# *Quick Start Guide*

ZKTeco
ZKBioSecurity 3.0

ZKTeco
InBio Pro

# *InBio Pro*
# *+*
# *ZKBioSecurity 3.0*

# CONTENT

## ZKBioSecurity Software

**Installation and Setup starts at Page 25**

# What's in the Box





2 Screws & Anchors       2 Screwdrivers       4 Diodes

# Optional Accessories



Wiegand Card Reader

Prox Card

InBio Pro Cabinet

K1-1 Exit Button

ZK4500 Enrollment reader

CR10E Card Enroller

RS485 Fingerprint Reader

# Safety Precautions

The following precautions are to keep users safe and prevent any damage. Please read carefully before installation.

**Do not** install the device in a place subject to direct sunlight, humidity, dust or soot.

**Do not** place a magnet near the product. Magnetic objects such as magnets, CRTs, TVs, monitors or speakers may damage the device.

**Do not** place the device next to heating equipment.

**Be careful** not to let liquid like water, drinks or chemicals leak inside the device.

**Do not** let children touch the device without supervision.

**Do not** drop or damage the device.

**Do not** disassemble, repair or alter the device.

**Do not** use the device for any other purpose than specified.

**Clean** the device often to remove dust on it. In cleaning, do not splash water on the device but clean it with a smooth cloth or towel.

**Contact** your supplier in case of a problem.

# Product PIN Diagram

4 Aux Inputs

RS485
Fingerprint Reader

State Indicator

#1 Door Exit Button

#1 Door Card Reader

#2 Door Exit Button

#2 Door Card Reader

#3 Door Exit Button

#3 Door Card Reader

#4 Door Exit Button

#4 Door Card Reader

SD Card Slot

LINK LED

Ethernet Port

ACT LED

DIP Switches

4 Aux Output

4 Lock & Door Sensor

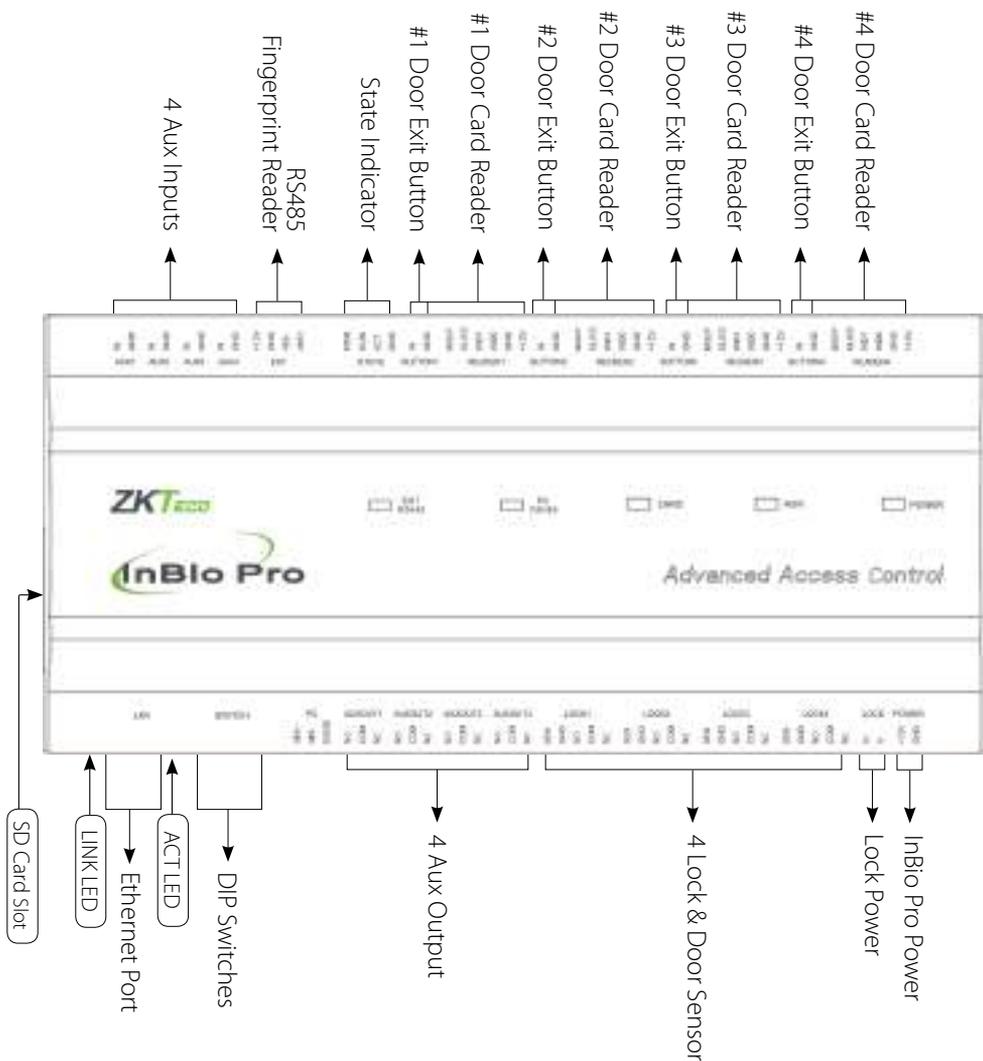Lock Power

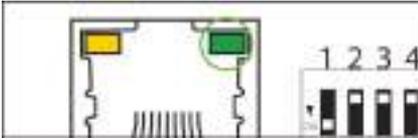InBio Pro Power

Figure 1

# LED Indicators


Figure 2

🟩 **LINK Solid Green LED** indicates TCP/IP communication is normal.
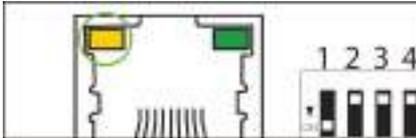

Figure 3

🟥 **Flashing (ACT) Yellow LED** indicates data communication is in progress.


Figure 4

🟥🟩 **EXT RS485 (TX/RX) Flashing Yellow & Green LED** indicates communication is in progress.


Figure 5

🟥 **Flashing (POWER) Red LED** indicates the panel is powered on.


Figure 6

🟩 **Flashing (RUN) Green LED** indicates that panel is in normal working state.
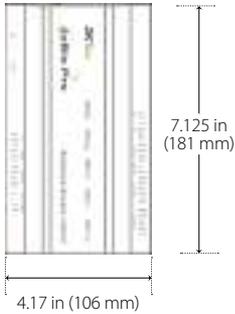

Figure 7

🟥 **Flashing (CARD) Yellow LED** indicates that the card is read by the panel.

# Product Dimension

InBio160Pro       InBio260Pro       InBio460Pro
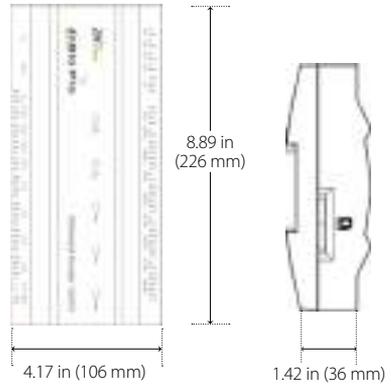
7.125 in (181 mm)

8.89 in (226 mm)

4.17 in (106 mm)      4.17 in (106 mm)      4.17 in (106 mm)      1.42 in (36 mm)

Figure 8

## InBio Pro- Metal Cabinet

13 in (330 mm)

15.7 in (400 mm)      3.56 in (90.5 mm)
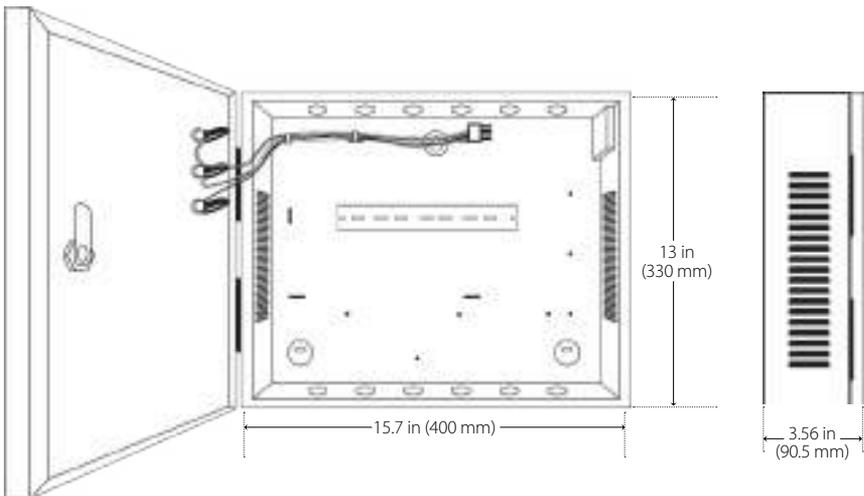
Figure 9

# Installation of Panel & Cabinet

Cable Conduit
(Punch Hole for cables)

Temper Switch

InBio  Pro Panel

Heat Dissipation Grill

Power Supply

Backup Battery
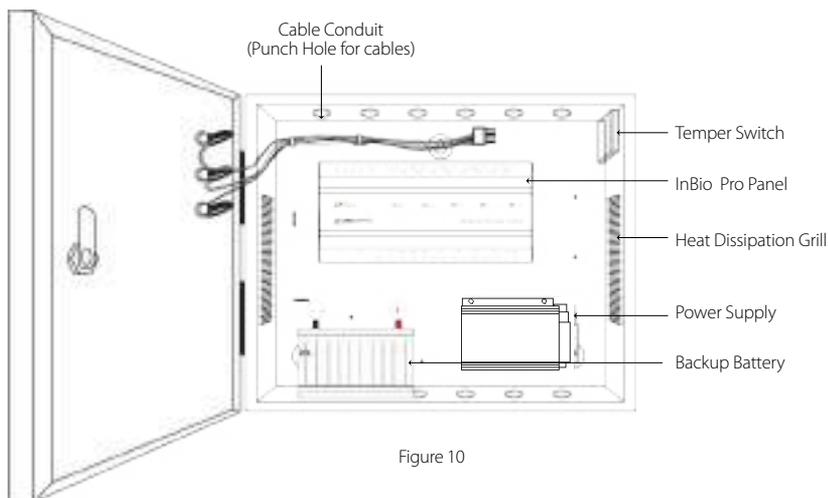
Figure 10

**Step 1**
Pass the cable through holes

**Step 2**
Mount the Metal Cabinet

**Step 3**
Insert the InBio Pro Panel as it shown

State Indicators          Mounting Holes                                    Inserting Panel to Rail

1

2

Mounting Rail
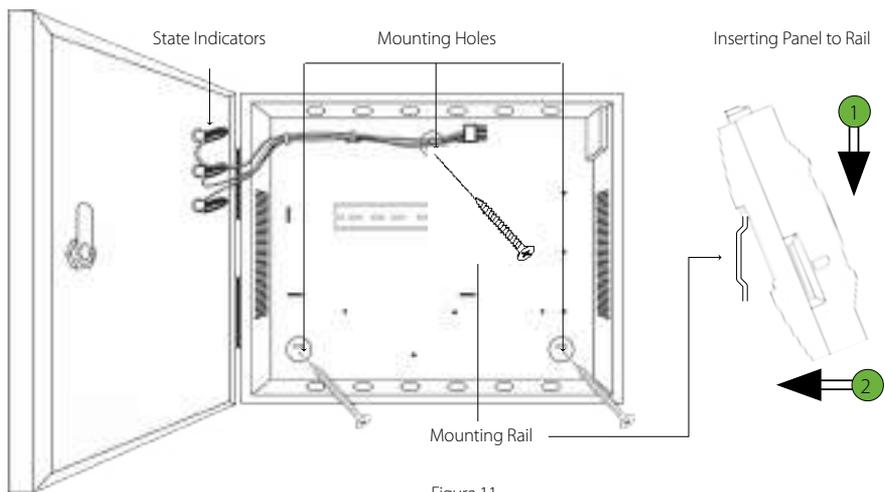
Figure 11

We recommend drilling the mounting plate screws into solid wood (i.e. stud/beam). If a stud/beam cannot be found, then use the supplied drywall plastic mollies (anchors).

# Wiring Legend

Detector

IR Sensor

Exit Button

Wiegand
Card Reader

Exit Button

Wiegand
Card Reader

Ethernet Cable

Floodlight

Normally Open Lock

Normally Close Lock

12V DC Power

12V DC Power Supply
(Wet Power Input to Lock)
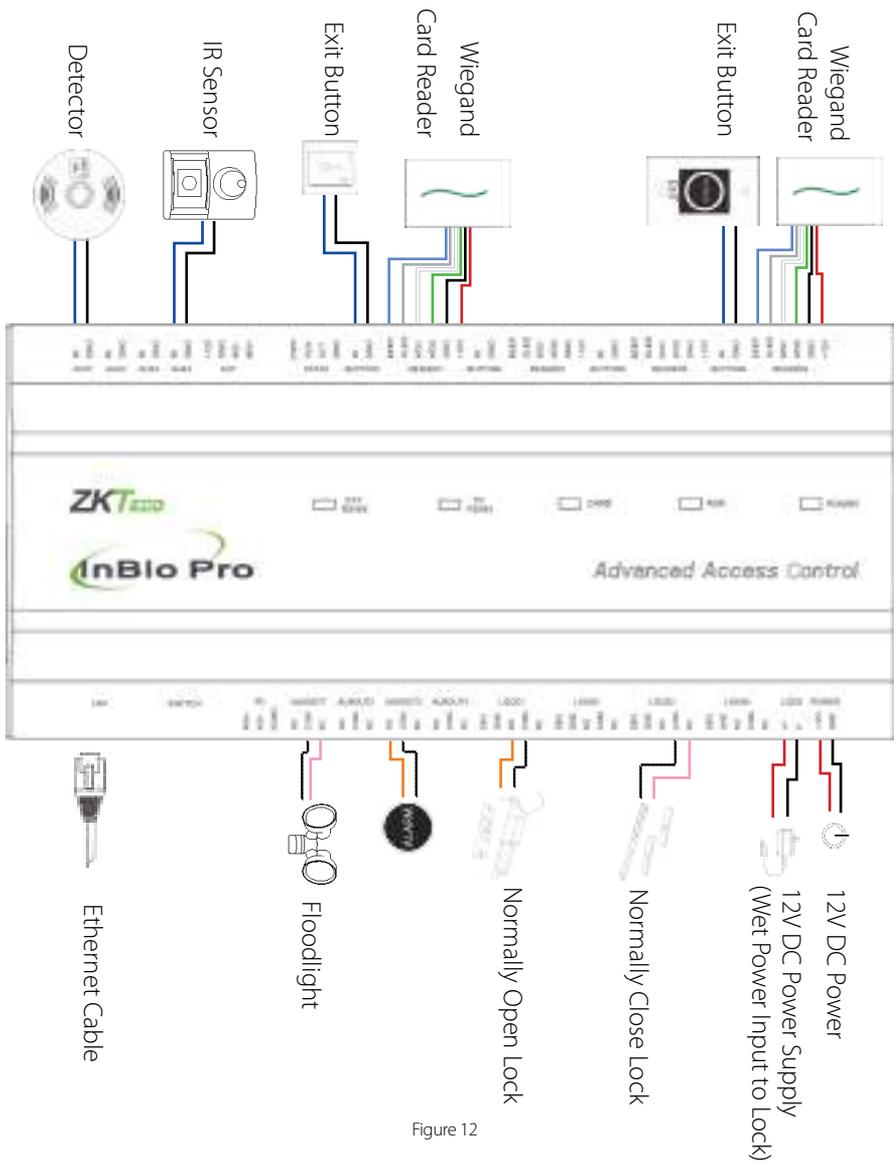
Figure 12

# Power Wiring Diagram

## Without Backup Battery



Ground

Switching Power Supply
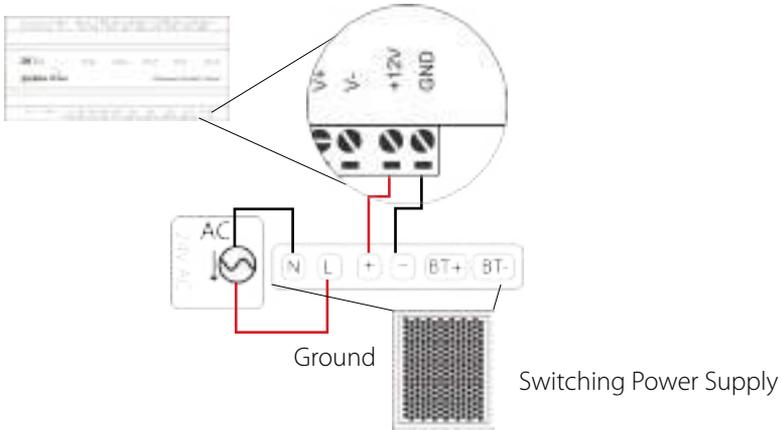
Figure 13

## With Backup Battery



Ground

Switching Power Supply
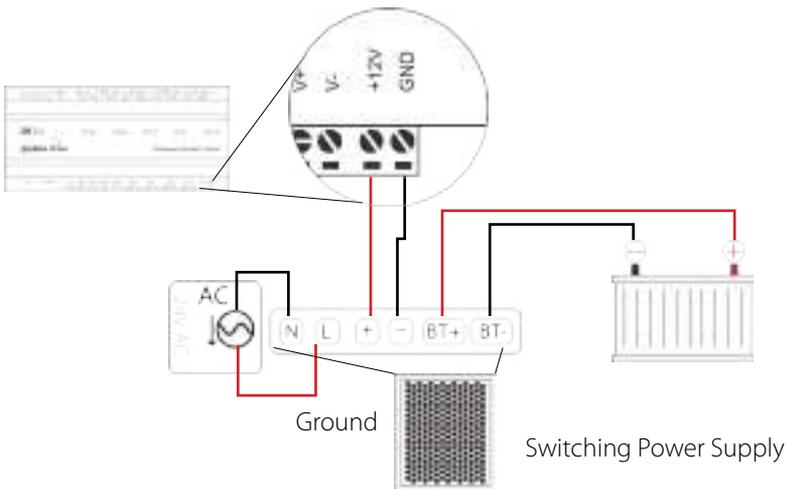
Figure 14

# RS485 Fingerprint Reader Connection

ETHERNET

Note: Power Supply can only Power Panel and Two readers

12V DC                    12V DC

① ② ③  ◀ • • • • • ▶  ⑧ RS485 Fingerprint Reader
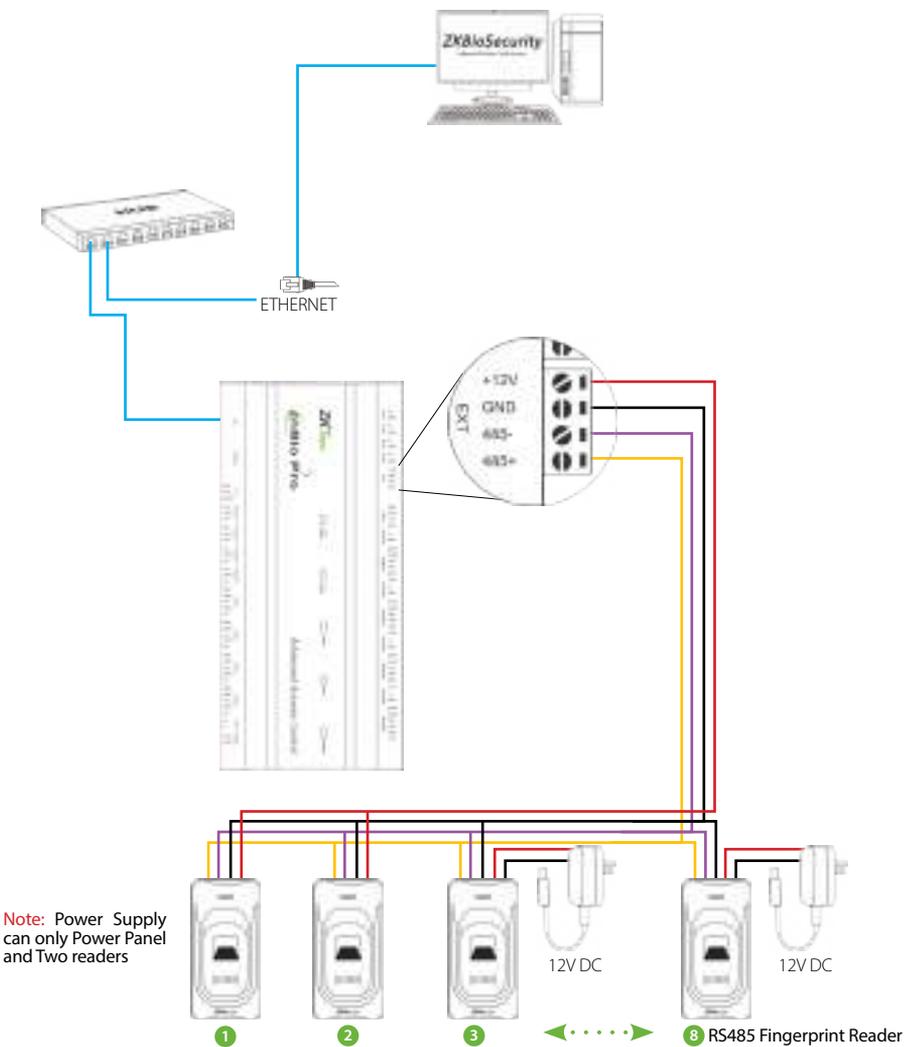
Figure 15

# DIP Switch Setting for RS485 Reader



RS485 Terminal Resistance

8

4

2

1
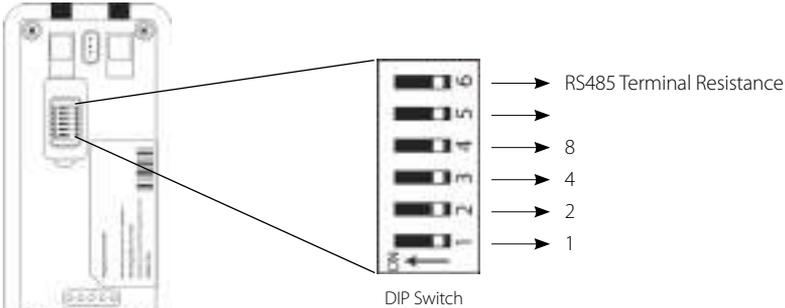
DIP Switch

Figure 16

| Address | Switch Settings | Address | Switch Settings |
|---------|-----------------|---------|-----------------|
| 1 | | 5 | |
| 2 | | 6 | |
| 3 | | 7 | |
| 4 | | 8 | |

## Important Notes

**1.** There are six DIP switches on the back of RS485 fingerprint reader, Switches 1-4 is for RS485 address, switch 5 is reserved, switch 6 is at the End-Of-Line for reducing noise on long RS485 cable.

**2.** Set the odd number for IN reader, and the even number  for OUT reader (for eg. For two readers for one door- the RS485 address 1 is for IN reader, RS485 address 2 is for OUT reader)

**3.** If RS485 fingerprint reader is powered from InBio460Pro panel, the length of wire should be less than 100 meters or 330 ft.

**4.**  The External RS485 interface can supply maximum 500mA current, The RS485 fingerprint reader's start-up current is 240mA. So InBio460Pro only can power two RS485 fingerprint readers.

**5.** If the cable length is  more than 200 meters or 600 ft , the number 6 switch should be ON as below:

Distance: More than 200 meters

# Wiegand Connection

DC+(6-14V)
GND
Wiegand D0
Wiegand D1
Green LED
Beeper

Wiegand Card Reader

BEEP GLED WD1 WD0 GND +12V

ZKTeco
InBio Pro

Advanced Access Control
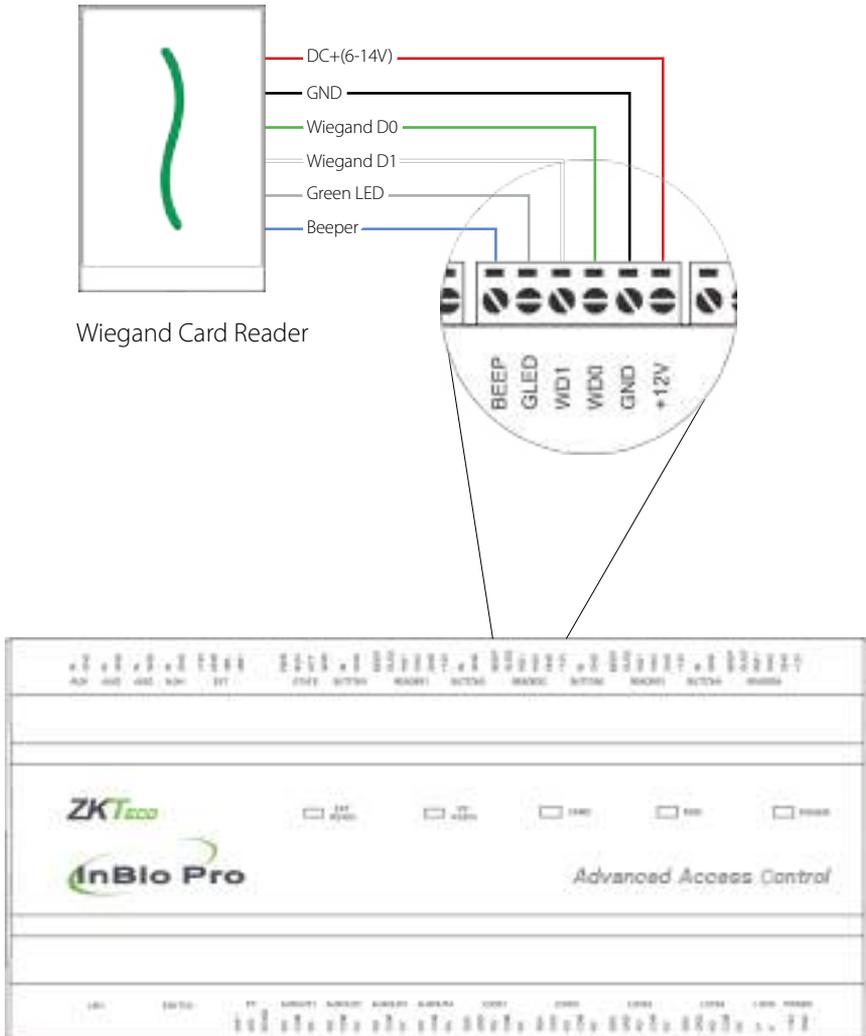
Figure 17

# REX Connections

Separate Power Supply

12V DC(+)

12V DC(•)

Unused

COM

NO

K2 Exit Switch

BUTTON

GND

ZK ABK Exit Button
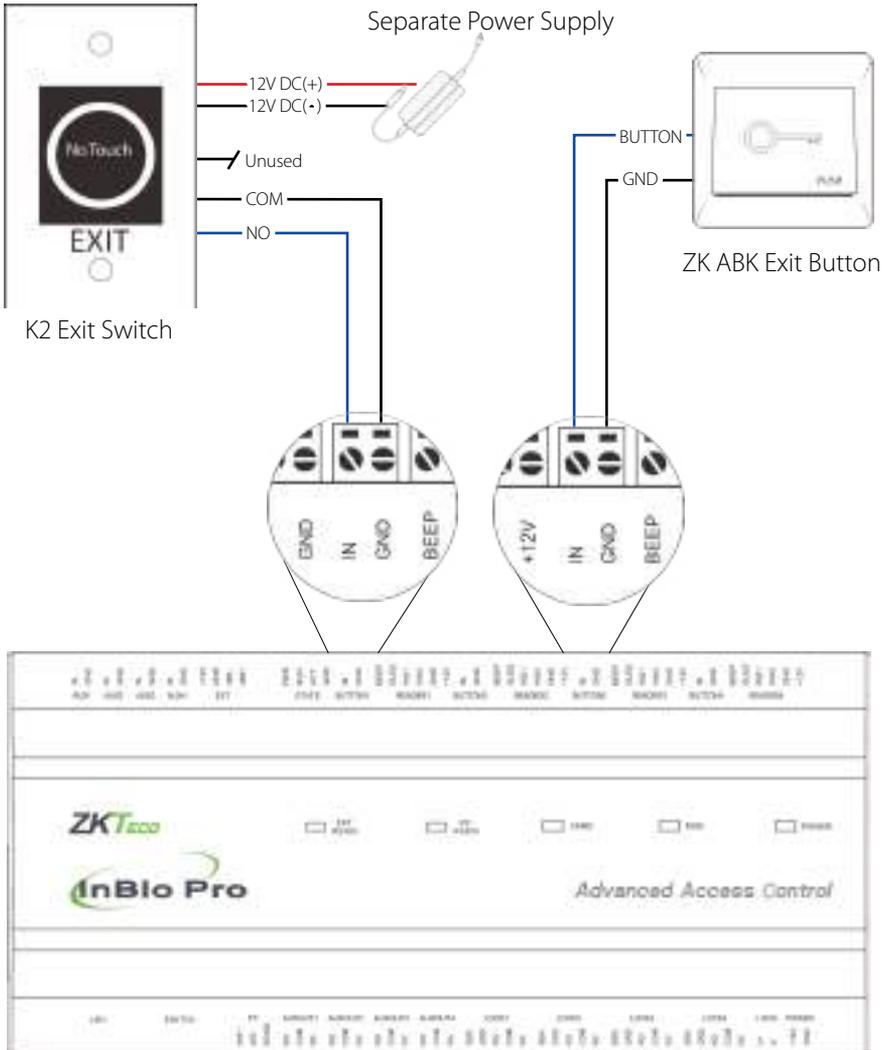
Figure 18

# Lock Connection

## Connecting a Lock with External Power Supply (Dry Contact)

ETHERNET

LOCK3

NC SEN GND NO COM NC SEN

GND

Door Contact

Sensor
Sensor
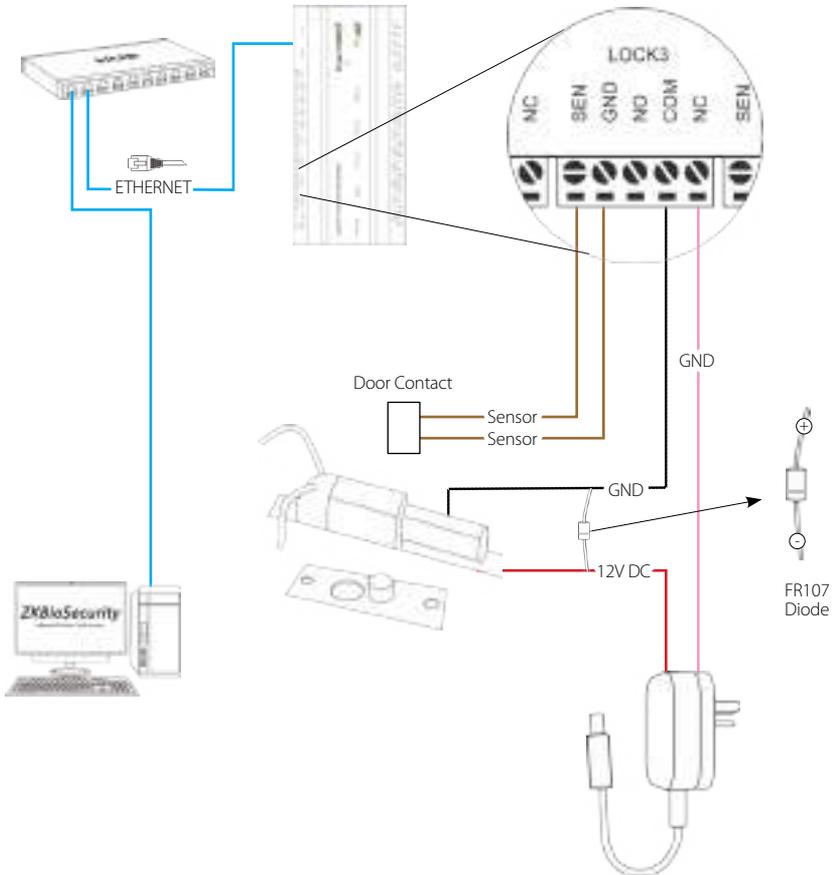
GND

12V DC

FR107
Diode

Figure 19

# Lock Connection

## Switching Dry Contact to Wet Contact

**Important Notes:**

The factory default jumper setting is set as dry mode. If you want to power the lock from the panel, you must take the following steps:

1. Take apart the cover of InBio460Pro. Push the tab inward (see figure 21).
2. Select the appropriate lock relay and find its jumpers.
3. Take off the jumpers and change [image] to [image]
4. Connect the lock as show in the diagram, (see figure 23 and 24).



Back of InBio460Pro                                    Select one Relay

**Figure 20**



Default setting          Take off jumpers          Jumpers          Plug Jumpers
1, 2 - 3, 4                                                              2, 3 - 4, 5
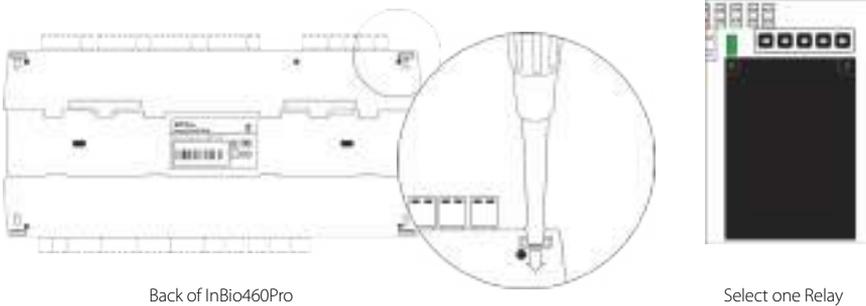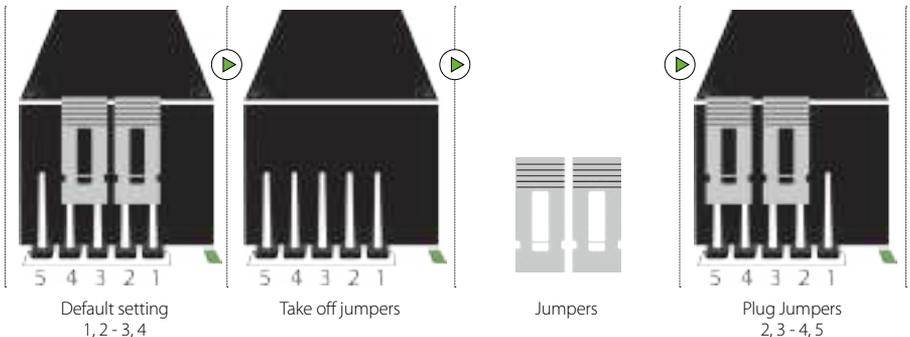
**Figure 21**

# Lock Connection

## Normally Open Lock Powered From Lock Terminal (Wet Contact)



ETHERNET

12V DC
GND

FR107
Diode

16 or 18 AWG shielded cable recommended

GND
12V DC
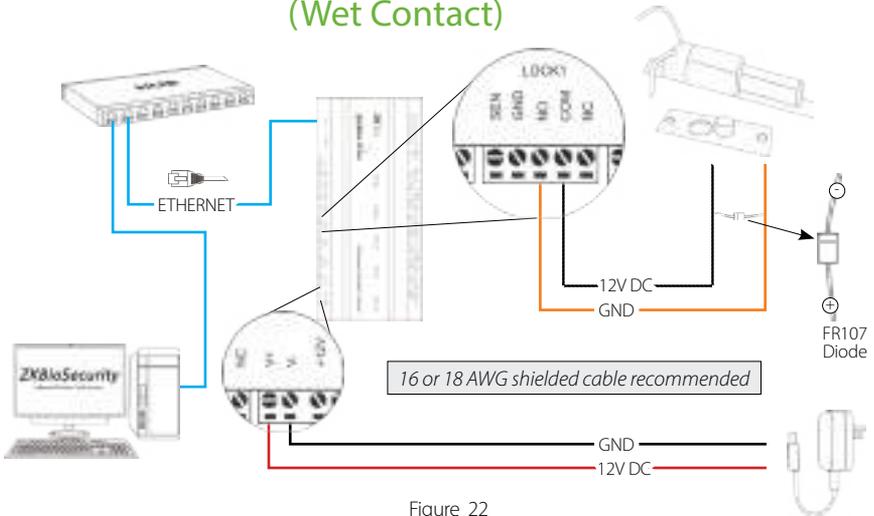
Figure 22

## Normally Closed Lock Powered From Lock Terminal (Wet Contact)



ETHERNET

12V DC
GND

FR107
Diode

GND
12V DC
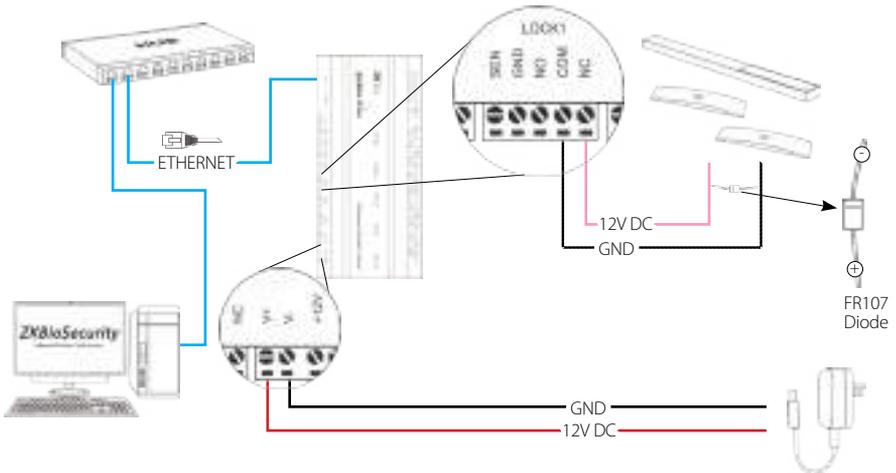
Figure 23

# Aux. I/O Connection

## Aux. Input Connection
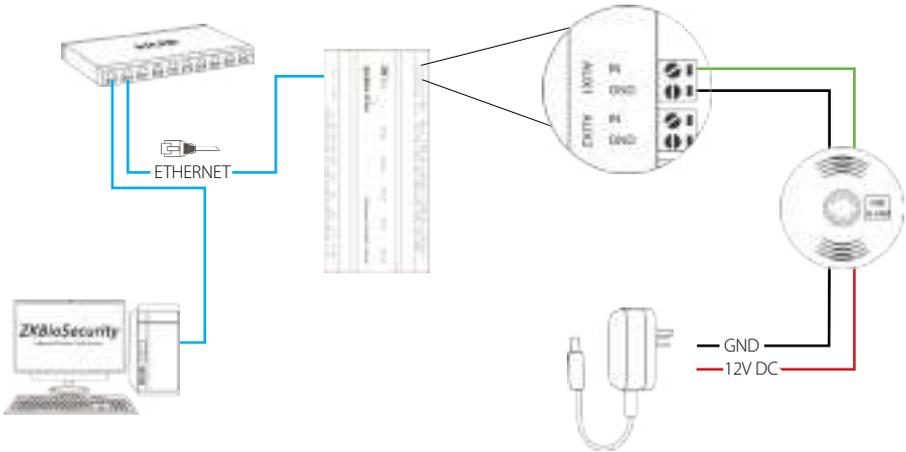


Figure 24

## Aux. Output Connection
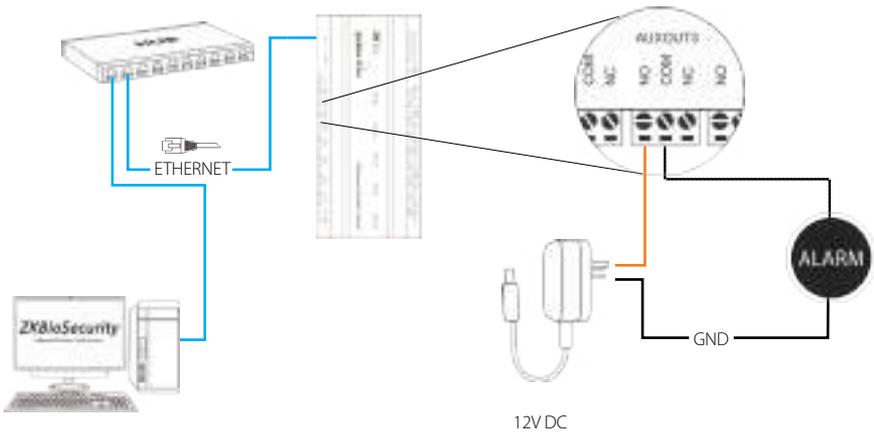


Figure 25

# Ethernet Connection

## LAN Connection

**Important Notes:**

**1.** Both 10Base-T and 100Base-T are supported

**2.** This cable distance must be less than 330 ft. (100m)

**3.** For cable length of more than 330 ft. (100m). use network switch to amplify the signal.

USB

USB                    ETHERNET

CR20E Card Issuer        ZK4500 Enrollment reader          *CAT5e or CAT6 ethernet cable recommended*

Figure 26

## Direct Connection

To connect InBio Pro Panel with a PC directly, connect both devices with a straight network cable. As the InBio Pro Panel supports auto MDI/MDIX, it is not necessary to use a crossover type cable.

ETHERNET

USB                    USB

CR10E Card Issuer     ZK4500 Enrollment reader
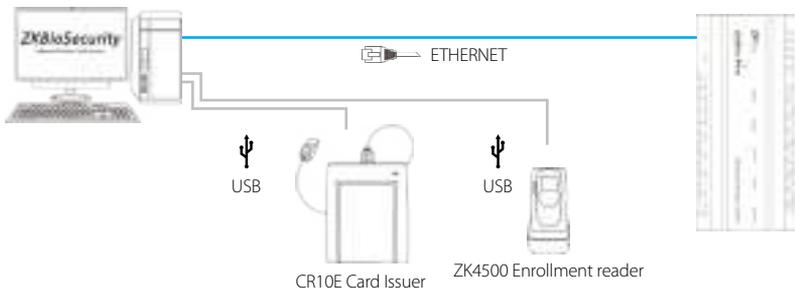
Figure 27

# Restore Factory Setting



Restore Factory Setting
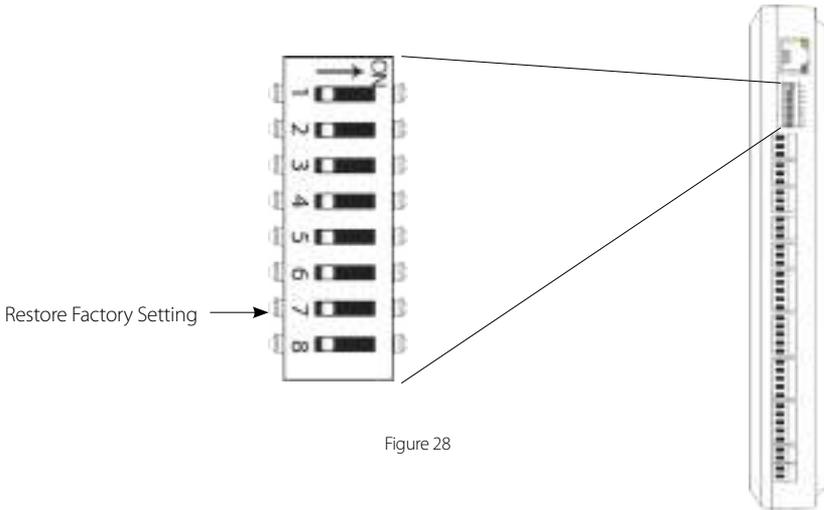
Figure 28

## Restore factory setting

**1.** If you forget the IP address of the InBio Pro panel or the device does not work normally, you can use the number 7 DIP switch to restore InBio Pro Panel to factory default settings. The parameters which gets reset are device IP address, communication password, gateway, and subnet mask.
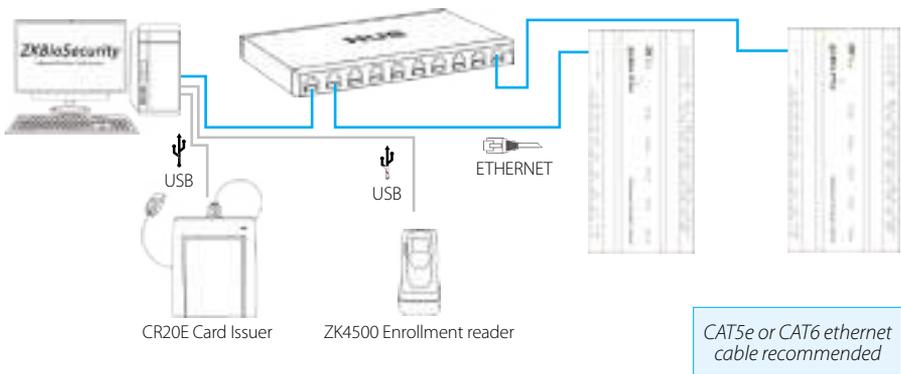
**2.** The switch is OFF by default. When it is moved up and down for three times within 10 seconds and finally returned to OFF position, the factory settings will be restored after the access control panel is restarted.
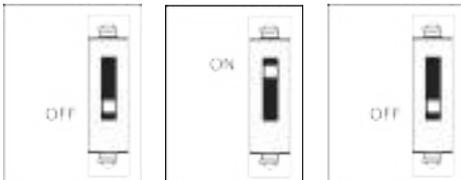


To reset factory settings
Turn #7 switch ON and OFF

**Repeat process 3 times**

Figure 29

# Installation Diagram

Ethernet Communication wire

220/110 V Input

InBio Pro Access Control Bundle

CEILING

Sensor

Electric Lock

OUTDOOR

INDOOR

Exit Button

Outdoor Wiegand card reader

Indoor Wiegand card reader

Figure 30

# Troubleshooting

**1.** How to switch four doors one way to two doors two way?
 › Connect four readers from reader 1 to reader 4.
 › Connect two door locks, one connected to LOCK1, another connected to LOCK3.
 › In the software configure reader 1-Indoor, and reader 2-Outdoor.

**Note:** Please note that below option is only available in software version 3.0.3.1 or above.



Figure 31

**2.** Can we integrate IP Camera and NVR?
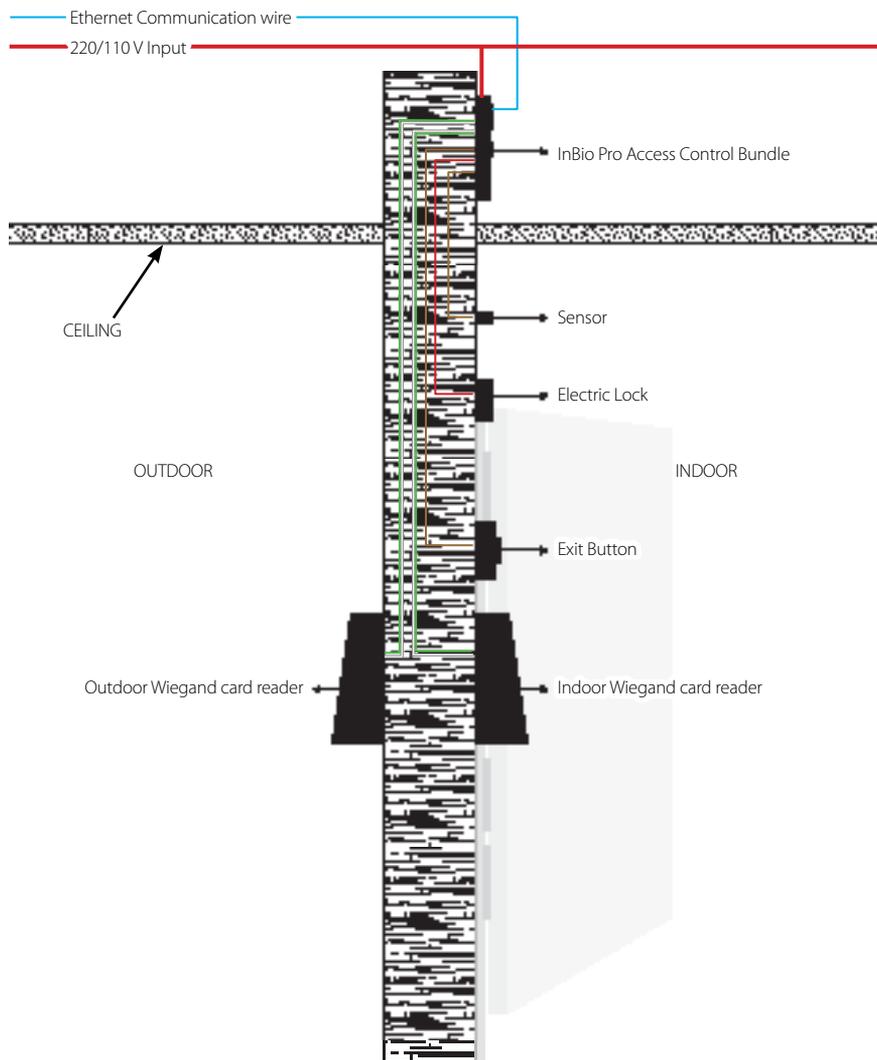 › Currently ZKBioSecurity software supports ZKVision, GT/PT Series, Hikvision, Dahua, and other cameras supporting Onvif protocol and NVR.
 › You can associate a camera to the reader and setup a linkage for the same.

**3.** What does it mean when I get a "Wiegand Format Error"?
 › Your WD0 and WD1 wiring is reversed.

**4.** How do I connect a third-party reader or a stand-alone reader to a InBio Pro panel?
 › Connect the Wiegand output to the WD0 and WD1 of the stand-alone readers on the panel's reader port.

*Note: The board can only supply 12 V DC, 2A power so an external power supply may be required.*

**5.** What kind of wire is recommended for the panel?
 › 16 or 18 AWG twisted shielded wire is recommended.

**6.** What is the default IP of the panel?
 › 192.168.1.201

**7.** How long is the device under warranty?
 › 2 Years from original purchase date, replacement/repair of hardware under ZK standard warranty requires an evaluation of the failed system by a ZK Technical Support specialist, and the issuance of a Technical Support RMA number.

# Electrical Specifications

| | Minimum | Typical | Maximum | Notes |
|---|---|---|---|---|
| **WORKING POWER SUPPLY** | | | | |
| Voltage (V) DC | 9.6 | 12 | 14.4 | Use regulated DC power adaptor only |
| Current (A) | | | 5 | |
| **ELECTRONIC LOCK RELAY OUTPUT** | | | | |
| Switching voltage (V) | | | 12V | Use regulated DC power adaptor only |
| Switching Current (A) | | | 2 | |
| Auxiliary relay output | | | | |
| Switching voltage (V) | | | 12V | Use regulated DC power adaptor only |
| Switching Current (A) | | | 1.25 | |
| **SWITCH AUX. INPUT** | | | | |
| VIH (V) | | | | |
| VIL (V) | | | | |
| Pull-up resistance (Ω) | | 4.7k | | The input ports are pulled up with 4.7k resistors |
| **WIEGAND INPUT** | | | | |
| Voltage (V) | 10.8 | 12 | 13.5 | |
| Current (mA) | | | 500 | |
| **ZK ELECTRIC LOCK** | | | | |
| Voltage (V) DC | 10.8 | 12 | 13.2 | |
| Current (mA) | | | 500 | May vary as per models |

# Specifications

**Note:** Please note that the below specifications are only applicable for ZMM220 InBio Pro panels.

| GL Exclusive Feature | InBio-160 Pro | InBio-260 Pro | InBio-460 Pro |
|---|---|---|---|
| Number of doors controller | 1 Door | 2 Door | 4 Door |
| Numbers of readers supported | 4(2 RS-485 Reader, 2 26-bit Wiegand reader) | 8(4 RS-485 Reader, 4 26-bit Wiegand reader) | 12 (8 RS-485 Reader, 4 26-bit Wiegand reader) |
| Types of readers supported | 26-bit Wiegand and RS485 FR Series Reader | 26-bit Wiegand and RS485 FR Series Reader | 26-bit Wiegand and RS485 FR Series Reader |
| Number of Inputs | 3(Exit Device and Door Status, 1 AUX) | 6( 2 Exit Device, 2 Door Status, 2 AUX) | 12( 4 Exit Device, 4 Door Status, 4 AUX) |
| Number of Outputs | 2 (1-Form C Relay for Lock and One Form C Relay for Aux Output) | 4 (2-Form C Relay for Lock and 2-Form C Relay for Aux Output) | 8 (4-Form C Relay or Lock and 4-Form C Relay for Aux Output) |
| Card holders Capacity | 60,000 | 60,000 | 60,000 |
| Fingerprint Capacity | 20,000 | 20,000 | 20,000 |
| Log Events Capacity | 100,000 | 100,000 | 100,000 |
| Communication | TCP/IP | TCP/IP | TCP/IP |
| Package Dimension | 350(L)*90(H)*300(W) mm | 350(L)*90(H)*300(W) mm | 350(L)*90(H)*300(W) mm |
| Package Weight | 3.6kg | 3.6kg | 3.7kg |
| CPU | 32 bit 1.2GHz CPU | 32 bit 1.2GHz CPU | 32 bit 1.2GHz CPU |
| RAM | 128MB | 128MB | 128MB |
| Flash Memory | 256MB | 256MB | 256MB |
| Power | 9.6V-14.4V DC | 9.6V-14.4V DC | 9.6V-14.4V DC |
| Operating Temp | 0° to 45°C | 0° to 45°C | 0° to 45°C |
| Operating Humidity | 20% to 80% | 20% to 80% | 20% to 80% |

# ZKBioSecurity 3.0

It is recommended to install software version 3.0.3.0 or above
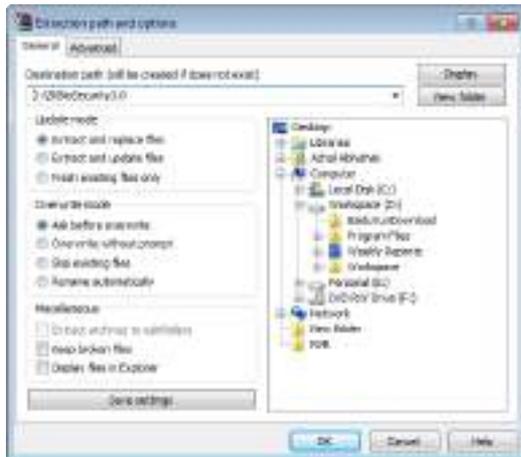
# Installation & Setup

# Downloading

**1.** Go to http://www.zkteco.com/product/ZKBioSecurity3.0_421.html

**2.** Download the latest software and related files as required.



**3.** Once downloaded, extract the rar file to a new folder.

**4.** Click on setup to begin installstion.

# Installation

1. System will check the requirements to install the software. Click *Continue* if all tests are passed, else check the issues and re-test.





2. Add an open port (Default 8088) or ask a network administrator for an open port.

3. Click the check box to add firewall exception for this port.

**4.** Select the mode of database. The default will be PostgreSQL, if you want to select any other database, then select *Alternative database*.



**5.** Click Browse and choose or create a folder to store your backup files.

**6.** Select/Create the required folder.

**7.** Click OK.

# Adding Device

**1.** Click on *Access* to get below interface of Access Module of the software.
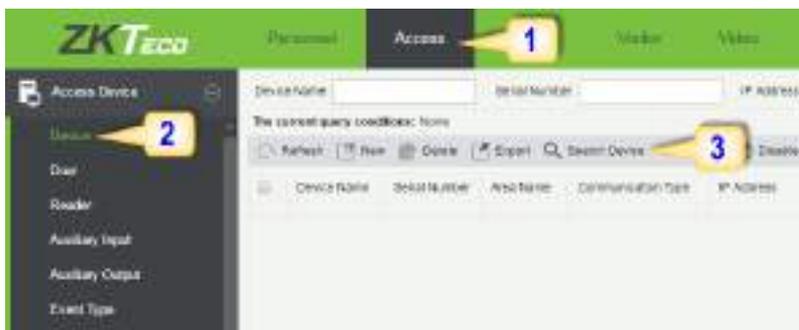


**2.** Click on *Device*.
**3.** Click on *Search Device*.



**4.** Click *Search* to search all the access controllers on the network.
**5.** From the list, click *Add* to add the required device.

# Adding Device

**6.** Enter a unique name.

**7.** Enter the IP address of current system (PC).

**8.** Enter the access point of system.

**9.** Click on this option, after adding device, the system will clear all data in the device (except the event logs).

**10.** Click OK to finish.

**The default IP address may conflict with the device IP of other devices. In order to avoid that problem, modify the IP address as shown below:**
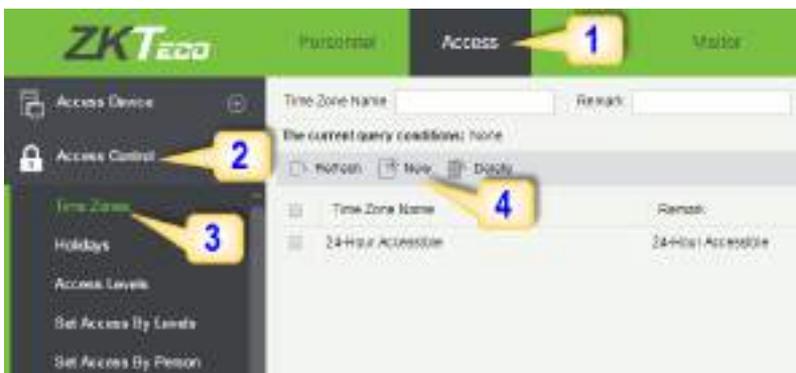


When the device is not in the same network with server, customers should download the tool and search the device as shown below:
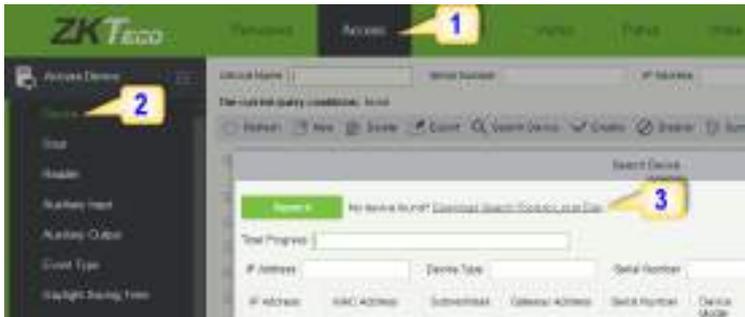
# Creating a Time Zone

Click Access Control > Time Zones > Add to access the time zone setting interface.



After setting the time zone, click *OK* to save, and the time zone will appear in the list.
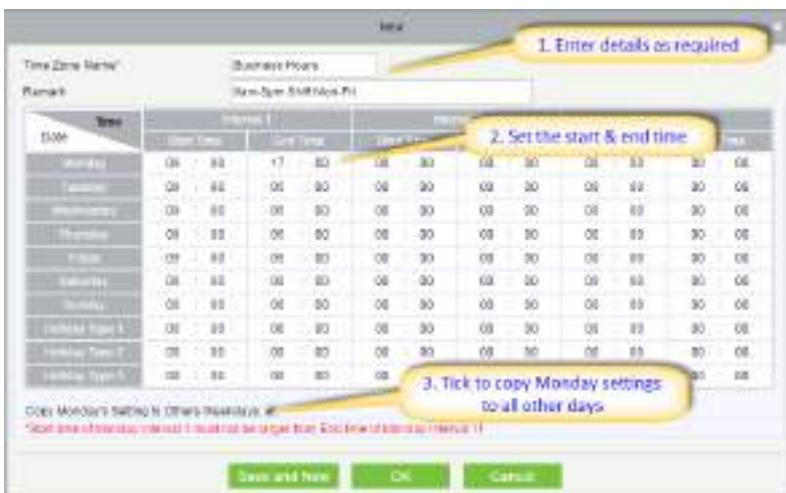
# Creating an Access Level

**1.** Click Access   **2.** Click Access Control **3.** Click Access Levels **4.** Click New.



**5.** Enter the details and click *OK.*



**6.** You need to add doors to the access levels.
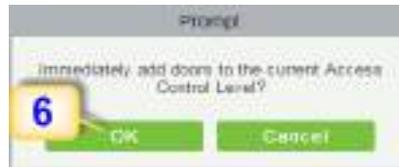


**7.** Select the required door(s).

**8.** Move the selected door(s).

**9.** Click *OK* to finish adding doors.

# Enrolling Personnel

**1.** Click Personnel  **2.** Click Person **3.** Click *New* to add personnel.





**A. Personnel ID:** It must be a unique 9 characters length with the valid range of 1-79999999. It can be configured based on actual conditions. The Personnel No. contains only numbers by default but may also include letters after setting parameters.

**B. Department:** Select from the pull-down menu and click *OK*. If the department was not set previously, you can only select the default [Company Name] department.

**C. Password:** Set personnel password. It only supports 6-digit passwords. If password exceeds the specified length, the system will truncate it automatically. It can't be same with duress or other passwords.

**D. Card Number:** You can add a card number through manual entry or a card issuer. For issuing through issuer, click on the card icon directly. For issuing card manually, you must enter both the card number and the site code, then the software converts the numbers to the card number for access control system verification.

**E. Access Control:** Here you will get all the access levels created by you and by default. Tick the required box.

**F. Fingerprint:** Enroll the Personnel Fingerprint or Duress Fingerprint. Duress Fingerprint is to trigger the alarm and send the signal to the system in case of emergency.

# Wiegand Format

Wiegand Format is the card format that can be identified by Wiegand reader. The software is embedded with 10 Wiegand formats. You may set the Wiegand card format as required.

**1.** Click Personnel  **2.** Click Card Management  **3.** Click Wiegand Format.
**4.** Taking Wiegnad Format37 as an example. Click to edit.
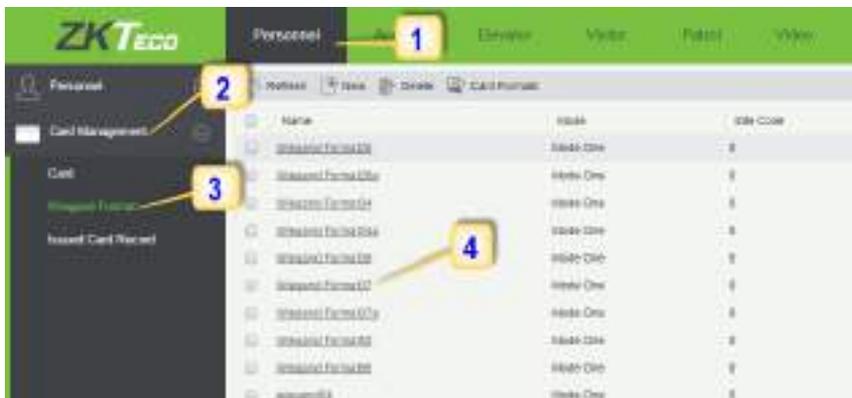


This software supports two modes for adding Wiegand Format, if mode 1 does not meet your setting requirement, switch to mode 2.
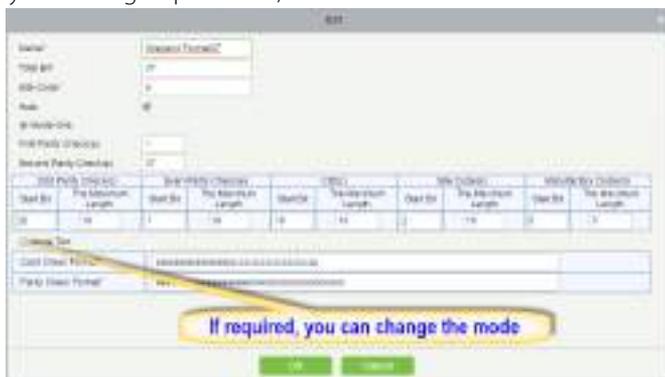


p indicates Parity Position, s indicates Site Code, c indicates Cardholder ID, f indicates Facility Code, m indicates Manufactory Code, e indicates Even Parity, O indicates Odd Parity, b indicates both odd check and even check, x indicates parity bits no check.

The previous Wiegand Format 37: the first parity bits (p) check "eeeeeeeeeeeeeeeeee," the second parity bits check "oooooooooooooooooooo". Card Check Format only can be set "p, x, m, f, c, s", Parity Check Format only can be set "x, b, o, e."

# Add & Delete Personnel to Access Level

**1.** Click Access  **2.** Access Control **3.** Set Access by Person **4.** Click on the required employee **5.** Click Add to Levels.



**6.** Select Level(s).

**7.** Click to move the selected level(s) to the right, and then click OK to complete adding. The added level(s) will appear in the list on to the right side.

# Real -Time Monitoring

**1.** Click Access  **2.** Click Access Device **3.** Click Real-Time Monitoring

Real-time monitor the status and real-time events of controllers in the system, including normal events and abnormal events (including alarm events) device transactions.



You can also filter by Area, device name, Serial number to check a specific device transactions or all at once.

Hover over a door icon to open pop up menu as shown below and click Remote Closing, Remote Opening, or Cancel Alarm and more.

# Exporting Reports

## Access Module:

**1.** Click Access  **2.** Click Reports **3.** Filter the data (time, Personnel ID, Device Name and more) if required and click on search **4.** Click All transactions or as required.



**5.** Click on *Export* to get the list.

**6.** Click OK.



## Personnel Module:

**1.** Click Personnel **2.** Click Person **3.** Filter the data (Department, Personnel ID, and more) if required and click on search **4.** Click on Export to get the list.

# First-Person Normally Open

This feature will keep a door unlocked during a specified time zone. It will automatically unlock at the beginning of the time zone and will lock automatically at the end of the specified time zone.

The First Person Normally Open feature will keep a door unlocked during a specified time zone when triggered by specified personnel. After the specified personnel unlocks, this feature keeps the door unlocked till the end of the time zone and it will lock automatically at the end of the specified time zone.

Before using this function, create a new time zone with the hours you want the door to be unlocked.



**1.** Click Access  **2.** Click Access Control **3.** Click First-Person Normally Open

**4.** Click New  **5.** Select the door **6.** Select the Time Zone.

**7.** Add the specific person. Once this person checks in, this feature is activated.