COSEC DOOR FMX

Quick Start

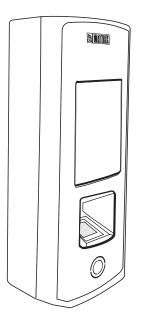**MATRIX**

SECURITY SOLUTIONS

MATRIX COMSEC

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MATRIX

SECURITY SOLUTIONS

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Please read this guide first for correct installation and retain it for future reference. The information in this guide may change from time to time. However, Matrix Comsec reserves the right to make changes in product design and specifications without prior notice.

Copyright
All rights reserved. No part of this document may be copied or reproduced in any form or by any means without the prior written consent of Matrix Comsec.

Warranty
Limited Warranty. Valid only if primary protection is provided, mains supply is within limit and protected, and environment conditions maintained within product specifications. Complete warranty statement is available on our website:
www.MatrixSecuSol.com

FCC Compliance

This device complies with part15 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.

This equipment has been tested and found to comply with the limits of Class A digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
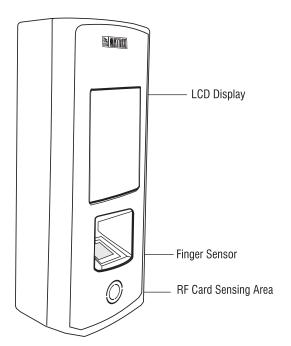
CE RoHS COMPLIANT FCC

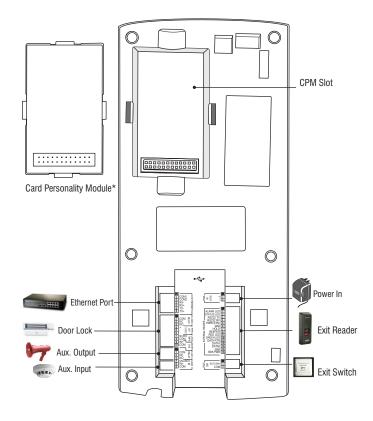### Disposal of Product after End-Of-Life

At the end of product life cycle; batteries, soldered boards, metal components and plastic components must be disposed through recyclers.

If you are unable to dispose-off the products or unable to locate e-waste recyclers, you may return the products to Matrix Return Material Authorization (RMA) department.

Know Your DOOR Controller FMX

COSEC DOOR FMX- Front View

LCD Display

Finger Sensor

RF Card Sensing Area

COSEC DOOR FMX- Rear View

CPM Slot

Card Personality Module*

Ethernet Port

Door Lock

Aux. Output

Aux. Input

Power In

Exit Reader

Exit Switch

* Card Personality Module must be ordered seperately.

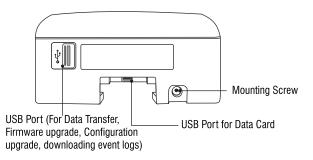| Specification Parameter	Door FMX
	COSEC DOOR FMX10
IN/OUT	
Exit Switch Port	Yes
Door Status Sense	Yes
Door Lock Relay	Form C SPDT Relay output, max 30VDC @ 2A
Door Lock Power	POE:12 VDC@0.5A; Adapter: 12V DC@1A
Aux Input Port	Yes
Aux Output Port	Form C SPDT Relay output, max 30VDC @ 2A

Technical Specifications

Specification Parameter	DOOR FMX
	COSEC DOOR FMX10
General	
Input Power	PoE (IEEE 802.3 af; Max 12W) OR External Power Adapter (12VDC@2A)
User Capacity	50,000
Event Buffer	5,00,000
Credential Supported	Card, Pin & Finger
Cards Supported	EM Prox, HID Prox, HID i-Class and Mifare
Template Capacity	10,000* (1:N mode) and 1,00,000 (1:1 mode)
Display	Touch screen display
USB	USB and Broadband dongle connectivity
Communication Port	Ethernet, Wi-Fi, Mobile Broadband (2G-3G)
Buzzer	Yes
Tamper Detection	Yes
Readers	
Interface	Wiegand and RS-232
Power Output	12V DC at 0.5A
Physical	
Dimensions (LxWxH)	220.0mm x 100.0mm x 56.0mm
Weight	600 g (approx.)
Environmental	
Operating Temperature	0° to 45°C
Humidity Range	5% to 95 % RH Non-Condensing

* 1:1000 in 3 seconds

COSEC DOOR FMX- Bottom View

Mounting Screw

USB Port (For Data Transfer, Firmware upgrade, Configuration upgrade, downloading event logs)

USB Port for Data Card

What Your Package Contains

- COSEC DOOR FMX Unit
- Mounting Plate
- Power Adapter 12V DC, 2 Amp
- Four Screws M 7/30
- Four Screw Grips
- A Threaded Screw M 3x6
- Power Supply Cable with DC jack
- Ethernet Port Cable with RJ45 plug
- Auxiliary Port Cable
- Electromagnetic Lock Cable
- Exit Switch Cable
- Quick Installation Guide
- Warranty Card

Things You Will Need

- A power hand drill
- A wire stripper
- A screw driver set
- Insulation tape
- A Stand-alone Computer with a Web Browser to change the Network Settings of the Door Controller.

Preparing for Installation

Step 1: Select the Location

• Unpack COSEC DOOR FMX and check your package contents.
• Select a Location. It must be a flat surface such as a wall, close to the access point (door).
• You can mount the COSEC DOOR FMX directly to the wall or to an electrical box recessed in the wall (recommended).
• Recommended height from ground level: 4.5 to 5 feet.

⚠ **CAUTION**

Do not install the device:
• In very hot, cold and humid environment temperatures
• Near heating/air conditioning equipment
• In dusty environment
• In direct sunlight
• Under direct light of incandescent or halogen lamps
• Near infra-red radiation emitting equipment
• Where ferromagnetic field or noise is induced
• Near volatile inflammable materials or inflammable goods such as drapes
• Where volatile gas and/or inflammable gas is created

⚡ **WARNING**

• Installation and servicing should be done only by a qualified technician.
• There are no user-serviceable parts inside.
• Opening or removing the device cover may result in electric shock or exposure to other hazards.
• Use this product only for the purpose for which it was designed.

Connecting the Door FMX to COSEC Server

The COSEC Door Controller can communicate with the COSEC Server:

• As a Direct Door

Connecting as a Direct Door

In this type of architecture, you can connect the COSEC Door FMX either directly to the monitoring computer using an Ethernet Crossover/Straight cable or through an Ethernet Switch or hub using standard straight-through Ethernet cables (Figure 9).
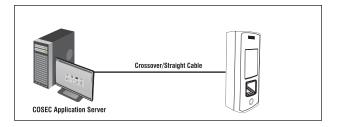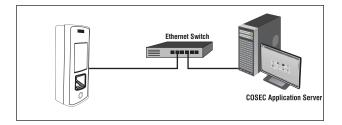

Crossover/Straight Cable

COSEC Application Server

Figure 9: Connecting to the Monitoring Computer

Ethernet Switch

COSEC Application Server

Powering On the Device

Apply Power to the COSEC Door FMX and wait for the reboot cycle to complete.

The Matrix Comsec Logo will appear on the display, with a long beep. The Software Version-Revision, MAC Address, IP Address (default) and Current Date will appear on the LCD of the device.

Make note of the MAC Address. You will need it to connect it to the COSEC monitoring computer.

The COSEC DOOR FMX can be connected to the network over Ethernet, Wi-Fi, or Mobile Broadband.The COSEC DOOR is pre-configured with a default IP address and Subnet Mask.

   Default IP Address: **192.168.50.1**
   Default Subnet Mask: **255.255.255.0**

You need to change the IP Address to connect the Door to the network. You can do this in one of the following ways:
   1. From the DOOR display
   2. From the DOOR Webpage

Step 2: Mounting the Plate

- Place the Mounting Plate on the installation surface.
- Trace out the screw holes on the wall along the holes on the Mounting Plate (Figure 1).
- If required, trace out the rectangular hole of the Mounting Plate.
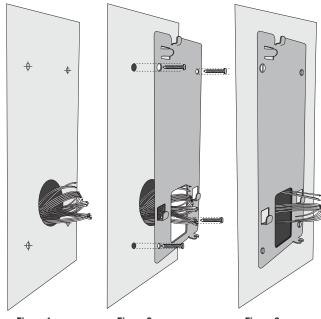- Remove the Mounting Plate.

Figure 1   **Figure 2**   **Figure 3**

- Drill four screw holes along the markings you traced on the wall. Cut out the rectangular hole on the wall.
- Insert the screw grips into the holes you drilled.
- Fix the Mounting Plate on the installation surface with the four supplied screws (Figure 2 and 3).

Step 3: Mounting the Card Personality Module

To access the door controller with card, you must order Matrix COSEC CPM (Card Personality Module) separately.
The module needs to be mounted on the COSEC DOOR FMX prior to starting the wall mounting procedure as shown below.
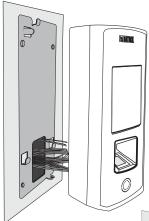

Figure 7

- Match the mounting hooks (A, B, C, D, E) on the plate with the respective mounting slots (1, 2, 3, 4, 5) at the back of the device. Refer Figure 8.

- Tilt the device to allow mounting hook A into slot 1. Straighten the device and then slide it down on the plate.

- Use the M 3x6 screw provided to you to secure the bottom mounting slot on the plate. Match E to 5 as in Figure 8.
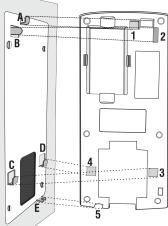
Figure 8

Auxiliary Output

• The Auxiliary output port can be used for activating alarm devices like hooter; energize some devices; control annunciation devices.

• If you are connecting an alarm device like a hooter or an annunciation device, connect the wires from the alarm devices to the 'AUX RELAY' (C3).

Exit Reader

• COSEC DOOR FMX supports external Serial and Wiegand reader.

• Connect a Serial or a Wiegand reader to the 'EXTERNAL READER' terminal (C5).

⚡ **WARNING**

Do not leave unused wires with stripped ends free. Seal them with insulation tape.

Step 5: Mounting the DOOR FMX

• After you have completed all the electrical connections, lead all the cables through the rectangular hole into the electrical box recessed in the wall (Figure 7).

• Mount the COSEC DOOR FMX to the mounting plate fixed on the wall.

[If your wiring is not concealed, lead all the cables through the bottom of the device before you attach it to the Mounting Plate.]

Step 4: Connecting the wires

• If your wiring is from behind the surface/through an electrical box, first draw out sufficient length of the cables from rectangular hole you have cut on the mounting surface.

• Make the electrical connections.

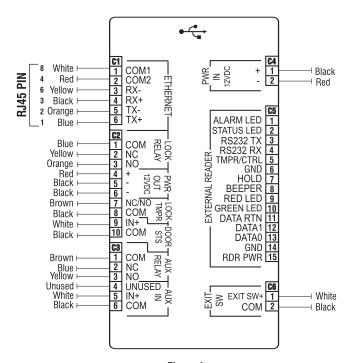• Refer the wire color code mapping for the terminals (Figure 4).

Figure 4

Power

- Insert the power supply cable (2-pin connector with a DC jack on one end) into the power terminal 'PWR In (C4)'. Care must be taken to maintain the correct polarity.
- Connect the power adapter to the DC jack. Plug the adaptor into a power outlet.

> If connecting Matrix PSBB-Universal Mains Power Supply (13.8 VDC@2A) with battery backup to the PWR In terminal, be sure to maintain correct polarity.

⚠ CAUTION

Do not apply Power to the unit until you have completed all the connections.

Ethernet

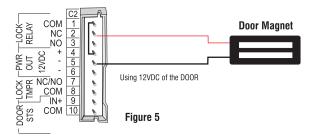- Connect the Ethernet cable (with RJ45 plug at one end) into the 'ETHERNET' terminal (C1).

Door Lock

- Use the electromagnetic door lock cable (10-pin connector at one end and free at the other) to connect a Door Lock to the Door Lock terminal (C2).
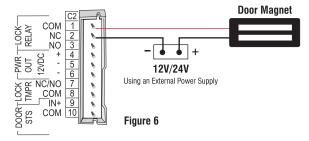
📌 NOTE

- Always use a standard hydraulic door closer to ensure that the door closes automatically after an entry or exit. This is to prevent "door open too long" or "door left open" alarms.

- The NO or NC output can operate DC-powered locking devices like electro-mechanical strikes and magnetic locks. The maximum permitted current is 500 mA @ 12VDC per output.

- If you are using a lock of higher capacity, you must use an external 12/24 VDC power supply, according to the technical specifications of the magnetic lock.

- To use the 12VDC of the Door, short the terminals COM (C2-1) and +ve (C2-4)as shown in figure 5, before connecting the NC/NO and the -ve terminal (C2-5) to the Door lock.

Figure 5

- To connect a lock of higher capacity using external power supply, connect the wires as shown in the figure below, considering the technical specifications of the magnetic lock.

Figure 6

Exit Switch

- If you are using an exit switch to open the door lock, connect the exit switch cable (2-pin connector on one end and free on the other) in the 'EXT SW' terminal (C6).

Auxiliary Input

- If you are connecting a sensor for detecting alarm conditions, connect the wire pair from the sensor device to the auxiliary input port 'AUX' (C3).