter, the shafts should be less than 3.5 mm in diameter, and the screw length should be at least 15 mm, as shown in the figure on the right.
- Do not drive the screws in all the way—leave a space of about 2 mm to allow room for sliding the wall-mounting panel between the wall and the screws.
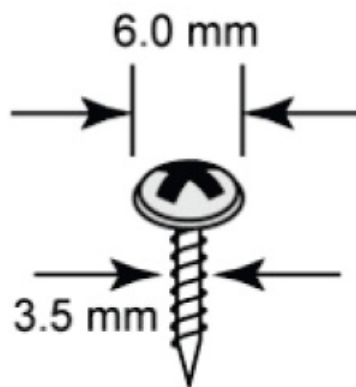


**NOTE**
Test the screw head and shank size by inserting the screws into one of the keyhole-shaped apertures of the wall-mounting plates before they are fixed to the wall.

**STEP 3**
Once the screws are fixed into the wall, insert the four screw heads through the large opening of the keyhole-shaped apertures, and then slide the AWK-3262A downwards (wall mounting) or forwards (ceiling mounting), as indicated to the right. Tighten the two screws for added stability.
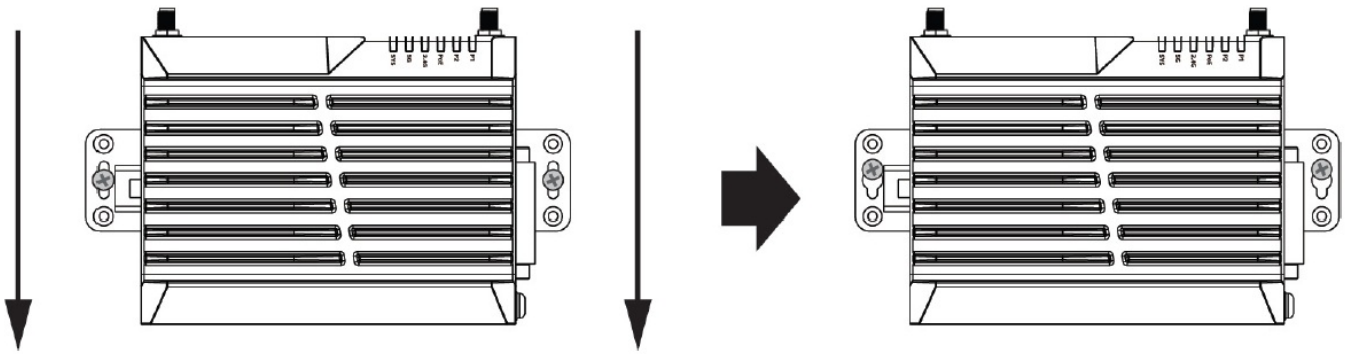
**WARNING**

- This equipment is intended to be used in a Restricted Access Location, such as a dedicated computer room where only authorized service personnel or users can gain access. Such personnel must be instructed about the fact that the metal chassis of the equipment is extremely hot and may cause burns.
- Service personnel or users have to pay special attention and take special precautions before handling this equipment.
- Only authorized, well-trained professionals should be allowed to access the restricted access location. Access should be controlled by the authority responsible for the location with lock and key or a security identity system.
- External metal parts are hot!! Pay special attention or use special protection before handling the equipment.

## Wiring Requirements

**WARNING**
**Safety First!**
Be sure to disconnect the power cord before installing and/or wiring your AWK-3262A.
Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes that dictate the maximum current allowed for each wire size. If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

**Read and Follow These Guidelines**

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the crossing point.

**NOTE**
Do not run signal or communications wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.

- You can use the type of signal transmitted through a wire todetermine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separated.
- For future reference, you should label the wiring used for all of your devices.

**NOTE**

- If the device is powered by PoE, the PSE equipment and cabling should not be connected to outside facilities.

**NOTE**

- The product is intended to be supplied by a UL Listed Power
- Unit marked "L.P.S." (or "Limited Power Source") and is rated 12-48 VDC, 2 – 0.5A min. (supplied by power adapter) or 48 VDC, 0.5A min. (supplied by PoE), Tma = 75 degree C. If you need further assistance with purchasing the power source, please contact Moxa for further information.

**NOTE**

- If using a Class I adapter, the power cord must be connected to a socket outlet with an earthing connection.

**ATTENTION**

- Make sure the external power adapter (including power cords and plug assemblies) provided with the unit is certified and suitable for use in your country or region.

**ATTENTION**

- Make sure the PSE (power sourcing equipment) or PoE injector used to power the AWK device complies with IEEE 802.3af or IEEE 802.3at.

**ATTENTION**

- The USB interface is coded to only support Moxa's ABC-02 dongle for troubleshooting or debugging purposes.

**NOTE**
This product can be deployed on vehicles as the control unit's wireless interface that collects data from different I/O devices and transmits the data to vehicle dispatch centers.

**Grounding the AWK-3262A**
Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices.

**ATTENTION**
This product is intended to be mounted to a well-grounded mounting surface, such as a metal panel. The potential difference between any two grounding points must be zero. If the potential difference is NOT zero, the product could be permanently damaged.

**Installations with Cable Extended Antennas for Outdoor Applications**
If an AWK device or its antenna is installed in an outdoor location, proper lightning protection is required to prevent direct lightning strikes to the AWK device. In order to prevent the effects of coupling currents from nearby lightning strikes, a lightning arrester should be installed as part of your antenna system. Ground the device, antenna, as well as arrester properly to provide maximum outdoor protection for the device.

**System Ground**
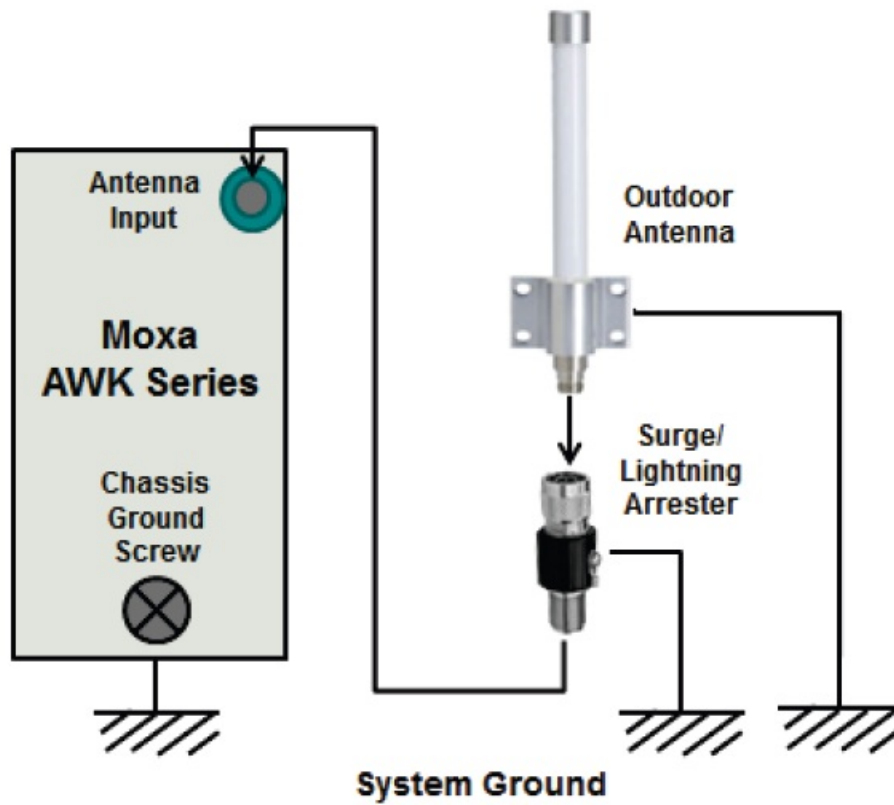
**Arrester Accessories**

- SA-NMNF-02: Surge arrester, N-type (male) to N-type (female)
- SA-NFNF-02: Surge arrester, N-type (female) to N-type (female)

**Terminal Block Pin Assignment**
The AWK-3262A comes with one 2-pin and one 8-pin terminal block located on the top panel of the device. The terminal block contains dual power inputs, a relay output, and dual digital inputs. Refer to the following figure and table for the detailed pin assignment.
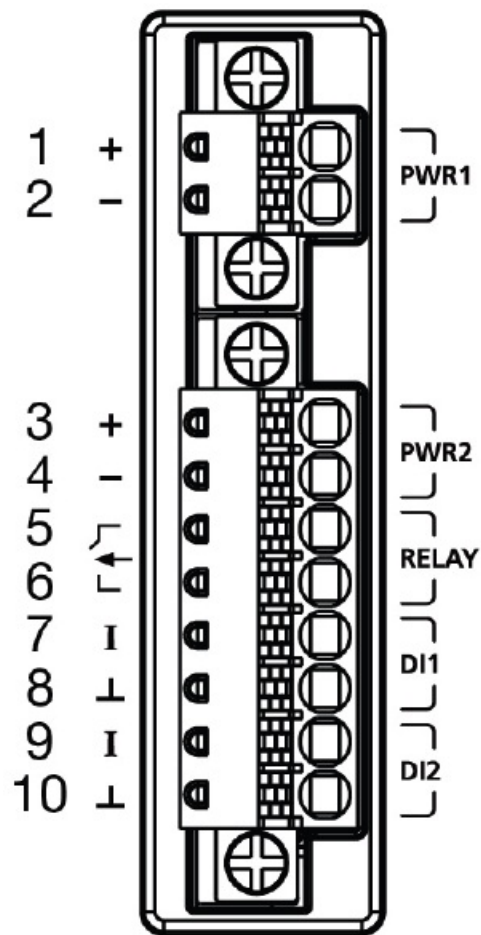
| Pin | Definition |
|---|---|
| 1 | DC Power Input 1 |
| 2 | |
| 3 | DC Power Input 2 |
| 4 | |
| 5 | Relay Output |
| 6 | |
| 7 | Digital Input 1 |
| 8 | Digital Input GND |
| 9 | Digital Input 2 |
| 10 | Digital Input GND |

**Wiring the Redundant Power Inputs**

The first two pairs of contacts of the 2- and 8-contact terminal block connectors on AWK-3262A's top panel are used for AWK-3262A's two DC inputs, designed for power redundancy. The top view of the terminal block connector is shown below.

- **STEP 1:** Insert the negative/positive DC wires into the +/- terminals.
- **STEP 2:** Insert the plastic terminal block connector prongs into the terminal block receptor, which is located on AWK-3262A's top panel.
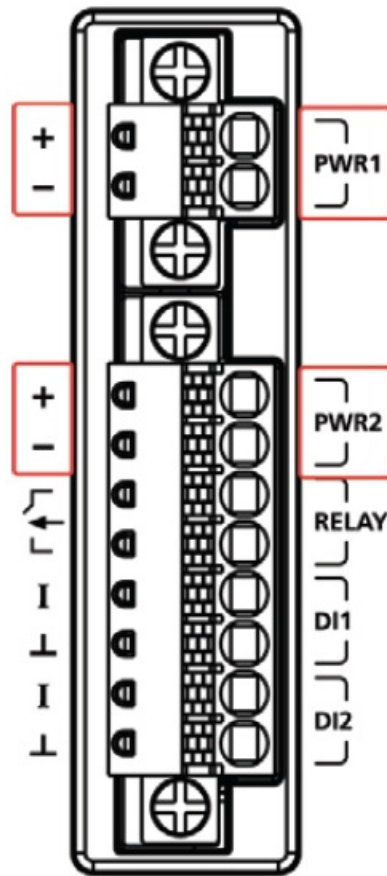
**NOTE**

Before connecting the AWK-3262A DC power inputs, make sure the DC power source voltage is stable.

- The wiring for the input terminal block shall be installed by a skilled person.
- Wire type: Cu
- Only use 16-22 AWG wire size.
- Use only one conductor in a clamping point between the DC power source and the power input.

**ATTENTION**

If the AWK-3262A is connected to a motor or other similar type of equipment, be sure to use power isolation protection. Before connecting the AWK-3262A to the DC power inputs, make sure the DC power source voltage is stable.

**Wiring the Relay Contact**

The AWK-3262A has one relay output, which consists of the two contacts of the terminal block on the AWK-3262A's top panel. Refer to the previous section for detailed instructions on how to connect the wires to the terminal block connector, and how to attach the terminal block connector to the terminal block receptor. These relay contacts are used to indicate user-configured events. The two wires attached to the Relay contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the Relay circuit will be closed.

**Wiring the Digital Inputs**

The AWK-3262A has two sets of digital inputs—DI1 and DI2. Each DI comprises two contacts of the 8-pin terminal block connector on AWK-3262A's top panel. Refer to the "Wiring the Redundant Power Inputs" section for detailed instructions on how to connect the wires to the terminal block connector, and how to attach the terminal block connector to the terminal block receptor.
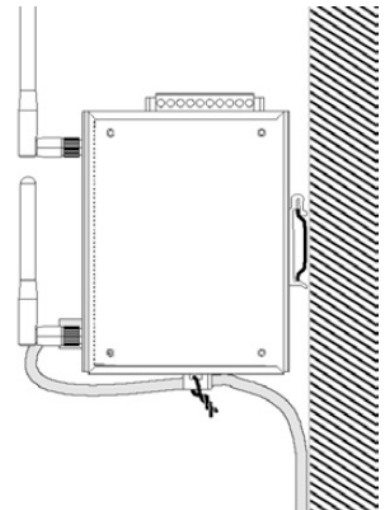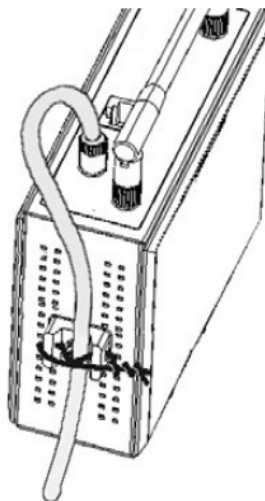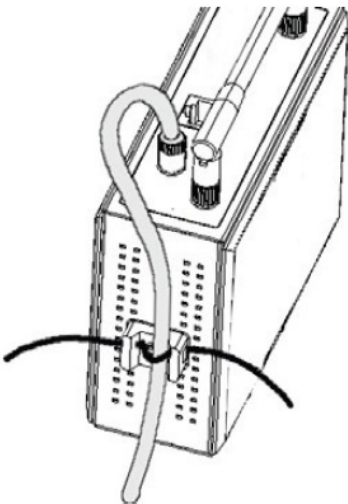
**Cable Holder Installation**

Attach the cable holder to the bottom of the AWK-3262A to keep the cabling neat and avoid accidents that result

from untidy cables.

- **STEP 1:** Screw the cable holder onto the bottom of the AWK-3262A.
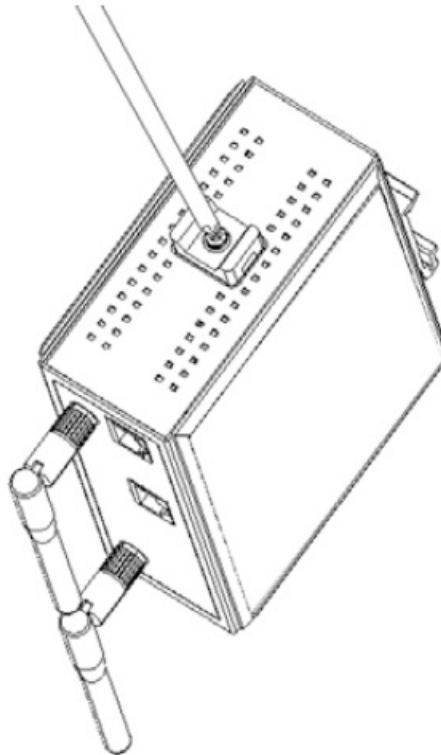


- **STEP 2:** After mounting the AWK-3262A and plugging in the LAN cable, tighten the cable along the device and wall.



## Communication Connections

- 10/100/1000BaseT(X) and 10/100/1000/2500BaseT(X) Ethernet Port Connection
- The 10/100/1000BaseT(X) and 10/100/1000/2500BaseT(X) ports located on the AWK-3262A's front panel are used to connect to Ethernet-enabled devices.

**MDI/MDI-X Port Pinouts**

| Pin | | 1000/2500BaseT MDI/MDI-X | 10/100 BaseT(X) MDI | 10/100 BaseT(X) MDI-X |
|---|---|---|---|---|
| 1 | TRD(0)+ | | TX+ | RX+ |
| 2 | TRD(0)– | | TX- | RX- |
| 3 | TRD(1)+ | | RX+ | TX+ |
| 4 | TRD(2)+ | | – | – |
| 5 | TRD(2)- | | – | – |
| 6 | TRD(1)- | | RX- | TX- |
| 7 | TRD(3)+ | | – | – |
| 8 | TRD(3)- | | – | – |
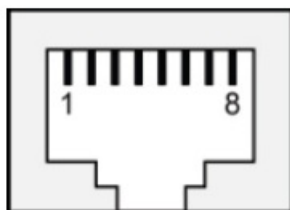


**RS-232 Connection**

The AWK-3262A has one RS-232 (8-pin RJ45) console port located on the front panel. Use either an RJ45-to-DB9 or RJ45-to-DB25 cable to connect the AWK-3262A's console port to your PC's COM port. You may then use a console terminal program to access the AWK-3262A for console configuration.

| Pin | Description |
|---|---|
| 1 | DSR |
| 2 | NC |
| 3 | GND |
| 4 | TXD |
| 5 | RXD |
| 6 | NC |
| 7 | NC |
| 8 | DTR |
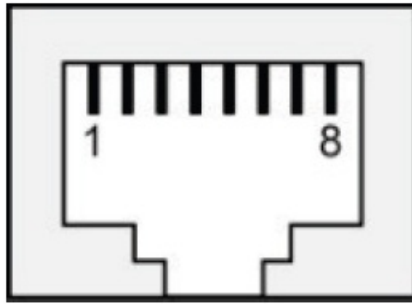
## LED Indicators

The front panel of the AWK-3262A contains several LED indicators. The function of each LED is described in the table below:

| LED | Color | State | Description |
|---|---|---|---|
| **Front Panel LED Indicators (System)** | | | |
| **PWR1** | Green | On | Power is being supplied from power input 1. |
| | | Off | Power is not being supplied from power input 1. |
| **PWR2** | Green | On | Power is being supplied from power input 2. |
| | | Off | Power is not being supplied from power input 2. |
| **PoE** | Amber | On | Power is being supplied via PoE. |
| | | Off | Power is not being supplied via PoE. |
| **2.4G** | Green | On | Client/Client-Router/Slave has established a Wi-Fi connection to an AP/Master with an SNR value of 35 or higher. |

| LED | Color | State | Description |
|---|---|---|---|
| | | Blinking | Data is being transmitted over the 2.4 GHz band with an SNR value of 35 or higher. |
| | Amber | On | Client/Client-Router/Slave has established a Wi-Fi connection to an AP/Master with an SNR value of less than 35. |
| | | Blinking | Data is being transmitted over the 2.4 GHz band with an SNR value of less than 35. |

| | | | |
|---|---|---|---|
| **5G** | Green | On | Established a Wi-Fi connection to an AP/Master with an SNR value of 35 or<br><br>higher. |
| | | Blinking | Data is being transmitted over the 5 GHz band with an SNR value of 35 or higher. |
| | Amber | On | Established a Wi-Fi connection to an AP/Master with an SNR value of less than<br><br>35. |
| | | Blinking | Data is being transmitted over the 5 GHz band with an SNR value of less than 35. |
| **SYS** | Red | On | System configuration error. |
| | Green | On | System startup completed and is operating normally. |

LAN LED Indicators (RJ45 Port)

| | | | |
|---|---|---|---|
| **LAN 1** | Green | On | LAN port's 2500 Mbps link is active. |
| | | Blinking | Data is being transmitted at 2500 Mbps. |
| | | Off | LAN port's 2500 Mbps link is inactive. |
| | Amber | On | LAN port's 10/100/1000 Mbps link is active. |
| | | Blinking | Data is being transmitted at 10/100/1000 Mbps. |
| | | Off | LAN port's 10/100/1000 Mbps link is<br><br>inactive. |
| **LAN 2** | Green | On | LAN port's 1000 Mbps link is active. |
| | | Blinking | Data is being transmitted at 1000 Mbps. |
| | | Off | The LAN port's 1000 Mbps link is inactive. |
| | Amber | On | LAN port's 10/100 Mbps link is active. |
| | | Blinking | Data is being transmitted at 10/100 Mbps. |
| | | Off | LAN port's 10/100 Mbps link is inactive. |

## Specifications

| | |
|---|---|
| Input Current | DC input: 12 to 48 VDC, 2 to 0.5 A or PoE input: 48 VDC, 0.5 A |
| Input Voltage | 12 to 48 VDC, redundant dual power inputs, 48 VDC Power over Ethernet |
| Power Consumption | 24 W (max.) |
| Relay Output | 24 VDC, 1 A (resistive load) |
| Operating Temperature | Standard Models: -25 to 60°C (-13 to 140°F) Wide Temp. Models: -40 to 75°C (-40 to 167°F) |
| Storage Temperature | -40 to 85°C (-40 to 185°F) |

**NOTE**
To meet the standard for IP30 protection, all unused ports should be covered with protective caps.

**ATTENTION**

- The AWK-3262A is NOT a portable mobile device and should be located at least 50 cm away from the human body.
- The AWK-3262A is NOT designed for the general public. To ensure that your AWK-3262A wireless network is safe and configured correctly, consult a well-trained technician to assist with the installation process.

**ATTENTION**

- Use the appropriate antennas for your wireless setup: Use 2.4 GHz antennas when the AWK-3262A is configured for IEEE 802.11b/g/n/ax.
- Use 5 GHz antennas when the AWK-3262A is configured for IEEE 802.11a/n/ac/ax. Make sure that the antennas are located in an area with a lightning and surge protection system installed.

**ATTENTION**

- Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits.
- When installing the antenna, take extreme care not to come into contact with such circuits, because they may cause serious injury or death.
- For proper installation and grounding of the antenna, refer to national and local codes (for example, U.S.: NFPA 70; National Electrical Code (NEC) Article 810; Canada: Canadian Electrical Code, Section 54).

**NOTE**

- For installation flexibility, you can use either antenna 1 or antenna 2. Make sure the antenna connection matches the antennas configured in the AWK-3262A web interface.
- To protect the connectors and RF module, all radio ports should be terminated by either an antenna or a terminator. We strongly recommend using resistive terminators for terminating the unused antenna ports.

**Software Setup**

- This section covers the software setup for the AWK-3262A.

**How to Access the AWK**

Before installing the AWK device (AWK), make sure that all items in the package checklist are provided in the product box. You will also need access to a notebook computer or PC equipped with an Ethernet port.

- **Step 1:** Select a suitable power source and plug in the AWK.

  The AWK can be powered by DC power ranging from 12 VDC to 48 VDC or by a PoE PSE via an Ethernet

  connection.
- **Step 2:** Connect the AWK to the notebook or PC via the AWK's LAN port.

  The LED indicator on the AWK's LAN port will light up when a connection is established.
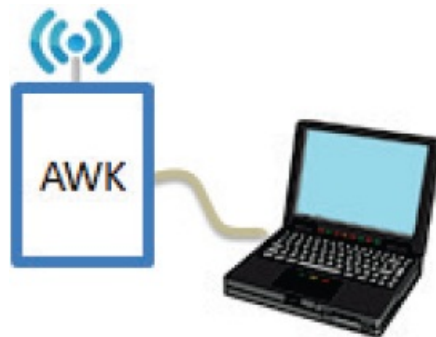


**NOTE**
If you are using an Ethernet-to-USB adapter, follow the instructions in the user's manual provided with the adapter.

- **Step 3:** Set up the computer's IP address.

  Choose an IP address for the computer that is on the same subnet as the AWK. Since the AWK's default IP

  address is 192.168.127.253, and the subnet mask is 255.255.255.0, set the IP address to 192.168.127.xxx,

  where xxx is a value between 1 and 252.
- **Step 4:** Access the homepage of the AWK.

  Open your computer's web browser and type https://192.168.127.253 in the address field to access AWK's

  homepage. If successfully connected, the AWK's interface homepage will appear. Click NEXT.
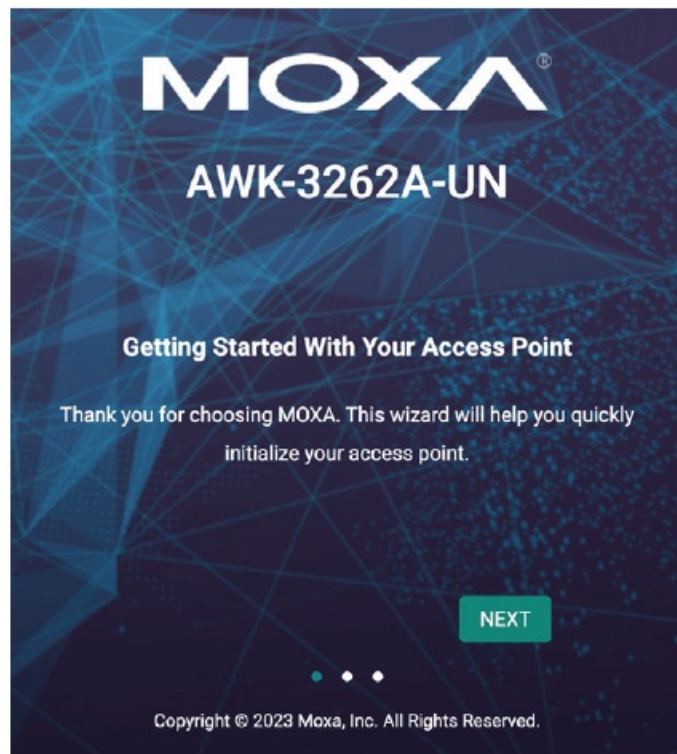
- **Step 5:** Choose your country or region.
- Select your country or region from the drop-down list and click NEXT.
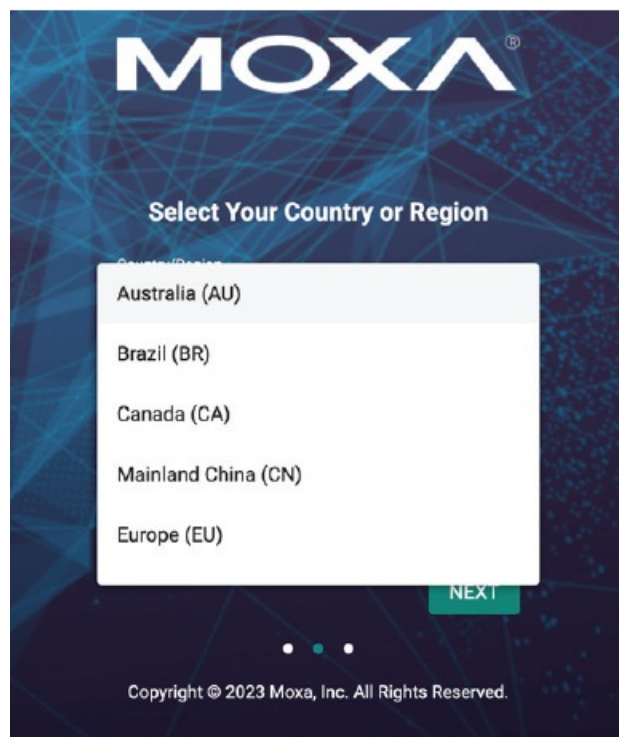


- **Step 6:** Create a user account and password.
- Enter the username, password, and email address for your user account and click CREATE.

**NOTE**
The username and password are case-sensitive.

- After creating your account, you will be automatically redirected to the login screen.
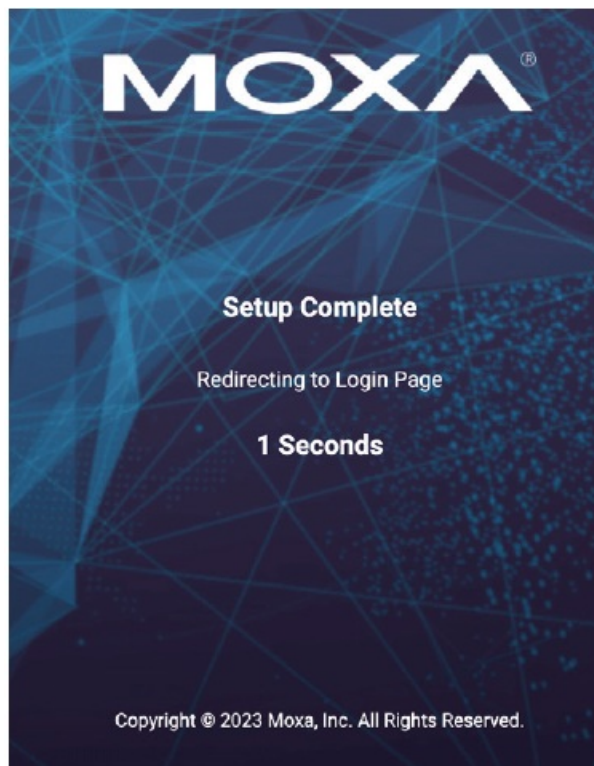


- **Step 7:** Log in to the device.
- Enter your username and password and click LOG IN. The device will start initializing, this may take several seconds. Once the warning message has disappeared, you can log in using your username and password.
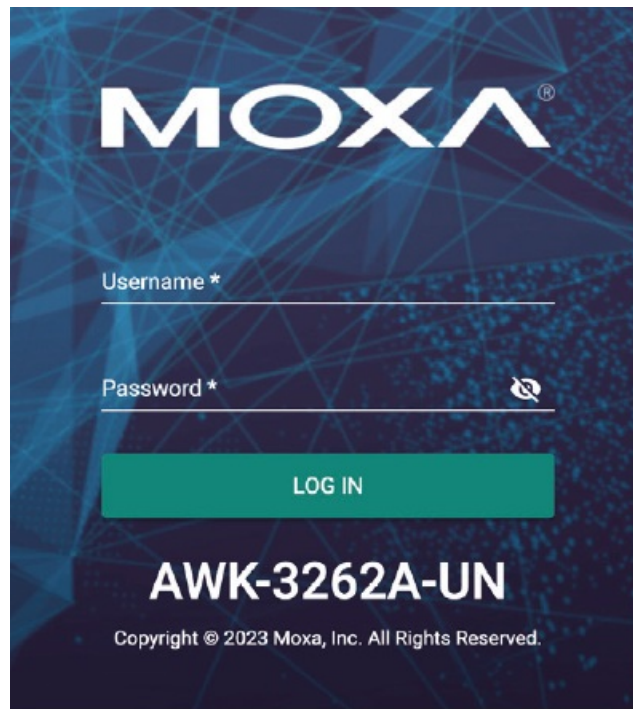
**First-time Quick Configuration**

- After successfully accessing the AWK, refer to the appropriate subsection below to set up a wireless network quickly.

**NOTE**
Ensure that there are no IP address conflicts when you configure more than one AWK on the same subnet.

**AP/Client Mode**
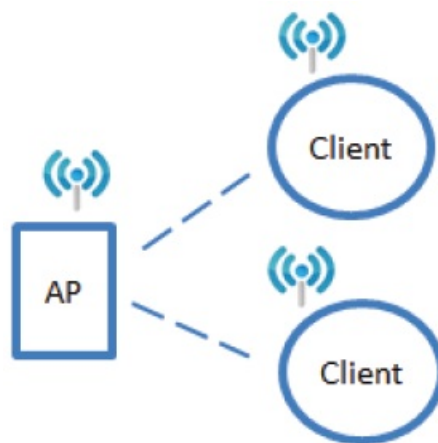


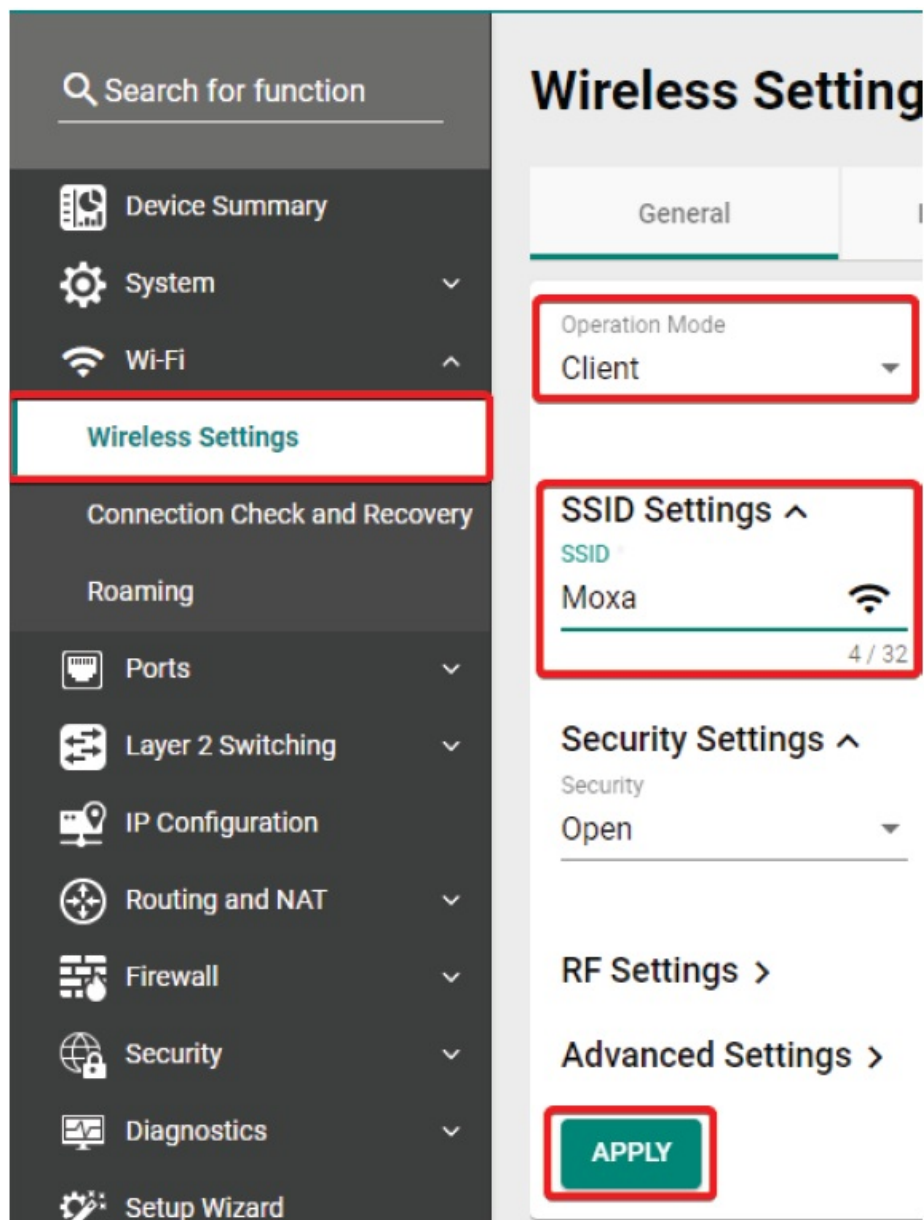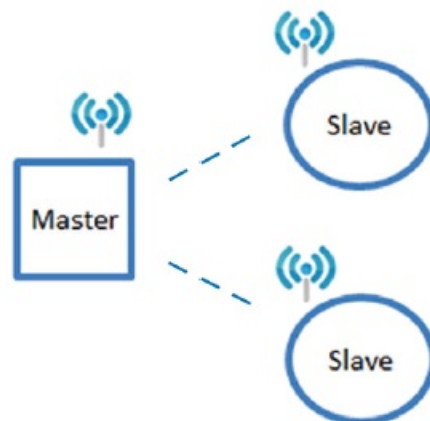**Configuring the AWK as an AP**

- Step 1: Set the operation mode of the AWK to AP mode.
- Go to Wi-Fi➜ Wireless Settings and select AP from the Operation Mode drop-down list.
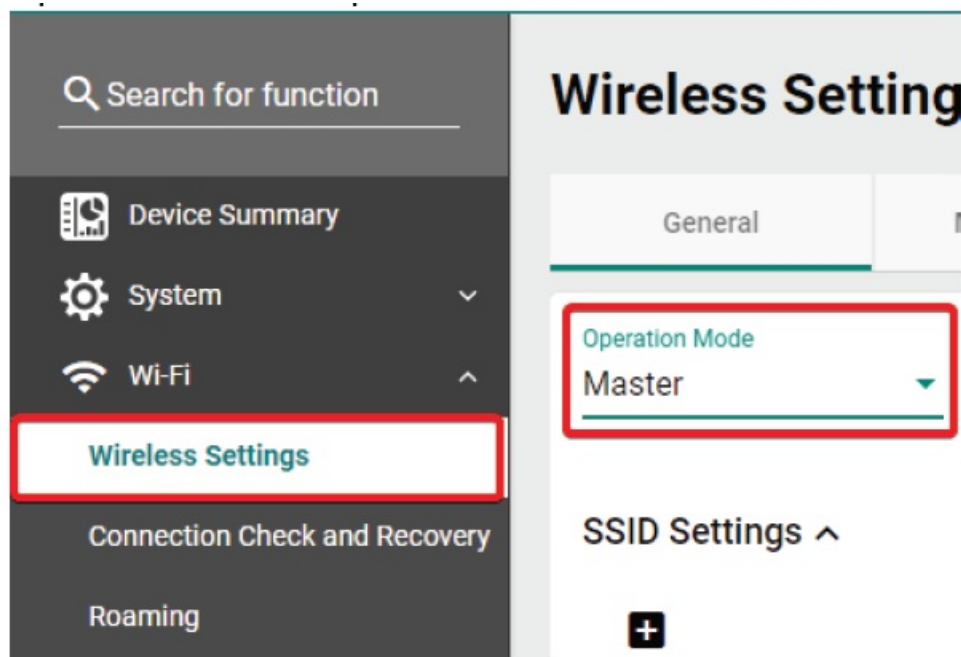
**Step 2: Set up the AWK as an AP**

Click the **ADD** icon ➕ to create a new SSID.
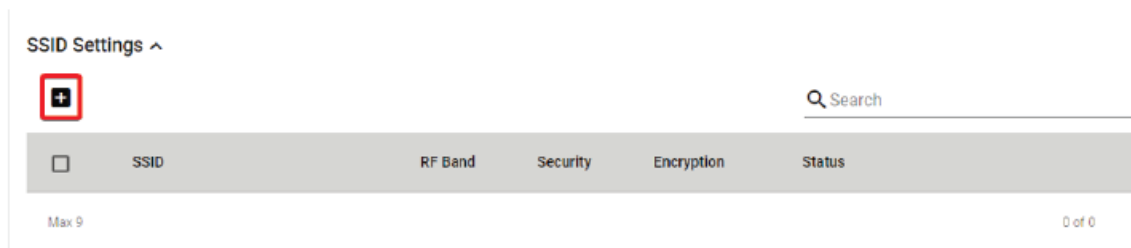


- On the settings page, configure the SSID Status, SSID, RF Band, RTS/CTS Threshold, and Transmission Rate for the 5 GHz or 2.4 GHz band. When finished, click NEXT.

- On the second SSID Settings screen, configure the SSID Broadcast Status and Security type. From here, you can also copy the configuration over to the second SSID. When finished, click CONFIRM.



**Configuring the AWK as a Client**

- **Step 1:** Set the operation mode of the AWK to Client mode.
- Go to Wi-Fi→ Wireless Settings and select Client from the Operation Mode drop-down list, set the SSID, and click Apply. For more detailed configurations, refer to the AWK-3262A User's Manual.
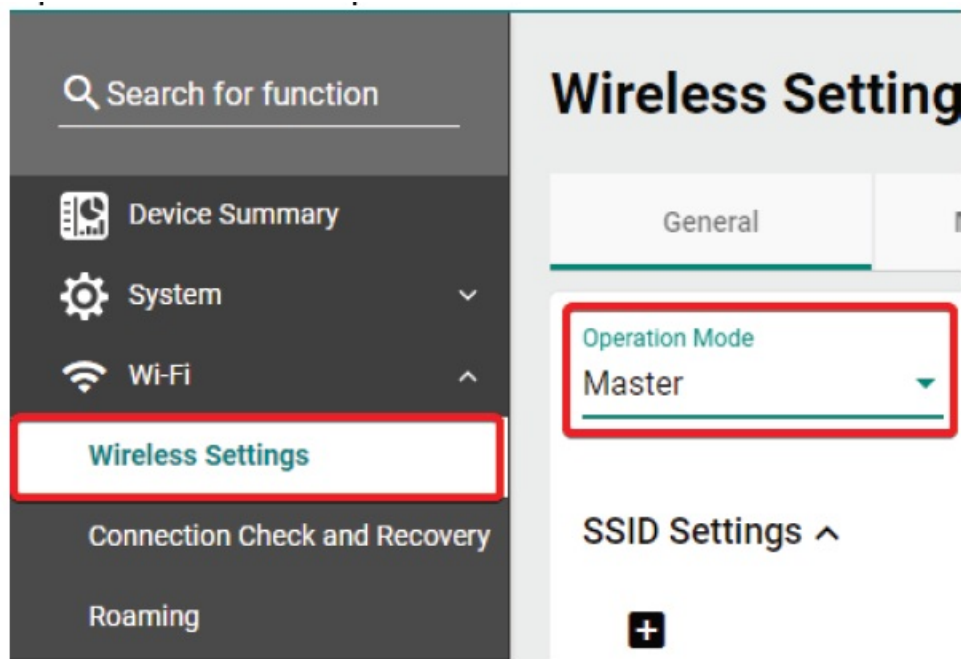
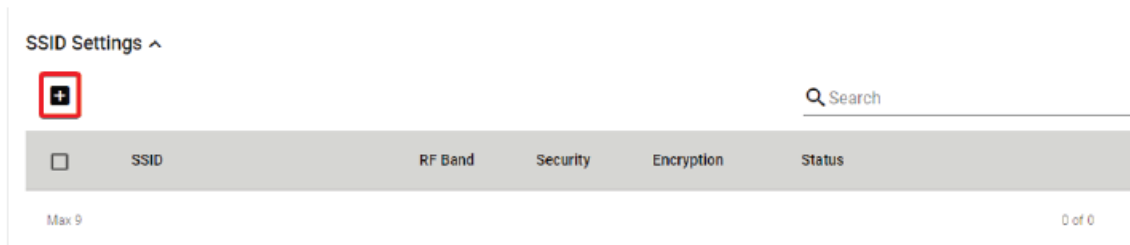**Master/slave Mode**



**Configuring the AWK as a Master**

- Step 1: Set the operation mode of the AWK to Master mode.

- Go to Wi-Fi➔ Wireless Settings and select Master from the Operation Mode drop-down list.



**Step 2: Set up the AWK as a Master**



- On the settings page, configure the SSID Status, Master/AP (select Master), SSID, RF Band, RTS/CTS Threshold, and Transmission Rate for the 5 GHz or 2.4 GHz band. When finished, click NEXT.

- On the second SSID Settings screen, configure the SSID Broadcast Status and Security type. From here, you can also copy the configuration over to the second SSID. When finished, click CONFIRM.
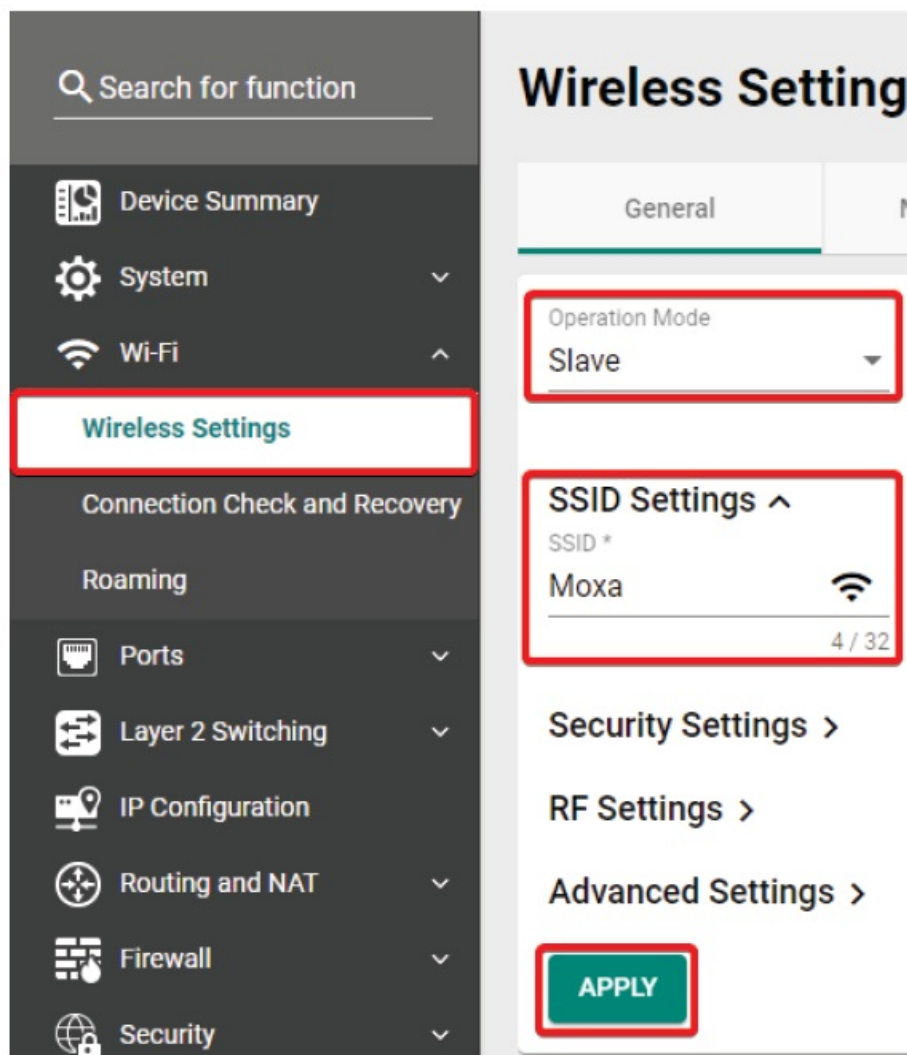


**Configuring the AWK as a Slave**

- Step 1: Set the operation mode of the AWK to Slave mode.
- Go to Wi-Fi→ Wireless Settings and select Slave from the Operation Mode drop-down list, set the SSID, and click Apply. For more detailed configurations, refer to the AWK-3262A User's

**Manual**

## FCC Statements

**Federal Communication Commission Interference Statement**
This equipment has been tested and found to comply with the limits for a Class A digital device, according to part 15 of 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 per 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, and

2. This device must accept any interference received, including interference that may cause undesired operation.

**Caution**
Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

**FCC Radiation Exposure Statement**
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator & your body

**IMPORTANT**

This radio transmitter FCC ID: [SLE-AWK3262A] has been approved by the FCC to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

| Antenna Type | Model Number | Antenna Gain (dBi) | |
| --- | --- | --- | --- |
| | | 2.4 GHz | 5 GHz |
| Dipole | ANT-WDB-ANM-0306 | 3.80 | 6.30 |
| Dipole | ANT-WDB-ANM-0502 | 4.62 | 1.41 |
| Dipole | ANT-WDB-ARM-02 | 2.04 | 0.38 |
| Dipole | ANT-WDB-ARM-0202 | 1.80 | 1.80 |
| Dipole | ANT-WSB-AHRM-05-1.5m | 5.00 | - |
| Dipole | MAT-WDB-CA-RM-2-0205 | 2.50 | 5.70 |
| Dipole | MAT-WDB-DA-RM-2-0203-1m | 2.45 | 2.72 |
| Panel | MAT-WDB-PA-NF-2-0708 | 7.63 | 8.77 |
| Panel | ANT-WDB-PNF-1011 | 11.00 | 12.04 |
| Dipole | ANT-WDB-ONM-0707 | 7.10 | 7.60 |
| Dipole | ANT-WDB-ONF-0709 | 7.40 | 8.87 |
| Panel | ANT-WSB-PNF-12-02 | 12.34 | - |
| Panel | ANT-WSB5-PNF-16 | - | 16.94 |

**Professional installation**

- This is a specific product that requires professional installation and configuration and must be performed by trained technical engineers to install the antenna, please contact Moxa for further information.
- The availability of some specific channels and/or operational frequency bands are country-dependent and are firmware programmed at the factory to match the intended destination. The firmware setting is not accessible by the end user.

Technical Support Contact Information **www.moxa.com/support**.

**Documents / Resources**

**MOXA AWK-3262A Series Wireless AP/Bridge/Client** [pdf] Installation Guide
SLE-AWK3262A, SLEAWK3262A, awk3262a, AWK-3262A Series Wireless AP Bridge Client, AWK-3262A Series, Wireless AP Bridge Client, AP Bridge Client, Bridge Client, Client

**References**

- ᴹ **Moxa - Support**

- **[User Manual](#)**