About This Manual

Akuvox
Open A Smart World

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AKUVOX A08
ACCESS CONTROL
Administrator Guide

Thank you for choosing the Akuvox A08 access control terminal. This manual is intended for the administrators who need to properly configure the access control terminal. This manual is written based on firmware version 108.30.1.17, and it provides all the configurations for the functions and features of the A08 access control terminal. Please visit the Akuvox forum or consult technical support for any new information or the latest firmware. And the hardware version of A08 is 0.0.0.0.

Product Overview

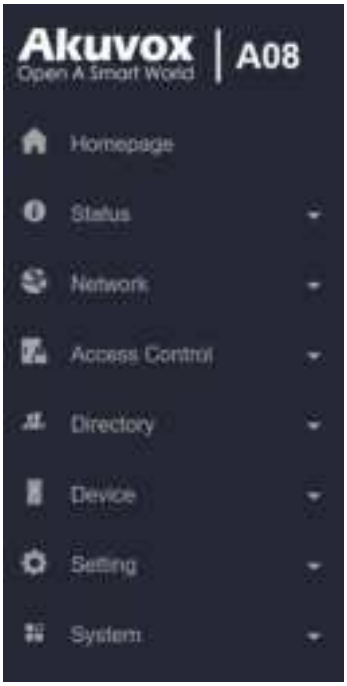
Akuvox A08 series integrates a door controller and card reader into a single device, significantly reducing costs for building operators. It provides versatile credentials such as PIN codes, QR scanning, wave-to-unlock via Bluetooth, and mobile access via NFC and RFID cards.

Model Specifications and Differences

Model	A08S	A08K
Front Panel	Toughened Glass	Toughened Glass
Frame	Aluminum Alloy	Aluminum Alloy
RFID Card Reader	13.56MHz & 125kHz	13.56MHz & 125kHz
Relay Out	x1	x1
Inputs	x2	x2
Wiegand	✔	✔
RS485	✔	✔
Speaker	8Ω / 0.5W	8Ω / 0.5W
Tamper Proof Alarm	✔	✔
Ethernet Port	RJ45, 10/100Mbps adaptive	RJ45, 10/100Mbps adaptive
Power Output	12V 600mA	12V 600mA
Power Supply	12V DC connector (if not using PoE)	12V DC connector (if not using PoE)
QR Code Unlock	✔	X
Bluetooth Unlock	✔	X

Introduction to Configuration Menu

- **Status**: This section gives you basic information such as product information, network information, and access logs.
- **Network**: This section covers LAN port settings.
- **Access Control**: This section covers relay, input, web relay, card setting, Bluetooth setting, etc.
- **Directory**: This section includes access schedule management and user management.
- **Device**: This section includes light, Wiegand, lift control, and audio settings.
- **Setting**: This section deals with time and language settings, relay schedule, action, HTTP API settings, etc.
- **System**: This section covers firmware upgrade, device reset, reboot, configuration file auto-provisioning, system log and PCAP, password modification as well as device backup.



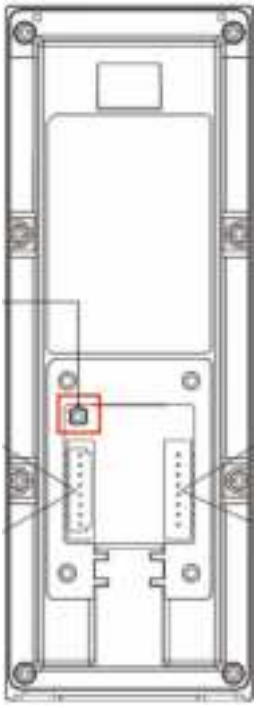
Access the Device

Before configuring A08, please make sure the device is installed correctly and connected to a normal network. Using the Akuvox IP scanner tool to search the device IP address in the same LAN. Then use the IP address to log into the web browser. The default username and password are **admin**.

Note

- Download IP scanner: https://knowledge.akuvox.com/docs/akuvox-ip-scanner?highlight=IP
- See detailed guide: https://knowledge.akuvox.com/v1/docs/en/how-to-obtain-ip-address-via-ip-scanner?highlight=IP%20Scanner
- Google Chrome browser is strongly recommended.

You can also obtain the IP address by pressing the **Reset** button at the back of the device. The device will announce the IP address automatically.



You can set up the loop times of the IP announcement on the **Device > Audio > IP Announcement** interface.

Language and Time Setting

Language

You can switch the web language between English and Chinese in the upper right corner.

You can customize interface text including configuration names and prompt text.

To set it up, go to **Setting > Time/Lang** interface. Export and edit the .json file. Then import the file to the device.

Time

Time settings on the web interface allows you to set up the NTP server address that you obtained to automatically synchronize your time and date. When a time zone is selected, the device will automatically notify the NTP server of the time zone so that the NTP server can synchronize the time zone setting in your device.

To set up time, go to **Setting > Time/Lang** interface.

- **Automatic Date&Time Enabled**: Set whether the device updates the time automatically via the Network Time Protocol(NTP) server.
- **Date/Time**: Set the date and time for the device manually when you disable the automatic date and time service.
- **Time Zone**: Select the specific time zone based on where the device is used. The default time zone is GMT+0:00.
- **Preferred Server**: Enter the primary NTP server address for updating the time. The default NPT server address is 0.pool.ntp.org.

- **Alternate Server**: Enter the backup NPT server address when the primary one fails.
- **Update Interval**: Set the time update interval. For example, if you set it as 3600s, the device will send a request to the NPT server for the time update every 3600 seconds.
- **Current Time**: Display the current device time.

LED Setting

Status Light

You can turn on or off the status light and adjust its brightness.

To set it up, go to **Device > Light > Status Light** interface.

- **Status Light**: The level ranges from 1-5. The higher the value is, the brighter it is.

Status Light Description:

LED Color	LED Status	Description
Light Blue	Light on briefly	The device starts up.
	The light circle rotates once.	Door-opening succeeds.
Blue	Flashing briefly	Door-opening fails.
	Flashing continuously	The tamper alarm is triggered.

Keypad Light

You can set up the keypad light. For example, keep the light on, and users can locate the device conveniently in a dark environment.

To set it up, go to **Device > Light > Keypad Light** interface.

- **Mode**:
    - **Auto**: The keypad lights up when users approach or touch it.
    - **On**: Turn on the keypad light all the time.
    - **Off**: Turn off the keypad light all the time.

Volume and Tone Configuration

Volume and tone configuration include keypad volume, prompt volume, tamper alarm volume, and open-door tone configuration.

To set it up, go to **Device > Audio > Volume Control** interface.

- **Prompt Volume**: Set the voice prompt volume. The default volume is 8.
- **Tamper Alarm Volume**: Set the volume when the tamper alarm is triggered. The default volume is 8.
- **Keypad Volume**: Set the volume when pressing the keypad. The default volume is 8.

Voice Prompts Upload

You can customize and upload various voice prompts to the device.

To set it up, go to **Device > Audio > Voice Prompt Setting** interface.

Note

File Format: WAV; Size: < 200KB; Sample Rate:16000; Bits: 16

Network Setting

To ensure normal functioning, make sure that the device has its IP address set correctly or obtained automatically from the DHCP server.

To set it up, go to **Network > Basic** interface.

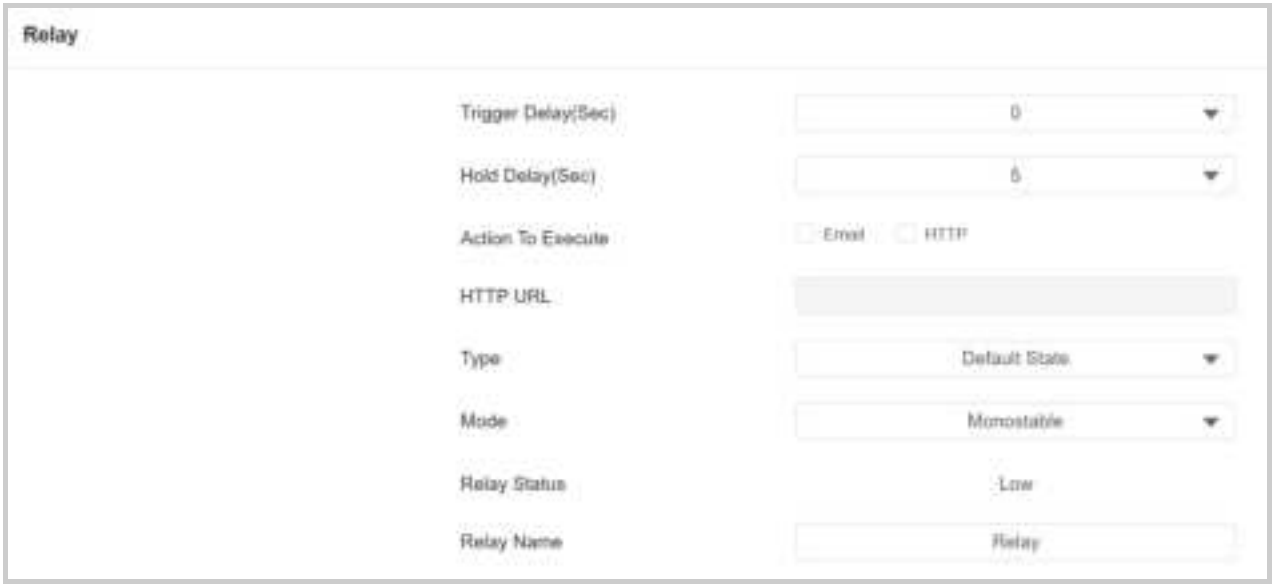
- **DHCP**: DHCP mode is the default network connection. If the DHCP mode is selected, the access control terminal will be assigned by the DHCP server with IP address, subnet mask, default gateway, and DNS server address automatically.
- **Static IP**: When static IP mode is selected, the IP address, subnet mask, default gateway, and DNS server address should be configured according to the network environment.
- **IP Address**: Set up the IP address when the static IP mode is selected.
- **Subnet Mask**: Set up the subnet mask according to the actual network environment.
- **Default Gateway**: Set up the correct gateway according to the IP address.
- **Preferred/Alternate DNS Server**: Set up the preferred or alternate Domain Name Server(DNS) server according to the actual network environment. The preferred DNS server is the primary server while the alternate DNS server is the secondary one. The secondary server is for backup.

Relay Setting

You can configure the relay switch(es) for door access on the web interface.

Relay Switch

To set up the relay, go to **Access Control > Relay > Relay** interface.



- **Trigger Delay(Sec)**: Set the delay time before the relay triggers. For example, if set to 5 seconds, the relay activates 5 seconds after pressing the Unlock button.
- **Hold Delay(Sec)**: Determine how long the relay stays activated. For example, if set to 5 seconds, the relay remains to be opened for 5 seconds before closing.
- **Action to Execute**: Check the action to be executed when the relay is triggered.
    - **HTTP**: When triggered, the HTTP message can be captured and displayed in the corresponding packets. To utilize this feature, enable the HTTP server and enter the message content in the designated box below.
    - **Email**: Send a screenshot to the preconfigured Email address.
- **HTTP URL**: Enter the HTTP message if selecting HTTP as the action to execute. The format is http://HTTP server's IP/Message content.
- **Type**: Determine the interpretation of the Relay Status regarding the state of the door:
    - **Default State**: A "Low" status in the Relay Status field indicates that the door is closed, while "High" indicates that it is opened.
    - **Invert State**: A "Low" status in the Relay Status field indicates an opened door, while "High" indicates a closed one.

- **Mode**: Specify the conditions for automatically resetting the relay status.
    - **Monostable**: The relay status resets automatically within the relay delay time after activation.
    - **Bistable**: The relay status resets upon triggering the relay again.
- **Relay Status**: Indicate the states of the relay, which are normally opened and closed. By default, it shows low for normally closed(NC) and high for Normally Open(NO).
- **Relay Name**: Assign a distinct name for identification purposes.

> **Note**
>
> External devices connected to the relay require separate power adapters.

Security Relay

The Security Relay, known as Akuvox SR01, is a product designed to bolster access security by preventing unauthorized forced entry attempts. Installed inside the door, it directly governs the door opening mechanism, ensuring that the door remains secure even in the event of damage to the door phone.

To set it up, go to **Access Control > Relay > Security Relay** interface.

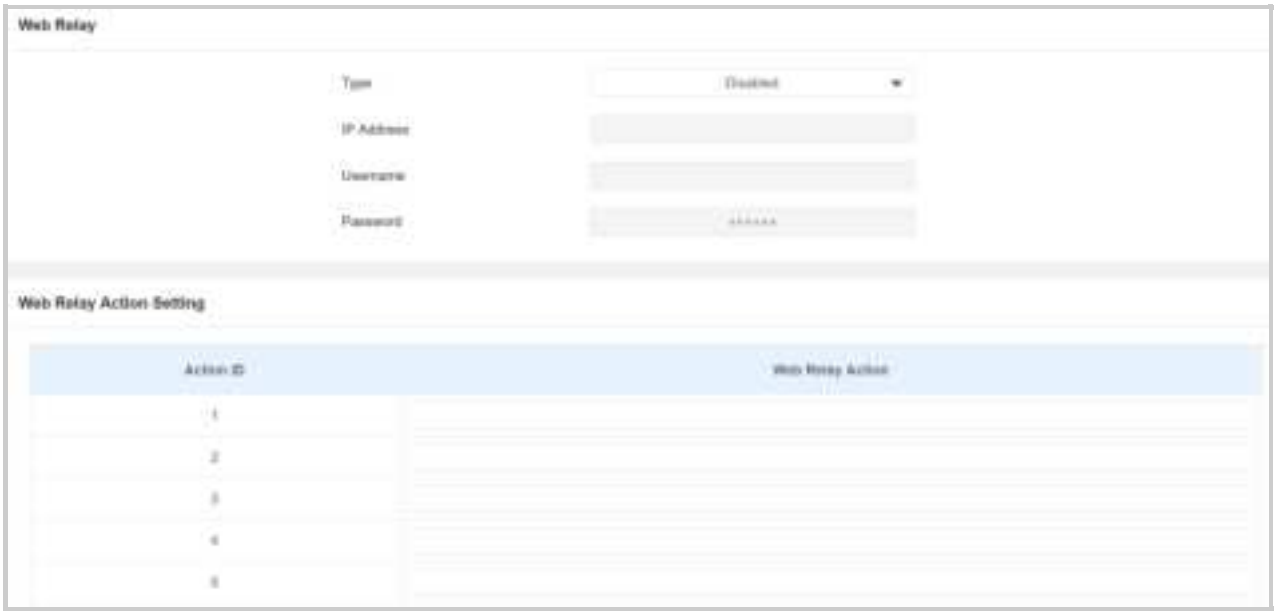
- **Relay ID**: The specific relay for door access.
- **Connect Type**: The security relay connects to the door phone using Power Output or RS485.

- **Trigger Delay(Sec)**: Set the delay time before the relay triggers. For example, if set to 5 seconds, the relay activates 5 seconds after pressing the Unlock button.
- **Hold Delay(Sec)**: Determine how long the relay stays activated. For example, if set to 5 seconds, the relay remains to be opened for 5 seconds before closing.
- **Relay Name**: Name the security relay. The name can be displayed in door opening logs. When connecting to the SmartPlus Cloud, the Cloud server will automatically assign the relay name.

Web Relay

A web relay has a built-in web server and can be controlled via the Internet or a local network. The door phone can use a web relay to either control a local relay, or a remote relay somewhere else on the network.

To set it up, go to **Access Control > Web Relay** interface.



- **Type**: Determine the type of relay activated when employing door access methods for entry.
    - **Disabled**: Only activate the local relay.
    - **Web Relay**: Only activate the web relay.

  - **Local Relay+Web Relay**: Activate both the local relay and web relay. Typically, the local relay is triggered first, followed by the web relay to execute their pre-configured actions.

- **IP Address**: The web relay IP address provided by the web relay manufacturer.
- **Username**: The user name provided by the web relay manufacturer.
- **Password**: The manufacturer-provided authentication key for the web relay. Authentication occurs via HTTP. Leaving the Password field blank indicates non-use of HTTP authentication. You can define the password using HTTP GET in the Web Relay Action field.
- **Web Relay Action**: Configure the actions to be performed by the web relay upon triggering. Enter the manufacturer-provided URLs for various actions, with up to 50 commands.

NOTE

If the URL includes full HTTP content (e.g., http://admin:admin@192.168.1.2/state.xml?relayState=2), it doesn't rely on the IP address that you entered above. However, if the URL is simpler (e.g., "state.xml?relayState=2"), the relay uses the entered IP address.

Door Access Schedule Management

Door Access Schedule

A door access schedule lets you decide who can open the door and when. It applies to both individuals and groups, ensuring that users within the schedule can only open the door using the authorized method during designated time periods.

Create Door Access Schedule

To create a door access schedule, go to the **Setting > Schedule** interface.

Click **+Add** to create a schedule.

- **Name**: Name the schedule.
- **Mode**:
  - **Normal**: Set the schedule based on the month, week, and day. It is used for a long period schedule.
  - **Weekly**: Set the schedule based on the week.
  - **Daily**: Set the schedule based on 24 hours a day.

Import and Export Door Access Schedule

You can create door access schedules one by one or in bulk. You can export the current schedule file, edit it or add more schedules following the format, and import the new file to the desired devices. This helps you manage your door access schedules easily.

To set it up, go to the **Setting > Schedule** interface. The export file is in **TGZ** format. The import file should be in **XML** format.

Relay Schedule

The relay schedule allows you to set a specific relay to always open at a certain time. This is helpful for situations like keeping the gate open after school or keeping the door open during work hours.

To set it up, go to **Access Control > Relay > Relay Schedule** interface.

- **Relay ID**: Specify the relay you need to set up.
- **Activation Required**: It means only after the relay is triggered successfully for the first time, can it be triggered by device-supported access methods later.
- **Schedule:** Assign particular door access schedules to the chosen relay. Simply move them to the Selected Schedules box.

For instructions on creating schedules, kindly consult the Create Door Access Schedule section.

Door Unlock Configuration

Public PIN Code for Door Unlock

There are two types of PIN codes for door access: public and private. A private PIN is unique to each user, while the public one is shared by residents in the same building or complex. You can create and modify both the public and private PIN codes.

To set up the public PIN code, go to **Access Control > PIN Setting > Public PIN** interface.

- **PIN Code**: Set a 3-8 digit PIN code accessible for universal use.

User-specific Access Methods

The private PIN code, RF card, QR code, and Bluetooth setting should be assigned to a particular user for door opening.

When adding a user, you can also customize settings such as defining the door access schedule to determine when the code is valid and specifying which relay to open.

To add a user, go to **Directory > User** interface and Click **+Add**.

- **User ID**: The unique identification number assigned to the user.
- **Name**: The name of this user.

Unlock by Private PIN Code

On the **Directory > User > +Add** interface, scroll to the **PIN** section.

- **Code**: Set a 2-8 digit PIN code solely for the use of this user. Each user can only be assigned a single PIN code.

Unlock by RF Card

On the **Directory > User > +Add** interface, scroll to the **RF Card** section.

- **Code**: The card number that the card reader reads.

Note:

- Each user can have a maximum of 5 cards added.
- The device allows to add 20,000 users.
- RF cards operating at 13.56 MHz and 125 KHz frequencies are compatible with the door phone for access.

RF Card Code Format

To integrate the RF card door access with the third-party intercom system, you need to match the RF card code format with the one used by the third-party system.

To set it up, go to **Access Control > Card Setting > RFID** interface.

- **IC/ID Card Display Mode**: Set the card number format from the provided options. The default format in the device is 8HN.

- **ID Card Order**: Set the ID card reading mode between Normal and Reversed.

Unlock by Bluetooth

A08 supports opening the door via Bluetooth-enabled My MobileKey or SmartPlus App. Users can either open the door with the apps in their pockets or wave their phones towards the door phone as they get closer to the door.

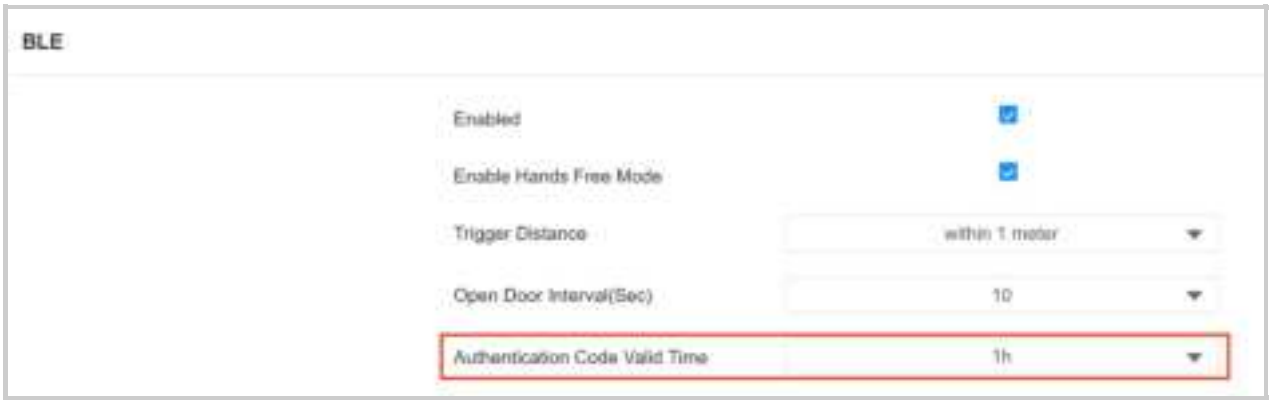
Unlock via My MobileKey

On the **Directory > User > +Add** interface, scroll to the **BLE Setting** section.

- **Authentication Code**: Click **Generate** to generate a 6-digit verification code.

You can set up the pairing valid time within which users need to finish the pairing.

To set it up, go to **Access Control > BLE > BLE** interface.



- **Authentication Code Valid Time**: Set the time from 15 minutes to 24 hours.

Note

- Only A08S supports this feature.
- Click here to see detailed configuration steps.

Unlock via SmartPlus App

To open the door via SmartPlus App, the device should be connected to the SmartPlus Cloud.

To set up Bluetooth unlock, go to **Access Control > BLE > BLE** interface.

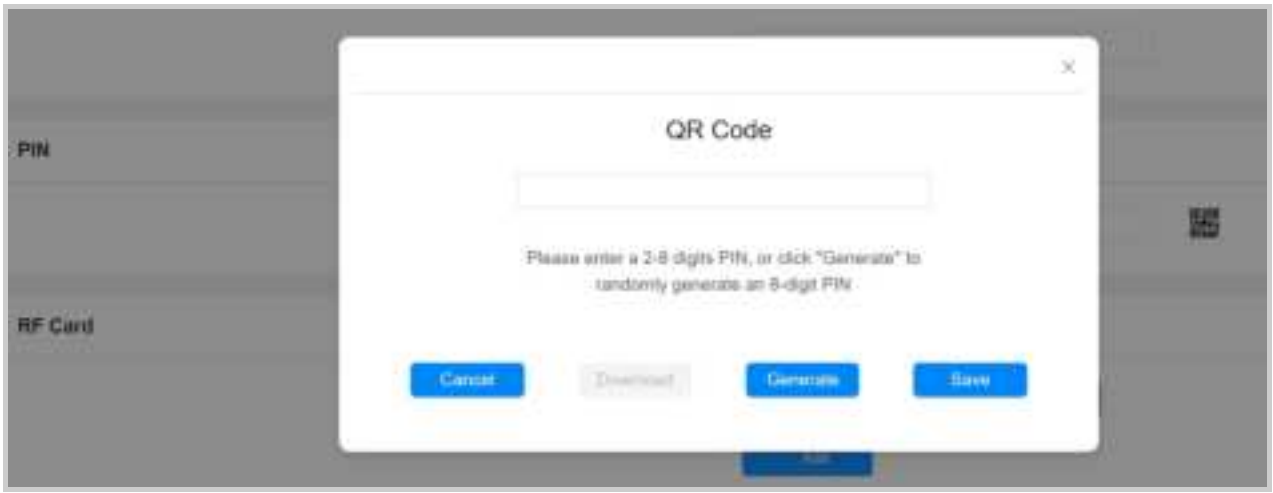
- **Enable Hands Free Mode**: If enabled, users can gain door access hands-free. If disabled, users have to wave their hands near the device to open doors.
- **Trigger Distance**: Set the triggering distance of the Bluetooth for the door access. You select Within 1 Meter, Between 1 to 2 Meters, and More Than 2 Meters. The trigger distance is 3 meters maximum.
- **Open Door Interval**: Set the time interval between consecutive Bluetooth door access attempts.

> **Note**
>
> Click here to see detailed configuration steps.

Unlock by QR Code

On the **Directory > User > +Add** interface, scroll to the **PIN** section. Click the QR code icon .

Click **Generate** to generate the QR code with an 8-digit PIN.



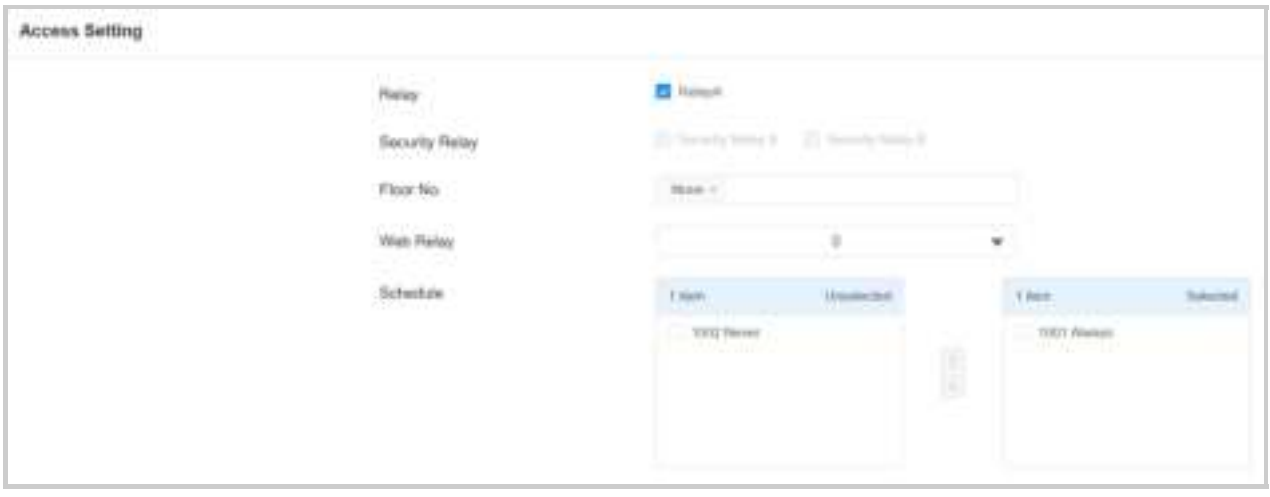
- **Cancel**: Click to return to the user editing interface. The QR code and the PIN code will not be saved.
- **Download**: Click to save the QR code to your PC.
- **Generate**: Click to generate another QR code and PIN code.
- **Save**: Click to return to the user editing interface and save the codes.

> **Note**
>
> Only A08S supports this feature.

Access Setting

You can customize access settings such as defining the door access schedule to determine when the code is valid and specifying which relay to open.

On the **Directory > User > +Add** interface, scroll to the **Access Setting** section.



- **Relay**: Specify the relay(s) to be unlocked using the door opening methods assigned to the user.

- **Security Relay**: Select the security relay that you've configured on the Security Relay interface.
- **Floor No.** : Specify the accessible floor(s) to the user via the elevator.
- **Web Relay**: Specify the ID of web relay action commands that you've configured on the Web Relay interface. A default value of 0 indicates that the web relay will not be triggered.
- **Schedule**: Grant the user access to open designated doors during preset periods by relocating the desired schedule(s) from the left box to the right one. Besides custom schedules, there are 2 default options:
  - **Always**: Allows door opening without limitations on door open counts during the valid period.
  - **Never**: Prohibits door opening.

Unlock by NFC

NFC (Near Field Communication) is a popular way for door access. It uses radio waves for data transmission interaction. The device can be unlocked by NFC. You can keep the mobile phone closer to the door phone for door access.

To set it up, go to **Access Control > Card Setting > Contactless Smart Card** interface.

- **Enabled**: Select from Disabled, NFC, Felica, and NFC & Felica.

> **Note**
>
> The NFC feature is not available on iPhones.

Unlock by HTTP Command

You can unlock the door remotely without approaching the device physically for door entry by typing in the created HTTP command (URL) on the web browser to trigger the relay when you are not available by the door for door entry.

To set it up, go to **Access Control > Relay > Open Relay Via HTTP** interface.

- **Username**: Set a username for authentication in HTTP command URLs.
- **Password**: Set a password for authentication in HTTP command URLs.

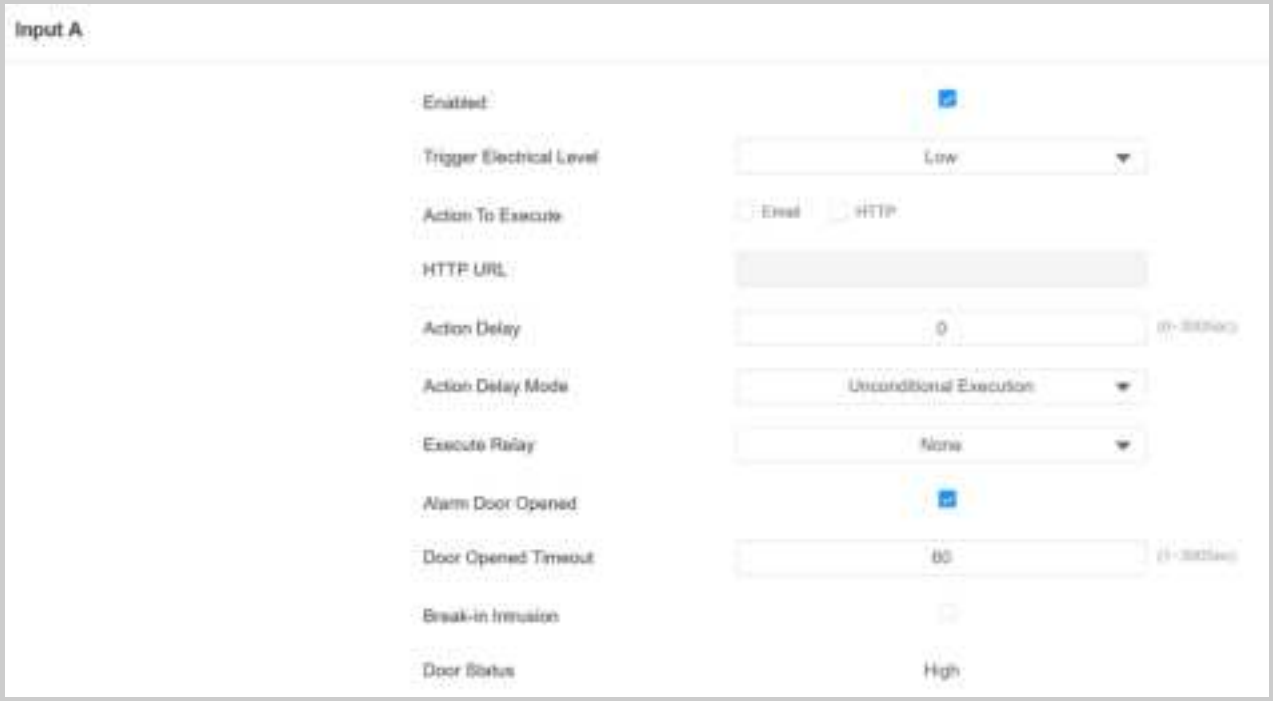
Tip:

Here is an HTTP command URL example for relay triggering.

Unlock by Exit Button

When you need to open the door from inside using the exit button installed by the door, you can configure the access control terminal Input to trigger the relay for the door access.When users need to open the door from inside by pressing the Exit button, you need to set up the Input terminal that matches the Exit button to activate the relay for the door access.

To set it up, go to **Access Control > Input** interface.



- **Enabled**: To use a specific input interface.
- **Trigger Electrical Level**: Set the input interface to trigger at low or high electrical level.
- **Action To Execute**: Set the desired actions that occur when the specific Input interface is triggered.
    - **Email**: Send a screenshot to the preconfigured Email address.
    - **HTTP**: When triggered, the HTTP message can be captured and displayed in the corresponding packets. To utilize this feature, enable the HTTP server and enter the message content in the designated box below.
- **HTTP URL**: Enter the HTTP message if selecting HTTP as the action to execute. The format is http://HTTP server's IP/Message content.

- **Action Delay**: Specify how many seconds to delay executing the preconfigured actions.
- **Action Delay Mode**:
    - **Unconditional Execution**: The action will be carried out when the input is triggered.
    - **Execute If Input Still Triggered**: The action will be carried out when the input stays triggered. For example, if the door stays open after triggering input, an action such as an email will be sent to notify the receiver.
- **Execute Relay**: Specify the relay to be triggered by the actions.
- **Alarm Door Opened**: Decide whether to enable Door Opened Timeout.
- **Door Opened Timeout**: Set the time limit for the door to stay open.
- **Break-in Intrusion**: Activate an alarm when the door is forcibly or illegally opened. Only by checking off this option can the alarm be turned off once triggered.
- **Door Status**: Display the status of the input signal.

Access Authentication Mode

The device allows dual authentication for door access, using the combination of PIN code and RF card. When the mode is set up, users must unlock the door in the order of the chosen methods.

To set it up, go to **Access Control > Relay > Access Authentication Mode** interface.

- **Authentication Mode**: Determine how to unlock the door using different methods. Please note that the order of the two-factor authentication matters.
    - **Any Method**: Allow all access methods.
    - **PIN + RF Card**: Enter the PIN code first, then swipe the RF card.
    - **RF Card + PIN**: Swipe the RF card first, then enter the PIN code.

Security

Tamper Alarm

The tamper alarm function prevents anyone from removing the devices without permission. It does this by setting off the tamper alarm and making calls to a designated location, when the door phone detects a change in its gravity value from the original one.

To set it up, go to **System > Security > Tamper Alarm** interface.

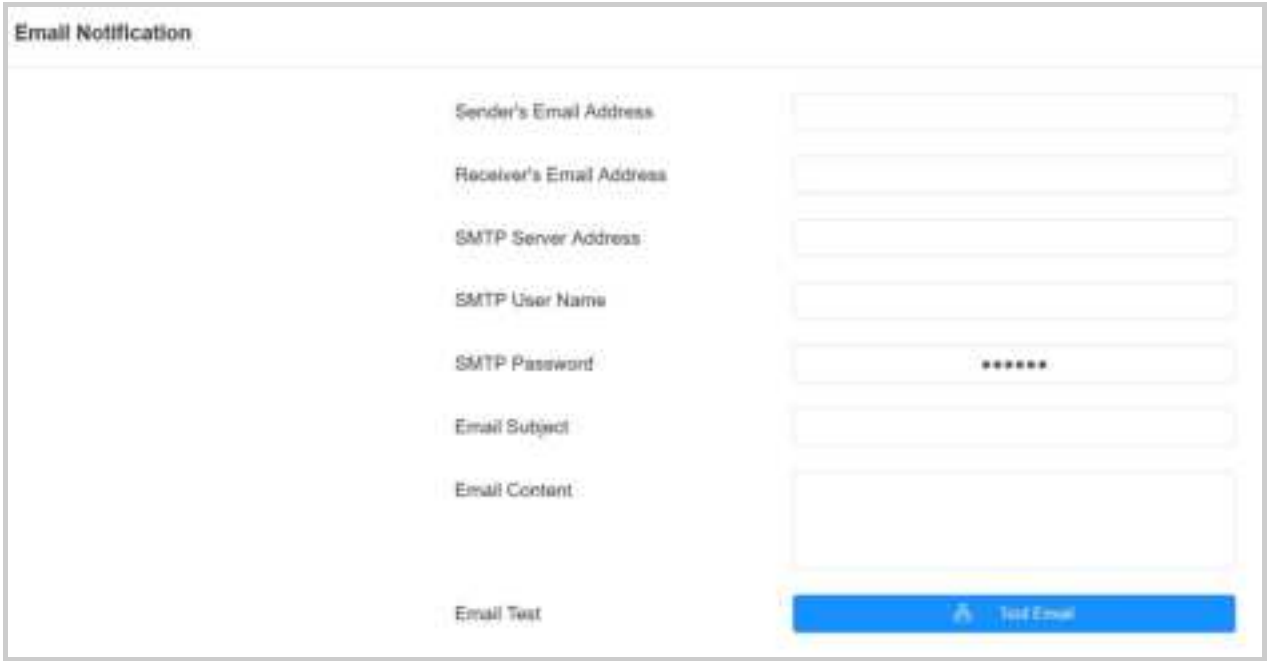
- **Gravity Sensor Threshold**: The threshold for gravity sensory sensitivity. The lower the value is, the more sensitive the sensor will be. It is 32 by default.

Security Notification

Email Notification

Set up email notifications to receive screenshots of unusual motion from the device.

Go to **Setting > Action > Email Notification** interface.



- **SMTP Server Address**: The SMTP server address of the sender.
- **SMTP User Name**: The SMTP username is usually the same as the sender's email address.

- **SMTP Password**: The password of the SMTP service is the same as the sender's email address.
- **Email Test**: Used to test whether the email can be sent and received.

Action URL

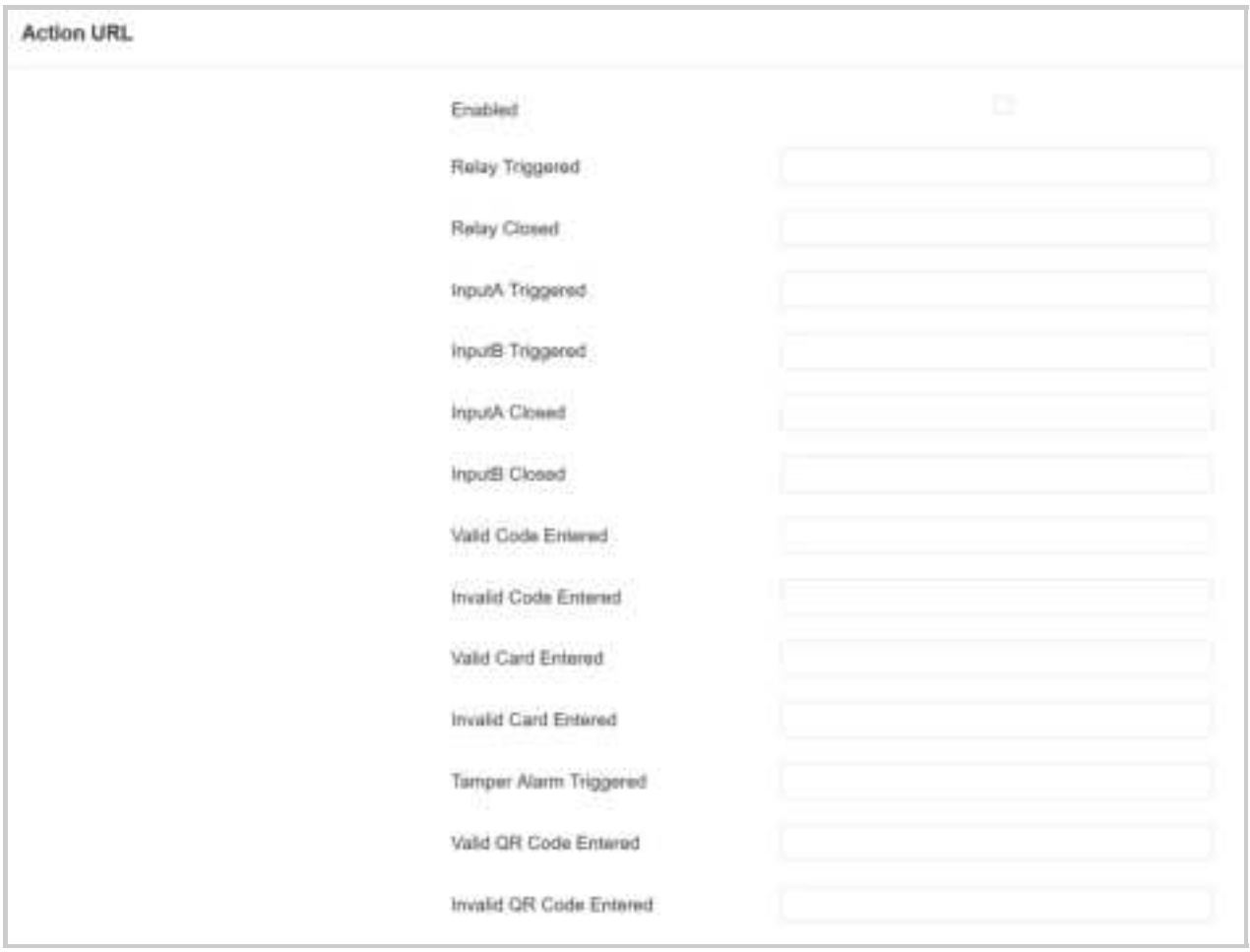
You can use the device to send specific HTTP URL commands to the HTTP server for certain actions. These actions will be triggered when the relay status, input status, PIN code, or RF card access changes.

Akuvox Action URL:

No	Event	Parameter format	Example
1	Make Call	$remote	Http://server ip/ Callnumber=$remote
2	Hang Up	$remote	Http://server ip/ Callnumber=$remote
3	Relay Triggered	$relay1status	Http://server ip/ relaytrigger=$relay1status
4	Relay Closed	$relay1status	Http://server ip/ relayclose=$relay1status
5	Input Triggered	$input1status	Http://server ip/ inputtrigger=$input1status
6	Input Closed	$input1status	Http://server ip/ inputclose=$input1status
7	Valid Code Entered	$code	Http://server ip/ validcode=$code
8	Invalid Code Entered	$code	Http://server ip/ invalidcode=$code
9	Valid Card Entered	$card_sn	Http://server ip/ validcard=$card_sn
10	Invalid Card Entered	$card_sn	Http://server ip/ invalidcard=$card_sn
11	Tamper Alarm Triggered	$alarm status	Http://server ip/tampertrigger=$alarm status

For example: http://192.168.16.118/help.xml?
mac=$mac:ip=$ip:model=$model:firmware=$firmware:card_sn=$card_sn

To set it up, go to **Setting > Action URL** interface.



Real-Time Monitoring

When the device is connected to SmartPlus Cloud or ACMS, the door status can be displayed on the SmartPlus platform or ACMS.

To set it up, go to **System > Security > Real-Time Monitoring** interface.

- **Apply Setting To**:
  - **None**: Not display door status.
  - **Input**: the door is opened by triggering input.
  - **Relay**: the door is opened by triggering the relay.

> **Note**
>
> Click here to see the detailed configuration steps.

Emergency Action

This feature works with Akuvox SmartPlus Cloud. It keeps the door open when an emergency happens.

To set it up, go to **System > Security > Emergency Action** interface.

Web Interface Automatic Log-out

You can set up the web interface's automatic log-out timing, requiring re-login by entering the user name and the passwords for security purposes or for the convenience of operation.

To set it up, go to **System > Security > Session Time Out** interface.

Logs

Access Log

You can search and check door logs on the device web **Status > Access Log** interface.

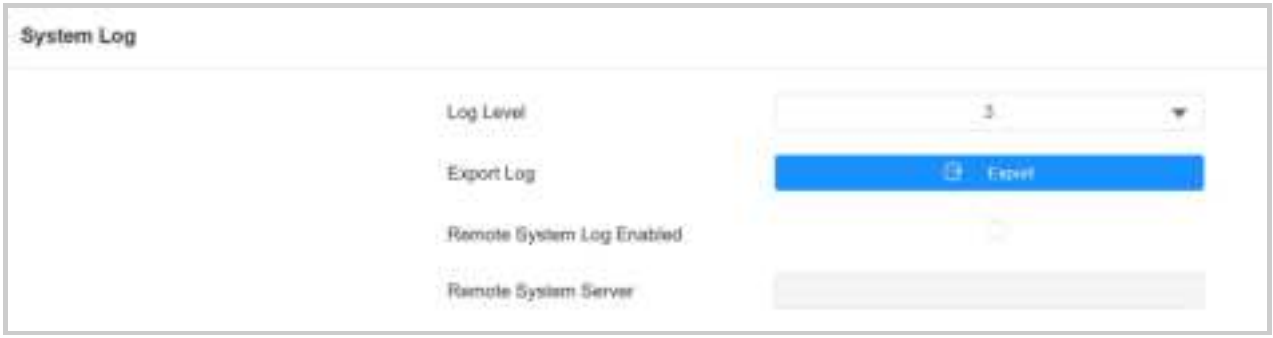
- **Save Access Log**: Decide whether to save the door-opening records.
- **Status**: **Success** and **Failed** options represent successful door accesses and failed door accesses respectively.
- **Time**: Select the specific period of the door logs you want to search, check, or export.
- **Name/Code**: Search the log by the username or the PIN code.
- **Door ID**: Display the door name.
- **Type**: Display the access type such as QR code.

Debug

System Log for Debugging

System logs can be used for debugging purposes.

To set it up, go to **System > Maintenance > System Log** interface.



- **Log Level**: Log levels range from 1 to 7. You will be instructed by Akuvox technical staff about the specific log level to be entered for debugging purposes. The default log level is 3. The higher the level is, the more complete the log is.
- **Export Log**: Click the **Export** tab to export the temporary debug log file to a local PC.
- **Remote System Server**: Set the remote server address to receive the device log. The remote server address will be provided by Akuvox technical support.

Remote Debug Server

When the device is having a problem, you can use the remote debug server to access the device log remotely for debugging purposes.

To set it up, go to **System > Maintenance> Remote Debug Server** interface.

- **Connect Status**: Display the remote debug server connection status.
- **IP Address**: Set the remote debug server IP address. Please ask the Akuvox technical team for the server IP address.
- **Port**: Set the remote debug server port.

PCAP for Debugging

PCAP is used to capture the data package going in and out of the devices for debugging and troubleshooting purposes.

To set it up, go to **System > Maintenance > PCAP** interface.

- **Specific Port**: Select the specific ports from 1-65535 so that only the data packet from the specific port can be captured. You can leave the field blank by default.
- **PCAP**: Click the **Start** tab and **Stop** tab to capture a certain range of data packets before clicking the **Export** tab to export the data packets to your Local PC.
- **PCAP Auto Refresh Enabled**: When enabled, the PCAP will continue to capture data packets even after the data packets reach their 50M maximum in capacity. When disabled, the PCAP will stop data packet capturing when the data packets captured reach the maximum capturing capacity of 1MB.

Ping

The device allows you to verify the accessibility of the target server.

To set it up, go to **System > Maintenance > Ping** interface.

- **Cloud Server**: Select the server to be verified.
- **Verify the network address accessibility**: Select the service type.

Firmware Upgrade

Akuvox devices can be upgraded on the device web interface.

To upgrade the device, go to **System > Upgrade** interface.

Note

Firmware files should be in **.rom** format for upgrade.

Auto-provisioning via Configuration File

Provisioning Principle

Auto-provisioning is a feature used to configure or upgrade devices in batch via third-party servers. **DHCP, PNP, TFTP, FTP, and HTTPS** are the protocols used by the Akuvox intercom devices to access the URL of the address of the third-party server which stores configuration files and firmware, which will then be used to update the firmware and the corresponding parameters on the device.

Please see the flow chart below:

Introduction to the Configuration Files for Auto-Provisioning

Configuration files have two formats for auto-provisioning. One is the general configuration files used for the general provisioning and another one is the MAC-based configuration provisioning.

The difference between the two types of configuration files is shown below:

- **General configuration provisioning**: a general file is stored in a server from which all the related devices will be able to download the same configuration file to update parameters on the devices. For example, cfg.
- **MAC-based configuration provisioning**: MAC-based configuration files are used for auto-provisioning on

a specific device as distinguished by its unique MAC number. And the configuration files named with the device MAC number will be matched automatically with the device MAC number before being downloaded for provisioning on the specific device.

Note

- If a server has these two types of configuration files, then IP devices will first access the general configuration files before accessing the MAC-based configuration files.

Note

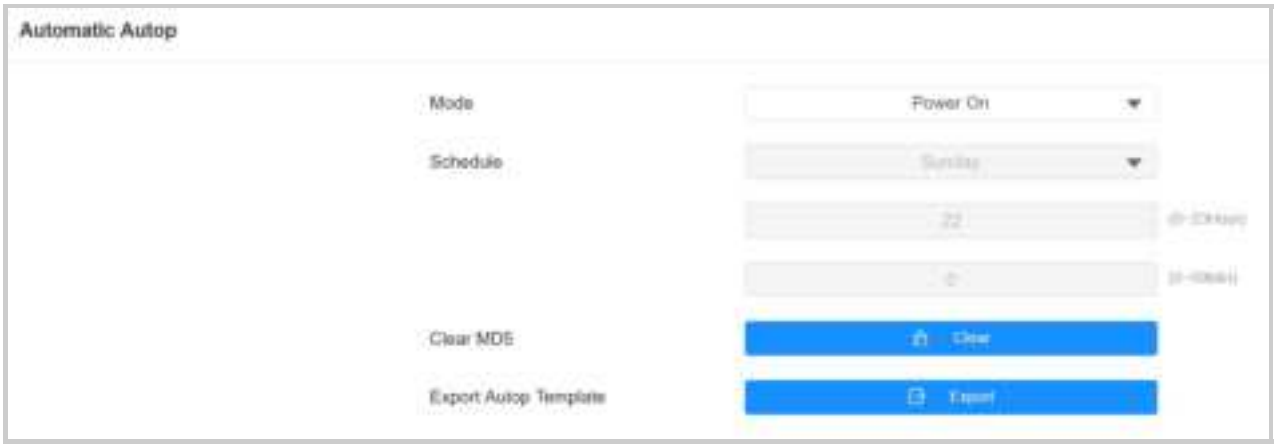
- The configuration file should be in CFG format.
- The general configuration file for the in-batch provisioning varies by model.
- The MAC-based configuration file for the specific device provisioning is named by its MAC address.

You may click here to see detailed format and steps.

Autop Schedule

Akuvox provides you with different Autop methods that enable the device to perform provisioning for itself according to the schedule.

To set it up, go to **System > Auto Provisioning > Automatic Autop** interface.

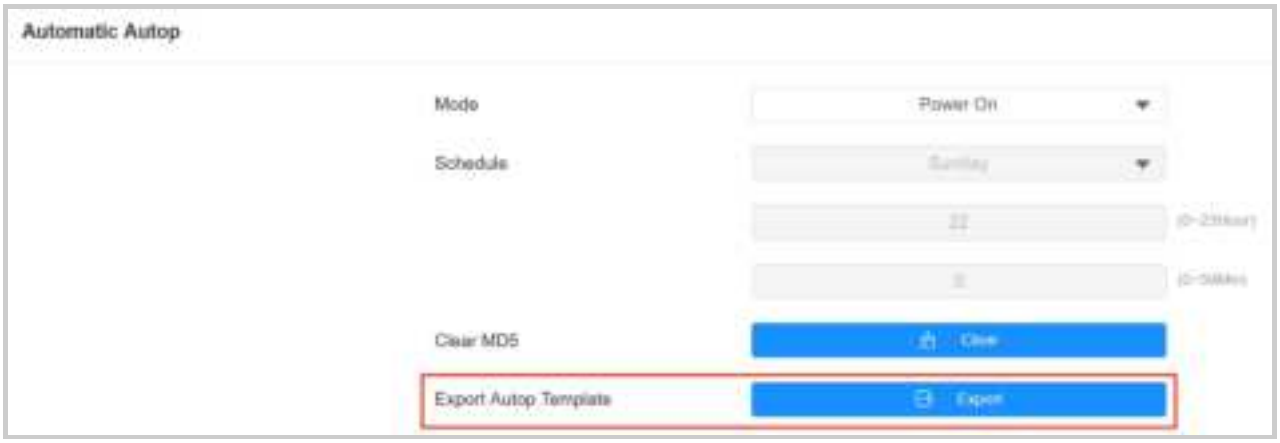


- **Mode**:
  - **Power On**: The device will perform Autop every time it boots up.
  - **Repeatedly**: The device will perform Autop according to the schedule you set up.
  - **Power On + Repeatedly**: Combine **Power On** mode and **Repeatedly** mode that will enable the device to perform Autop every time it boots up or according to the schedule you set up.
  - **Hourly Repeat**: The device will perform Autop every hour.

Static Provisioning

You can manually set up a specific server URL for downloading the firmware or configuration file. If an auto-provision schedule is set up, the device will perform the auto-provisioning at a specific time according to the auto provision schedule you set up. In addition, TFTP, FTP, HTTP, and HTTPS are the protocols that can be used for upgrading the device firmware and configuration.

To set it up, download the template on **System > Auto Provisioning > Automatic Autop** first.



Set up the Autop server on **System > Auto Provisioning > Manual Autop** interface.

- **URL**: Specify the TFTP, HTTP, HTTPS, or FTP server address for the provisioning.
- **Username**: Enter the username if the server needs a username to be accessed.
- **Password**: Enter the password if the server needs a password to be accessed.
- **Common AES Key**: It is used for the intercom to decipher general Autop configuration files.
- **AES Key (MAC)**: It is used for the intercom to decipher the MAC-based Autop configuration file.

Note

- AES as one type of encryption should be configured only when the config file is encrypted with AES.
- Server Address Format:
  - TFTP: tftp://192.168.0.19/
  - FTP: ftp://192.168.0.19/(allows anonymous login)
    ftp://username:password@192.168.0.19/(requires a user name and password)
  - HTTP: http://192.168.0.19/(use the default port 80)
    http://192.168.0.19:8080/(use other ports, such as 8080)
  - HTTPS: https://192.168.0.19/(use the default port 443)

Tip

Akuvox does not provide user specified server. Please prepare TFTP/FTP/HTTP/HTTPS server by yourself.

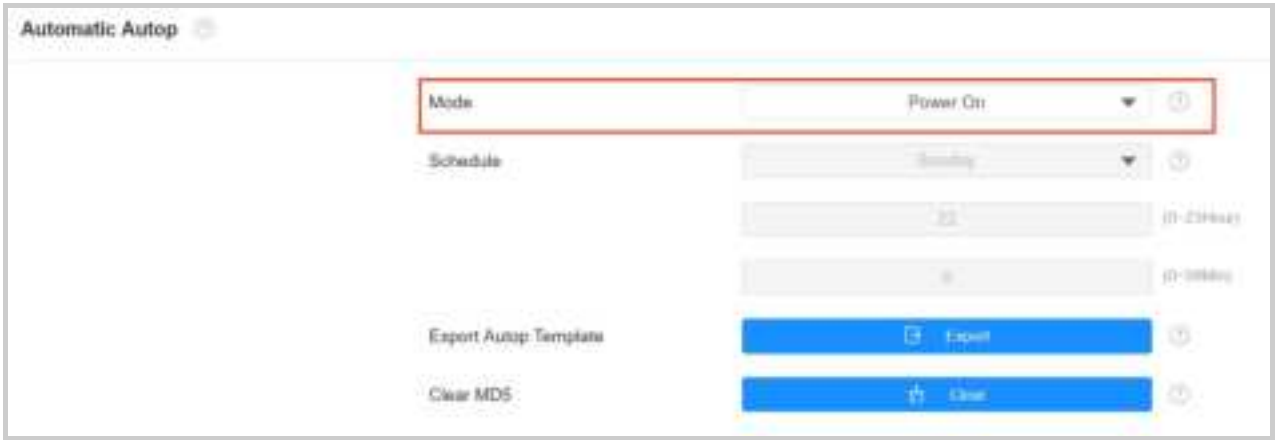
DHCP Provisioning

Auto-provisioning URL can also be obtained using the DHCP option which allows the device to send a request to a DHCP server for a specific DHCP option code. If you want to use **Custom Option** as defined by users with option codes ranging from 128-255), you are required to configure DHCP Custom Option on the web interface.

Note

- The Custom Option type must be a string. The value is the URL of TFTP server.

To set up DHCP Autop with **Power On** mode, go to the web **Upgrade > Advanced > Automatic Autop** interface.



To set up the DHCP Option, scroll to the **DHCP Option** section.

- **Custom Option**: Enter the DHCP code that matches with corresponding URL so that the device will find the configuration file server for the configuration or upgrading.
- **DHCP Option 43**: If the device does not get a URL from DHCP Option 66, it will automatically use DHCP Option 43. This is done within the software and the user does not need to specify this. To make it work, you need to configure the DHCP server for option 43 with the upgrade server URL in it.
- **DHCP Option 66**: If none of the above is set, the device will automatically use DHCP Option 66 to get the upgrade server URL. This is done within the software and the user does not need to specify this. To make it work, you need to configure the DHCP server for option 66 with the upgrade server URL in it.

Integration with Third Party Device

Integration via Wiegand

A02 access control terminal can be integrated with the third-party devices via Wiegand.

To set it up, go to **Device > Wiegand** interface.

- **Wiegand Display Mode**: Select the Wiegand card code format from the provided options.
- **Wiegand Card Reader Mode**: The transmission format should be identical between the access control terminal and the third-party device. It is automatically configured.
- **Wiegand Transfer Mode**:
    - **Input**: A08 serves as a receiver.
    - **Output**: A08 serves as a sender.
- **Wiegand Input Clear Time**: When the interval of entering passwords exceeds the time. All entered passwords will be cleared.
- **Wiegand Input Data Order**: Set the Wiegand input data sequence between Normal and Reversed. If you select Reversed, then the input card number will be reversed.
- **Wiegand Output Basic Data Order**: Set the sequence of the Wiegand output data.
    - **Normal**: The data is displayed as received.
    - **Reversed**: The order of the data bits is reversed.
- **Wiegand Output Data Order:** Determine the sequence of the card number.

- **Normal**: The card number is displayed as received.
- **Reversed**: The order of the card number is reversed.

- **Wiegand Output CRC**: It is enabled by default for Wiegand data inspection. Disabling it may lead to integration failure with third-party devices.

> **Note**
>
> Click here to see detailed configuration steps.

Integration via HTTP API

HTTP API is designed to achieve a network-based integration between the third-party device with the Akuvox intercom device.

To set it up, go to **Setting > HTTP API** interface.

- **Enabled**: Enable or disable the HPTT API function for third-party integration. If the function is disabled, any request to initiate the integration will be denied and return HTTP 403 forbidden status.
- **Authorization Mode**: Select among the following options: None, Normal, Allowlist, Basic, Digest, and Token for authorization type, which will be explained in detail in the following chart.
- **Username**: Enter the user name when **Basic** or **Digest** authorization mode is selected. The default username is admin.
- **Password**: Enter the password when **Basic** or **Digest** authorization mode is selected. The default password is admin.
- **1st IP-5th IP**: Enter the IP address of the third-party devices when the **Allowlist** authorization is selected for the integration.

Please refer to the following description for the Authentication mode:

NO.	Authorization Mode	Description
1	None	No authentication is required for HTTP API as it is only used for demo testing.
2	Normal	This mode is used by Akuvox developers only.
3	Allowlist	If this mode is selected, you are only required to fill in the IP address of the third-party device for the authentication. The allowlist is suitable for operation in the LAN.
4	Basic	If this mode is selected, you are required to fill in the username and password for the authentication. In the Authorization field of the HTTP request header, use the Base64 encode method to encode of username and password.
5	Digest	The password encryption method only supports MD5. MD5(Message-Digest Algorithm) In the Authorization field of HTTP request header: WWW-Authenticate: Digest realm="HTTPAPI",qop="auth,auth-int",nonce="xx", opaque="xx".
6	Token	This mode is used by Akuvox developers only.

Power Output Control

The door phone can serve as a power supply for the external relays.

To set it up, go to **Access Control > Relay** interface.

- **Power Output**:
  - **Always**: The device can provide continuous power to the third-party device.
  - **Triggered By Open Relay**: The device can provide power to the third-party device via 12 output and GND interface during the timeout when the status of relays is shifted from low to high.
  - **Security Relay A**: The device can work with the security relay.

Password Modification

You can modify the device web password for both the administrator account and the user account.

To set it up, go to **System > Security > Web Password Modify** interface.

Click **Change Password** to modify the password.

To enable or disable the user account, scroll to the **Account Status** section.

System Reboot and Reset

Reboot

Reboot the device on the web **System > Upgrade** interface.

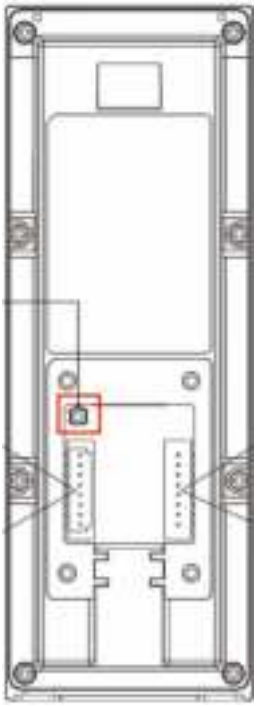
To set up the device restart schedule, go to **System > Auto Provisioning > Reboot Schedule** interface.

Reset

You can select **Reset To Factory Setting** if you want to reset the device (deleting both configuration data and user data such as RF cards, face data, and so on). Or, select **Reset Configuration to Default State (Except Data) Reset**, if you want to reset the device (retaining the user data).

Reset the device on **System > Upgrade** interface.

You can also reset the device by long pressing the **Reset** button on the back of the device.



FCC Caution:

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

FCC Radiation Exposure Statement:

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

This transmitter must not be co - located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with minimum distance 20cm between the radiator&you body.