



INVIXIUM



# IXM TITAN INGUIDE

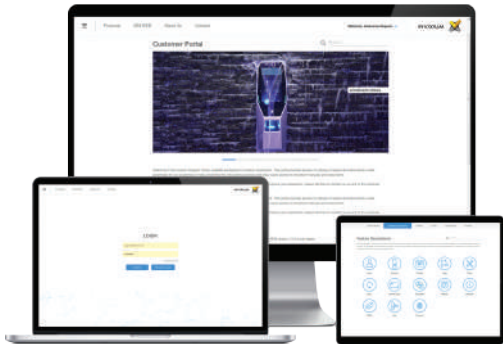
Quick Start Guide

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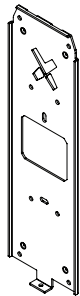
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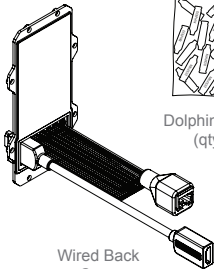


## In the Box

### IXM INSTALL KIT



Metal Mounting  
Plate



Wired Back  
Cover



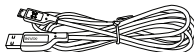
Dolphin Crimps  
(qty 12)



Metal Mounting  
Plate Screw  
(qty 2)



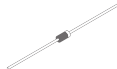
Wall Mounting Screws  
(qty 6)



Micro USB Extension Cable



Hex Key



Snubber Diode



Earth Ground Wire

## Getting Started

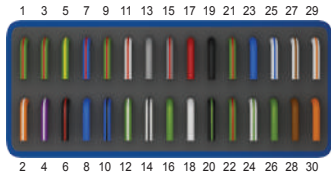
- 1 Remove the Mounting Plate, Wired Back Cover and screws from the IXM INSTALL KIT.
- 2 Install the Mounting Plate at the desired location. IXM recommends 110-115 cms from the floor to the bottom of the device.
- 3 Make the necessary connections to the Wired Back Cover (refer to [Get Wired](#) Pages).
- 4 Unscrew and remove the Temporary Back Cover from the IXM device and connect the Wired Back Cover using the same screws.
- 5 Hang your IXM device on the Mounting Plate and secure it on the bottom with the screw provided.



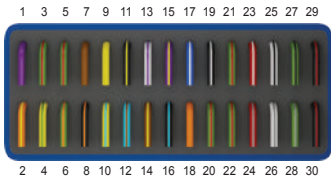
## Get Wired Glossary

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 one of two ways:

1 EGND wire (Green/Yellow) from the Wired Back Plate

or

2 Loose Earth Ground wire direct to the mounting plate using one of the wall mounting screws (as shown). Ensure that the lug is secured tightly for contact between the device and the mounting plate.

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

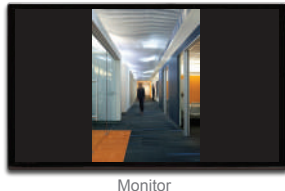
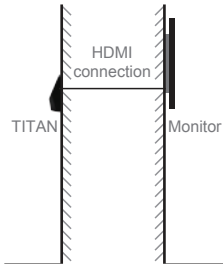
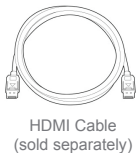
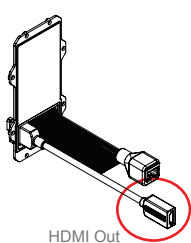




## HDMI Output

TITAN's wired back cover is equipped with an HDMI Out Port that can be used for real time Video Surveillance for standalone installations. When the HDMI out is connected to a monitor via an HDMI cable (sold separately), the monitor screen will show the user the TITAN Field of View when in surveillance mode.

For security purposes, the HDMI cable can be connected to a monitor behind the door i.e. on the inside, to see what is happening on the outside.



## Power, Ethernet and Wi-Fi

Ensure that a regulated, filtered and dedicated power source provides a minimum of 3A @ 12 VDC per device, when using an external power supply. PoE+ connectivity is also available on all TITAN models.

When using PoE+, an IEEE 802.3at compliant Active Midspan Injector is required (sold separately). Refer to table for Invixium recommended PoE Injector specs. Full PoE deployments should include a centralized PoE PSE.

For Ethernet communication, a specific range of allowable IP addresses can be set for improved security.

For Wi-Fi communication on the TITAN, standard 802.11ac protocol is supported. DHCP is enabled as a factory default. WEP, WPA and WPA2 encryption options are available.

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

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



### INVIXIUM 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




## RS-485 Configuration

For RS-485 networks, ensure that IXM devices are wired in a daisy chain configuration, up to a maximum of 31 devices. At a baud rate of 9600 bps, make certain that the maximum cable length is not longer than 1200 m (4000 ft).



R = 120 ohms for Standard RS-485 Cabling  
R = 100 ohms for CAT5/6 Cabling

### Top Connector RS-485

SGND	(6)	
RS-485+	(8)	
RS-485-	(10)	

## Serial Communication and USB

For Serial Communication, IXM devices are 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.



Micro USB Cable



Micro USB OTG Cable  
(sold separately)

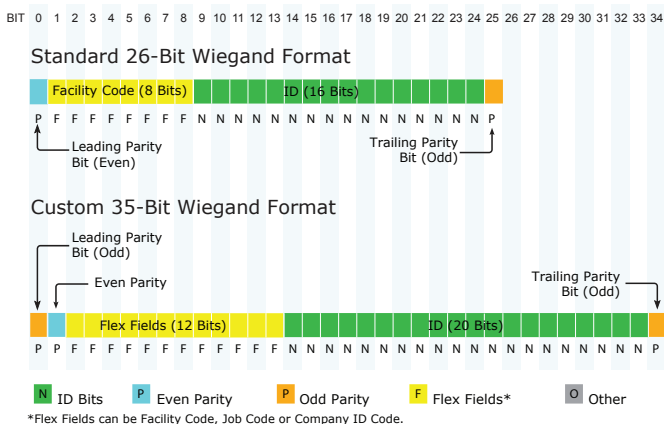


Bottom USB Port

# Wiegand

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.



# Access Control Panel Connections

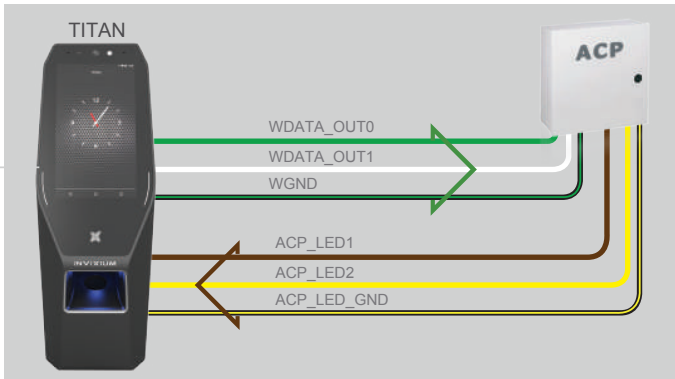


## Top Connector Wiegand

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)

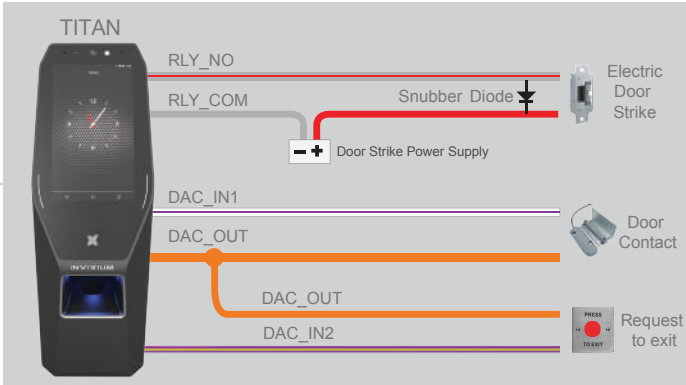


## Top Connector DAC

- 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)

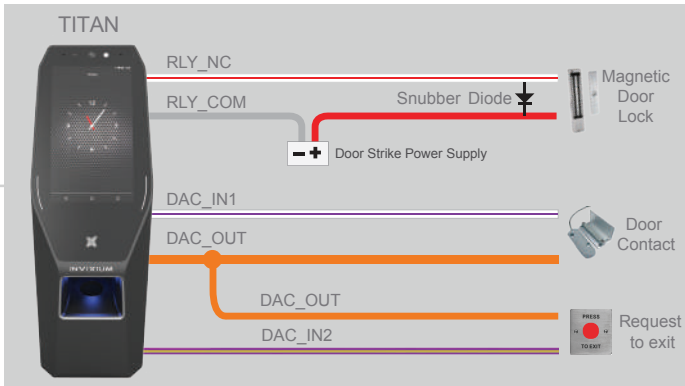


## Top Connector DAC

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)

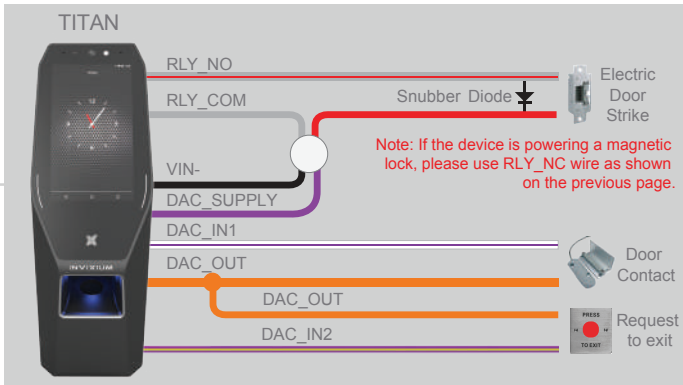


## Top Connector DAC

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

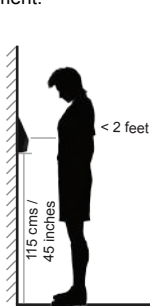
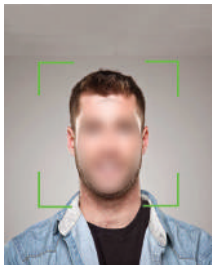
Device can supply 500mA@12V or 250mA@24V

# Face Enrollment Best Practices

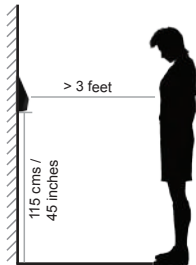
Invizium recommends standing at a distance of 2 to 3 feet from the device when enrolling a face.

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

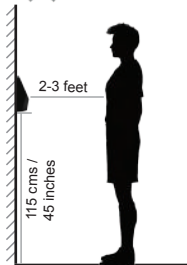
The user should look straight at the camera when enrolling their face. Avoid looking in other directions or turning your head during enrollment.



Incorrect



Correct



# Fingerprint Enrollment Best Practices

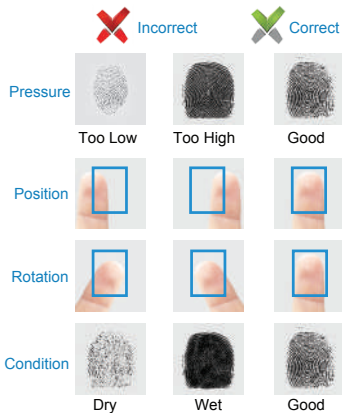
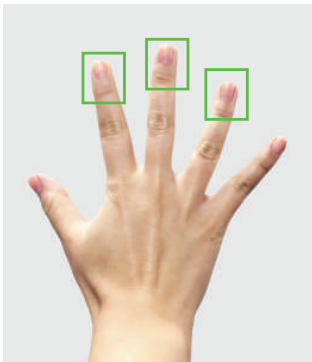
Invixium recommends using the index, middle and ring fingers for enrollment.

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

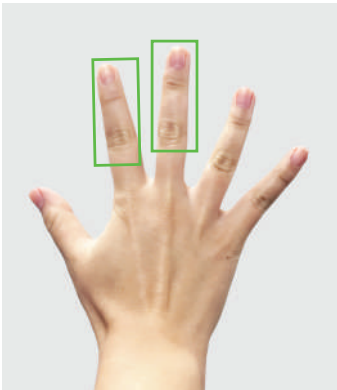
Invizium recommends using the index and middle fingers for enrollment.

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



# 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.



# Software Installation

- 1 Go to [www.invixium.com](http://www.invixium.com) >> IXM WEB >> Get IXM WEB.
- 2 You will be redirected to [ixmweb.invixium.com](http://ixmweb.invixium.com). Click on the IXM WEB Tab. Provide the required details and Click "Submit". An email with the latest IXM WEB package will be sent to the email ID provided.
- 3 Extract the compressed file and run IXM WEB.exe.
- 4 INVIXIUM recommends to select **Install** option for rapid installation.
- 5 When installation is complete, click **Exit**. IXM WEB icon is now on the desktop.
- 6 Run IXM WEB to launch in default web browser.
- 7 Contact [support@invixium.com](mailto: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](http://www.invixium.com/support)



Enjoy the Experience.

Some features may vary based on device models. Copyright © 2019, INVIXIUM. All rights reserved.

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