# Video Access Control Terminal

Quick Start Guide

V1.1.0

**Quick Start Guide**

## About this Manual

**Trademarks**

## Disclaimer

## Support

Should you have any questions, please do not hesitate to contact your local dealer.

# Regulatory Information

## FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**FCC compliance:** 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.

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

## FCC Conditions

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.

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

## EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the RE Directive 2014/53/EU, the EMC Directive 2014/30/EU, the RoHS Directive 2011/65/EU.

2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

## Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into **Warnings** and **Cautions**:

**Warnings**: Neglecting any of the warnings may cause serious injury or death.

**Cautions**: Neglecting any of the cautions may cause injury or equipment damage.

| ⚡ Warnings | ⚠ Cautions |
|---|---|
| Follow these safeguards to prevent serious injury or death. | Follow these precautions to prevent potential injury or material damage. |

⚡ **Warnings**

● All the electronic operation should be strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.

● Please use the power adapter, which is provided by normal company. The power consumption cannot be less than the required value.

● Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.

● Please make sure that the power has been disconnected before you wire, install or dismantle the device.

● When the product is installed on wall or ceiling, the device shall be firmly fixed.

● If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

● If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

⚠ **Cautions**

● Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).

● Do not place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.

● The device cover for indoor use shall be kept from rain and moisture.

● Exposing the equipment to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).

● Do not aim the device at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.

● Please use the provided glove when open up the device cover, avoid direct contact with the device cover, because the acidic sweat of the fingers may erode the surface coating of the device cover.

● Please use a soft and dry cloth when clean inside and outside surfaces of the device cover, do not use alkaline detergents.

● Please keep all wrappers after unpack them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and lead to additional costs.

● Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

# Contents

# 1 Installation

***Before You Start:***
- Make sure that the device in the package is in good condition and all the assembly parts are included.
- Make sure that the wall is strong enough to withstand three times the weight of the terminal.
- Set the DIP address before installation.

***Steps:***

1. Connect the cables with the connecter on the rear panel of the device. Route the cables through the cable hole of the mounting plate. The cable holes are on the right side, left side and lower side of the rear cover. If the right/left side cable hole is selected, remove the plastic sheet of the cable hole.

2. After routing the cable, pour glues(recommended model: Devcon 24105) into the pouring area.

3. Secure the mounting plate on the wall with 4 supplied screws.
4. Connect the corresponding cables.
5. Push the terminal in the mounting plate from bottom up.

6. Tighten the screws on the bottom of the terminal to fix the terminal on the mounting plate and complete the installation.
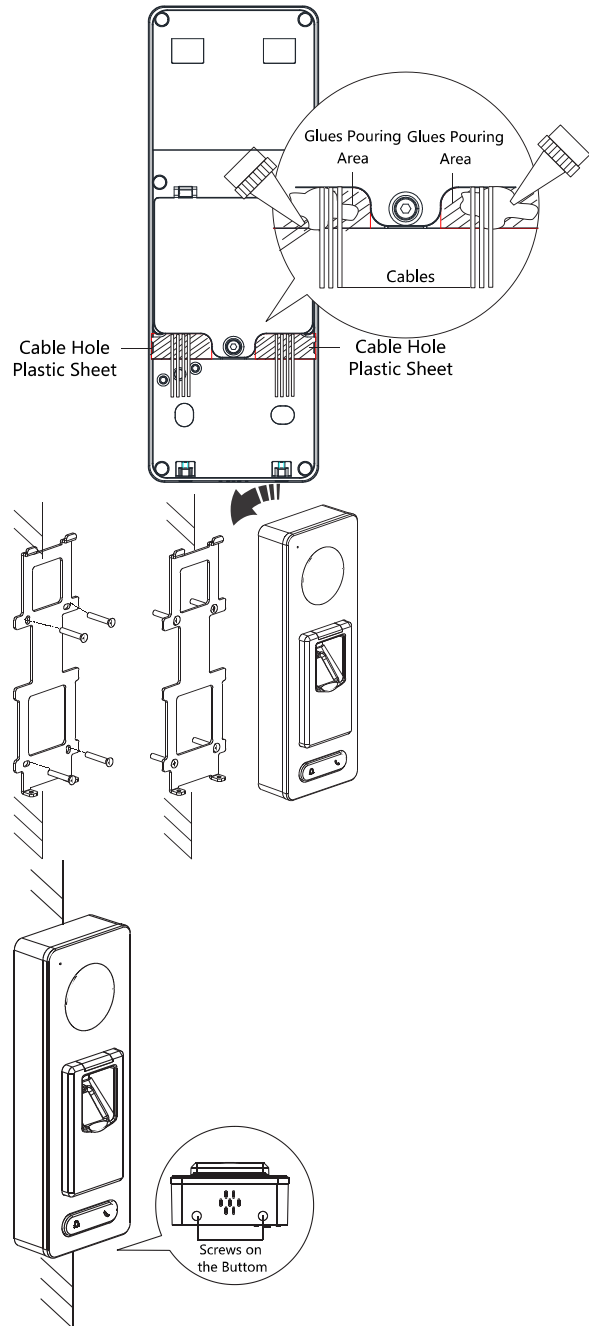
# 2 Terminal Connection

## 2.1 Terminal Description

### Group A

| | | |
|---|---|---|
| IN1 | Red | A1 |
| IN1 | Black | A2 |

### Group B

| | | |
|---|---|---|
| IN1 | Blue | B1 |
| IN2 | Orange | B2 |
| GND | Black | B3 |
| NC | Red | B4 |
| COM | White | B5 |
| NO | Purple | B6 |

### Group C

| | | |
|---|---|---|
| GND | Black | C1 |
| W0 | Green | C2 |
| W1 | White | C3 |
| GND | Black | C4 |
| LED-OK | Brown | C5 |
| LED-ERR | Orange | C6 |
| TAMPER | Gray | C7 |
| BEEP | Purple | C8 |

### Group D

| | | |
|---|---|---|
| NC | Purple | D1 |
| COM | White | D2 |
| NO | Red | D3 |
| SENSOR | Green | D4 |
| BUTTON | Gray | D5 |
| GND | Black | D6 |

### Group E

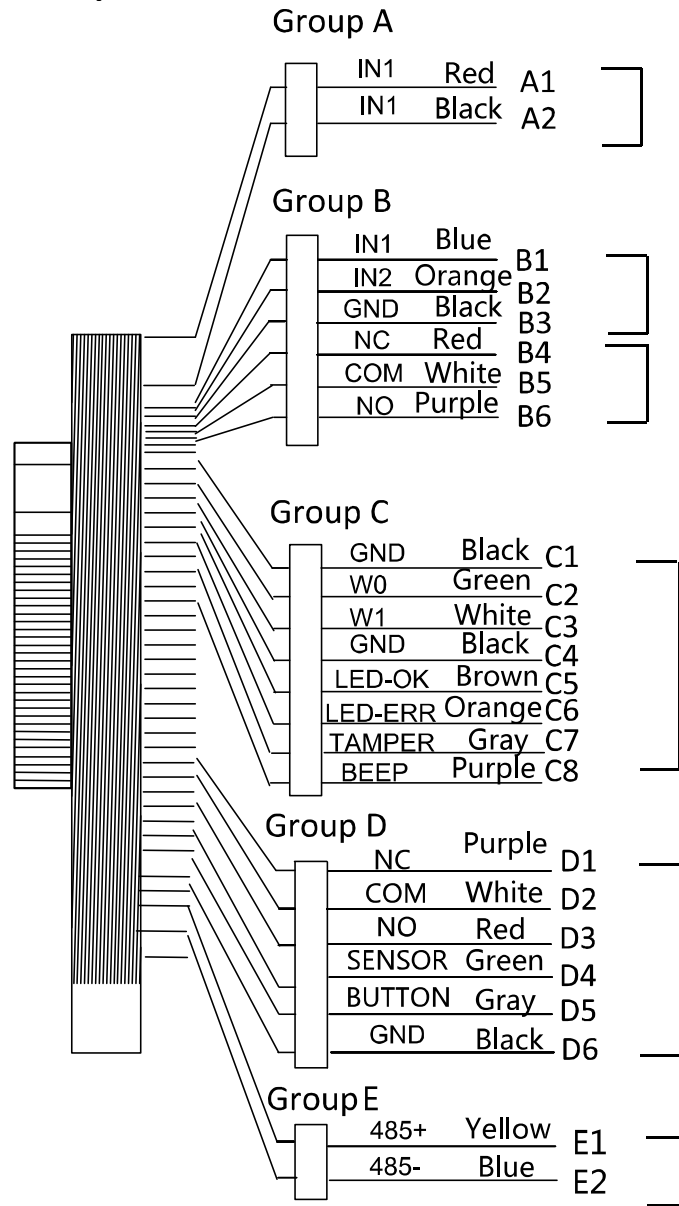| | | |
|---|---|---|
| 485+ | Yellow | E1 |
| 485- | Blue | E2 |

Figure 2-1 Terminal Diagram of Access Control Terminal

Table 2-1 Terminal Description

| Group | No. | Function | Color | Terminal Name | Description |
|-------|-----|----------|-------|---------------|-------------|
| Group A | A1 | Power Input | Red | +12V | 12V DC Power Supply |
| | A2 | | Black | GND | GND |
| Group B | B1 | Alarm Input | Yellow | IN1 | Alarm Input 1 |
| | B2 | | Orange | IN2 | Alarm Input 2 |
| | B3 | | Black | GND | GND |
| | B4 | Alarm Output | Red | NC | Alarm Output Wiring |
| | B5 | | White | COM | |
| | B6 | | Purple | NO | |
| Group C | C1 | Wiegand | Black | GND | GND |
| | C2 | | Green | W0 | Wiegand Wiring 0 |
| | C3 | | White | W1 | Wiegand Wiring 1 |
| | C4 | | Black | GND | GND |
| | C5 | | Brown | LED-OK | Wiegand Authenticated |
| | C6 | | Orange | LED-ERR | Wiegand Authentication Failed |
| | C7 | | Gray | TAMPER | Tampering Alarm Wiring |
| | C7 | | Purple | BEEP | Buzzer Wiring |
| Group D | D1 | Lock | Yellow | NC | Lock Wiring |
| | D2 | | White | COM | |
| | D3 | | Red | NO | |
| | D4 | | Green | SENSOR | Door Magnetic Signal Input |
| | D5 | | Gray | BUTTON | Exit Door Wiring |
| | D6 | | Black | GND | GND |
| Group E | E1 | RS-485 | Yellow | 485 + | RS-485 Wiring |
| | E2 | | Blue | 485 - | |

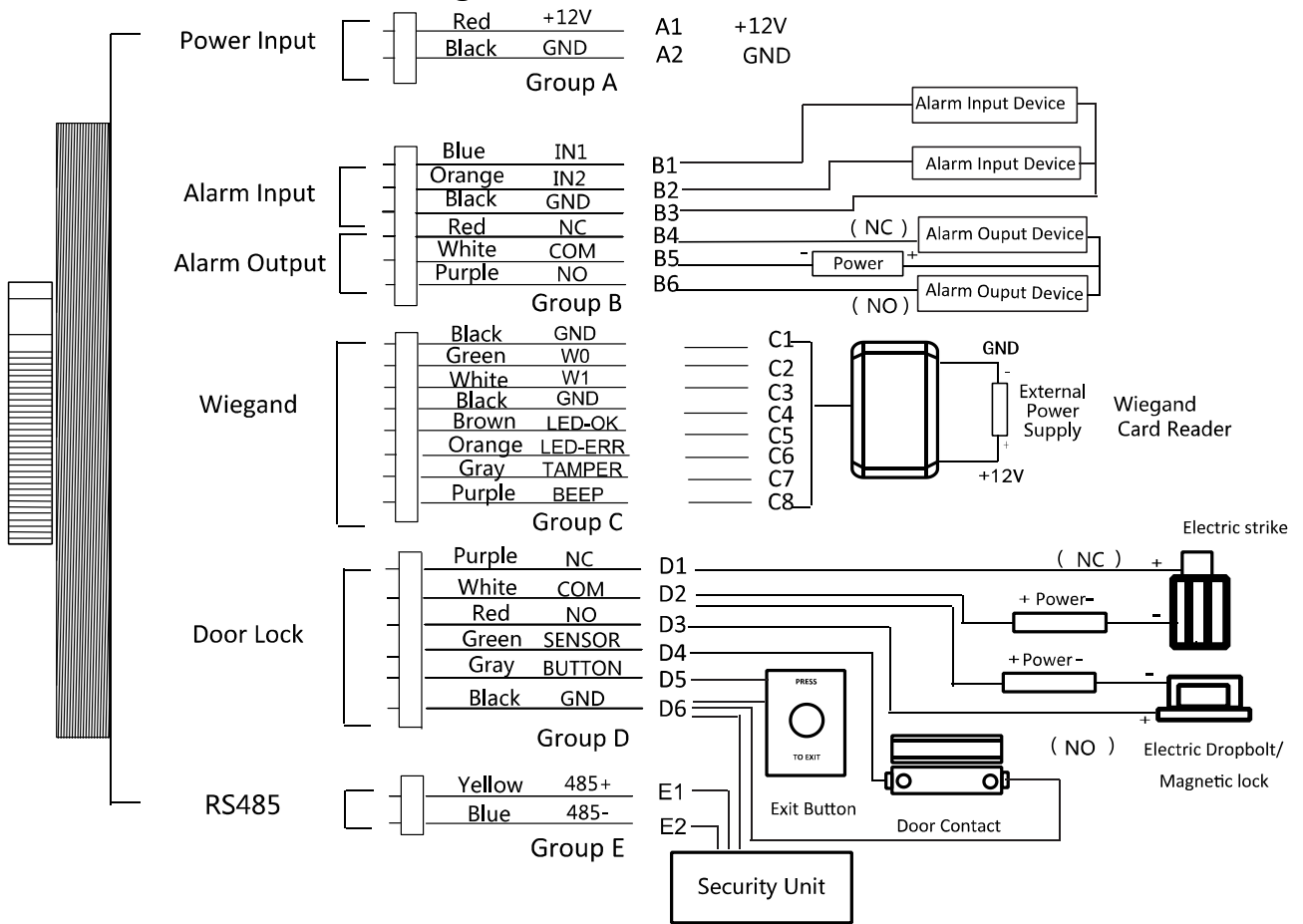# 3 Wiring Description

## 3.1 External Device Wiring Overview



Figure 3-1 External Device Connection Diagram

## 3.2 The Wiring of External Card Reader

### 3.2.1 The Wiring of External RS-485 Card Reader

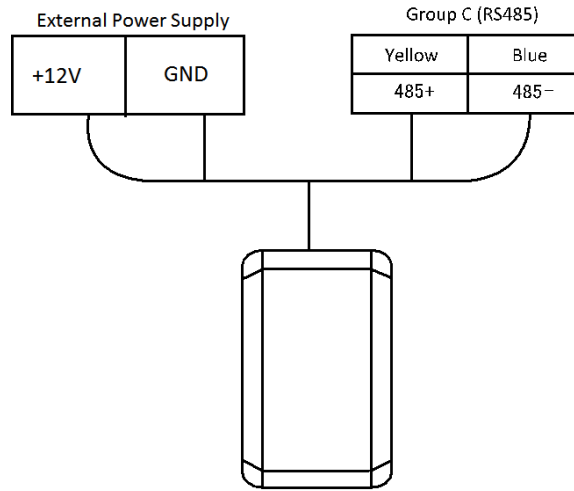| External Power Supply | | Group C (RS485) | |
|---|---|---|---|
| +12V | GND | Yellow | Blue |
| | | 485+ | 485− |

Figure 3-2 External RS-485 Card Reader Connection Diagram

## 3.3 Card Reader Connection

The access control terminal can be switched into the card reader mode. It can access to the access control as a card reader, and supports Wiegand communication port and RS-485 communication port.

**NOTE**

When the access control terminal works as a card reader, it only supports being connected to the controller, but does not support alarm input or output, or the connection of external devices.
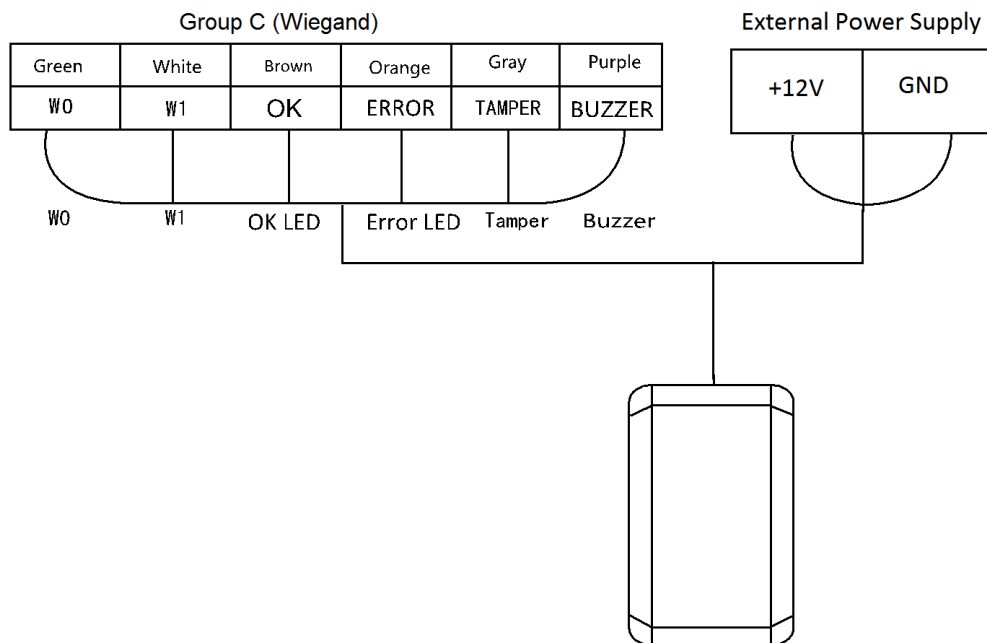
### 3.3.1 The Wiring of Wiegand

| Group C (Wiegand) | | | | | | External Power Supply | |
|---|---|---|---|---|---|---|---|
| Green | White | Brown | Orange | Gray | Purple | +12V | GND |
| W0 | W1 | OK | ERROR | TAMPER | BUZZER | | |

W0    W1    OK LED    Error LED    Tamper    Buzzer

Figure 3-3 Wiegand Connection Diagram

**NOTE**

● When the access control terminal works as a card reader, you must the **WG_ERR, BUZZER and WG_OK** interfaces if you want to control the LED and buzzer of the Wiegand card reader.

- Set the working mode of the terminal as card reader, if the terminal is required to work as a card reader. The card reader mode support to communicate by Wiegand or RS-485.
- The distance of Wiegand communication should be no longer than 80 m.
- The external power supply and the access control terminal should use the same GND cable.

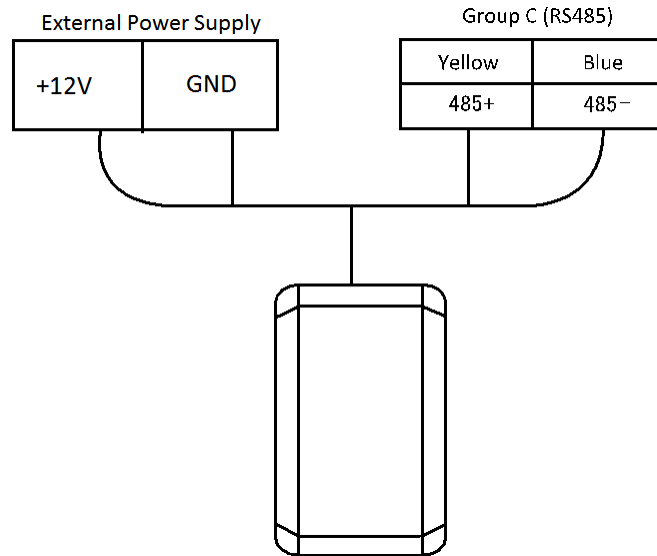**3.3.2 The Wiring of RS-485 Output**



Figure 3-4 RS-485 Connection Diagram



- Set the working mode of the terminal as card reader, if the terminal requires working as a card reader.
- When the access control terminal works as a RS-485 card reader, the default RS-485 address is 1.
- The external power supply and the access control terminal should use the same GND cable.

# 4 Activating the Access Control Terminal

*Purpose:*

You are required to activate the terminal first before using it.

Activation via SADP, and Activation via client software are supported.

The default values of the control terminal are as follows.

● The default IP address: 192.0.0.64.

● The default port No.: 8000.

● The default user name: admin.

## 4.1 Activating via SADP Software

SADP software is used for detecting the online device, activating the device, and resetting the password.

Get the SADP software from the supplied disk or the official website, and install the SADP according to the prompts. Follow the steps to activate the control panel*.*

*Steps:*

1. Run the SADP software to search the online devices.
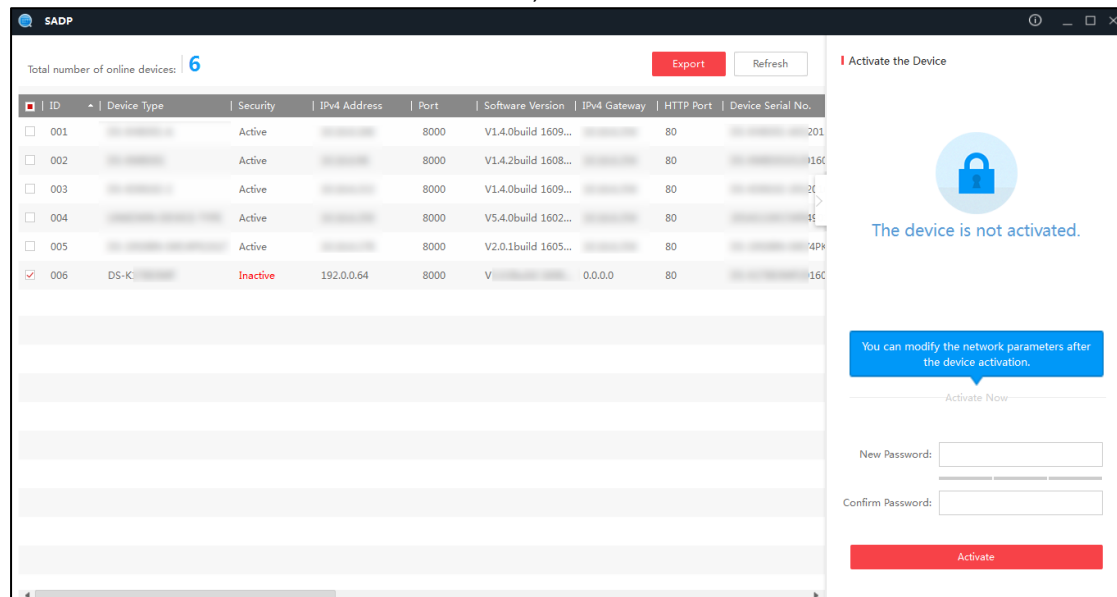2. Check the device status from the device list, and select an inactive device.



Figure 4-1 SADP Interface

3. Create a password and input the password in the password field, and confirm the password.

⚠ **STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*

4. Click **Active** to active the device.
5. You can change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking the Enable DHCP checkbox.

Figure 4-2 Modify Network Parameters Interface

6. Input the password and click the **Modify** button to save your IP address modification.

## 4.2 Activating via Client Software

The client software is versatile video management software for multiple kinds of devices.

Get the client software from the supplied disk or the official website, and install the software according to the prompts. Follow the steps to activate the control panel.

*Steps:*

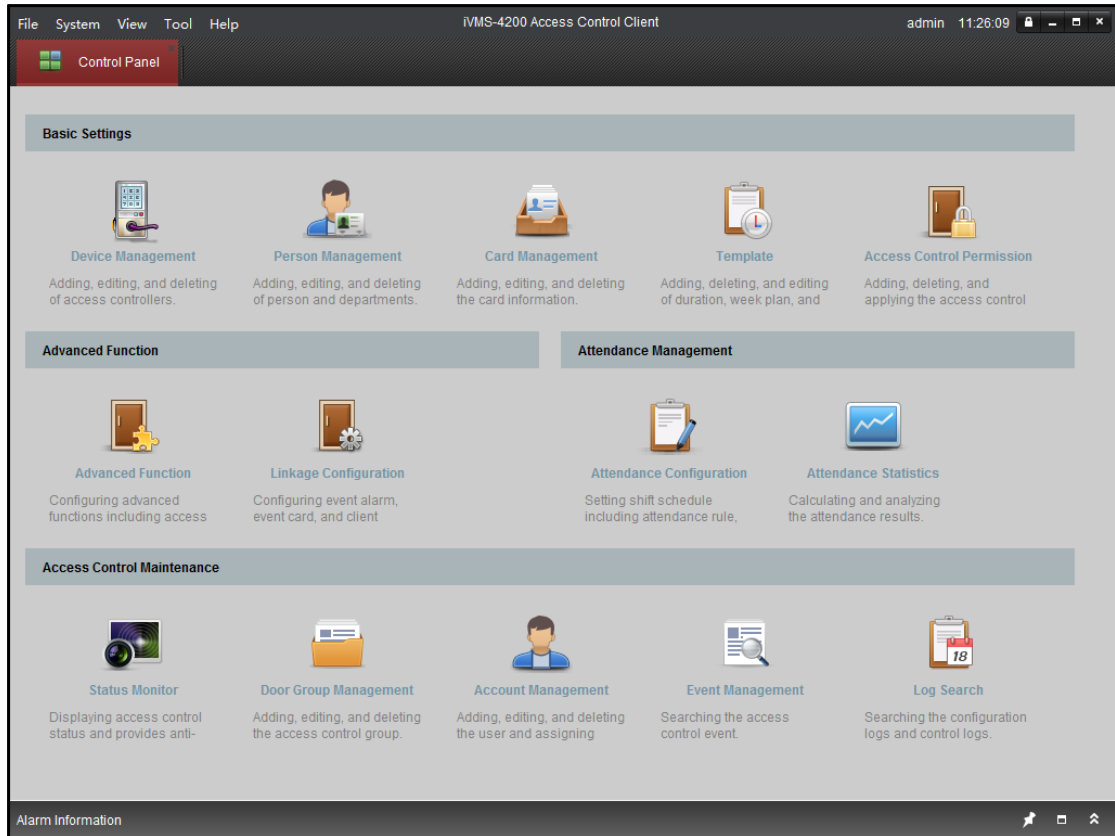1. Run the client software and the control panel of the software pops up, as shown in the figure below.

Figure 4-3 Control Panel Interface

2.  Click  icon on the control panel to enter the access control device management interface.



Figure 4-4 Online Device List

3.  Select an inactive device in the Online Device list.
4.  Click the **Activate** button to pop up the Activation interface.
5.  Create a password and input the password in the password field, and confirm the password.

**STRONG PASSWORD RECOMMENDED**– *We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.*
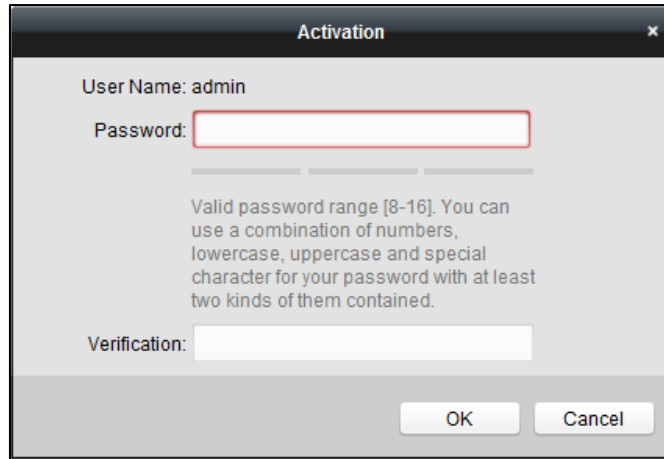
Figure 4-5 Input Password Window

6.   Click **OK** button to start activation.
7.   Click the **Modify Netinfor** button to pop up the Network Parameter Modification interface.
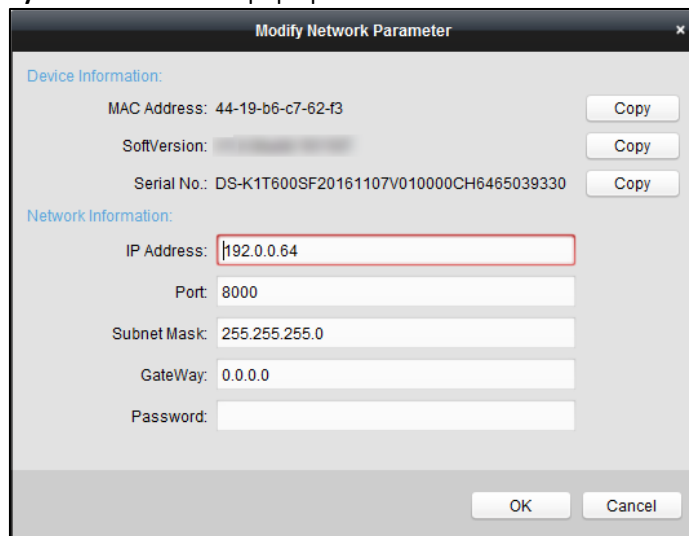

Figure 4-6 Modify Network Parameters Window

8.   Change the device IP address to the same subnet with your computer by either modifying the IP address manually.
9.   Input the password and click the **OK** button to change the device network information.
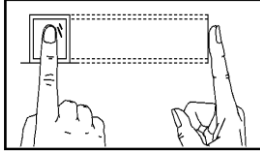
# 5 Appendix:

## 5.1 Tips for Scanning Fingerprint

**Recommended Finger**
Forefinger, middle finger or the third finger.

**Correct Scanning**
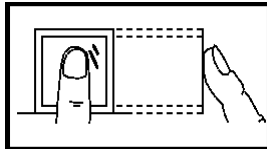The figure displayed below is the correct way to scan your finger:



You should press your finger on the scanner horizontally. The center of your scanned finger should align with the scanner center.
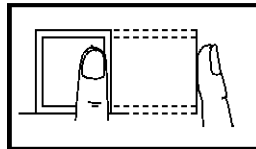
**Incorrect Scanning**
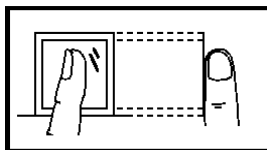The figures of scanning fingerprint displayed below are wrong:
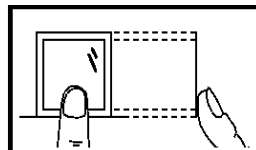
| **Vertical** | **Edge I** |
|:---:|:---:|



| **Side** | **Edge II** |
|:---:|:---:|



**Environment**
The scanner should avoid direct high light, high temperature, humid conditions and rain.

When it is dry, the scanner may not recognize your fingerprint successfully. You can blow your finger and scan again after drying the finger.

**Others**
If your fingerprint is shallow, or it is hard to scan your fingerprint, we recommend you to use other authentication methods.

If you have injuries on the scanned finger, the scanner may not recognize. You can change another finger and try again.

## 5.2 Specification

| Model | DS-K1T500SF/DS-K1T500S |
|---|---|
| Camera | 1080P, More than 2 Megapixel; Recognition Distance<= 1m; Support IR Light; Support Outdoor Operation; Support Scanning QR Code |
| Fingerprint Capacity | 3000 (DS-K1T500SF) |
| Card Capacity | 50,000 |
| Recording Capacity | 200,000 |
| Authentication Speed | 1: N Fingerprint Recognition Duration (Matching with All Fingerprints) <= 1s (DS-K1T500SF) |
| FAR | Fingerprint<= 0.001 %(DS-K1T500SF) |
| FRR | Fingerprint<= 0.01 %(DS-K1T500SF) |
| Fingerprint Scanner | Optical Fingerprint Collecting Instrument (DS-K1T500SF) |
| Card Reading Format | Mifare Card / CPU Serial No. / Other Cards. Supports Operating in Metal Environment |
| Card Reading Distance | Mifare Card > 2cm; Other Cards > 1cm |
| Button | 1 Doorbell Button; 1 Voice Talk Button |
| Communication | TCP/IP 10/100Mbps*1, RS485*1, Wiegand26/34*1, Alternative WIFI/4G/3G/GPRS |
| Input / Output Interface | 1 Door Magnetic, 1 Exit Button, 1 Door Lock, 2 Alarm Input, 1 Alarm Output (Door Bell), 1 SD Card Slot, and 1 Audio Input |
| Voice Prompt | 1 Buzzer and 1 Loud Speaker |
| Two-way Audio | Supports Communicating with Monitoring System |
| Wi-Fi Probe | Alternative |
| Storage | Built-in Micro SD Card; HIK SD Card, up to 128G; Support NVR Storage |
| Protection Level | IP65 |

| | |
|---|---|
| **Tamper-Proof** | Support |
| **Working Temperature** | -40°C to 70°C |
| **Working Humidity** | 10% to 90% (No Condensation) |
| **Appearance** | Metal |
| **Mount Option** | Wall Mounting; Metal Door Mounting |
| **Dimensions** | Cuboid |

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