



TITAN

INGUIDE

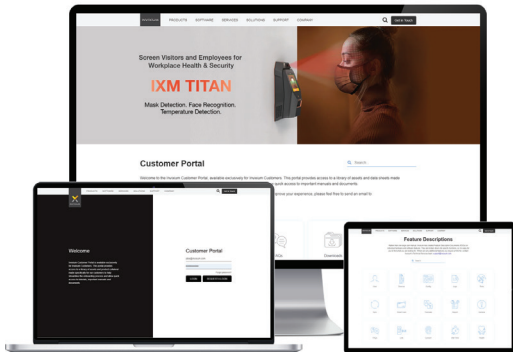
Quick Start Guide

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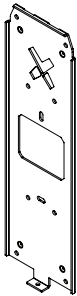
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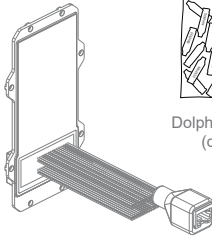


In the Box

IXM INSTALL KIT



Metal Mounting
Plate



Wired Back
Cover



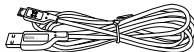
Dolphin Crimps
(qty 12)



Metal Mounting
Plate Screw
(qty 2)



Wall Mounting Screws
(qty 6)



Micro USB Extension Cable



Hex Key



Snubber Diode



Earth Ground Wire

Device Handling & Cleaning

- 1 Handle with care, ensure not to drop or step on the device. Perform occasional cleaning to eliminate a build-up of dust, dirt, oil and residual grime.
- 2 The components that may require frequent cleaning are the camera, screen and fingerprint sensor. Cleaning should be performed with care and attention, as improper cleaning may damage the components.
- 3 To clean, lightly moisten a new cotton swab or lint free polishing cloth with water or isopropyl alcohol. Gently wipe the components with the moistened cotton swab or cloth. Finish wiping the components again with a dry cotton swab or cloth.
- 4 Install the product in a well-ventilated area and place away from direct sunlight to prevent overheating when installing it outside. Do not install in areas with flammable vapours, near heating elements or equipment or magnetic objects.
- 5 Do not attempt to open or disassemble the device, deploy for any use other than its intended purpose or insert anything other than the correct fitting USB plug into the USB port located at the bottom of the device as this will void the product warranty.



Do not use harsh or abrasive chemicals to clean the surface of the sensor, as this may cause permanent damage to the device.
Do not use sandpaper, steel wool, scouring pads, chlorine, ammonia, bleach, or any inappropriate products for cleaning.

Getting Started

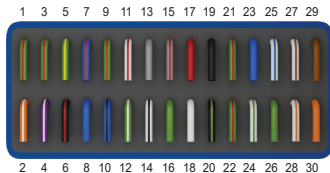
- 1 Remove the Mounting Plate, Wired Back Cover and screws from the IXM INSTALL KIT.
- 2 Install the Mounting Plate at the desired location. Invixium recommends 115 cms from the floor to the bottom of the device.
- 3 Make the necessary connections to the Wired Back Cover (refer to [Get Wired Pages](#)).
- 4 Unscrew and remove the Temporary Back Cover from the IXM device and connect the Wired Back Cover using the same screws. Ensure that the Wired Back Cover is completely closed to maintain the IP65 rating. Invixium recommends using an enclosure if the product is installed outdoors.
- 5 Hang your IXM device on the Mounting Plate and secure it on the bottom with the screw provided.



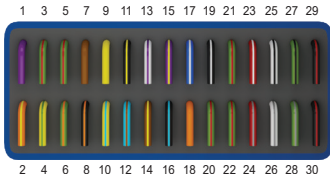
Get Wired Glossary

| | | | |
|------|----------------------|-------|-------------------------|
| ACP | Access Control Panel | SGND | Signal Ground |
| COM | Common | SPI | Specific Purpose Input |
| DAC | Door Access Control | SPO | Specific Purpose Output |
| DSP | Door Strike Power | T | Termination |
| EGND | Earth Ground | TX | Transmitter |
| ETH | Ethernet | USB | Universal Serial Bus |
| GND | Ground | VBUS | USB Supply |
| NC | Normally Closed | VIN- | Power Ground |
| NO | Normally Open | VIN+ | Power (12VDC) |
| RLY | Relay | WDATA | Wiegand Data |
| RX | Receiver | WGND | Wiegand Ground |
















Top Connector











Bottom Connector

































Get Wired Top Connector

| Wire Color | Wire | Label | Pin(s) |
|--------------|---|-----------|--------|
| Green/Red |  | RESERVED | 1 |
| Orange/White |  | RS232_RX | 2 |
| Green/Red |  | RESERVED | 3 |
| Purple/White |  | RS232_TX | 4 |
| Green/Yellow |  | EGND | 5 |
| Black/Red |  | SGND | 6 |
| Blue/Red |  | RS485_T | 7 |
| Blue |  | RS485_D+ | 8 |
| Green/Red |  | RESERVED | 9 |
| Blue/Black |  | RS485_D- | 10 |
| White/Red |  | RLY_NC | 11 |
| Green/White |  | WDATA_IN0 | 12 |
| Grey |  | RLY_COM | 13 |
| White/Black |  | WDATA_IN1 | 14 |
| Grey/Red |  | RLY_NO | 15 |

| Wire Color | Wire | Label | Pin(s) |
|---------------------|---|------------|--------|
| Green |  | WDATA_OUT0 | 16 |
| Red |  | V_INPUT+ | 17 |
| White |  | WDATA_OUT1 | 18 |
| Black |  | V_INPUT- | 19 |
| Black/Green |  | WGND | 20 |
| Green/Red |  | RESERVED | 21 |
| Green/Red |  | RESERVED | 22 |
| RJ 45 Receptacle |  | TCP/IP | 23-30 |

Get Wired Bottom Connector

| Wire Color | Wire | Label | Pin(s) |
|---------------|---|-------------|--------|
| Purple |  | DAC_SUPPLY | 1 |
| Orange/Yellow |  | SPO1 | 2 |
| Green/Red |  | RESERVED | 3 |
| Yellow/Green |  | SPO2 | 4 |
| Green/Red |  | RESERVED | 5 |
| Green/Orange |  | SPO3 | 6 |
| Brown |  | ACP_LED1 | 7 |
| Black/Orange |  | SPO_GND | 8 |
| Yellow |  | ACP_LED2 | 9 |
| Yellow/Cyan |  | SPI1 | 10 |
| Black/Yellow |  | ACP_LED_GND | 11 |
| Cyan/Brown |  | SPI2 | 12 |
| White/Purple |  | DAC_IN1 | 13 |
| Brown/Yellow |  | SPI3 | 14 |
| Purple/Yellow |  | DAC_IN2 | 15 |

| Wire Color | Wire | Label | Pin(s) |
|-------------|---|------------|--------|
| Black/Cyan |  | SPI_GND | 16 |
| Blue/White |  | DAC_IN3 | 17 |
| Orange |  | DAC_OUT | 18 |
| Black/White |  | DAC_IN_GND | 19 |
| Green/Red |  | RESERVED | 20 |
| Green/Red |  | RESERVED | 21 |
| Green/Red |  | RESERVED | 22 |
| Red/White |  | USB0_VBUS | 23 |
| Red/Grey |  | USB1_VBUS | 24 |
| White/Black |  | USB0_D- | 25 |
| White/Grey |  | USB1_D- | 26 |
| Green/Black |  | USB0_D+ | 27 |
| Green/Grey |  | USB1_D+ | 28 |
| Black/Red |  | USB0_GND | 29 |
| Black/Red |  | USB1_GND | 30 |

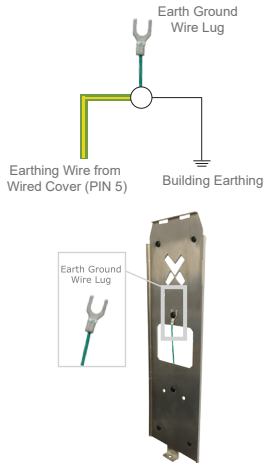
Earth Ground

For protection against Electrostatic Discharge, Invixium recommends the use of a ground connection between each IXM device to a high quality Earth Ground available at the install site.

Connect to Earth Ground in the following way:

- 1 Connect the green and yellow earthing wire from the wired back cover (top connector PIN 5) to the building earthing.
- 2 Connect the open end of earth ground wire provided in the Install Kit Box to the building earthing as well.
- 3 Screw the lug end of the earth ground wire to the metal mounting plate.

Ensure all Earth Ground connections are made to each device prior to turning on the power.



Power

The product should be powered by a regulated, filtered & dedicated Class 2 power supply providing a minimum of 3A @ 12 VDC or 1.5A @ 24 VDC per device.

PoE+ connectivity is also available on all TITAN models. Invixium recommends using a UL 62368-1 listed PoE Power Source Equipment (PSE). For PoE+, the maximum distance from PSE is 100 meters or 328 feet.

Refer to table for recommended PoE Injector specs. Full PoE deployments should include a centralized PoE PSE.

Do not connect and use the power supply and PoE simultaneously.

Do not extend the length of power cable when using a power adapter.

Do not use a 2-Wire CAT5 UTP for power supply purposes.

WARNING: Product Warranty is void if improper power (under or over) is supplied to the device.



Recommended PoE+ Injector Specs

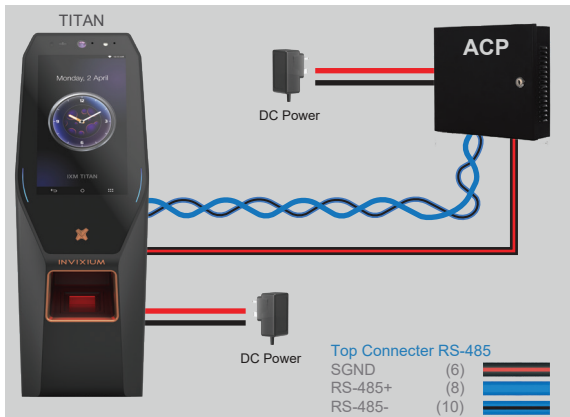
| | |
|----------------|-----------------------|
| Input Voltage | 100-240 VAC, 50-60 Hz |
| Input Current | 0.75 A |
| Output Voltage | 40-56 VDC |
| Output Current | 0.625 A |
| Power | 30 Watts |

INVIXIUM recommends the use of battery back up or a UPS with built-in surge protection.

Access Control Panel Connection - RS485

1. For RS485, use a 4 conductor 24 AWG twisted pair overall shielded and UL approved, Belden 9842 or equivalent cable.
2. With a RS-485 daisy chain, connect up to a maximum of 31 devices and connect the termination resistor (120 Ω) to both ends of the daisy chain connection.
3. Connect SGND cable with the ground cable of access control panel to equalize possible voltage potential difference between nodes.
4. At a baud rate of 9600 bps, ensure that the maximum cable length is not longer than 1200m (4000 ft).

NOTE: Do Not Use Ethernet cable for RS485 communication.



Serial Communication and USB

For Serial Communication, IXM TITAN is also equipped with RS-232 and USB capabilities. Refer to [Get Wired Bottom Connector](#) page for RS-232 connections.

The USB port can be used to connect a Flash Drive via Micro USB OTG cable and perform functions like upgrading firmware, downloading transaction logs and configuration files.

The USB port can also be used to connect to a PC running IXM WEB via Micro USB cable.

After performing USB operations, close the USB bottom connector tightly for water/dust ingress protection.



Micro USB Cable



Micro USB OTG Cable
(sold separately)



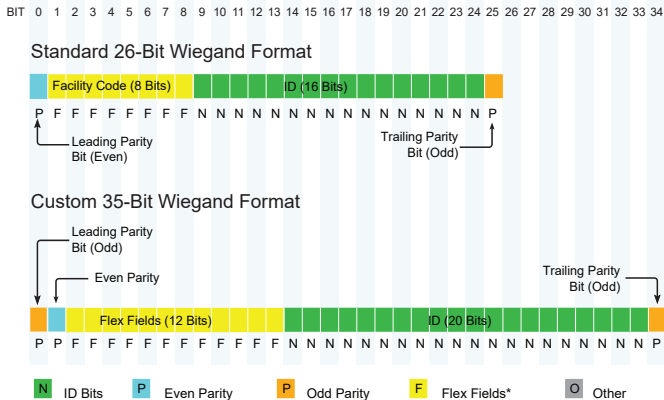
Bottom USB Port

Wiegand

Invisium recommends using a 3 or 6 conductor, 20 - 24 AWG, untwisted, non-stranded; overall shielded cable with a maximum cable length of 500 feet.

IXM devices have the option to use the Standard 26-bit Wiegand format or a Custom Wiegand format (up to 512 bits) to suit any Access Control System.

All IXM devices are set to Standard 26-bit format as a factory default.



*Flex Fields can be Facility Code, Job Code or Company ID Code.

Access Control Panel Connection - Wiegand

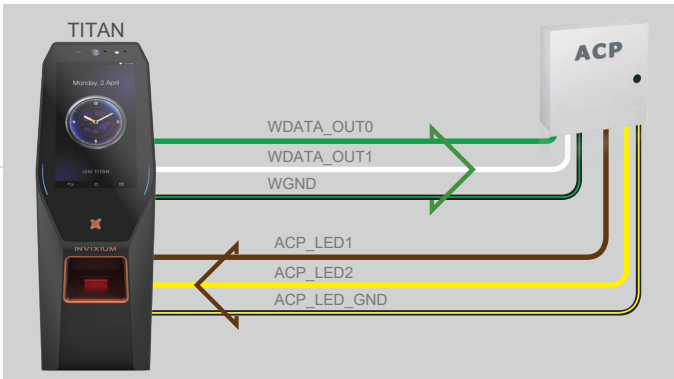


Top Connector Wiegand

| | | |
|------------|---|------|
| WDATA_OUT0 |  | (16) |
| WDATA_OUT1 |  | (18) |
| WGND |  | (20) |

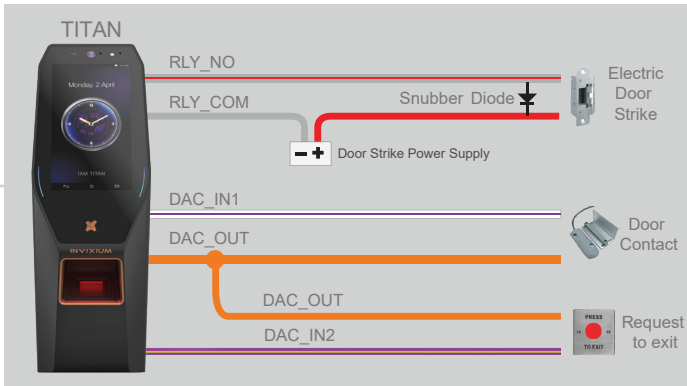
Bottom Connector LED

| | | |
|-------------|---|------|
| ACP_LED1 |  | (7) |
| ACP_LED2 |  | (9) |
| ACP_LED_GND |  | (11) |



ACP_LED signals can be used if available on the Access Control Panel. IXM devices support up to 2 wires + GND for LED status.

Door Access Control Connections (Electric Lock)



Top Connector DAC

RLY_COM (13)
RLY_NO (15)

Bottom Connector DAC

DAC_IN1 (13)
DAC_IN2 (15)
DAC_OUT (18)

Max Relay rating = 2A @ 24VDC

NOTE: A separate power supply is required for the door strike

Door Access Control Connections (Magnetic Lock)

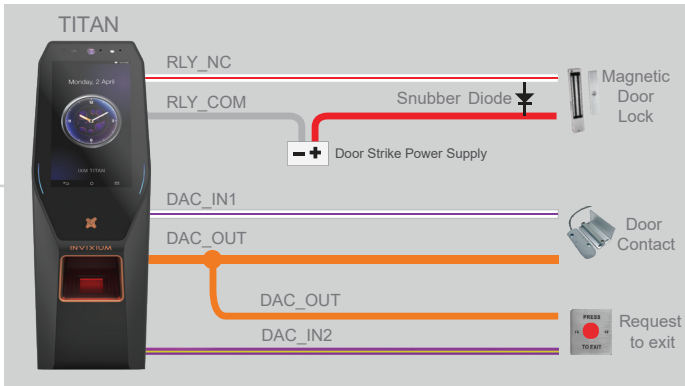


Top Connector DAC

RLY_NC (11)
RLY_COM (13)

Bottom Connector DAC

DAC_IN1 (13)
DAC_IN2 (15)
DAC_OUT (18)



Max Relay rating = 2A @ 24VDC

NOTE: A separate power supply is required for the door strike

Door Access Control Connections (Device Powers Door Strike)

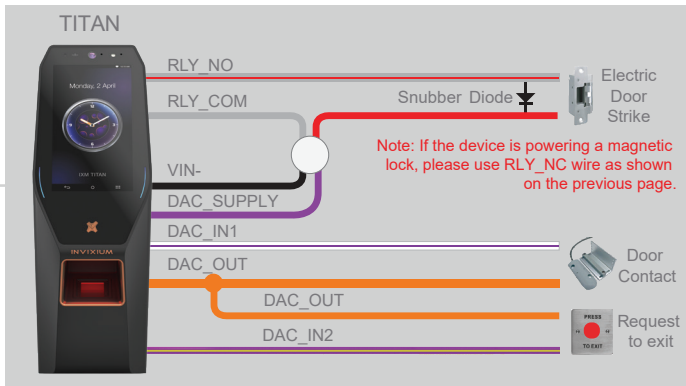


Top Connector DAC

RLY_COM (13)
RLY_NO (15)

Bottom Connector DAC

DAC_SUPPLY (1)
DAC_IN1 (13)
DAC_IN2 (15)
DAC_OUT (18)



Max Relay rating = 2A @ 24VDC

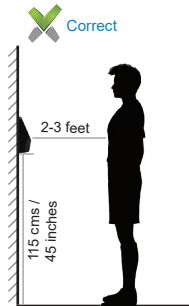
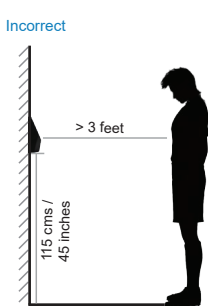
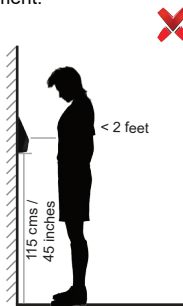
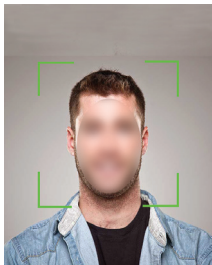
Device can supply 500mA@12V or 250mA@24V

Face Enrollment Best Practices

Invizium recommends standing at a distance of 2 to 3 feet from the device when enrolling a face.

Make sure your entire face is within the frame corners, which will highlight upon correct positioning.

The user should look straight at the camera when enrolling their face. Avoid looking in other directions or turning your head during enrollment.



Fingerprint Enrollment Best Practices

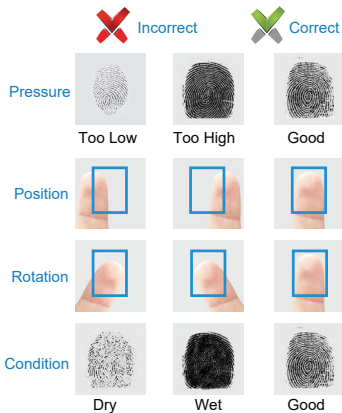
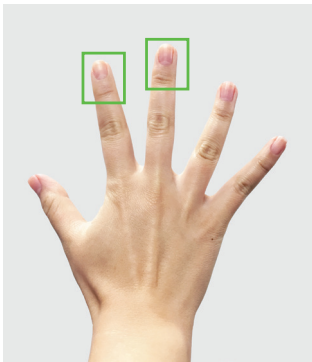
Invixium recommends using the index and middle fingers for enrollment.

Make sure your finger is flat and centered on the sensor scanning area.

The finger should not be at an angle and should be straight when placing on the sensor.

Ensure that the finger is not too dry or too wet. Moisten your finger during enrollment if required.

Preferred Fingers



Finger Vein Enrollment Best Practices

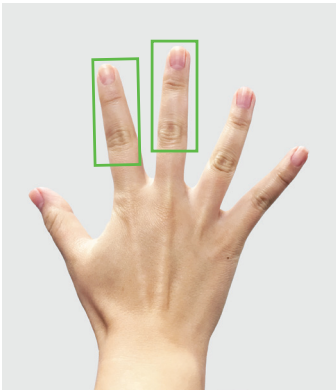
Invizium recommends using the index and middle fingers for enrollment.

Make sure your finger tip is resting on the finger guide at the back of the sensor cavity.

The finger should be completely straight for the best finger vein scan.

Ensure that the finger is not turned or rotated in any direction.

Preferred Fingers



Correct



Incorrect



Finger Placement Best Practices

1. Proper finger placement is crucial for good enrollment score and faster authentication.
2. Place your finger straight on the sensor as shown below, while covering the fingerprint sensor with the top third of your finger as shown on the Fingerprint Enrollment Best Practices page.
3. For the finger vein sensor, place your finger straight so that the tip of your finger is resting on the guide at the far end of the sensor cavity as shown on the Finger Vein Best Practices page.



Incorrect



Correct



Card Placement

1. The location of the card reader on the IXM TITAN is different than the other models.
2. For IXM TITAN, the card reader is placed behind the emblem at the bottom part of the LCD.
3. See below for the correct card placement while using the IXM TITAN.



Note: The card read range may vary depending on the installation environment.

Software Installation

- 1 Go to www.invixium.com >> [IXM WEB](#) >> [Get IXM WEB](#).
- 2 Follow the instructions on the screen. Enter your details and click [submit](#). You will then be sent an email with the latest IXM WEB package.
- 3 [Extract](#) the compressed file and [run](#) IXM WEB.exe. Invixium recommends selecting [Install](#) for easier installation.
- 4 When installation is complete, click [Exit](#). The IXM WEB icon will now be on your desktop.
- 5 Use the [IXM WEB icon](#) to run IXM WEB in your default web browser.
- 6 Contact support@invixium.com in case of any issues.



INGUIDE

This is a Quick Start Guide. For a detailed guide please refer the Invixium Installation Guide.

For technical or customer support issues, please contact your Local Authorized Reseller first.

Visit the Customer Portal for more Invixium resources at www.invixium.com/support



Contact Invixium Support at:



support@invixium.com



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Enjoy the Experience.

Some features may vary based on device models.
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