



While adopting progressive HR structures and policies such as flexible work hours, open seating and work from home, most organizations struggle to secure assets and safeguard people. Invariably, their traditional access control solution surfaces as one of the bottlenecks. The outdated access control solution was never designed to cater to today's needs.

Introducing Matrix COSEC - a range of Access Control solutions specifically designed for modern organizations to offer unprecedented security, safety, flexibility and simplicity. COSEC offers access control on all the three dimensions - user, zone and time by answering the three fundamental security questions - Who, Where, and When. Designed on cutting-edge open networking and computing technologies such as 32-bit RISC, IP, PoE, Mobile, Face Recognition and Deep Learning, COSEC offers new-age people identification methods, a wide range of access control features, reliability, integration and scalability.

Matrix COSEC is ideal for all organizations including offices, laboratories, clinics, retail outlets, factories, warehouses, malls, schools, colleges, gyms, clubs, etc. and for a diverse industries such as IT, BFSI, Consulting, Pharma, Healthcare, Hospitality, Education, Manufacturing, Transportation, Government and Defence.

## ADVANTAGES

-  RFID Cards and PIN
-  Fingerprint and Face Recognition
-  Mobile as Your Identity
-  IP, Ethernet/CAT6 with PoE+
-  Flexible Access Policies
-  25+ Access Control Features
-  Web based Configuration
-  Panels, Controllers and Readers
-  Simple to Deploy and Use

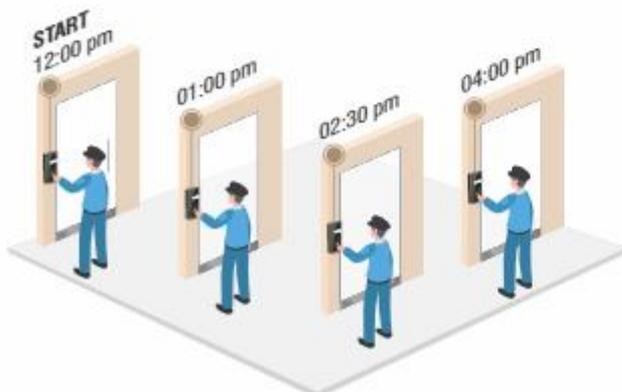
## WHY MATRIX ACCESS CONTROL?

-  **New-age Credentials**  
Face Recognition, Fingerprint, Palm Vein, Mobile, RFID Cards
-  **Third-Party Readers on Wiegand**  
Choose 3rd Party Readers; Reuse Existing Readers
-  **Event Log**  
Records 500,000 Entry/Exit Events
-  **IP Technology**  
Eliminate Proprietary and Bulky Cabling
-  **Plug and Play**  
Simple to Install and Manage; Built-in Web Server; No Software Needed
-  **Alerts and Notifications**  
Email and SMS in Real-time
-  **PoE+ Panels and Controllers**  
Common CAT6 for Networking and Power for Controllers, Readers and Locks
-  **Universal Connectivity**  
Ethernet, Wi-Fi, Wiegand, RS-485, RS-232 and 3G/4G/LTE
-  **Backup-Restore Configuration and Events**  
Protection against Disasters
-  **Scalable**  
1 to 255 Doors from a Single Panel
-  **Highly Secure Communication**  
SSL Encryption
-  **IP65 Readers with Tamper Detection**  
All-weather Outdoor Applications

## 25+ ACCESS CONTROL FEATURES

Matrix COSEC is a comprehensive Access Control solution with advanced access control features designed to meet diverse applications.

- Zone Specific Access**  
User can enter only designated zones.
- Access Mode**  
Control entry with a single or a combination of user credentials.
- Access Level**  
Allow or restrict users based on their roles or levels.
- VIP Access**  
A user with VIP Access can enter any controlled area.
- First-in User Rule**  
Normal users are allowed only after the designated first-in user has entered.
- 2-Person Rule**  
Stops one individual to enter high-security area alone. Allows two people (from a predefined group) together if they enter within specified duration.
- Guard Tour**  
Requires security guards to show their credentials at sequential checkpoints at specified time periods.
- Centralized Monitoring and Control**  
Live status of all the controllers, alarms, input-output ports at one place. Also, control doors, alarms and user credentials from a central location.
- Dead-man Zone**  
Registers user's presence periodically to confirm the user is present and active. Ensures safety of an employee working in a hazardous environment.
- Anti-passback**  
Prevents second entry for a user until the user has exited to eliminate multiple entries using one user's credentials.
- Do Not Disturb (DND) Zone**  
Stops anyone entering a Do Not Disturb zone. Useful for private offices, meeting-conference rooms.
- Access Route**  
Forces users to follow predefined path to reach their destination. Prevents loitering or jaywalking.
- Occupancy Control**  
Control the number of users allowed to enter a zone.
- Smart Identification**  
Stores users' credentials on the smart card (RF). COSEC first reads the user's credentials from the card and then prompts the user to show credentials.
- Blocked User**  
Suspend a user's access rights for a defined period.
- Time Stamping**  
Trigger video surveillance to take a snapshot of the person while accessing a door. Generate reports with such photographs.
- Who's-In**  
Allows security or admin to determine the users present inside a zone or building.
- Input-Output Linking**  
COSEC supports an additional layer of automated security by activating a designated output port or sending a notification when triggered by a pre-configured input or an event.



### Mantrap

Many applications require arranging two or more doors in a proximity sequence to prevent direct air passage. The second door opens only after the first door has completely closed.

### Door Interlocking

Matrix COSEC offers user-programmable flexible interlocking logic for multiple doors to meet complex, industry-specific needs such as R&D, pharma labs, semiconductor foundries, chemical plants, etc.

### Elevator Access Control

Integrate Matrix COSEC with any existing elevator by installing COSEC readers in the elevator and wiring floor-specific keys through the COSEC IO controller. COSEC grants or denies access to a floor based on the user's access rights.

## ACCESS CONTROL ARCHITECTURE

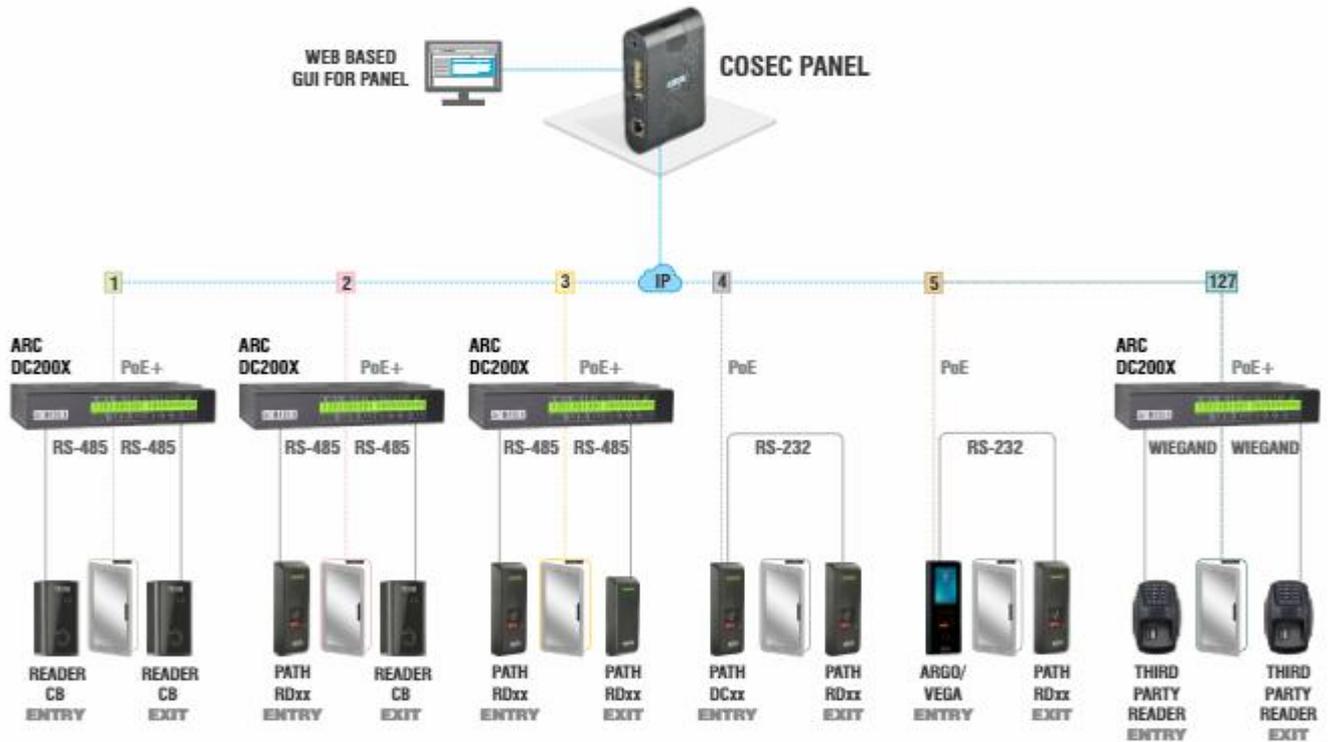
Matrix COSEC offers intuitive and low-touch access to all the users. Mobile-as-Identity and biometric credentials (face recognition and fingerprint) take security and ease of use to the next orbit. As shown in the picture below, A typical access control solution consists of:

**PANEL:** One Site Controller for Every Building or Location up to 255 Doors

**ARC DCxx:** One Controller For Every 2 Readers

**READERS:** For Every Entry and Exit (Optional)

As shown in the picture, controllers with built-in readers (such as ARGO, VEGA, and PATH DCxx) can also be deployed in conjunction with ARC DCxx and READERS.



**READER CB:** BLUETOOTH + RF CARD (MIFARE Classic<sup>®</sup>/EM PROX/iCLASS)

**PATH RDxx:** FINGERPRINT + RF CARD (MIFARE Classic<sup>®</sup>/EM PROX/iCLASS)

**ARGO:** FINGERPRINT + PIN + BLUETOOTH + RF CARD (MIFARE Classic<sup>®</sup>/EM PROX/iCLASS)

**VEGA:** FACE + FINGERPRINT + PIN + BLUETOOTH + RF CARD (MIFARE Classic<sup>®</sup>/EM PROX/iCLASS)

**PATH DCxx:** FINGERPRINT + BLUETOOTH + RF CARD (MIFARE Classic<sup>®</sup>/EM PROX/iCLASS/HID PROX)

## USE CASE 1: ONE-WAY ACCESS CONTROL

One-way access control permits entry to only authorized users but allows everyone to exit. One-way access control solution requires a COSEC reader at the entrance and a push-button switch at the exit.



## USE CASE 2: TWO-WAY ACCESS CONTROL

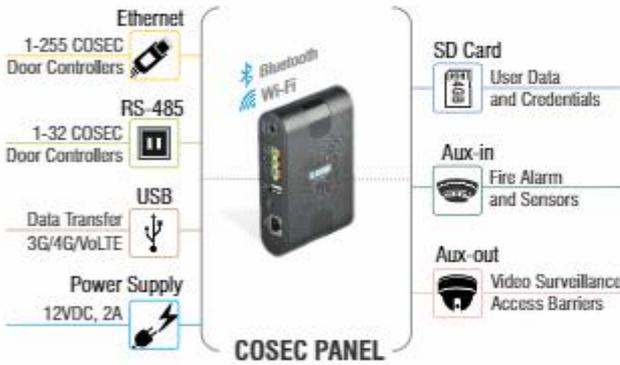
Two-way access control allows entry and exit only to authorized users. Two-way access control solution requires two readers for every door - one to control entry and the second to control exit.



CONNECTIVITY OPTIONS FOR READERS: • COSEC READER - RS-232/RS-485 • THIRD-PARTY READER - WIEGAND

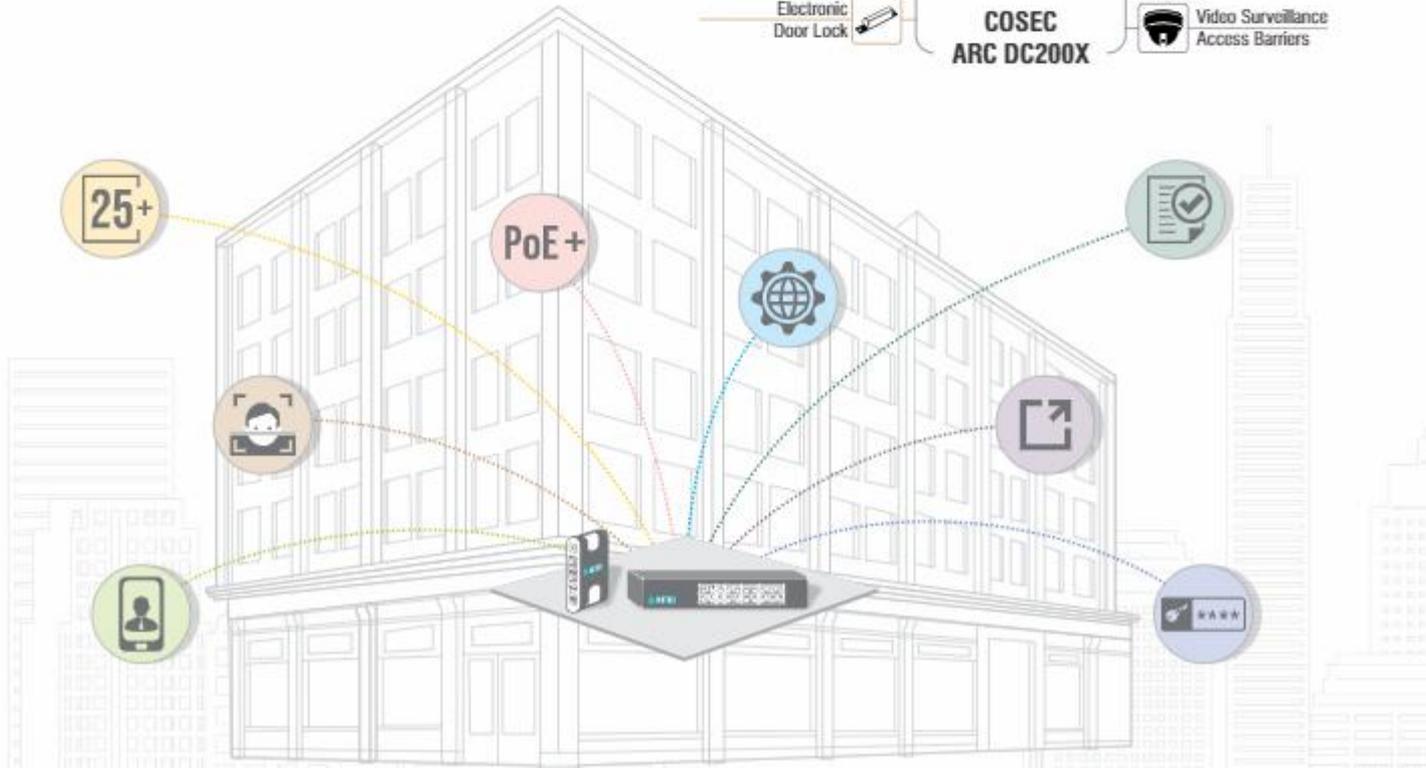
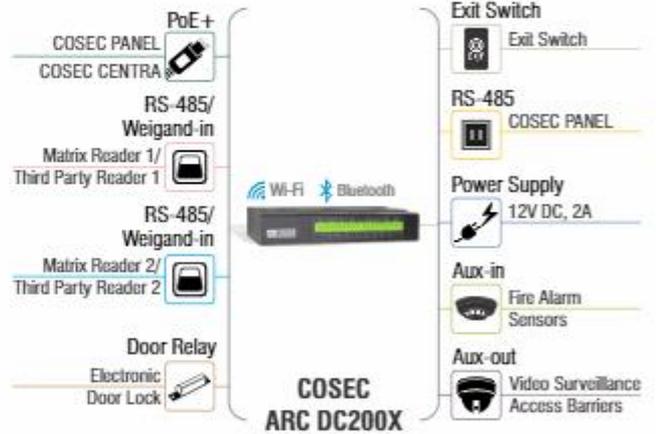
## COSEC PANEL

COSEC PANEL is a site controller capable of managing 1 to 255 doors; 1 to 25,000 users and offers 25+ advanced access control features. It is an embedded web server based on 32-bit RISC processor.



## COSEC ARC DC200X

COSEC ARC DC200X is a door controller designed on distributed "Core-to-Door IP" technology leveraging the industry-standard CAT6 cabling for both - communication and power. ARC eliminates the outdated proprietary bulky cabling from panel to every reader. With built-in Bluetooth, the ARC DC200P offers "Mobile as Your Identity" even with 3rd party readers not capable of Bluetooth or mobile. ARC DC200S does not support Wi-Fi and Bluetooth.



## COSEC ACS: MOBILE APP

COSEC ACS mobile app allows users to use their mobile phones as their identity by eliminating the need to carry RF cards. You simply shake your mobile phone in front of the door. COSEC ACS communicates with the COSEC device at the door over Bluetooth and recognizes you by matching IMEI of the mobile with the one already registered at the time of user enrollment.



## ACCESS CONTROL COMPONENTS



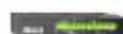
### COSEC PANEL:

IP Panel with Built-in Wi-Fi, Bluetooth and Web Server for 255 Doors with 255 Entry and Exit Readers. Or 255 Doors with 255 Readers and 255 Exit Switches. Supports 25,000 Users and 500,000 Events.



### COSEC PATH:

IP Door Controller for Fingerprint, Card and BLE with PoE, Wi-Fi, Bluetooth, RS-485, Wiegand, IP65 and 9,600 Fingerprint Templates. Supports HID iCLASS or HID Prox or MIFARE® DESFire®/NFC or EM Prox.



### COSEC ARC DC200P:

IP Door Controller for 2 Doors with Interfaces for 2 Readers, 2 Exit Switches and 2 Door Relays. With PoE+, Wi-Fi and Bluetooth.



### COSEC CPMXXX and VEGA CPMXXX:

Card Personality Module for READER CB or VEGA respectively. Separate Variants for HID iCLASS, HID Prox, MIFARE® DESFire®/NFC and EM Prox.



### COSEC ARGO:

IP Door Controller with 3.5" LCD, Fingerprint Reader and Card Reader, PoE, Wi-Fi, Bluetooth, RS-232, Wiegand, IK8, IP65 and 25,000 Fingerprint Templates. Supports HID iCLASS or HID Prox or MIFARE® DESFire®/NFC or EM Prox.



### COSEC READER CB:

Card and Bluetooth Reader with Wiegand, RS-232 and RS-485. Card Personality Module Required to Support HID iCLASS or HID Prox or MIFARE® DESFire®/NFC or EM Prox.



### COSEC VEGA:

IP Door Controller for Fingerprint, Card, PIN and BLE with 3.5" LCD, PoE, Wi-Fi, Bluetooth, RS-232, Wiegand, IP65 and 9,600 Fingerprint Templates. VEGA Card Personality Module Required to Support HID iCLASS or HID Prox or MIFARE® DESFire®/NFC or EM Prox.



### COSEC PATH RDX:

Fingerprint and Card Reader with RS-232, RS-485 and IP65. Supports HID iCLASS or HID Prox or MIFARE® DESFire®/NFC or EM Prox.

## ACCESS CONTROL KITS

SR. NO.	KIT NAME	DESCRIPTION	PANEL	ARC DC200S	READER CB	CPM MIFARE Classic® SMART	PATH RDFM
1	ACS2DCM	2-Door Access Control Kit with Two Readers for MIFARE® DESFire® Cards	1	1	2	2	-
2	ACS4DCM	4-Door Access Control Kit with Four Readers for MIFARE® DESFire® Cards	1	2	4	4	-
3	ACS8DCM	8-Door Access Control Kit with Eight Readers for MIFARE® DESFire® Cards	1	4	8	8	-
4	ACS2DFP	2-Door Access Control Kit with Two Readers for Fingerprint and MIFARE® DESFire® Cards	1	1	-	-	2
5	ACS4DFP	4-Door Access Control Kit with Four Readers for Fingerprint and MIFARE® DESFire® Cards	1	2	-	-	4
6	ACS8DFP	8-Door Access Control Kit with Eight Readers for Fingerprint and MIFARE® DESFire® Cards	1	4	-	-	8

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## MATRIX NETWORK



## MATRIX CUSTOMERS

### MANUFACTURING

- Adani Infrastructure
- L&T Limited
- Linde Engineering
- TATA Steel
- Reliance Industries
- Tyco Electronics
- Selorge Limited
- AIA Engineering
- Gujarat Ambuja Exports
- Aujan, KSA
- Al Khodari, KSA

### BFSI

- State Bank of India
- Reserve Bank of India
- Gruh Finance
- Mahindra & Mahindra
- Shriram Finance

### EDUCATIONAL INSTITUTE

- British School
- MIT College
- Presidency Group of Colleges
- Indian Institute of Science
- Rishikul Vidyapeeth

### GOVERNMENT

- Indian Air Force
- Ministry of Interiors, KSA
- BHEL
- Power Grid
- AP Police
- Jeevika Development Society
- Dubai Statistics Center

### HEALTHCARE

- Gold's Gym
- Fortis Memorial
- Dr. Reddy's Foundation
- Apollo Health & Lifestyle
- CIIGMA
- VIVA Gym, South Africa

### IT

- Wipro
- Tata Consultancy Services
- Risk Management Solutions
- Infoc Capital Ltd.
- YOU Telecom and Broadband

### CONSTRUCTION

- Rustomjee Group
- Raheja Atlantis
- Shapoorji & Palanji
- Sterling & Wilson
- AFCONS Construction

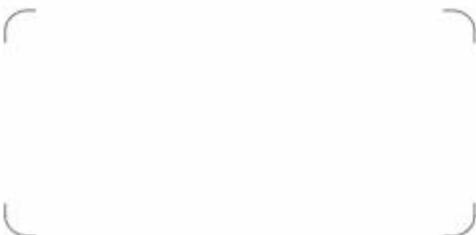
### OTHER SECTORS

- Khimji Ramdas, Oman
- TCI Express
- Big Bazaar
- Burger King
- FedEx

## ABOUT MATRIX

Established in 1991, Matrix is a leader in Security and Telecom solutions for modern businesses and enterprises. As an innovative, technology-driven and customer-focused organization, the company is committed to keeping pace with the revolutions in the Security and Telecom industries. With around 40% of its human resources dedicated to the development of new products, Matrix has launched cutting-edge products like Video Surveillance Systems - Video Management System, Network Video Recorder and IP Camera, Access Control and Time-Attendance systems as well as Telecom solutions such as Unified Communications, IP-PBX, Universal Gateways, VoIP and GSM Gateways and Communication Endpoints. These solutions are feature-rich, reliable and conform to international standards. Having global footprints in Asia, Europe, North America, South America, and Africa through an extensive network of more than 2,500 channel partners, Matrix ensures that the products serve the needs of its customers faster and longer. Matrix has gained trust and admiration of customers representing the entire spectrum of industries. Matrix has won many international awards for its innovative products.

For further information, please contact:



## SECURITY SOLUTIONS

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