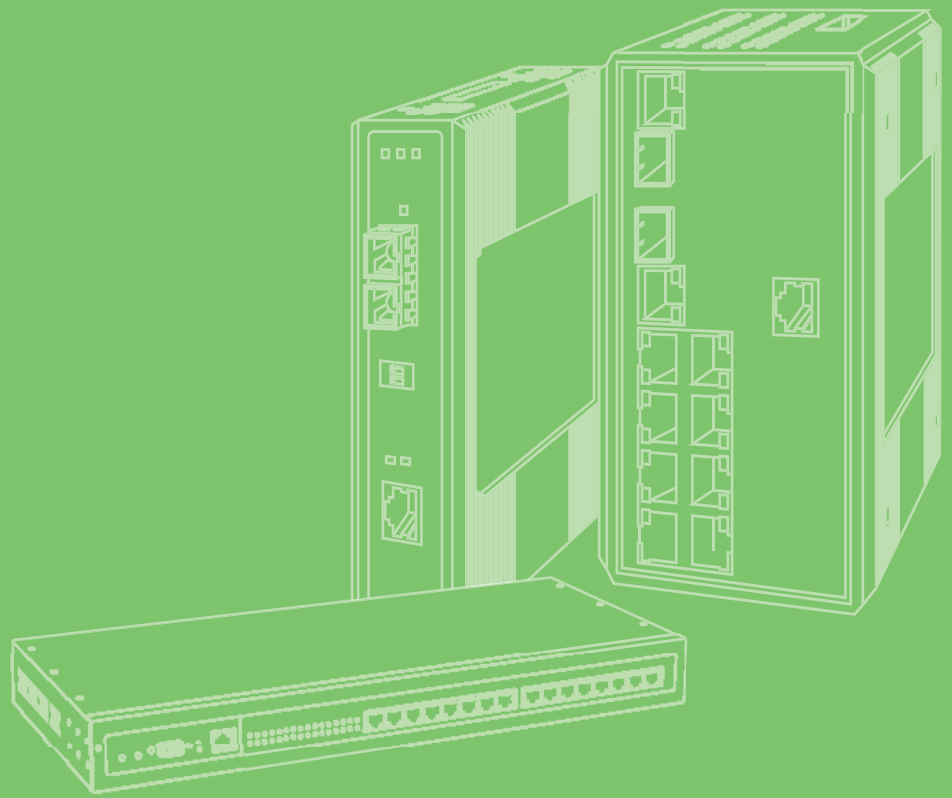


User Manual



EKI-6333AC-2G Series

IEEE 802.11 a/b/g/n/ac WiFi AP

ADVANTECH

Enabling an Intelligent Planet

Copyright

The documentation and the software included with this product are copyrighted 2018 by Advantech Co., Ltd. All rights are reserved. Advantech Co., Ltd. reserves the right to make improvements in the products described in this manual at any time without notice. No part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without the prior written permission of Advantech Co., Ltd. Information provided in this manual is intended to be accurate and reliable. However, Advantech Co., Ltd. assumes no responsibility for its use, nor for any infringements of the rights of third parties, which may result from its use.

Acknowledgments

Intel and Pentium are trademarks of Intel Corporation.

Microsoft Windows and MS-DOS are registered trademarks of Microsoft Corp.

All other product names or trademarks are properties of their respective owners.

Product Warranty (5 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for five years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any on-screen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC Class B

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 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.

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

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.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters (7.87 inches) between the radiator and your body.

Technical Support and Assistance

1. Visit the Advantech web site at www.advantech.com/support where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! *Warnings indicate conditions, which if not observed, can cause personal injury!*



Caution! *Cautions are included to help you avoid damaging hardware or losing data. e.g.*



There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! *Notes provide optional additional information.*



Document Feedback

To assist us in making improvements to this manual, we would welcome comments and constructive criticism. Please send all such - in writing to:
support@advantech.com

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any item does not accord with the table, please contact your dealer immediately.

- 1 x EKI-6333AC-2G Wi-Fi AP
- 1 x Power cord and PoE injector
- 2 x Pole mounting clamp
- 4 x Antennas
- 1 x mounting screws

Safety Instructions

- Read these safety instructions carefully.
- Keep this User Manual for later reference.
- This device is for indoor use only.
- Disconnect this equipment from any DC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
- For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
- The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
- Never pour any liquid into an opening. This may cause fire or electrical shock.
- Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
- If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
- **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO -40°C (-40°F) ~ 80°C (176°F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.**
- The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Safety Precaution - Static Electricity

Static electricity can cause bodily harm or damage electronic devices. To avoid damage, keep static-sensitive devices in the static-protective packaging until the installation period. The following guidelines are also recommended:

- Wear a grounded wrist or ankle strap and use gloves to prevent direct contact to the device before servicing the device. Avoid nylon gloves or work clothes, which tend to build up a charge.
- Always disconnect the power from the device before servicing it.
- Before plugging a cable into any port, discharge the voltage stored on the cable by touching the electrical contacts to the ground surface.

Contents

| | | |
|------------------|-----------------------------------|-----------|
| Chapter 1 | Introduction | 1 |
| 1.1 | Overview | 2 |
| 1.2 | Device Features | 2 |
| 1.3 | Specifications | 2 |
| 1.4 | Dimensions | 3 |
| | | |
| Chapter 2 | Getting Started | 4 |
| 2.1 | Hardware | 5 |
| 2.1.1 | Front View | 5 |
| 2.1.2 | Rear View | 6 |
| 2.1.3 | Top View | 6 |
| 2.1.4 | Bottom View | 7 |
| 2.1.5 | Right View | 7 |
| 2.1.6 | Left View | 8 |
| 2.1.7 | LED Indicators | 9 |
| 2.2 | Connecting Hardware | 10 |
| 2.2.1 | Wall Mounting | 10 |
| 2.2.2 | Wireless Connection | 11 |
| 2.2.3 | Network Connection | 12 |
| 2.2.4 | I/O Port Cover | 13 |
| 2.2.5 | Power Connection | 14 |
| 2.3 | Reset Button | 16 |
| | | |
| Chapter 3 | Web Interface | 18 |
| 3.1 | Log In | 19 |
| 3.1.1 | Password | 20 |
| 3.2 | Overview | 20 |
| 3.3 | Address Resolution Protocol | 21 |
| 3.4 | Interface Settings | 22 |
| 3.4.1 | LAN | 22 |
| 3.4.2 | WAN | 23 |
| 3.4.3 | Wireless 2.4GHz | 25 |
| 3.4.4 | Wireless 5GHz | 38 |
| 3.5 | Network Settings | 39 |
| 3.5.1 | Static Route | 39 |
| 3.5.2 | Forwarding | 39 |
| 3.5.3 | Security | 40 |
| 3.6 | Management | 42 |
| 3.6.1 | Password Manager | 42 |
| 3.6.2 | Syslog | 42 |
| 3.6.3 | NTP / Time | 44 |
| 3.6.4 | SNMP | 45 |
| 3.6.5 | Remote Services | 46 |
| 3.6.6 | Configuration Manager | 47 |
| 3.6.7 | Firmware Upgrade | 47 |
| 3.6.8 | Reset System | 47 |
| 3.6.9 | Apply Configuration | 48 |
| 3.6.10 | Reboot Device | 48 |
| 3.7 | Tools | 49 |
| 3.7.1 | Diagnostics | 49 |

List of Figures

| | | |
|-------------|---|-----------|
| Figure 1.1 | Dimensions..... | 3 |
| Figure 2.1 | Front View | 5 |
| Figure 2.2 | Rear View | 6 |
| Figure 2.3 | Top View..... | 6 |
| Figure 2.4 | Bottom View as Seen Without a Port Cover..... | 7 |
| Figure 2.5 | Right View | 7 |
| Figure 2.6 | Left View..... | 8 |
| Figure 2.7 | System LED Panel | 9 |
| Figure 2.8 | Mounting Screw Installation..... | 10 |
| Figure 2.9 | Wall Mount Installation | 11 |
| Figure 2.10 | Installing the Top Antennas..... | 11 |
| Figure 2.11 | Installing the Bottom Antennas..... | 12 |
| Figure 2.12 | Ethernet Plug & Connector Pin Position..... | 12 |
| Figure 2.13 | Removing the I/O Cover..... | 13 |
| Figure 2.14 | Installing the I/O Cover..... | 14 |
| Figure 2.15 | Connecting Power to the PoE LAN Port..... | 15 |
| Figure 2.16 | Grounding Connection..... | 16 |
| Figure 2.17 | Reset Button Location | 17 |
| Figure 3.1 | Login Screen | 19 |
| Figure 3.2 | Administration > HTTP | 20 |
| Figure 3.3 | Status > Overview, System Info and LAN Interface | 20 |
| Figure 3.4 | Status > Overview, WAN Interface, DHCP Leases, & System Status..... | 21 |
| Figure 3.5 | Status > ARP..... | 22 |
| Figure 3.6 | Interface > LAN..... | 22 |
| Figure 3.7 | Interface > WAN > Network Mode..... | 23 |
| Figure 3.8 | Interface > WAN > Network Mode > Static..... | 24 |
| Figure 3.9 | Interface > WAN > Network Mode..... | 24 |
| Figure 3.10 | Interface > WAN > Network Mode > PPPoE..... | 25 |
| Figure 3.11 | Wireless - 2.4GHz > Basic > Access Point..... | 26 |
| Figure 3.12 | Wireless - 2.4GHz > Basic > Client | 27 |
| Figure 3.13 | Wireless - 2.4GHz > Basic > Bridged Repeater | 28 |
| Figure 3.14 | Wireless - 2.4GHz > Advanced | 30 |
| Figure 3.15 | Wireless - 2.4GHz > Advanced | 31 |
| Figure 3.16 | Wireless - 2.4GHz > Security | 32 |
| Figure 3.17 | Wireless - 2.4GHz > Security | 32 |
| Figure 3.18 | Wireless - 2.4GHz > Multiple SSID..... | 33 |
| Figure 3.19 | Wireless - 2.4GHz > QoS | 34 |
| Figure 3.20 | Wireless - 2.4GHz > Statistics | 35 |
| Figure 3.21 | Wireless - 2.4GHz > Access Control | 36 |
| Figure 3.22 | Wireless - 2.4GHz > Site Survey..... | 36 |
| Figure 3.23 | Wireless - 2.4GHz > Site Survey..... | 37 |
| Figure 3.24 | Wireless - 2.4GHz > Log | 38 |
| Figure 3.25 | Networking > Static Route..... | 39 |
| Figure 3.26 | Networking > Forwarding > Port Forwarding..... | 39 |
| Figure 3.27 | Networking > Forwarding > DMZ..... | 40 |
| Figure 3.28 | Networking > Security > Filter | 40 |
| Figure 3.29 | Networking > Security > VPN Passthrough..... | 41 |
| Figure 3.30 | Management > Password Manager..... | 42 |
| Figure 3.31 | Management > Syslog..... | 43 |
| Figure 3.32 | Management > NTP / Time..... | 44 |
| Figure 3.33 | Management > SNMP..... | 45 |
| Figure 3.34 | Management > Remote Services..... | 46 |
| Figure 3.35 | Management > Configuration Manager | 47 |
| Figure 3.36 | Management > Firmware Upgrade..... | 47 |
| Figure 3.37 | Management > Apply Configuration..... | 47 |
| Figure 3.38 | Management > Apply Configuration..... | 48 |

| | | |
|-------------|--|-----------|
| Figure 3.39 | Management > Reboot Device | 48 |
| Figure 3.40 | Tools > Diagnostics | 49 |

Chapter 1

Introduction

1.1 Overview

The EKI-6333AC-2G Series is a feature rich wireless AP which provides a reliable wireless connectivity for industrial environments. The PoE injector enhances flexibility in deployment of this AP even where the DC power supply is hard to fulfill.

With the support of STP, WMM and IGMP snooping protocols, EKI-6333AC-2G effectively improves the reliability of wireless connectivity, especially in applications that need high reliability and high throughput data transmission. To secure wireless connections, EKI-6333AC-2G implements the latest encryption technologies including WPA2/WPA for powerful security authentication.

1.2 Device Features

- Support 802.11 a/b/g/n/ac MIMO 2T2R
- WLAN transmission rate up to 867 Mbps
- Supports secure access with WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Provides Web-based configuration
- Support Dual band 2.4G/5Ghz Concurrent
- IP55 waterproof

1.3 Specifications

| Specifications | Description | |
|-----------------------------|---------------------------|---|
| Interface | I/O Port | 2 x RJ45 |
| | Power Connector | RJ45, Passive 24V PoE |
| Physical | Enclosure | Aluminum die-casting |
| | Mounting | Wall, pole |
| | Dimensions (W x H x D) | 114.3 x 191.7 x 47.7 mm (4.5" x 7.55" x 1.88") |
| | Weight | 500g |
| LED Display | System LED | System: Power WLAN: Link/Active LAN: Link/Active |
| | Reboot Trigger | Built-in WDT (watchdog timer) |
| Environment | Operating Temperature | -20 ~ 70 °C (-4~158°F) |
| | Storage Temperature | -30 ~ 80°C (-22 ~ 176°F) |
| | Ambient Relative Humidity | 10 ~ 95% RH |
| Wireless LAN Communications | Compatibility | 2.4 GHz: IEEE 802.11 b/g/n 5 GHz: IEEE 802.11 a/n/ac |
| | Speed | Up to 867 Mbps |
| | Network Mode | Infrastructure |
| | Free Space Range | Open space 100 m |
| | Antenna | 4 x reverse SMA connectors Default external 5 dBi Omni antenna |
| | Wireless Security | WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise |

| Specifications | Description | |
|-------------------------|-------------------|---|
| Ethernet Communications | Compatibility | IEEE 802.11a/b/g/n/ac |
| | Speed | 10/100/1000 Mbps |
| | Port Connector | 2 x 8-pin RJ45 |
| | Protection | Built-in 1.5 KV magnetic isolation |
| Power | Power Consumption | 15W |
| | Power Input | DC 24V / 1A |
| Software | Management | Telnet, FTP, SNMP, Web UI, SSH |
| | Wireless | Radio on/off, WMM/Regatta Mode, Output Power Control, Beacon Interval, RTS/ CTS threshold, DTIM Interval |
| | Operation Modes | Access Point, Client, Repeater mode |
| | Configuration | Web Browser |
| | Protocol | ARP, ICMP, IPv4, IPv6, TCP, UDP, DHCP Client, DHCP Server, Auto IP, Telnet, DNS, SNMP, HTTP, DMZ, PPPoE, DHCP server, VPN Passthrough, Telnet Server, SSH Server, FTP Server, QoS |
| Regulatory Approvals | EMC | CE, FCC Part 15 Subpart B (Class B) |

1.4 Dimensions

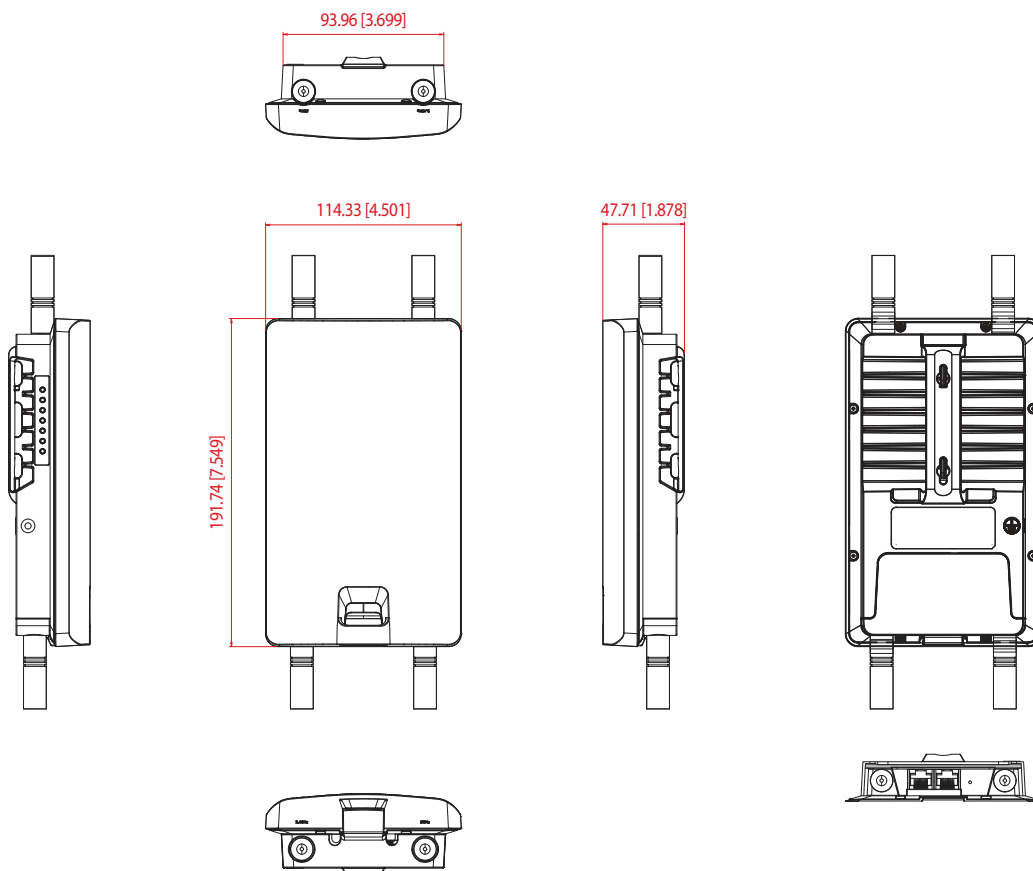


Figure 1.1 Dimensions

Chapter 2

Getting Started

2.1 Hardware

2.1.1 Front View

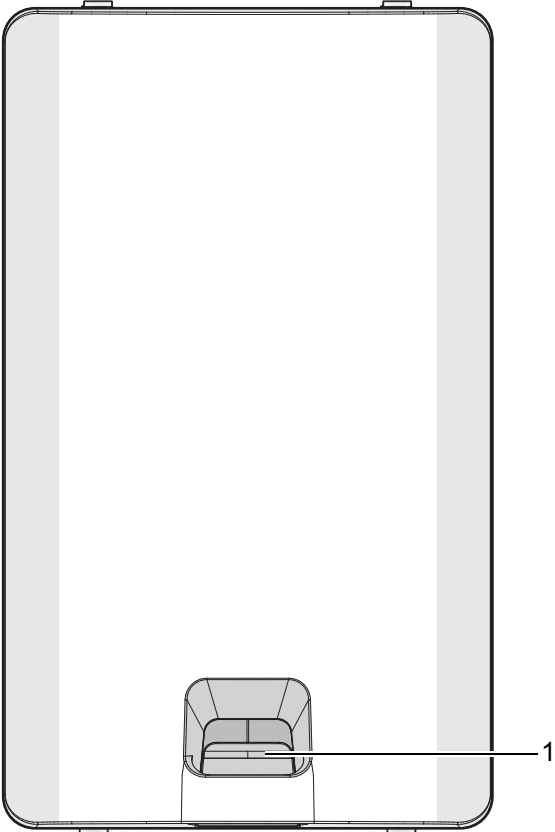


Figure 2.1 Front View

| No. | Item | Description |
|-----|-------------|--------------------------------|
| 1. | Release tab | Release tab for I/O port cover |

2.1.2 Rear View

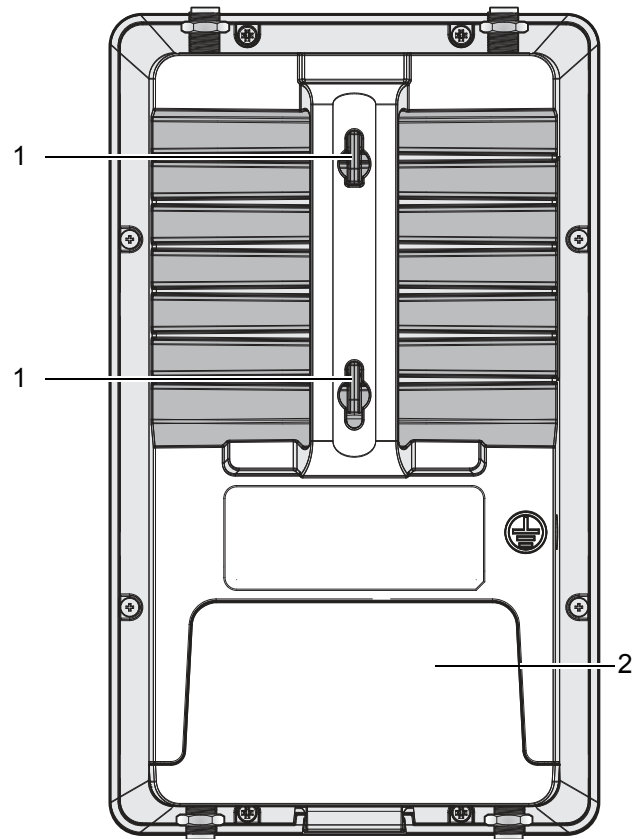


Figure 2.2 Rear View

| No. | Item | Description |
|-----|--------------------------|--|
| 1. | Quick mount keyhole slot | Slots for mounting device to a wall slot |
| 2. | Cover | I/O port cover |

2.1.3 Top View

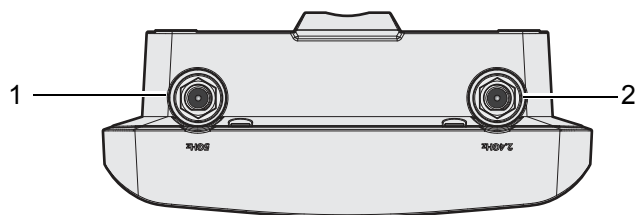


Figure 2.3 Top View

| No. | Item | Description |
|-----|-------------------|---|
| 1. | Antenna connector | Reverse SMA connector for 5G WLAN antenna |
| 2. | Antenna connector | Reverse SMA connector for 2G WLAN antenna |

2.1.4 Bottom View

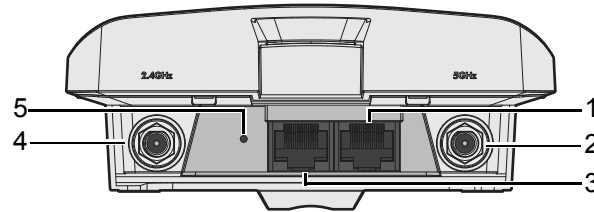


Figure 2.4 Bottom View as Seen Without a Port Cover

| No. | Item | Description |
|-----|-------------------|--|
| 1. | ETH port | LAN2 RJ45 port |
| 2. | Antenna connector | Reverse SMA connector for 2.4 GHz Wi-Fi antenna |
| 3. | ETH port | LAN1 RJ45 port, supports passive PoE |
| 4. | Antenna connector | Reverse SMA connector for 5 GHz Wi-Fi antenna |
| 5. | Reset button | Button allows for system soft reset or factory default reset |

2.1.5 Right View

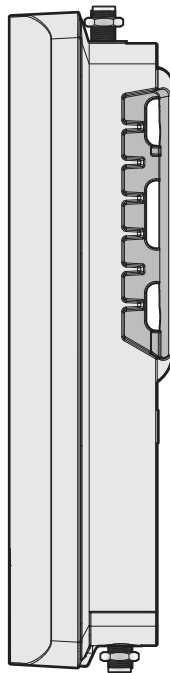


Figure 2.5 Right View

2.1.6 Left View

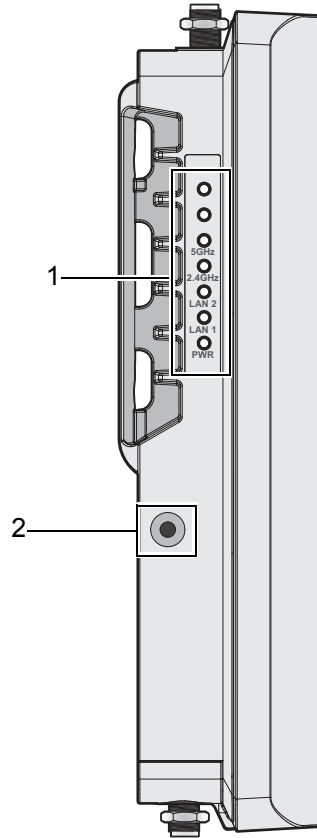


Figure 2.6 Left View

| No. | Item | Description |
|-----|------------------|---|
| 1. | System LED panel | See "LED Indicators" on page 9 for further details. |
| 2. | Ground terminal | Screw terminal used to ground chassis |

2.1.7 LED Indicators

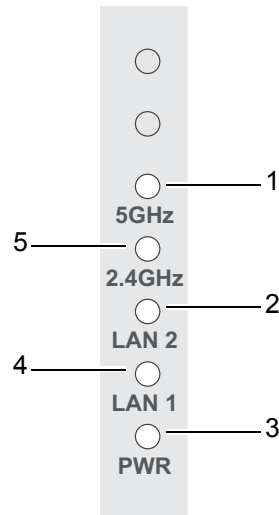


Figure 2.7 System LED Panel

| No. | LED Name | LED Color | Description |
|-----|------------------|----------------|---|
| 1. | WLAN (5 GHz) | Green on | Wireless function is active |
| | | Green blinking | Wireless port is transmitting or receiving data |
| 2. | Ethernet (LAN 2) | Green on | 10/100/1000Mbps Ethernet connection |
| | | Green blinking | Ethernet port is transmitting or receiving data |
| 3. | PWR | Amber on | Power is on |
| | | Amber blinking | Boot state |
| | | Off | Power is off or power error condition exists |
| 4. | Ethernet (LAN 1) | Green on | 10/100/1000Mbps Ethernet connection |
| | | Green blinking | Ethernet port is transmitting or receiving data |
| 5. | WLAN (2.4 GHz) | Green on | Wireless function is active |
| | | Green blinking | Wireless port is transmitting or receiving data |

2.2 Connecting Hardware

2.2.1 Wall Mounting

This section provides instructions for installing the access point. It is recommended that only personnel with an understanding of wireless access points and bridging techniques and grounding methods install the device.

Warning! *The installation of the access point must comply with local and national electrical codes.*



Note! *When installing, make sure to allow for enough space to properly install the cabling.*



When mounting an access point, make sure the access point is oriented with the LED indicators clearly visible.

In addition, the access point must be mounted in such a way as to ensure that all antenna ports and the console port are accessible for future use.

1. On the installation site, place the device firmly against the wall. Make sure the device is vertically and horizontally level.
2. Use the location of the keyhole slots on the back of the device to mark two screw hole locations on the mounting surface.
3. Remove the device from the wall and drill holes over each marked location (2) on the wall, keeping in mind that the holes must accommodate wall sinks in addition to the screws.
4. Insert the wall sinks into the walls.
5. Insert a screw in a wall sink and rotate it to secure. Do not tighten at this point. Repeat for the remaining location, see the following figure.

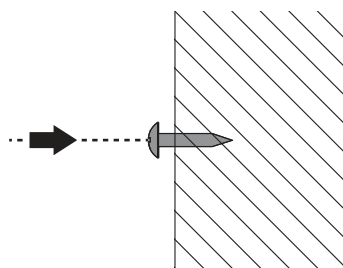


Figure 2.8 Mounting Screw Installation

6. Align the keyhole slots over the screws and insert the device in place.

7. Slide the device down to sit it securely in the mounting screws.

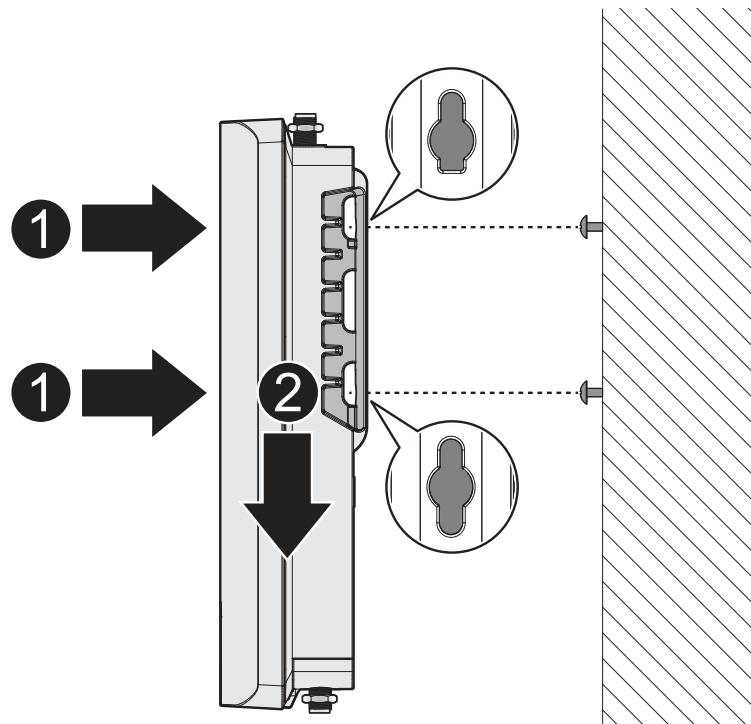


Figure 2.9 Wall Mount Installation

2.2.2 Wireless Connection

Note! *The location and position of the antenna is crucial for effective wireless connectivity*



1. Connect the top antennas by turning the antenna in the connectors in a clockwise direction.

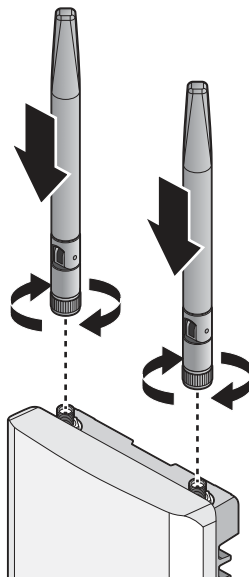


Figure 2.10 Installing the Top Antennas

2. Repeat for the bottom locations.

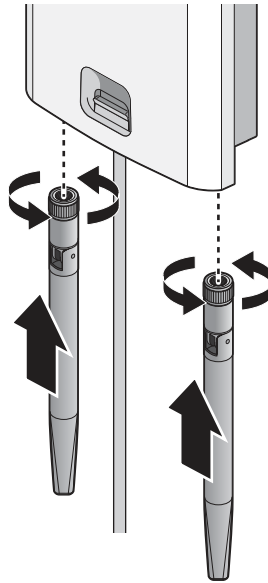


Figure 2.11 Installing the Bottom Antennas

2.2.3 Network Connection

For RJ45 connectors, data-quality, twisted pair cabling (rated CAT5 or better) is recommended. The connector bodies on the RJ45 Ethernet ports are metallic and connected to the GND terminal. For best performance, use shielded cabling. Shielded cabling may be used to provide further protection.

| Straight-thru Cable Wiring | | Cross-over Cable Wiring | |
|----------------------------|-------|-------------------------|-------|
| Pin 1 | Pin 1 | Pin 1 | Pin 3 |
| Pin 2 | Pin 2 | Pin 2 | Pin 6 |
| Pin 3 | Pin 3 | Pin 3 | Pin 1 |
| Pin 6 | Pin 6 | Pin 6 | Pin 2 |

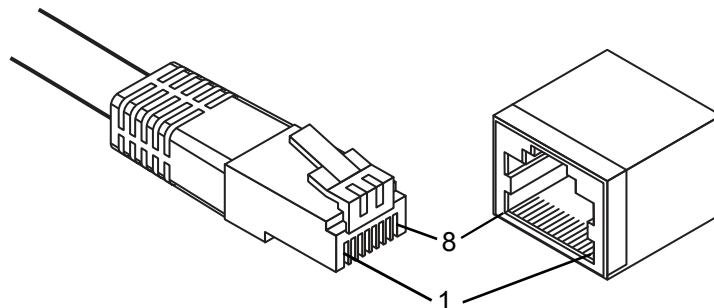


Figure 2.12 Ethernet Plug & Connector Pin Position

Maximum cable length: 100 meters (328 ft.) for 10/100BaseT.

2.2.4 I/O Port Cover

Caution! Do not disconnect modules or cabling unless the power is first switched off.



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the device.

Caution! Disconnect the power cord before installation or cable wiring.



2.2.4.1 Removing a Port cover

1. Position the device so the bottom is facing upwards.
2. Align the Locate the top cover release as shown in the following figure.
3. Insert a tool through the opening and into the bottom of the release tab.
4. Gently lift the tab upwards and slide the tab towards the bottom.

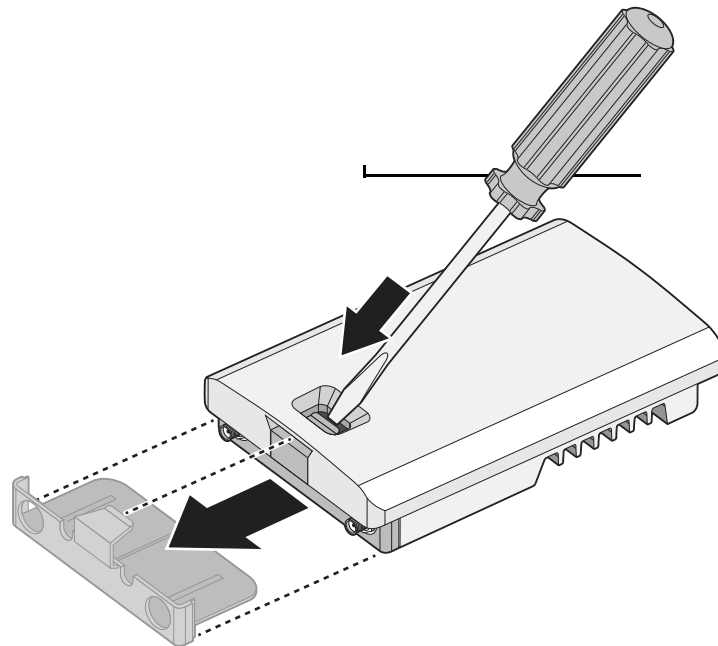


Figure 2.13 Removing the I/O Cover

Once the cover is released, the I/O ports on the back of the device are accessible.

2.2.4.2 Installing a Port Cover

1. Once the tab is unlocked, remove the cover from the device.
2. Position the device so the front is facing upwards.
To simplify this procedure, Ethernet cables are installed along with the cover.
3. Align the edges of the cover with the groves on the device bay. The ends of the cover must be inserted underneath the groves.

- Slide the cover into the bay and continue to slide it in place until an audible click sounds indicating that the cover is locked in place.

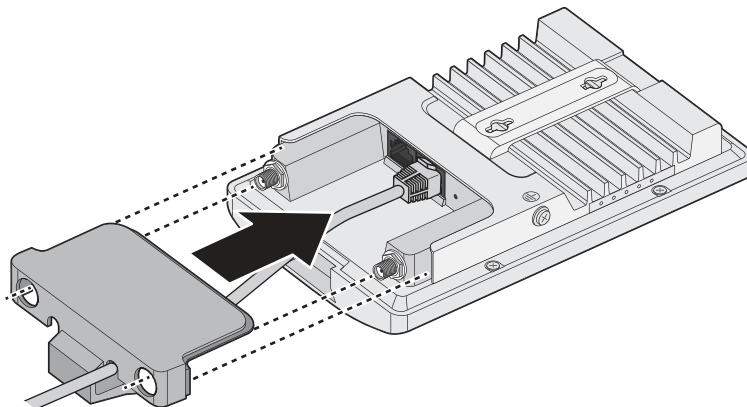


Figure 2.14 Installing the I/O Cover

2.2.5 Power Connection

2.2.5.1 Overview

Warning! Power down and disconnect the power cord before servicing or wiring the device.



Caution! Do not disconnect modules or cabling unless the power is first switched off.



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the device.

Caution! Disconnect the power cord before installation or cable wiring.



The EKI-6333AC-2G is powered by a passive 24Vdc PoE injector.

- Locate the LAN1 port on the bottom of the access point.
- Connect one end of a Ethernet cable to a PoE injector.
- Connect the other end of the Ethernet cable to the LAN port supporting PoE on the access point.

The device powers on once the PoE injector supplies power to the access point.

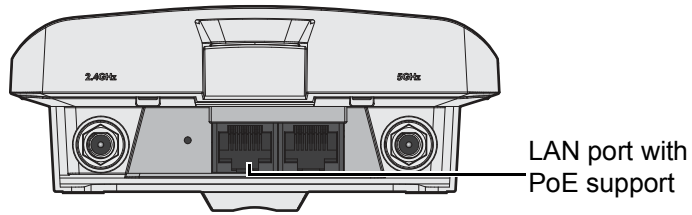


Figure 2.15 Connecting Power to the PoE LAN Port

2.2.5.2 Grounding the Device

Caution! Do not disconnect modules or cabling unless the power is first switched off.



The device only supports the voltage outlined in the type plate. Do not use any other power components except those specifically designated for the device.

Caution! Before connecting the device properly ground the device. Lack of a proper grounding setup may result in a safety risk and could be hazardous.



Caution! Do not service equipment or cables during periods of lightning activity.



Caution! Do not service any components unless qualified and authorized to do so.



Caution! Do not block air ventilation holes.



Electromagnetic Interference (EMI) affects the transmission performance of a device. By properly grounding the device to earth ground through a drain wire, you can setup the best possible noise immunity and emissions.

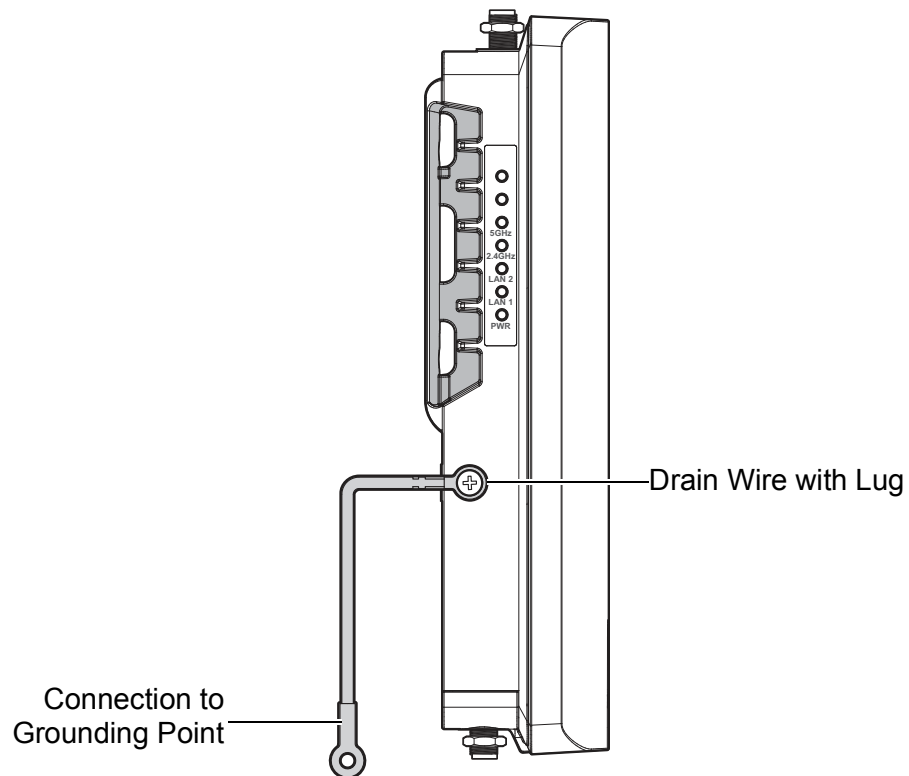


Figure 2.16 Grounding Connection

By connecting the ground terminal by drain wire to earth ground, the device and chassis can be ground.

Note! *Before applying power to the grounded device, it is advisable to use a volt meter to ensure there is no voltage difference between the power supply's negative output terminal and the grounding point on the device.*



2.3 Reset Button

Reset configuration to factory default:

Press and hold Reset button for 5 seconds.

System reboot:

Press and hold Reset button for 2 seconds.

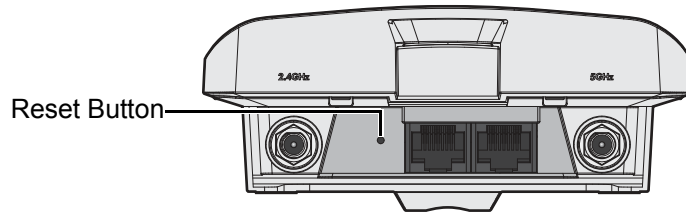


Figure 2.17 Reset Button Location

Note! Do NOT power off the WiFi AP when loading default settings.



Chapter 3

Web Interface

3.1 Log In

To access the login window, connect the device to the network, see “Network Connection” on page 12. Once the device is installed and connected, power on the device see the following procedures to log into your device.

When the device is first installed, the default IP is 192.168.1.1. You will need to make sure your network environment supports the device setup before connecting it to the network.

1. Launch your web browser on a computer.
2. In the browser’s address bar type in the device’s default IP address (192.168.1.1). The login screen displays.
3. Enter the default user name and password (admin/admin) to log into the management interface. You can change the default password after you have successfully logged in.
4. Click **Login** to enter the management interface.

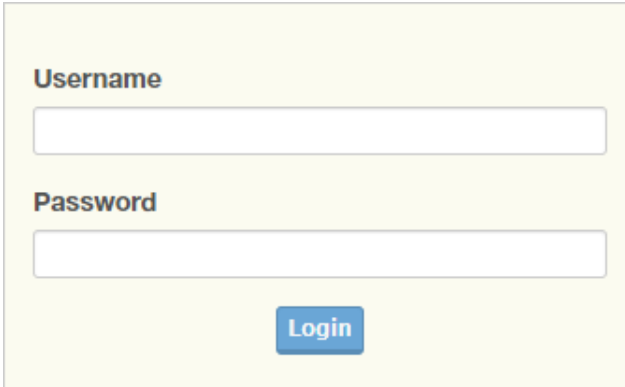
The image shows a login screen with a light yellow background. It features two text input fields: the top one is labeled "Username" and the bottom one is labeled "Password". Below the password field is a blue button with the word "Login" in white text.

Figure 3.1 Login Screen

Note! Screen may differ depending on the Web browser.



3.1.1 Password

The Management page allows you to configure the WiFi AP login details.

1. Log in to the user interface menu, see “Log In” on page 19.
2. Navigate to **Home > Management > Password Manager**. The Password Manager page displays.
3. The profile to change is the current logged in profile. Enter the new password under the **Password** field.
4. Re-type the same password in the **Confirm Password** field.
5. Click **Apply** to change the current account settings.



Figure 3.2 Administration > HTTP

6. Once completed, the settings must be saved to the firmware to retain them after a reboot. Navigate to **Home > Management > Apply Configuration**.
7. Click **Apply and Reboot** to save the settings.

3.2 Overview

To access this page, Navigate to **Home > Status** and click **Overview**.



| Information Name | Information Value |
|------------------|--------------------------|
| Firmware Version | 1.0.4 |
| Local Hostname | Advantech |
| System Time | Thu Jun 20 09:20:08 2019 |
| System Up Time | 0 day 0 hr 3 min 15 sec |
| Model Name | Advantech EKI-6333AC-2G |
| Serial Number | IAC2438545 |

| Information Name | Information Value |
|-------------------|---|
| LAN Status |  Address: 192.168.1.1 Netmask: 255.255.255.0 RX: 57.94 KB (713 Pkts.) TX: 1.03 MB (662 Pkts.) MAC-Address: 74:FE:48:46:54:68 |
| Wireless - 2.4GHz |  Mode: Access Point SSID: EKI-6333AC-2G-2.4G BSSID: 74:FE:48:46:54:6A Encryption: None Channel: 11 (2.462 GHz) Tx-Power: 30 dBm Country: US |
| Wireless - 5GHz |  Mode: Access Point SSID: EKI-6333AC-2G-5G BSSID: 74:FE:48:46:54:6B Encryption: None Channel: 36 (5.180 GHz) Tx-Power: 23 dBm Country: US |

Figure 3.3 Status > Overview, System Info and LAN Interface

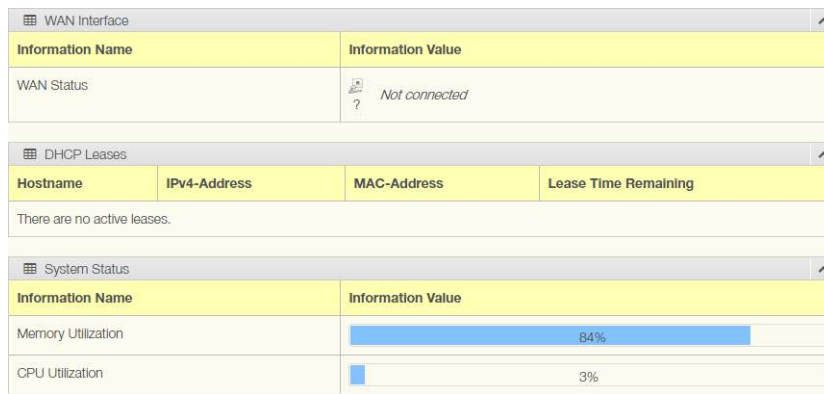


Figure 3.4 Status > Overview, WAN Interface, DHCP Leases, & System Status

| Item | Description |
|----------------------|---|
| System Info | |
| Firmware Version | Display the current firmware version of the device. |
| Local Hostname | Display the current local hostname of the device. |
| System Time | Displays the current date of the device. |
| System Up Time | Displays the time since the last device reboot. |
| Model Name | Displays the model name of the device. |
| LAN Interface | |
| LAN Status | Displays the current LAN and MAC settings, TX packets/bytes, and RX packets/bytes. |
| Wireless - 2.4GHz | Displays the current settings for the 2.4GHz interface, listing the access point mode, SSID name, BSSID, encryption type, broadcast channel, TX power, and assigned region (country). |
| Wireless - 5GHz | Displays the current settings for the 5GHz interface, listing the access point mode, SSID name, BSSID, encryption type, broadcast channel, TX power, and assigned region (country). |
| WAN Interface | |
| Local IP Address | Displays the type of WAN physical interface setup: Disabled (default), static, DHCP, PPPoE. |
| DHCP Leases | |
| | Displays the defined list of DHCP leases that the DHCP server has assigned. Defines hostname, IPv4-Address, MAC-Address, and Lease Time Remaining. |
| System Status | |
| Memory Utilization | Displays the total memory utilization in terms of percentage. |
| CPU Utilization | Displays the total CPU utilization in terms of percentage. |

3.3 Address Resolution Protocol

The Address Resolution Protocol (ARP) allows mapping of dynamic Internet Protocol addresses (IP address) to a permanent physical machine address in a local area network (LAN) through the use of the MAC address.

To access this page, Navigate to **Home > Status** and click **ARP**.

| IP Address | MAC | Interface |
|--------------|-------------------|-----------|
| 192.168.1.29 | 1c:6f:65:28:35:ae | br-lan |

Figure 3.5 Status > ARP

The following table describes the items in the previous figure.

| Item | Description |
|------------------|--|
| ARP Table | |
| IP Address | Displays the mapped IP address. |
| MAC | Displays the MAC address of the defined IP list entry. |
| Interface | Displays the defined interface of the mapped address. |

3.4 Interface Settings

3.4.1 LAN

To access this page, click **Interface > LAN**.

Figure 3.6 Interface > LAN

The following table describes the items in the previous figure.

| Item | Description |
|--------------------|--|
| Local Hostname | Enter the device name: up to 31 alphanumeric characters. |
| Domain Name | Enter the text string to define the name of a domain. |
| Network mode | Click the drop-down menu to select the IP Address Setting mode: Static or DHCP. |
| IP Address | Enter a value to specify the IP address of the interface. The default is 192.168.1.1. |
| Subnet Mask | Enter a value to specify the IP subnet mask for the interface. The default is 255.255.255.0. |
| Spanning Tree | Click the radio button to enable or disable (default) the spanning tree service. |
| DHCP Server | |
| DHCP Server | Click the radio button to enabled or disabled the DHCP server function. |
| Start IP Address | Enter starting a IP address for the IP assignment. |
| Pool Counter | Enter a variable to define the number of IP addresses for a given network. |
| Lease Time | Enter in the value designating the lease time for the DHCP server. |
| Static DNS 1 | Enter in the value designating the primary static DNS. |
| Static DNS 2 | Enter in the value designating the secondary static DNS. |
| Submit | Click Submit to save the values and update the screen. |

Note! *All new configurations will take effect after rebooting. To reboot the device, click **Management > Apply Configuration > Apply and Reboot.***



3.4.2 WAN

To access this page, click **Interface > WAN**.

The Interface screen allows user to setup the WAN interface and its network function mode.

When WAN Type (Network Mode) is **Disable** (default), the **Interface Setup** configuration settings appear.



Figure 3.7 Interface > WAN > Network Mode

The following table describes the items in the previous figure.

| Item | Description |
|---------------|---|
| Network Mode | Click the drop-down menu to select the mode type: Disable (default), Static, DHCP, PPPoE. |
| WAN Interface | Click the radio button to select the specific interface to configure. |
| Submit | Click Submit to save the values and update the screen. |

When WAN Type (Network Mode) is **Static**, the **Static WAN Type** configuration settings appear.

The screenshot shows the 'WAN Interface Setup' window with the following settings:

- Network Mode:** Static (selected in a drop-down menu)
- WAN Interface:** LAN 1 (selected with a radio button), LAN 2 (unselected)
- IP Address:** [Empty text box]
- Subnet Mask:** [Empty text box]
- Default Gateway:** [Empty text box]
- Static DNS 1:** [Empty text box]
- Static DNS 2:** [Empty text box]
- Submit:** [Submit button]

Figure 3.8 Interface > WAN > Network Mode > Static

The following table describes the items in the previous figure.

| Item | Description |
|-----------------|---|
| Network Mode | Click the drop-down menu to select the mode type: Disable (default), Static, DHCP, PPPoE. |
| WAN Interface | Click the radio button to select the specific interface to configure. |
| IP Address | Enter the WAN IP address given by your service provider. |
| Subnet Mask | Enter the WAN subnet mask given by your service provider. |
| Default Gateway | Enter the WAN gateway IP address given by your service provider. |
| Static DNS 1 | Enter the primary WAN DNS IP address given by your service provider. |
| Static DNS 2 | Enter the secondary WAN DNS IP address given by your service provider. |
| Submit | Click Submit to save the values and update the screen. |

When WAN Type (Network Mode) is **DHCP**, the **DHCP WAN Type** configuration settings appear.

The screenshot shows the 'WAN Interface Setup' window with the following settings:

- Network Mode:** DHCP (selected in a drop-down menu)
- WAN Interface:** LAN 1 (selected with a radio button), LAN 2 (unselected)
- Submit:** [Submit button]

Figure 3.9 Interface > WAN > Network Mode

The following table describes the items in the previous figure.

| Item | Description |
|---------------|---|
| Network Mode | Click the drop-down menu to select the mode type: Disable (default), Static, DHCP, PPPoE. |
| WAN Interface | Click the radio button to select the specific interface to configure. |
| Submit | Click Submit to save the values and update the screen. |

When WAN Type (Network Mode) is **PPPoE**, the **PPPoE WAN Type** configuration settings appear.

The screenshot shows a configuration window titled "WAN Interface Setup". It contains the following fields and controls:

- Network Mode:** A dropdown menu currently showing "PPPoE".
- WAN Interface:** Two radio buttons, "LAN 1" (selected) and "LAN 2".
- Username:** An empty text input field.
- Password:** An empty text input field.
- Service Name:** An empty text input field.
- MTU:** A text input field containing the value "1492".
- Submit:** A blue button at the bottom center.

Figure 3.10 Interface > WAN > Network Mode > PPPoE

The following table describes the items in the previous figure.

| Item | Description |
|---------------|---|
| Network Mode | Click the drop-down menu to select the mode type: Disable (default), Static, DHCP, PPPoE. |
| WAN Interface | Click the radio button to select the specific interface to configure. |
| Username | Enter the PPPoE user name (account) provided by your service provider. |
| Password | Enter the PPPoE password provided by your service provider. |
| Service Name | Enter the service name if your ISP requires it. |
| MTU | Check Enable check box to enable the MTU (Maximum Transmission Unit) limit, and specify the MTU for the 3G/4G connection. MTU refers to Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Value Range: 1200 ~ 1500. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3 Wireless 2.4GHz

To access this page, click **Interface > Wireless - 2.4GHz**.

3.4.3.1 Basic

Basic wireless settings offer three types of configurable modes, Access Point, Client, and Bridged Repeater.

The following descriptions provide further details for each specific mode.

Access Point Mode

To access this page, click **Wireless - 2.4GHz > Basic** and select **Access Point** in Operation Mode.

The screenshot shows the 'Basic Wireless Settings' window. Under the 'Wireless Network' section, the 'Operation Mode' is set to 'Access Point'. The 'WDS' option is checked for 'Enabled'. The 'SSID' is 'EKI-6333AC-2G-2.4G', 'SSID Broadcast' is 'Enable', and 'AP Isolation' is 'Disable'. The 'BSSID' is '88:dc:96:80:0f:ea' and 'Maximum Clients' is '30'. Under 'Management Frame Protection', 'Disable' is selected. The 'Operation Frequency' section shows 'Country Code' as 'US (United States)', 'Band' as '2.4G', 'Band / Channel Bandwidth' as '11n - HT 20', and 'Channel / Frequency' as 'AutoSelect'. A 'Submit' button is at the bottom.

Figure 3.11 Wireless - 2.4GHz > Basic > Access Point

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------------|--|
| Wireless Network | |
| Operation Mode | Click the drop-down menu to select an operation mode: Access Point, Client, Bridged Repeater. |
| WDS | Click the radio button to enable or disable the Wireless Distribution System (WDS) to allow you to link the Access Points wirelessly. |
| SSID | Enter the name to distinguish it from other networks in your neighborhood. |
| SSID Broadcast | Click the drop-down menu to enable or disable the SSID broadcast function. The function is only enabled when Operation Mode is set to Access Point. |
| AP Isolation | Click the drop-down menu to enable or disable the AP Isolation function. The function is only enabled when Operation Mode is set to Access Point. |
| BSSID | Display the MAC address of the device. |
| Maximum Clients | Enter the value (1 to 30) designating the maximum number of clients per wireless device. |
| Management Frame Protection | Click the radio button to enable, disable, or set the function to optional. The wireless feature increases the security of the management frames, standard: IEEE 802.11W-2009. |
| Operation frequency | |

| Item | Description |
|--------------------------|--|
| Country Code | Click the drop-down menu to select the country code to specify different selectable channels. Available options: US (United States), Germany, France, China and Japan. Some specific channels and/or operational frequency bands are country dependent. |
| Channel Selection | Click the drop-down menu to select Auto (default) or Manual. The Auto selection allows the device to select a band. The Manual selection provides access to a selection of the option band (2.4G / 5G). The function is only enabled when Operation Mode is set to Client. |
| Band | Click the drop-down menu to select the band channel. |
| Band / Channel bandwidth | Click the drop-down menu to select the band and channel bandwidth: 11b/g - Non-HT (Legacy), 11n - HT20, 11n - HT40, or 11ac - VHT 80. |
| Channel / Frequency | Click the drop-down menu to select a wireless channel/frequency: <ul style="list-style-type: none"> - AutoSelect - Channel 1: 2.412 GHz - Channel 2: 2.417 GHz - Channel 3: 2.422 GHz - Channel 4: 2.427 GHz - Channel 5: 2.432 GHz - Channel 6: 2.437 GHz - Channel 7: 2.442 GHz - Channel 8: 2.447 GHz - Channel 9: 2.452 GHz - Channel 10: 2.457 GHz - Channel 11: 2.462 GHz - Channel 12: 2.467 GHz - Channel 13: 2.472 GHz - Channel 14: 2.484 GHz (802.11b) |
| Submit | Click Submit to save the values and update the screen. |

Client Mode

To access this page, click **Wireless - 2.4GHz > Basic** and select **Client** in Operation Mode.

The screenshot shows the 'Basic Wireless Settings' interface. Under the 'Wireless Network' section, 'Operation Mode' is set to 'Client'. 'WDS' is 'Disabled'. 'SSID' is 'EKI-6333AC-2G-2.4G' and 'BSSID' is '88:dc:96:80:0f:ea'. 'Management Frame Protection' is 'Disabled'. Under the 'Operation Frequency' section, 'Country Code' is 'US (United States)', 'Channel Selection' is 'Auto', and 'Channel Bandwidth' is '11n - HT 20'. A 'Submit' button is located at the bottom of the form.

Figure 3.12 Wireless - 2.4GHz > Basic > Client

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------------|--|
| Wireless Network | |
| Operation Mode | Click the drop-down menu to select an operation mode: Access Point, Client, Bridged Repeater. |
| WDS | Click the radio button to enable or disable the Wireless Distribution System (WDS) to allow you to link the Access Points wirelessly. |
| SSID | Enter the name to distinguish it from other networks in your neighborhood. |
| BSSID | Displays the basic service set identifiers (BSSID) for the device. |
| Scan AP | Click to rescan the selected SSID. |
| Management Frame Protection | Click the radio button to enable, disable, or set the function to optional. The wireless feature increases the security of the management frames, standard: IEEE 802.11W-2009. |
| Operation frequency | |
| Country Code | Click the drop-down menu to select the country code to specify different selectable channels. Available options: US (United States), Germany, France, China and Japan. Some specific channels and/or operational frequency bands are country dependent. |
| Channel Selection | Click the drop-down menu to select Auto (default) or Manual. The Auto selection allows the device to select a band. The Manual selection provides access to a selection of the option band (2.4G / 5G). The function is only enabled when Operation Mode is set to Client. |
| Channel bandwidth | Click the drop-down menu to select the band and channel bandwidth: 11b/g - Non-HT (Legacy), 11n - HT20, 11n - HT40, or 11ac - VHT 80. |
| Submit | Click Submit to save the values and update the list. |

Bridged Repeater Mode

To access this page, click **Wireless - 2.4GHz > Basic** and select **Bridged Repeater** in Operation Mode.

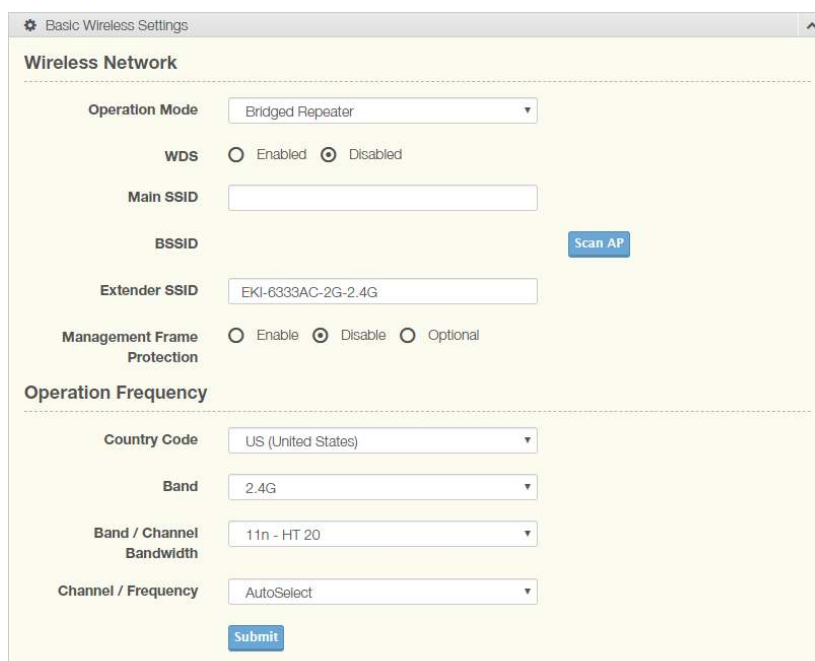


Figure 3.13 Wireless - 2.4GHz > Basic > Bridged Repeater

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------------|--|
| Wireless Network | |
| Operation Mode | Click the drop-down menu to select an operation mode: Access Point, Client, Bridged Repeater. |
| WDS | Click the radio button to enable or disable the Wireless Distribution System (WDS) to allow you to link the Access Points wirelessly. |
| Main SSID | Enter the source SSID network to be repeated. |
| BSSID | Displays the basic service set identifiers (BSSID) for the device. |
| Scan AP | Click to rescan the selected SSID. |
| Extender SSID | Enter the AP device to be used as the extender. |
| Management Frame Protection | Click the radio button to enable, disable, or set the function to optional. The wireless feature increases the security of the management frames, standard: IEEE 802.11W-2009. |
| Operation frequency | |
| Country Code | Click the drop-down menu to select the country code to specify different selectable channels. Available options: US (United States), Germany, France, China and Japan. Some specific channels and/or operational frequency bands are country dependent. |
| Band | Click the drop-down menu to select the band channel. |
| Band / Channel bandwidth | Click the drop-down menu to select the band and channel bandwidth: 11b/g - Non-HT (Legacy), 11n - HT20, 11n - HT40, or 11ac - VHT 80. |
| Channel / Frequency | Click the drop-down menu to select a wireless channel/frequency: <ul style="list-style-type: none"> – AutoSelect – Channel 1: 2.412 GHz – Channel 2: 2.417 GHz – Channel 3: 2.422 GHz – Channel 4: 2.427 GHz – Channel 5: 2.432 GHz – Channel 6: 2.437 GHz – Channel 7: 2.442 GHz – Channel 8: 2.447 GHz – Channel 9: 2.452 GHz – Channel 10: 2.457 GHz – Channel 11: 2.462 GHz – Channel 12: 2.467 GHz – Channel 13: 2.472 GHz – Channel 14: 2.484 GHz (802.11b) |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.2 Advanced

Access Point Settings

The Access Point Settings as displayed in the following figure are available when the operation mode (Wireless Network) is set to access point.

To access this page, click **Wireless - 2.4GHz > Advanced**.

Figure 3.14 Wireless - 2.4GHz > Advanced

The following table describes the items in the previous figure.

| Item | Description |
|----------------------------------|---|
| Access Point Settings | |
| Beacon Interval | Enter a value (20-999) to specify the frequency interval to broadcast packets. |
| Data Beacon Rate (DTIM) | DTIM, which stands for Delivery Traffic Indication Message, is contained in the data packets. It is for enhancing the wireless transmission efficiency. The default is set to 2. Enter a value between 1 and 255. |
| 20/40 Coexistence | Select enable to select 20/40 MHz coexistence. Once enabled, the device allows clients operating only on a single channel (20 MHz) to connect to the wireless network (default: disabled). |
| HT LDPC | Enable to advertise Low-density Parity Check (LDPC) support. By enabling HT LDPC, the function improves data transmission over channels with a high degree of background noise (default: enabled). |
| Station Inactivity Time | Enter the value in seconds (30 to 600, default 300) to define the period of traffic inactivity for a client before the AP removes it. |
| Advanced Wireless Setting | |
| RTS Threshold | Enter a value (1-2347) to specify the request time to send threshold. |
| Transmission Power | Click the drop-down menu to set the transmission power (9 - 21 dBm) of the WiFi. By default the AP transmits at 21 dBm. |
| WMM | Enable WiFi Multimedia (WMM) to enhance the quality of service (QoS) on a network by prioritizing packet data based. |

| Item | Description |
|----------------------|---|
| Short Guard Interval | Click the drop-down menu to enable/disable the short guard interval. In 802.11 operation, the guard interval is 800ns. The short guard interval time is 400ns to allow for an increased throughput. |
| Submit | Click Submit to save the values and update the screen. |

Client Settings

The Client Settings as displayed in the following figure are available when the operation mode (Wireless Network) is set to client.

To access this page, click **Wireless - 2.4GHz > Advanced**.

The screenshot shows the 'Basic Wireless Settings' window for a 'Wireless Network' in 'Client' mode. The settings are as follows:

- Operation Mode:** Client
- WDS:** Disabled
- SSID:** EKI-6333AC-2G-2.4G
- BSSID:** 88:dc:96:80:0f:ea
- Management Frame Protection:** Disabled
- Operation Frequency:**
 - Country Code:** US (United States)
 - Channel Selection:** Auto
 - Channel Bandwidth:** 11n - HT 20

A 'Submit' button is located at the bottom of the form.

Figure 3.15 Wireless - 2.4GHz > Advanced

The following table describes the items in the previous figure.

| Item | Description |
|------------------------|---|
| Client Settings | |
| Roam | Click to enable or disable the roaming function allowing it to automatically switch to another AP with a better signal strength. |
| Watchdog | Click to disable the function, disassociate or ping a specific IP address. The function stops unsecured wireless LAN usage across the network. <ul style="list-style-type: none"> ■ Disassociation: Transmits disassociation and deauthentication frames to prevent client association. Detected rogue WLANs. ■ Ping: The feature pings a specified IP address. If there is no response to the pings, the AP performs one of the following functions: Restart WiFi, Reboot, or Force Re-association. |
| Watchdog Action | Available when Watchdog is set to disassociate. Click the drop-down menu to associate a response to the Watchdog event, options: Restart WiFi, Reboot, Force Reassociation. |
| Disassociate Timer | Available when Watchdog is set to disassociate. |
| Ping Target | Available when Watchdog is set to ping. Enter the IP address to target when watchdog ping is activated. |
| Ping Waittime | Available when Watchdog is set to ping. Enter the value in seconds to designate the interval between pings. |

| Item | Description |
|----------------------------------|---|
| Ping Loss Counter | Available when Watchdog is set to ping. Enter a value to activate the Watchdog function when the configured number of ping failure time is reached. |
| MAC Clone | Click to enable or disable the function, which allows the cloning of a wireless MAC address to connect an AP. |
| Clone Method | Available when MAC Clone is enabled. Click to select the clone method, Auto or Manual. By selecting Manual, you can enter the MAC address in the Clone MAC Address field. |
| Advanced Wireless Setting | |
| Transmission Power | Click the drop-down menu to set the transmission power (9 - 21 dBm) of the WiFi. By default the AP transmits at 21 dBm. |
| Short Guard Interval | Click the drop-down menu to enable/disable the short guard interval. In 802.11 operation, the guard interval is 800ns. The short guard interval time is 400ns to allow for an increased throughput. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.3 Security

To access this page, click **Wireless - 2.4GHz > Security**.



Figure 3.16 Wireless - 2.4GHz > Security

In Bridged Repeater mode, the security / encryption settings are displayed as follows. See the following figure.

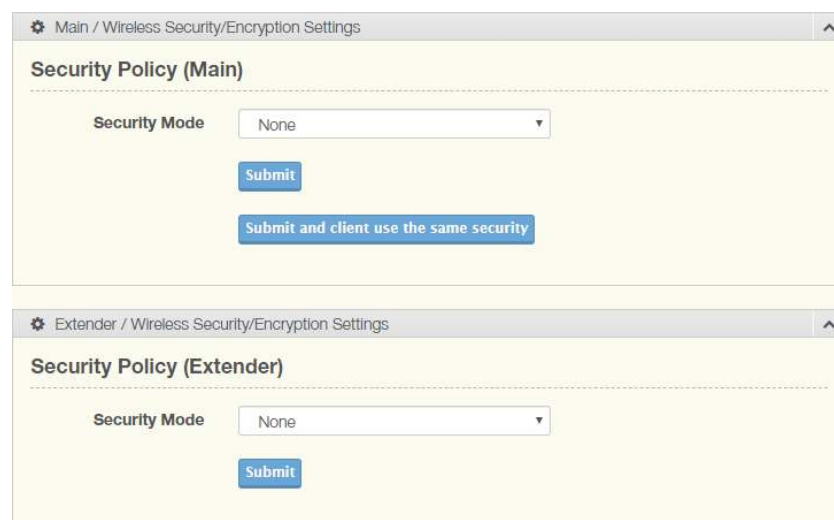


Figure 3.17 Wireless - 2.4GHz > Security

| Item | Description |
|------------------------|-------------|
| Security Policy | |

| Item | Description |
|--|--|
| Security Mode | Click the drop-down menu to select the encryption when communication. Available options: None, WEP, WPA-Personal and WPA/WPA2-Enterprise. If data encryption is enabled, the key is required and only sharing the same key with other wireless devices can the communication be established. |
| Submit | Click Submit to save the values and update the screen. |
| Security Policy (Main) | |
| Security Mode | Click the drop-down menu to select the encryption when communication. Available options: None, WPA-Personal and WPA/WPA2-Enterprise. If data encryption is enabled, the key is required and only sharing the same key with other wireless devices can the communication be established. |
| Submit | Click Submit to save the values and update the screen. |
| Submit and client use the same security. | Click Submit to push the settings to the client. |
| Security Policy (Extender) | |
| Security Mode | Click the drop-down menu to select the encryption when communication. Available options: None, WPA-Personal and WPA/WPA2-Enterprise. If data encryption is enabled, the key is required and only sharing the same key with other wireless devices can the communication be established. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.4 Multiple SSID

The Multiple SSID feature is only available when the wireless mode of the device is set to AP, see “Management” on page 42.

To access this page, click **Wireless - 2.4GHz > Multiple SSID**.

The screenshot displays the 'Multiple SSID Settings' configuration page. At the top, there is a section for '2.4GHz SSID' containing a table with one entry: 'EKI-6333AC-2G-2.4G', 'None', and 'Enable'. Below this is an 'Add' button. The 'Add SSID' section includes a 'State' radio button group (Enabled selected, Disabled unselected), an 'SSID' text input field, an 'SSID Broadcast' dropdown menu (set to 'Enable'), and a 'Management Frame Protection' radio button group (Disable selected, Enable and Optional unselected). The 'Security Policy' section at the bottom features a 'Security Mode' dropdown menu (set to 'None') and a 'Submit' button.

Figure 3.18 Wireless - 2.4GHz > Multiple SSID

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------------|---|
| Add | Click Add after completing the SSID information to create the wireless network and list it in the menu. |
| Add SSID | |
| State | Click the radio button to designate the state (enabled/disabled) of the defined SSID. |
| SSID | Enter the text string identifying the name of the SSID. |
| SSID Broadcast | Click the drop-down menu to enable (visible) or disable (not broadcasted) the broadcasting of the SSID name |
| Management Frame Protection | Click the radio button to enable, disable, or set the function to optional. The wireless feature increases the security of the management frames, standard: IEEE 802.11W-2009. |
| Security Policy | |
| Security Mode | Click the drop-down menu to select the encryption when communication. Available options: None, WPA-Personal and WPA/WPA2-Enterprise. If data encryption is enabled, the key is required and only sharing the same key with other wireless devices can the communication be established. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.5 QoS

The QoS feature is only available when the wireless mode of the device is set to AP or Bridged Repeater, see “Management” on page 42.

The QoS function is only available in Access Point mode.

To access this page, click **Wireless - 2.4GHz > QoS**.

Figure 3.19 Wireless - 2.4GHz > QoS

The following table describes the items in the previous figure.

| Item | Description |
|-------------------------|--|
| Interface Name | Click the drop-down menu to select an interface from the list of already created wireless networks. |
| QoS | Click the radio button to enable or disable the QoS policy on the selected interface. |
| Download Speed (kbit/s) | Enter the value (kbit/s) to define the download speed of the policy: 1024 to 102400, default: 85000) |
| Upload Speed (kbit/s) | Enter the value (kbit/s) to define the upload speed of the policy: 1024 to 102400, default: 10000) |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.6 Statistics

To access this page, click **Wireless - 2.4GHz > Statistics**.

| Overview | | | | | |
|---------------------|--|-----------------------|--|--|--|
| Information Name | | Information Value | | | |
| Mode | | Access Point | | | |
| SSID | | EKI-6333AC-2G-2.4G | | | |
| Channel / Frequency | | channel 11 (2462 MHz) | | | |
| BSSID | | 88:DC:96:80:0F:EA | | | |

| Station List | | | | | |
|---------------|--------------|----------------|------------|------------------|------------------|
| Station BSSID | Signal Level | Connected Time | Tx/Rx Rate | Tx Packets/Bytes | Rx Packets/Bytes |
| | | | | | |

| Wlan Status | |
|------------------|-------------------|
| Information Name | Information Value |
| TX Packets | 96870 |
| TX Bytes | 13474682 |
| RX Packets | 0 |
| RX Bytes | 0 |

Figure 3.20 Wireless - 2.4GHz > Statistics

The following table describes the items in the previous figure.

| Item | Description |
|---------------------|---|
| Overview | |
| Mode | Display the current operation mode of the device. |
| SSID | Display the SSID. |
| Channel / Frequency | Display the current channel / frequency of the device. |
| BSSID | Display the MAC address of the device. |
| Station List | |
| Station BSSID | Displays the basic service set identifier (BSSID), access point unique MAC address. |
| Signal level | Displays the power level measure in decibel-milliwatts of the listed BSSID. |
| Connected time | Displays the total uptime period. |
| Tx/Rx rate | Displays the transmit (Tx) to receive (Rx) rate of the connected client. |
| Tx packets/bytes | Displays the total Tx packets and corresponding bytes. |
| Rx packets/bytes | Displays the total Rx packets and corresponding bytes. |
| Wlan status | |
| TX packets | Display the current Tx packets. |
| TX bytes | Display the current Tx bytes. |
| RX packets | Display the current Rx packets. |
| RX bytes | Display the current Rx bytes. |

3.4.3.7 Access Control

The Access Control feature is only available when the wireless mode of the device is set to AP, see “Management” on page 42.

Access Control allows for an administrator to allow or deny access by defining specific devices through their MAC address.

To access this page, click **Wireless - 2.4GHz > Access Control**.

Figure 3.21 Wireless - 2.4GHz > Access Control

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------|---|
| SSID | Click the drop-down menu to select the SSID from the list of already created wireless networks. |
| Access Control Method | Click the drop-down menu to set the access control method: Disable, Deny or Allow. In the Deny or Allow menu, enter the MAC address of the target device - support for up to 32 target devices. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.8 Site Survey

The Site Survey feature is only available when the wireless mode of the device is set to Client or Bridged Repeater mode, see “Management” on page 42.

To access this page, click **Wireless - 2.4GHz > Site Survey**.

| SSID | BSSID | Frequency | Signal level | Encryption |
|-------------------|-------------------|-----------|--------------|--------------|
| DIRECT-FKLT37msDL | 86:C6:3B:E1:A9:FD | 2412 MHz | -88 dBm | WPA-personal |

Figure 3.22 Wireless - 2.4GHz > Site Survey

| Item | Description |
|----------------|--|
| Refresh | Click to update the displayed AP list table. |
| AP list | |
| SSID | Displays the name of the listed AP. |
| BSSID | Displays the basic service set identifiers (BSSID) used to describe the section of the SSID. |
| Frequency | Displays the radio frequency of the listed SSID. |
| Signal level | Displays the signal level of the listed SSID. |
| Encryption | Displays the encryption type assigned to the listed SSID. |

3.4.3.9 VLAN

The VLAN function allows for the processing of data to and from clients in the same manner as data is processed to and from wired connections.

To access this page, click **Wireless - 2.4GHz > Site Survey**.

| VLAN ID | Port | Wireless SSID | Delete |
|---------|---|------------------------|--------|
| 2 | <input checked="" type="checkbox"/> LAN 1 <input type="checkbox"/> LAN 2 | × EKI-6333AC-5G-5G × | Delete |
| 3 | <input checked="" type="checkbox"/> LAN 1 <input type="checkbox"/> LAN 2 | × EKI-6333AC-2G-2.4G × | Delete |

Add Submit

Figure 3.23 Wireless - 2.4GHz > Site Survey

| Item | Description |
|---------------|--|
| VLAN ID | Enter a variable (1 to 127) to identify the VLAN entry. |
| Port | Click a specific interface (LAN 1 / LAN 2) to designate to the VLAN entry. |
| Wireless SSID | Click the drop-down menu to select an SSID entry to configure to the VLAN entry. |
| Delete | Click Delete to remove the VLAN entry from the list. |
| Add | Click Add after completing the SSID information to create the wireless network and list it in the menu. |
| Submit | Click Submit to save the values and update the screen. |

3.4.3.10 Log

To access this page, click **Wireless - 2.4GHz > Log**.

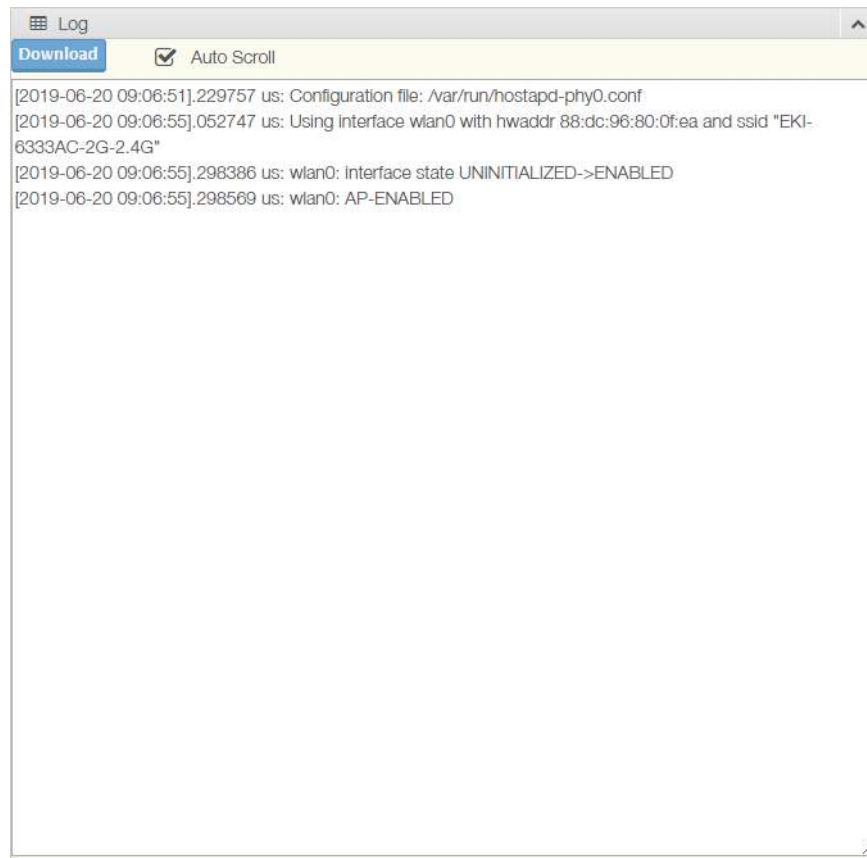


Figure 3.24 Wireless - 2.4GHz > Log

The following table describes the items in the previous figure.

| Item | Description |
|-------------|---|
| Download | Click Download to download the log file. |
| Auto Scroll | Click the option to allow for auto scrolling when the log entries has extended below the page line. |

3.4.4 Wireless 5GHz

To access this page, click **Interface > Wireless - 5GHz**.

For further details regarding the user interface, refer to the Wireless 2.4GHz section. See “Wireless 2.4GHz” on page 25.

3.5 Network Settings

3.5.1 Static Route

To access this page, click **Networking > Static Route**.

| Target IP Address | Netmask | Gateway | Interface | Metric | MTU | Delete |
|-------------------|-------------|-------------|-----------|--------|------|--------|
| 192.168.1.10 | 255.255.0.0 | 192.168.1.1 | LAN | 3 | 1500 | Delete |
| | | | LAN | | | Delete |

Add Submit

Figure 3.25 Networking > Static Route

The following table describes the items in the previous figure.

| Item | Description |
|-------------------|---|
| Target IP Address | Enter an IP address (static route) for this static route. |
| Netmask | Enter a netmask setting (static route) for this static route. |
| Gateway | Enter a gateway setting (static route) for this static route. |
| Interface | Enter an interface for this static route, options: LAN, WAN, Wireless 2.4GHz, or Wireless 5GHz. |
| Metric | Enter the administrative distance (default: 1) used by the ap to choose the best path for two or more routes to the same destination. |
| MTU | Enter the maximum transmission value for the data packets if applicable. |
| Delete | Click Delete to remove the route from the available list. |
| Add | Click Add to include the route in the static routing policy. |
| Submit | Click Submit to save the values and update the screen. |

3.5.2 Forwarding

3.5.2.1 Port Forwarding

To access this page, click **Networking > Forwarding > Port Forwarding**.

| Enabled | Name | Start Port | End Port | Local IP | Local Port | Protocol | Delete |
|-------------------------------------|-------------|------------|----------|---------------|------------|----------|--------|
| <input checked="" type="checkbox"/> | PortForward | 51 | 55 | 192.168.1.166 | 3001 | TCP | Delete |
| <input type="checkbox"/> | | | | | | TCP | Delete |

Add Submit

Figure 3.26 Networking > Forwarding > Port Forwarding

The following table describes the items in the previous figure.

| Item | Description |
|------------|--|
| Enabled | Click Download to download the log file. |
| Name | Enter a text string to identify the port forwarding entry. |
| Start Port | Enter the value of the starting port for this entry. |

| Item | Description |
|------------|---|
| End Port | Enter the value of the ending port for this entry. |
| Local IP | Enter the IP address defining the static address of the local IP. |
| Local Port | Enter the value defining the local port. |
| Protocol | Click the drop-down menu to select the protocol setting, options: TCP, UDP, Both. |
| Delete | Click Delete to remove the selected entry from the port forwarding policy. |
| Add | Click Add to include the entry in the port forwarding policy. |
| Submit | Click Submit to save the values and update the screen. |

3.5.2.2 DMZ

To access this page, click **Networking > Forwarding > DMZ**.

Figure 3.27 Networking > Forwarding > DMZ

The following table describes the items in the previous figure.

| Item | Description |
|--------|--|
| DMZ | Click the radio button to enable or disable the DMZ function. |
| IP | Enter the IP address to designate a static IP address as the DMZ target. |
| Submit | Click Submit to save the values and update the screen. |

3.5.3 Security

3.5.3.1 Filter

To access this page, click **Networking > Security > Filter**.

Figure 3.28 Networking > Security > Filter

| Item | Description |
|----------------|--|
| Filter | Click the radio button to enable or disable the Filter policy. |
| Enabled | Select to enable the defined filter entry. |
| Direction | Click the drop-down menu to select the direction of the data packet traffic for the entry: LAN to WAN, WAN to LAN. |
| Source IP | Enter the IP address of the sender address. |
| Destination IP | Enter the IP address of the destination address. |

| Item | Description |
|------------------|---|
| Protocol | Click the drop-down menu to select the protocol type for the entry: TCP, UDP, ICMP. |
| Source port | Enter the port number of the sender IP address. |
| Destination port | Enter the port number of the destination IP address. |
| Delete | Click Delete to remove the entry from the Filter policy. |
| Add | Click Add to include the entry in the Filter policy. |
| Submit | Click Submit to save the values and update the policy. |

3.5.3.2 VPN Passthrough

To access this page, click **Networking > Security > VPN Passthrough**.



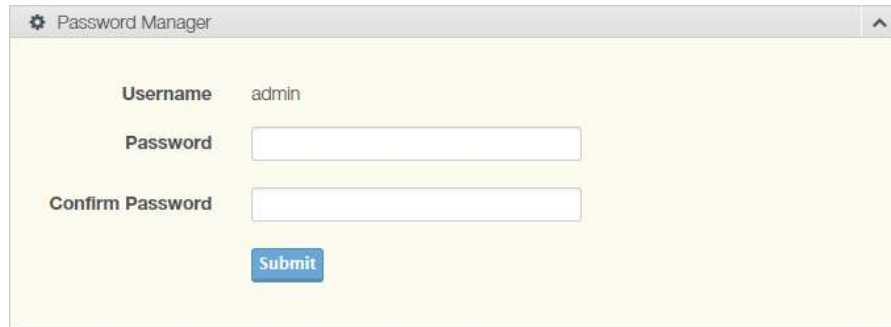
Figure 3.29 Networking > Security > VPN Passthrough

| Item | Description |
|-------------------|--|
| PPTP Passthrough | Click the radio button to enable or disable PPTP packets to pass through. |
| L2TP Passthrough | Click the radio button to enable or disable L2TP packets to pass through. |
| IPSec Passthrough | Click the radio button to enable or disable IPSEC packets to pass through. |
| Submit | Click Submit to save the values and update the policy. |

3.6 Management

3.6.1 Password Manager

To access this page, click **Management > Password Manager**.



The screenshot shows a web browser window titled "Password Manager". The page has a light yellow background. It contains a form with the following elements:

- Username:** A text input field containing the text "admin".
- Password:** An empty text input field.
- Confirm Password:** An empty text input field.
- Submit:** A blue button with the text "Submit" in white.

Figure 3.30 Management > Password Manager

The following table describes the items in the previous figure.

| Item | Description |
|------------------|---|
| Password | Enter the text string to define a password for the listed username entry. |
| Confirm Password | Re-type the text string as identified in the password field to confirm the entry. |
| Submit | Click Submit to save the values and update the screen. |

3.6.2 Syslog

Users can enable the syslogd function to record historical events or messages locally or on a remote syslog server.

To access this page, click **Management > Syslog**.

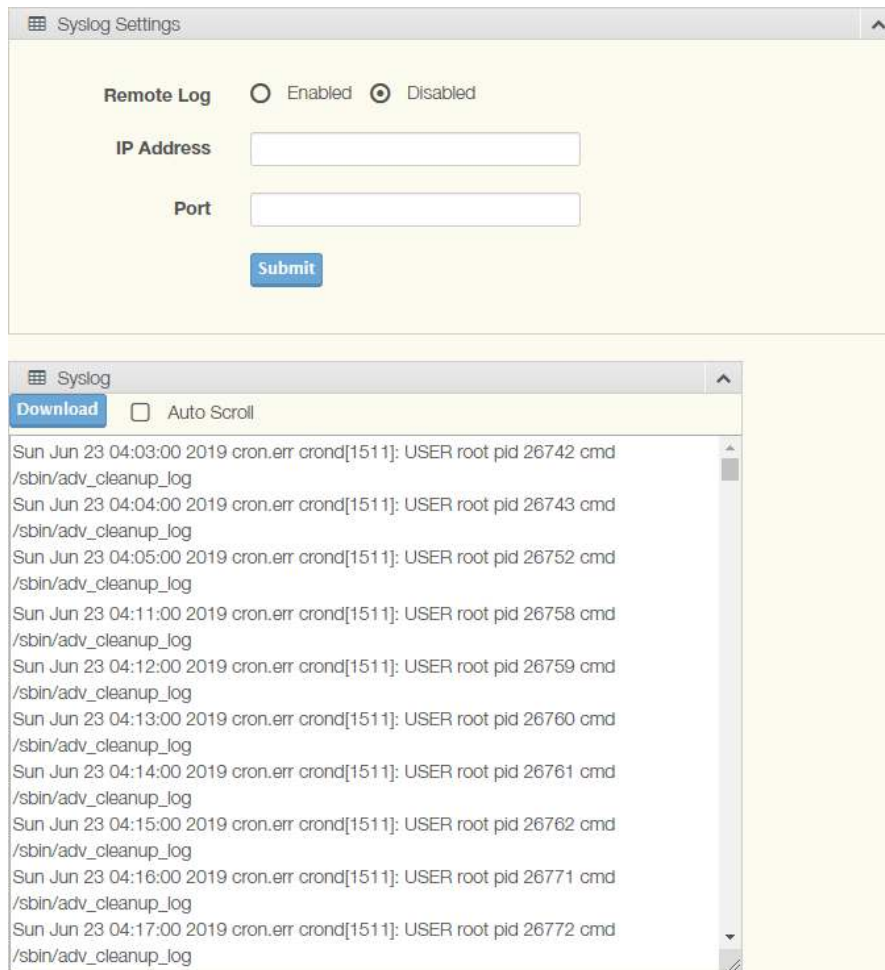


Figure 3.31 Management > Syslog

The following table describes the items in the previous figure.

| Item | Description |
|-------------|---|
| Remote Log | Click the radio button to enable or disable the remote log function. Enabling the function allows for the saving of log entries on a remote, not local, system. |
| IP Address | Enter the static address of the remote system used for storing logging information. |
| Port | Enter the port number of the define static address used for storing logging information. |
| Submit | Click Submit to save the values and update the screen. |
| Download | Click Download to download the log file. |
| Auto Scroll | Click the option to allow for auto scrolling when the log entries has extended below the page line. |

3.6.3 NTP / Time

To access this page, click **Management > NTP / Time**.




Figure 3.32 Management > NTP / Time

The following table describes the items in the previous figure.

| Item | Description |
|-------------|--|
| System Time | Displays the current system time settings. |
| Manual Time | To enable manual configuration, NTP Service option must first be disabled. Manually enter the Year, Month, Day, Hour, Minute, and Second settings to define the system time. |
| NTP Service | Click the drop-down menu to enable or disable the NTP server. By disabling this function, the Manual Time setting can be configured. |
| Time Zone | Click the drop-down menu to select a system time zone. |
| NTP Server | Enter the address of the SNTP server. |
| Submit | Click Submit to save the values and update the screen. |

3.6.4 SNMP

To access this page, click **Management > SNMP**.

The screenshot displays three configuration sections for SNMP:

- SNMP System Settings:** Includes a radio button for 'Enabled' (selected) and 'Disabled'. Fields for 'Contact' (Advantech@advantech.com.tw), 'Name' (Advantech), 'Location' (tw), and 'Description' (1073404).
- SNMP Daemon Settings:** Includes a dropdown for 'Version' (V1), 'Server Port' (162), 'Read Community' (public), and 'Write Community' (private).
- SNMP Trap Settings:** Includes 'Trap Server IP' (192.168.1.100) and 'Trap Community' (public).

A 'Submit' button is located at the bottom of the form.

Figure 3.33 Management > SNMP

The following table describes the items in the previous figure.

| Item | Description |
|-----------------------------|---|
| SNMP System settings | |
| SNMP | Click the radio button to enable or disable the Simple Network Management Protocol (SNMP) function used to monitor network devices. |
| Contact | Enter the contact route in an Email format for use during an SNMP event. |
| Name | Enter the text string describing the contact entry. |
| Location | Enter the text string describing the region/location of the contact entry. |
| Description | Enter a descriptive remark to better identify the contact entry. |
| SNMP Daemon Settings | |
| Version | Click the drop-down menu to select the version of the daemon. |
| Server Port | Enter the port to access on the specified server. |
| Read Community | Enter the setting to define the level of read access for the defined user, options: private, public (default). |
| Write Community | Enter the setting to define the level of write access for the defined user, options: private (default), public. |
| SNMP Trap Settings | |
| Trap Server IP | Enter the static route to define the trap server used for the defined user. |

| Item | Description |
|----------------|--|
| Trap Community | Enter the setting to define the level of access for the define user, options: private, public. |
| Submit | Click Submit to save the values and update the screen. |

3.6.5 Remote Services

To access this page, click **Management > Remote Services**.

Figure 3.34 Management > Remote Services

The following table describes the items in the previous figure.

| Item | Description |
|---------------------------------|---|
| HTTP common settings | |
| Redirect HTTP requests to HTTPS | Click the drop-down menu to enable or disable the function. By default the function is disabled. When enabled, a NAT setting and Open Ports can be setup to direct connection requests to an internal server. |
| HTTPS port | Enter the port to forward HTTPS traffic, default: 443. |
| HTTP port | Enter the port to forward HTTP traffic, default: 80. |
| SSH | |
| SSH | Click the radio button to enable or disable access to SSH function. |
| Telnet | |
| Telnet | Click the radio button to enable or disable access to the Telnet function. |
| FTP Server | |
| FTP Server | Click the radio button to enable or disable access to the FTP Server function. |
| Submit | Click Submit to save the values and update the screen. |

3.6.6 Configuration Manager

To access this page, click **Management > Configuration Manager**.

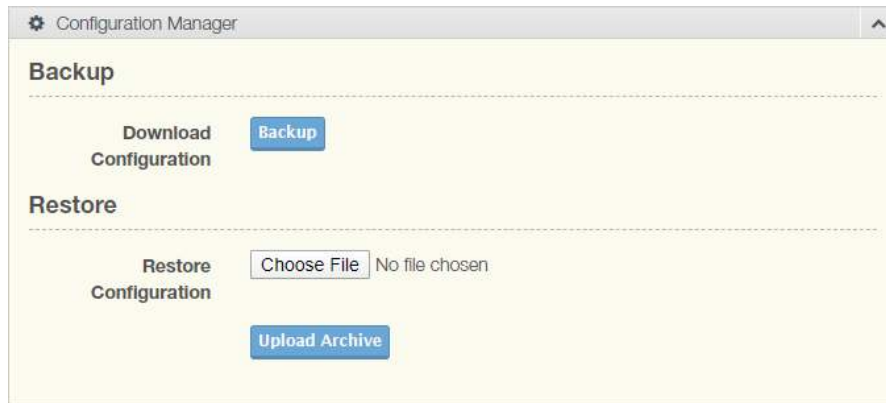


Figure 3.35 Management > Configuration Manager

The following table describes the items in the previous figure.

| Item | Description |
|----------------|--|
| Backup | |
| Backup | Click Backup to export the device settings. |
| Restore | |
| Upload Archive | Click Upload Archive to select a previously saved configuration file. |

3.6.7 Firmware Upgrade

To access this page, click **Management > Firmware Upgrade**.



Figure 3.36 Management > Firmware Upgrade

The following table describes the items in the previous figure.

| Item | Description |
|-------------|--|
| Choose File | Click Choose File to select the configuration file. |
| Upload | Click Upload to upload to the current version. |

3.6.8 Reset System

To access this page, click **Management > Apply Configuration**.



Figure 3.37 Management > Apply Configuration

The following table describes the items in the previous figure.

| Item | Description |
|-------|---|
| Reset | Click Reset the device, any changes to settings will be lost unless the Apply Configuration function is executed prior to resetting. |

3.6.9 Apply Configuration

To access this page, click **Management > Apply Configuration**.

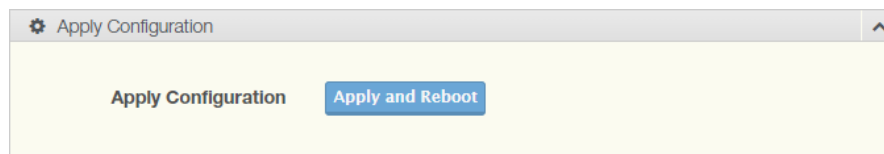


Figure 3.38 Management > Apply Configuration

The following table describes the items in the previous figure.

| Item | Description |
|------------------|--|
| Apply and Reboot | Click Apply and Reboot to save the new configuration settings and reboot the device to permanently save the new settings. |

3.6.10 Reboot Device

To access this page, click **Management > Reboot Device**.



Figure 3.39 Management > Reboot Device

The following table describes the items in the previous figure.

| Item | Description |
|--------|---|
| Reboot | Click Reboot to reboot the device. Any configuration changes you have made since the last time you issued a save will be lost. |

3.7 Tools

3.7.1 Diagnostics

To access this page, click **Tools > Diagnostics**.

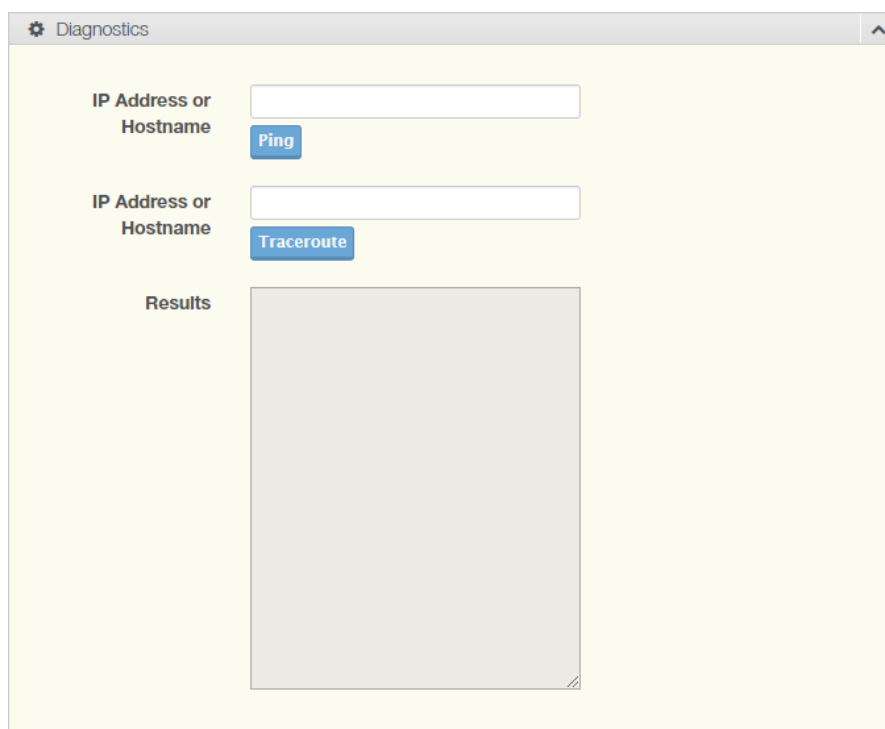


Figure 3.40 Tools > Diagnostics

The following table describes the items in the previous figure.

| Item | Description |
|------------------------|---|
| IP Address or Hostname | Enter the IP address or host name of the station to ping. The initial value is blank. The IP Address or host name you enter is not retained across a power cycle. Host names are composed of series of labels concatenated with periods. Each label must be between 1 and 63 characters long, maximum of 64 characters. |
| Ping | Click Ping to display ping result for the IP address. |
| IP Address or Hostname | Enter the IP address or host name of the station to ping. The initial value is blank. The IP Address or host name you enter is not retained across a power cycle. Host names are composed of series of labels concatenated with periods. Each label must be between 1 and 63 characters long, maximum of 64 characters. |
| Traceroute | Click Traceroute to track the pathway taken by a packet on the designated network from source to destination. |
| Results | Displays the results of the Ping or Traceroute function after initializing. |

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Please verify specifications before quoting. This guide is intended for reference purposes only.

All product specifications are subject to change without notice.

No part of this publication may be reproduced in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission of the publisher.

All brand and product names are trademarks or registered trademarks of their respective companies.

© Advantech Co., Ltd. 2020