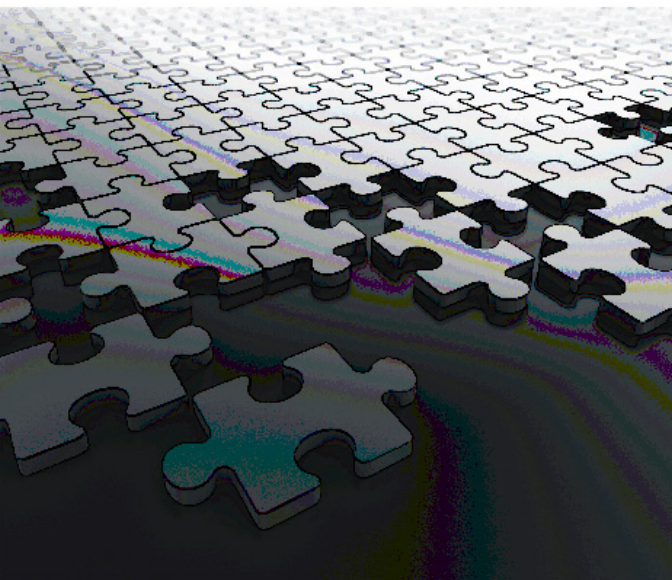


COSEC WIRELESS DOOR

Quick Start





COSEC DOOR FOW/CAW

Door Controller

Quick Start



Introduction

Congratulations on choosing the Matrix COSEC DOOR Controller. This quick start guide is meant to help you in completing the installation of the COSEC DOOR FOW/CAW Hardware components as well as configuring its basic parameters. For detailed information on the installation and configuration of the COSEC system, you may refer the 'COSEC System Manual' a copy of which is available on the CD.

Matrix Comsec reserves the right to change, at any time, without prior notice, the product design, specifications, components, as engineering and manufacturing may warrant.

This is a general documentation for all models/configurations of the product. The product may not support some of the features/facilities described in this document.

While every reasonable effort has been made to ensure accuracy of content in this document, Matrix Comsec assumes no responsibility for errors or omissions that may occur herein. No liability is assumed for damages, costs, expenses resulting from unauthorized modifications or repairs to the product; failure to use information or to comply with the installation, operation and maintenance instructions contained in this document.

Before You Start

Verify Package Content

Unpack the system. Make sure that your package contains all the below items along with the COSEC DOOR Controller. If any item is missing or damaged, please contact the source from where you have purchased the system.

- Board to wire connectors (6 nos.)
- 4 Screws M 7/30
- 4 Screw Grips
- Threaded Screw M 3x6
- Adaptor 12VDC @ 2A
- Mounting Plate.

Know your COSEC Wireless DOOR

The COSEC WIRELESS DOORs can be only configured as DIRECT DOORs and are designed to control a single Door.

The COSEC WIRELESS DOOR connects directly to the COSEC Monitor application.

The COSEC WIRELESS DOOR Controller supports the following options:

- 1 Ethernet communication port
- 2 USB Ports
- LCD display
- 4 LEDs. (Status, Alarm, Allow, Deny)
- 2 Internal Readers
- 1 External Reader port
- 1 Door Relay, 1 Aux input and Aux output port
- Touch sense Keypad
- Door Sense and Exit Switch inputs.

The COSEC DOOR is equipped with multiple reader interfaces to read various credential inputs as provided by the user.

A Door relay port is available to control an access point as also a door sense input to monitor the access point status through a door sense device. The COSEC DOOR Controller is supported with multiple user interfaces like Keypad, multi-color LED, Buzzer and LCD display in addition to the Readers to communicate with user. With input device support this controller can read user credentials from card readers, FP ID from finger print identification modules and PIN code input through the touch sense keypad.

In addition to the above, the COSEC DOOR is designed to support Request for Exit through EXIT switch or through an Exit reader (interfaced through RS232/Wiegand port).

The COSEC DOOR also provides an Aux input and output port. The Aux input port can be used to interface with suitable sensors to detect an alarm condition. The Aux output can be used for activating some alarm devices like hooter, energize some devices or to control some annunciation devices.

The COSEC WIRELESS DOOR Controller can communicate with the COSEC application using any of the following communication options.

1. Ethernet based packet communication using the LAN interface.
2. WiFi communication using the WiFi dongle connected to either of the two USB ports.
3. Broadband communication using the broadband dongle connected to either of the two USB ports.

The Ethernet port uses standard IP address scheme to identify the Controller and they can be changed depending on the site requirement.

The DIP switches on the COSEC WIRELESS DOORS are used to default the various settings on the DOOR as explained in the COSEC System manual. Some PANEL DOORS connected to the PANEL on the Ethernet and others on the RS-485 loop.

Connecting Remote Sites

Mounting and Wiring the COSEC PANEL

Before installing the COSEC DOOR:

The COSEC DOOR has been designed to be mounted on a wall in a single box without any additional enclosure.

Step 1: Unpacking the Door Controller

1. Unpack the COSEC DOOR Controller package. The following items are required to install the door controller:
 - COSEC DOOR Controller with accessory kit (included) as mentioned earlier.
 - Matrix COSEC Door PSBB (13.8VDC @ 2 A Universal Mains PS with Battery Backup) is not included with the package but has to be ordered separately in the event of a requirement for battery backup for the COSEC DOOR.
2. Verify the content for any missing item/part or damaged component. Any missing or damaged item should be reported immediately.

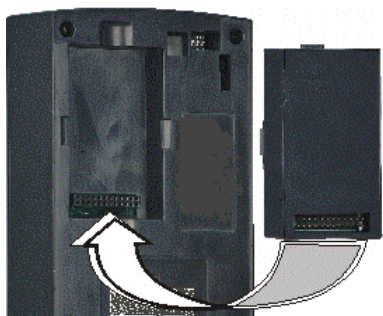
Step 2: Selecting a Mounting Location

The COSEC DOOR Controller should be accessible for ease of installation and maintenance. The DOOR Controller unit has inbuilt readers and thus it is mandatory that it should be installed next to the access point.

Select an ideal location using the following guidelines:

- Stay away from electrical or communication devices:
DOOR Controllers must be located at a minimum distance of:
 - 2 m (6 feet) from any high voltage equipment or wiring (> 230 Volts) and from electrical equipment susceptible of generating electrical interference
 - 1 meter (3 feet) from telephone equipment or lines
 - 8 meters (25 feet) from any transmitting equipment.
- The DOOR Controller should be mounted adjacent to the door providing normal temperature and humidity levels.
- DOOR Controllers should be located adjacent to the controlled door.

In the event of the MATRIX COSEC RF module also being included in the ordered items, the module needs to be mounted on the COSEC DOOR prior to starting the wall mounting procedure.



Step 3: Power Supply

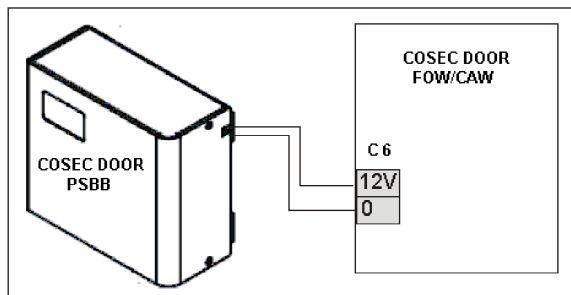
Connect the adapter giving an output of 12VDC @ 1~1.5A to the jack coming from the terminals C6 -1 and 2 on the COSEC DOOR Controller unit.

OR

Connect the two cables coming from the Matrix PSBB-Universal Mains Power supply (13.8 VDC @ 2A) with battery backup to the terminals C6 - 1 and 2 on the COSEC DOOR terminal strip. Care must be taken to maintain the correct polarity.

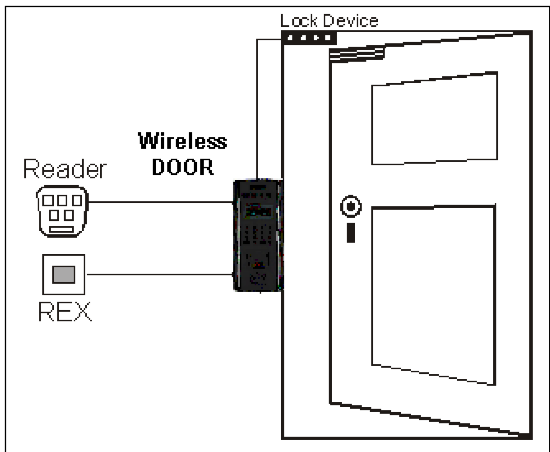


Power should only be applied to the unit when all connections are completed and tested.



Step 4: Installing the COSEC DOOR Unit

The following diagram illustrates a typical door layout:

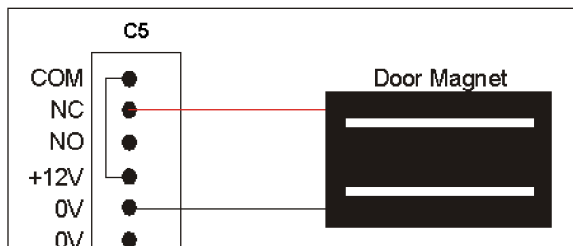


Door closer: A standard hydraulic door closer is almost mandatory to insure that the door closes automatically after an entry or exit and to prevent “door open too long” or “door left open” alarms.

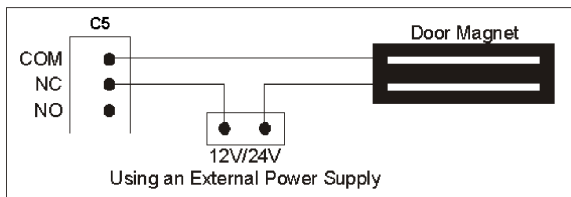
Door contact: When the door is closed, the access controller supervises the door contact and will report a “door forced open” alarm if the door is opened without the use of a card. When the door is opened for a valid credential, the condition of the door contact is still supervised but no alarms are generated.

Step 5: Connecting the Door Locking Device

The lock NO, COM, NC and +12VDC terminals are located at terminal nos. C5 - 1 to 6 on the rear face of COSEC DOOR terminal strip. The locking device output is controlled by the software according to preset parameters for allowing access or unlocking doors according to schedules and access levels. The NO or NC output can operate DC powered locking devices such as electromechanical strikes and Magnetic Locks. The maximum permitted current is 500 mA @ 12VDC per output.

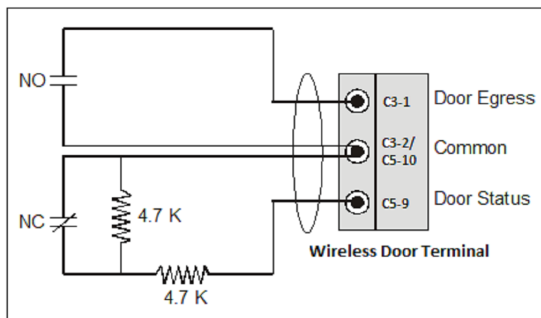


For locks of higher capacity an external 12 / 24 VDC power supply has to be used based on the technical specifications of the magnetic lock.



For using the 12VDC of the Door controller, short the terminals C5 - 1 (COM) and 4 (12+) as shown, prior to connecting the NC/NO and the 0V (terminal C5 - 5) to the Door locking device.

Connecting Inputs

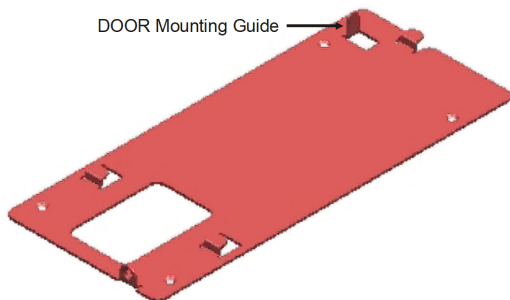


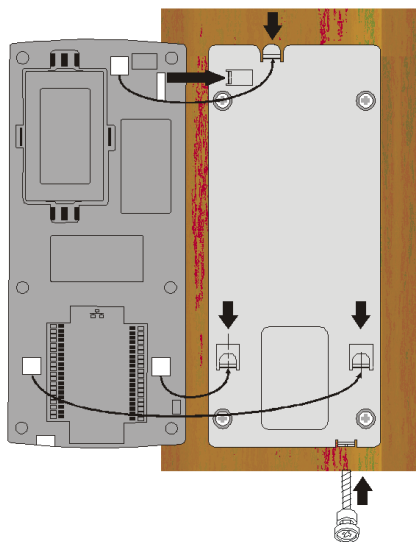
For supervised door status inputs it is necessary to connect the 4.7 K EOL resistors as shown in the above figure. It is not required for non-supervised inputs as you would only need a two state monitoring in this case.

Step 6: Mounting the Door Controller

Once all the connections have been completed it is time to mount the door controller unit next to the access point such as a door or turnstile as mentioned earlier.

Drill holes in the wall for insertion of the screws provided with the door controller. The holes are to be drilled in accordance with the following dimensions of the mounting plate of the Door controller unit.





Place the Mounting plate on the wall and mark the points for drilling holes for the four wall mounting screws M 7/30. Drill a hole of appropriate size and place the nail grips in the holes. Now place the mounting plate on the wall and mount it using the 4 wall mounting screws M 7/30.

The Door Controller unit can now be fixed on to the mounting plate using the matching slots as a guide. A matching slot is also provided on the bottom right of the Door Controller unit and the mounting plate for a screw as shown in the figure.

Place the threaded screw M 3x6 as provided in the package in this slot and tighten the same to fix the Door Controller unit to the mounting plate.

Step 7: Powering up the Door Controller

Once all the connections are checked, power up the Door Controller which in turn will go through the booting process. The LCD display will first display the Matrix logo followed by the firmware version, IP address of the controller and the MAC address of the door controller for a few seconds. Make a note of this address as it will have to be specified in the COSEC application.

Setting the IP address of the WIRELESS DOOR:

The WIRELESS DOORS come preconfigured with a default IP address. The System Engineer would need to connect the WIRELESS DOORS one at a time on the network and configure their IP address as explained in this section. There are two ways to configure the IP settings of the WIRELESS DOOR. From the:

- DOOR display
- DOOR web page

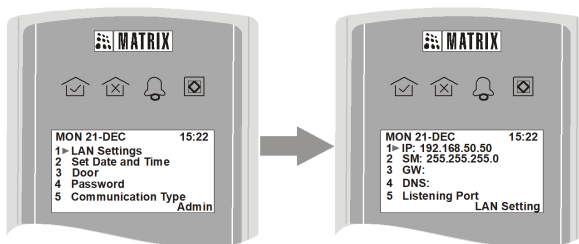
Configuring from the COSEC Wireless DOOR DISPLAY:

When you login for the first time, the system prompts you to set the password for the Admin mode. Enter the desired password in **New Password** and re-enter the same in **Confirm Password**.

The Password set during first login (whether from the Door Display or Web Page) will be applicable to both the logins.

You can access the Admin option on the DOOR using the keypad and display. The Admin option is password protected and gives access to the following administrative functions on the DIRECT DOOR:

To access the Admin functions press the ENT key on the DIRECT DOOR keypad and then press the numeric key 3 or scroll down to the Admin option and press the ENT key. The system prompts for the Admin password. Enter the password set by you. The following display appears.



Select the LAN Settings option by pressing the ENT key at the

above display or pressing the Number key 1. The Wireless DOOR displays the IP settings window.

To change the IP address of the DIRECT DOOR, press the Number key 1 to select the IP option or just press the ENT key. Specify the new IP address to be assigned to the DOOR using the numeric keypad.

Similarly, the administrator can also configure the other network parameters like Gateway, DNS as well as the Server Listening Port settings by selecting the appropriate options from the LAN settings option of the Wireless DOOR.

Configuring from the WIRELESS DOOR Web Page:

The COSEC Wireless DOORs have the following interface options:

- Ethernet
- WI-FI
- Mobile Broadband

The controllers can communicate with the COSEC application on any of the aforementioned interface options. The WIFI or Broadband USB dongle can be inserted into either any one of the USB ports available on the controller for wireless communication.

The COSEC FOW/CAW DOORs come with a pre-wired ethernet connector with the wire to board connector of the C1 terminal. Connect the Ethernet Port of the DOOR to the local network.

When you login for the first time, open the Web Browser in your

computer and enter the IP Address of the door in the address bar of the browser. Press the Enter key on your keyboard.

The Login page appears.

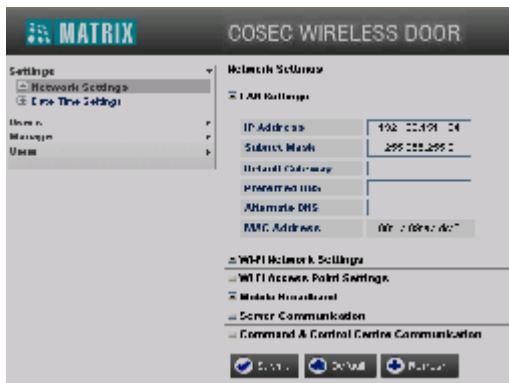
Select the User Name as **Admin** and you need to set the password, hence enter the desired password in **New Password** and re-enter the same in **Confirm Password**. Click Login.



The screenshot displays the login interface for the COSEC WIRELESS DOOR system. At the top, there is a dark header bar with the 'MATRIX' logo on the left and the text 'COSEC WIRELESS DOOR' on the right. Below the header is a white rectangular box containing the login form. The form has three input fields: 'User Name' with a dropdown menu showing 'Admin', 'New Password', and 'Confirm Password'. A blue 'Login' button is positioned at the bottom of the form.

The Password set during first login (whether from the Door Display or Web Page) will be applicable to both the logins.

Click **Network Settings** under **Settings**. The Network Settings page appears.



Take a note of the MAC address of the DOOR from the LAN Settings section as the same needs to be specified while defining the WiFi DOOR in the COSEC Server Application. The user can now edit the Ethernet or Wireless IP settings based on the communication type being used by the DOOR in the right pane of the web page.

In the event of using the Wireless option as the communication interface, expand the WiFi Access Point Settings option. The following section appears. Click on the Search Network button to detect the WiFi networks in the vicinity.

Wi-Fi Access Point Settings

Connection Status
Connected

SSID (Network Name)
linksys

Security Type
WPA2 - personal

Encryption Type
AES

Security Key

+ Search Network

| No. | Select | SSID | Network Type | Signal Strength | Signal Quality |
|-----|----------------------------------|-------------|--------------|-----------------|----------------|
| 01 | <input type="radio"/> | ZXDSL 531B | Open | 60/100 | Strong |
| 02 | <input type="radio"/> | MtpNet3_190 | Secured | 10/100 | Weak |
| 03 | <input checked="" type="radio"/> | linksys | Secured | 52/100 | Moderate |

The following wireless network parameters can be configured from this page:

Click on the radio button against the relevant network to which the COSEC Wireless DOOR is to be connected. This will automatically populate the SSID field with the Network name.

Security Type: Select the authentication type from the drop-down list based on the settings on the Wireless Access Point.

Encryption Type: Select the Encryption type from the drop-down list based on the settings on the Wireless Access Point. The appropriate options will be available based on the Security Type selected.

Security Key: Enter the character string in the field provided. This too has to match the key as set on the Wireless access point.

Now expand the Wi-Fi Network Settings option. The following section appears as shown.

Wi-Fi Network Settings

| | |
|-----------------|-------------------|
| IP Assignment | Static |
| IP Address | 192.168.1.152 |
| Subnet Mask | 255.255.255.0 |
| Default Gateway | |
| Preferred DNS | |
| Alternate DNS | |
| MAC Address | 00:13:13:00:40:d7 |

Select the IP address assignment mode from the drop-down list — Static, Dynamic.

In the event of the Dynamic option the administrator needs to ensure that the DHCP option is enabled in the Wireless Access Point settings.

In the Event of the Static option the administrator can enter the IP address, Subnet Mask, Gateway IP (for WLAN), DNS IP address and Domain name wherever applicable.

Expand the Server Communication option to define the communication settings as shown.

Color code mapping for the Wire-to-Board Connectors

Terminal C2 (External Reader)

| Terminal no. | Wire Color | Connects to |
|--------------|-------------|---------------|
| C2-1 | Violet | Alarm LED |
| C2-2 | Light Brown | Status LED |
| C2-3 | Grey | RS232 Tx |
| C2-4 | Pink | RS232 Rx |
| C2-5 | Light Blue | Tamper |
| C2-6 | White-Red | COM |
| C2-7 | Blue | Hold |
| C2-8 | Yellow | Beeper |
| C2-9 | Brown | Red LED |
| C2-10 | Orange | Green LED |
| C2-11 | White Blue | DATA RTN |
| C2-12 | White | Weigand Data1 |
| C2-13 | Green | Weigand Data0 |

| Terminal no. | Wire Color | Connects to |
|---------------------|-------------------|--------------------|
| C2-14 | Black | Ground |
| C2-15 | Red | Reader Power |

Terminal C3

| Terminal no. | Wire Color | Connects to |
|---------------------|-------------------|--------------------|
| C3-1 | White | Exit Switch IN+ |
| C3-2 | Black | COM |

Terminal C4

| Terminal no. | Wire Color | Connects to |
|---------------------|-------------------|--------------------|
| C4-1 | Brown | AUX Relay COM |
| C4-2 | Blue | AUX Relay NC |
| C4-3 | Yellow | AUX Relay NO |
| C4-4 | NA | Unused |

| Terminal no. | Wire Color | Connects to |
|---------------------|-------------------|--------------------|
| C4-5 | White | AUX IN+ |
| C4-6 | Black | COM |

Terminal C5

| Terminal no. | Wire Color | Connects to |
|---------------------|-------------------|--------------------|
| C5-1 | Blue | COM |
| C5-2 | Yellow | NC |
| C5-3 | Orange | NO |
| C5-4 | Red | Power Out + |
| C5-5 | Black | Power Out - |
| C5-6 | Black | Power Out - |
| C5-7 | Brown | Lock Tamper IN+ |
| C5-8 | Black | COM |
| C5-9 | White | Door Status IN+ |
| C5-10 | Black | COM |



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