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# Matrix Access Control Solution

New-age Access Control Solutions for Modern Organizations





# **Why Matrix Access Control?**



# Why Access Control? Security



Material and  
Inventory



Portable  
Equipment &  
Machinery



Cash and Precious  
Metals



Data and IT

```
1 export default class TodoList extends Component {  
2   state = { todos: [], text: '' };  
3   setText = e => {  
4     this.setState({ text: e.target.value });  
5   }  
6   addTodo = () => {  
7     let { todos, text } = this.state;  
8     todos = todos.concat([ text ]);  
9     this.setState({ todos, text: '' });  
10  };  
11  render() {  
12    return (  
13      <form onSubmit={this.addTodo} action="" javascript:"">  
14        <input value={text} onChange={this.setText} />  
15        <button type="submit">Add /button</>  
16      )  
17      { todos.map( todo => (  
18        <li {todo.text} /li>  
19      ) ) }  
20    </ul>  
21    </form>  
22  )  
23 }
```

Intellectual Property: Software, Documents,  
Designs, Formulae, etc.



# Why Access Control? Safety of People

- Field/Remote/Secluded Offices
- Sensitive Operations
- Hazardous Areas
- Break-Ins; Robberies
- Accidents, etc.





# Why Access Control? Control and Response



Users:  
Who has  
Access to  
Defined  
Area



Locations:  
Where  
Location/  
Premise is  
Accessible



Time:  
When to  
Access  
Specific Area



Response:  
How  
Notifications  
and Alerts  
get  
Triggered



# Why Access Control? Productivity



Schedule  
Entry-Exit as per  
Opening/Closing  
Hours



Plan Manpower  
Availability (Who,  
Where and When)



Trace People and  
their Whereabouts  
(Gym, Cafeteria,  
etc.)



Control  
Occupancy



# Why Access Control? Compliance

- Hazardous Area
- Process Compliance
- Security Compliance







# **MATRIX COSEC ACS Introduction and Differentiators**

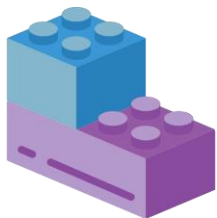


# Matrix ACS Introduction

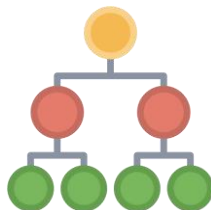
- End-to-End Access Control Solution (Panel, Controllers, Readers, etc.)
- RFID Cards, Fingerprint, Face and Mobile as User Credentials
- Distributed Architecture on Ethernet, CAT6 and PoE+
- Simple to Deploy and Use
- Flexible Access Policies
- 25+ Access Control Features
- Web based Configuration (Server PC or Software Not Required)
- Open Integration



# Matrix ACS Differentiators: Single-Source Solution



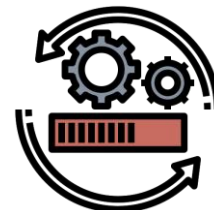
Matrix Offers All  
ACS Building  
Blocks



Panels, Controllers,  
Readers, Software,  
Apps



Tighter Integration



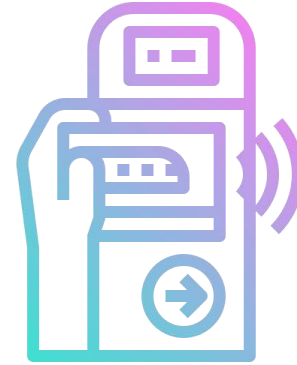
Seamless  
Interoperation



# Matrix ACS Differentiators: New-age RF Card Credentials



Proximity



Smart Card



# Matrix ACS Differentiators: New-age Mobile Credentials



Mobile PIN



Mobile Face  
Recognition



Mobile BLE



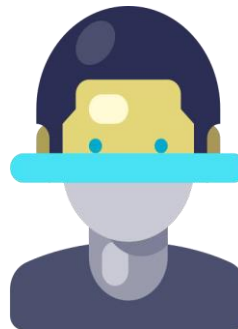
Mobile QR Code



# Matrix ACS Differentiators: New-age Biometric Credentials



Fingerprint



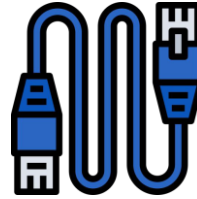
Face Recognition



# Matrix ACS Differentiators: Core-to-Door IP Technology



IP Networking



Universal CAT6  
Structured Cabling



Zero Maintenance  
and Higher Uptime



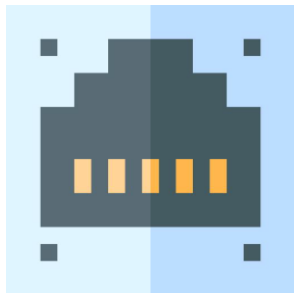
Lower Cost



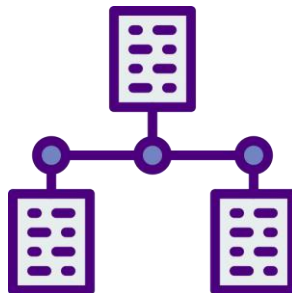
Standardization  
of Infrastructure  
and Skills



# Matrix ACS Differentiators: Multiple Connectivity Options



Panel to  
Controllers:  
Ethernet with PoE+  
and RS-485



Controllers to Readers:  
Wiegand, RS-485 and  
RS-232



External Wifi, BLE  
or 3G/4G USB  
Dongle



# Matrix ACS Differentiators: PoE+ Panels and Controllers

- PoE+ for Panel, Controllers, Readers and Locks
- Centralized Power Supply and UPS
- Eliminate Separate Power Supply Cabling
- Quick Installation
- Industry-Standard Infrastructure
- Lower Cost
- Lower Maintenance
- Higher Uptime



# Matrix ACS Differentiators: Support for Third-Party Readers

- Industry-Standard Wiegand Interface for Third-party Readers
- New Installations: Flexibility to Choose Third-Party Readers
- Upgrades and Expansion: Reuse Existing Readers to Protect Investment
- Flexibility to Deploy Cards, Face, Fingerprint and Mobile Credentials
- No Need to Change Cards or Re-Enroll All Users
- Coexistence of Third-Party and Matrix Readers
- Easy Migration to Matrix ACS





# Matrix ACS Differentiators: Plug-and-Play

- Standard, Simple CAT6 Cabling
- No Need for Power Supply Cabling
- Power and UPS through PoE Switches
- No Server PC or Software Installation
- Easy Simple Web Configuration
- Auto Search Controllers and Readers
- Automatic Distribution of User Credentials
- Lower Installation Time and Cost
- Intuitive and Easy Configuration



# Matrix ACS Differentiators: Encrypted Communication



SSL based  
Encryption



Snoop-Proof and  
Hack-Proof



Higher Security



# Matrix ACS Differentiators: Events Management

- 500,000 Entry/Exit Events Log
- Events View and Download Options
- Automatic and Manual Backup Options
- Events Backup and Restore
- Backup over FTP
- Easy and Quick Analysis
- Security of Events Data

## In Out Event Report

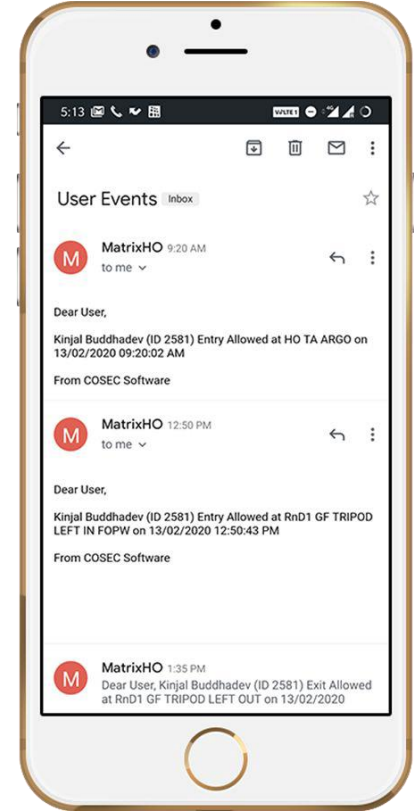
This report generates a list of all entry and exit events of the selected users.

Matrix Comsec Pvt. Ltd.					Page 1 of 270
User-Wise In/Out Event from 01/07/2013 00:00 to 31/07/2013 23:59					
Run by: System Admin			Date: 7/10/2013 10:03		
Sr No	Date	Time	Type	Panel/Door	Special Function
1 SALIM ANSARI					
1.	02/07/2013	08:29	IN	Factory Panel-Production 1	
2	02/07/2013	12:20	IN	Factory Panel-Production- 2	
3	02/07/2013	15:13	IN	Factory Panel-Production- 2	
4	02/07/2013	15:22	IN	Factory Panel-Production- 2	
5	02/07/2013	17:02	IN	Factory Panel-Production- 2	
6	03/07/2013	08:28	IN	Factory Panel-Production- 2	
7	03/07/2013	12:09	IN	Factory Panel-Production 1	
8	03/07/2013	12:34	IN	Factory Panel-Production 1	
9	03/07/2013	15:00	OUT	Factory Panel-Production 1	Short Leave - OUT
10	04/07/2013	08:29	IN	Factory Panel-Production 1	
11	04/07/2013	12:09	IN	Factory Panel-Production 1	
12	04/07/2013	12:35	IN	Factory Panel-Production 1	
13	04/07/2013	17:03	IN	Factory Panel-Production 1	
14	05/07/2013	08:27	IN	Factory Panel-Production 1	
15	05/07/2013	12:17	IN	Factory Panel-Production 1	
16	05/07/2013	12:36	IN	Factory Panel-Production 1	
17	05/07/2013	17:02	IN	Factory Panel-Production 1	
18	06/07/2013	08:31	IN	Factory Panel-Production 1	
19	06/07/2013	12:10	IN	Factory Panel-Production 1	
20	06/07/2013	12:33	IN	Factory Panel-Production 1	
21	06/07/2013	16:03	IN	Factory Panel-Production 1	
22	08/07/2013	08:33	IN	Factory Panel-Production 1	
23	08/07/2013	12:27	IN	Factory Panel-Production 1	
24	08/07/2013	17:04	IN	Factory Panel-Production 1	
25	09/07/2013	08:29	IN	Factory Panel-Production 1	



# Matrix ACS Differentiators: Alerts and Notifications

- Comprehensive and Programmable Alerts and Notifications
- Entry-Exit Events
- Access Violations and Exceptions
- Device Failures, etc.
- Notifications through Emails and SMS
- Quick Response to Security Violations and Exceptions





# Matrix ACS Differentiators: Configuration Management

- Use Any Web Browser for System Configuration
- Configuration Backup
- Automatic and Manual Backup Options
- External Modem or Telephone/GSM Connection Not Needed
- Easy and Quick Configuration Restore
- Security of Configuration Data
- Compliance for Mission-Critical Applications

## Panel Report

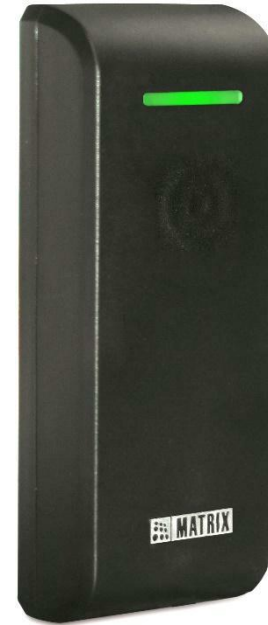
The COSEC system enables the user to extract a detailed listing of the configured Panel as shown in following reports.

Matrix Comsec Pvt. Ltd.								Page 1 of 1
Panel								
Run by: System Admin				Date: 7/10/2013				15:06
Sr No	ID	Name	IP Address	Subnet Mask	MAC Address	Working Hrs	Break Hrs	Status
1	3	HQ Panel (1st)	192.168.50.202	255.255.255.0	00:1b:59:00:99:08	00:00-23:59	13:00-14:00	Active
2	4	Factory Panel	192.168.10.10	255.255.255.0	00:1b:09:aa:58:b8	00:00-23:59	13:00-14:00	Active



# Matrix ACS Differentiators: IP65 Readers

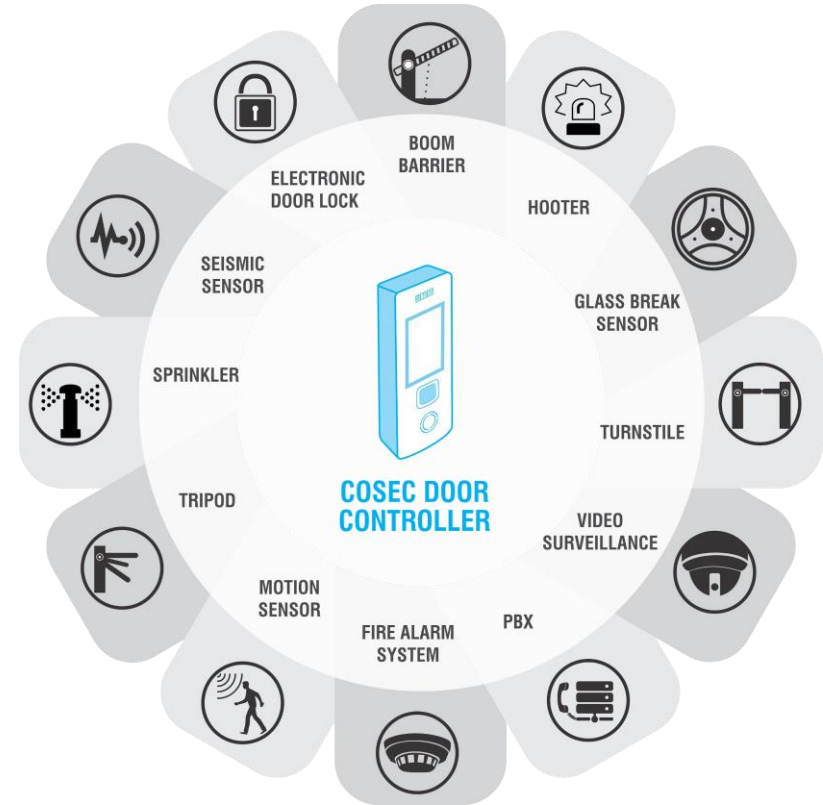
- COSEC PATH RDX: IP65
- COSEC PATH RDCX: IP65
- Suitable for All Weather Conditions
- Tamper Detection





# Matrix ACS Differentiators: Open System Integration

- Open API for Hardware Integration
- Integration with Fire Alarm, Video Surveillance, BMS, etc.
- Integration with Attendance, Payroll and ERP
- SNMP Support for Third-Party NMS
- Seamless Integration





# Matrix ACS Differentiators: Additional Applications

- Time-Attendance
- Access Control
- Visitor Management
- Cafeteria Management
- Job Processing & Management
- Field Visit Management
- Contract Workers Management



## Storage Options



On-Premise

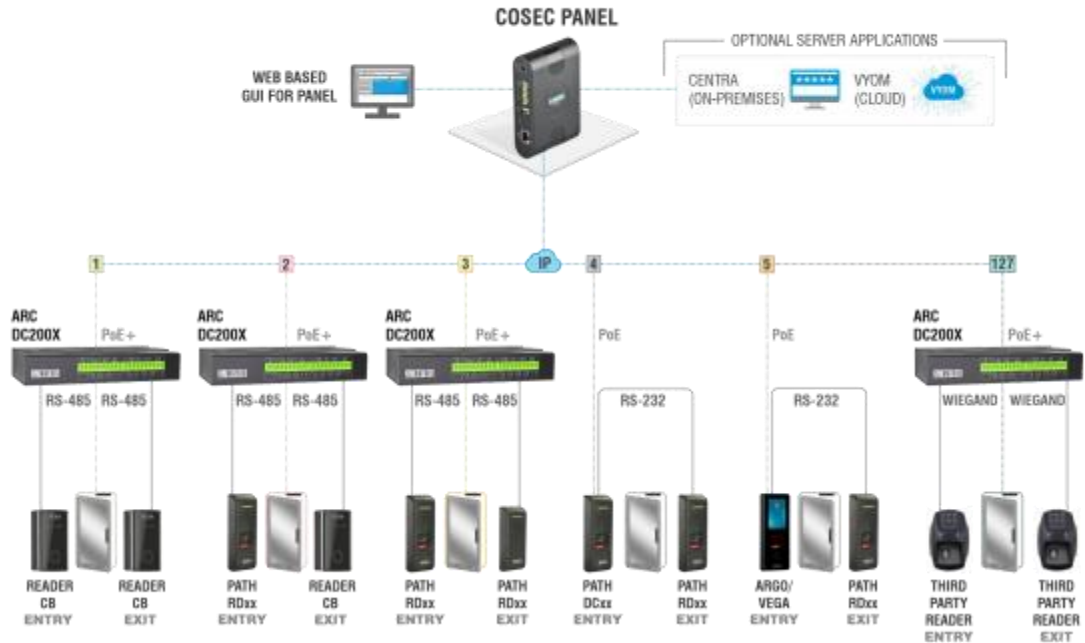


On-Cloud



# Matrix ACS Differentiators: Scalability

- Panel as Site Control
- Normally, Single Panel per Site
- 1 to 255 Doors per Panel
- 1 to 25,000 Users per Panel
- COSEC CENTRA to Network Multiple Panels
- Centralized Control and Management





# Matrix ACS Differentiators: Traditional v/s Matrix COSEC

TRADITIONAL ACCESS CONTROL	MATRIX ACCESS CONTROL
Traditional RFID Cards and PIN Credentials	Face Recognition, Fingerprint, RFID, Mobile, PIN and QR
PC and Software Installation Required	All-integrated, Self-contained Solution without Need for PC
Cabling: Bulky, Proprietary, Failure-prone and Expensive	CAT6 with PoE and PoE+
UPS and Batteries for Panels	Centralized Power and UPS
Limited Access Control Features	25+ Access Control Features

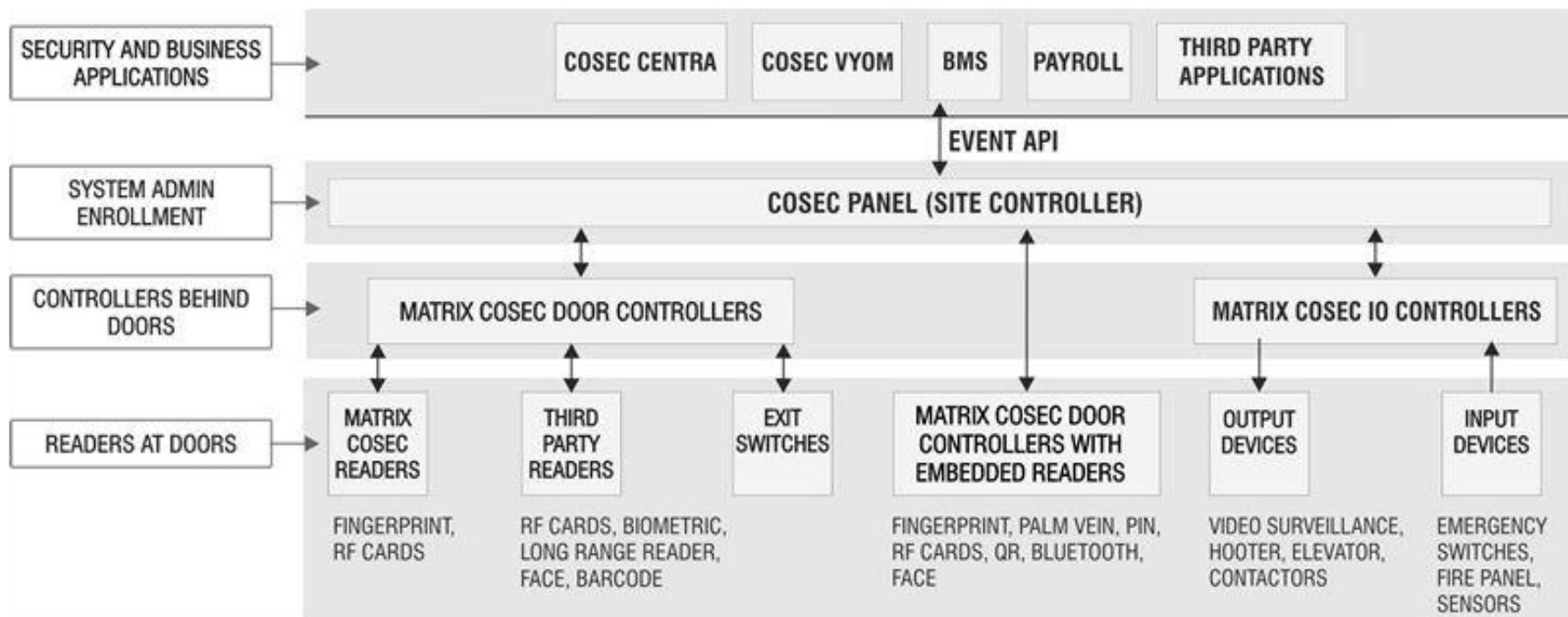




# **Matrix Access Control Architecture and Building Blocks**



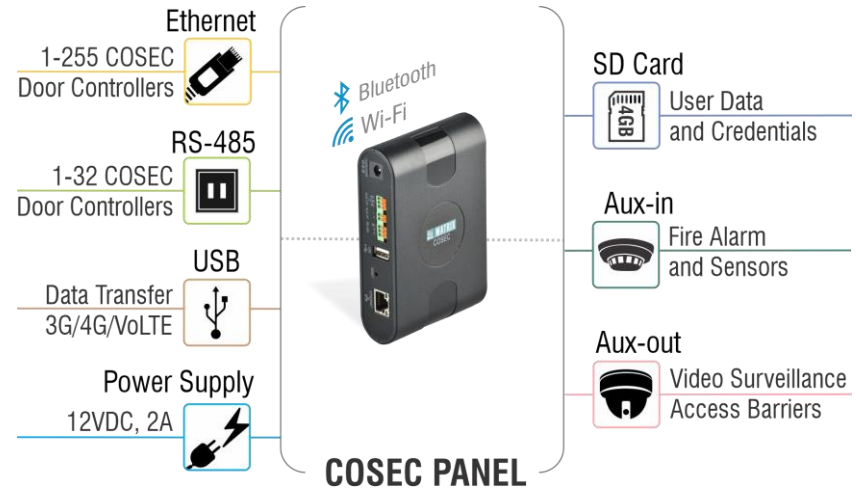
# Matrix Access Control Architecture





# Matrix ACS Building Blocks: COSEC PANEL

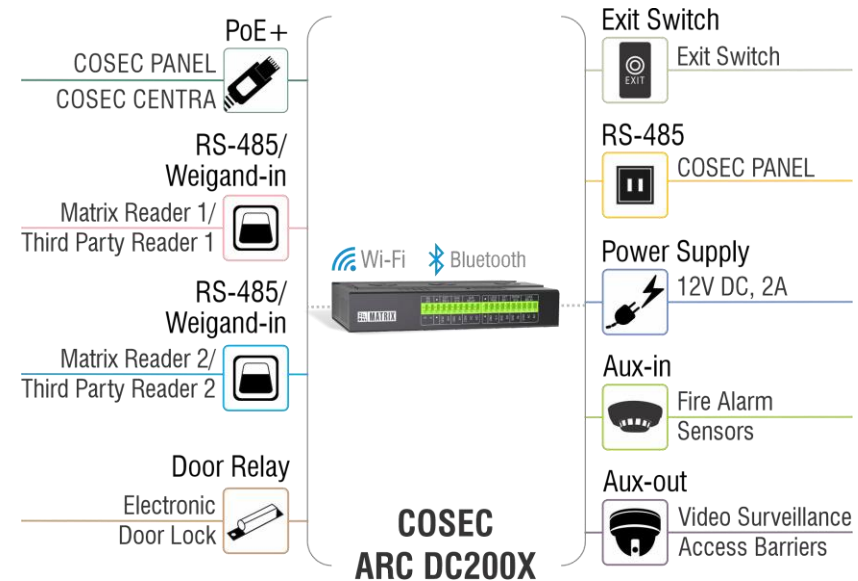
- A Site Controller with Higher Capacity
- Manages Up-to 255 Doors, Up-to 25,000 Users and 500,000 Event Buffer
- Seamless Integration with Third-party Devices
- Built-in Wi-Fi and Bluetooth





# Matrix ACS Building Blocks: COSEC ARC DC200P

- Door Controller Designed on Distributed “Core-to-the-Door IP” Technology
- Higher Storage Capacity
- Secured Communication
- Built-in Wi-Fi and BLE





# Matrix ACS Building Blocks: COSEC PATH RDX

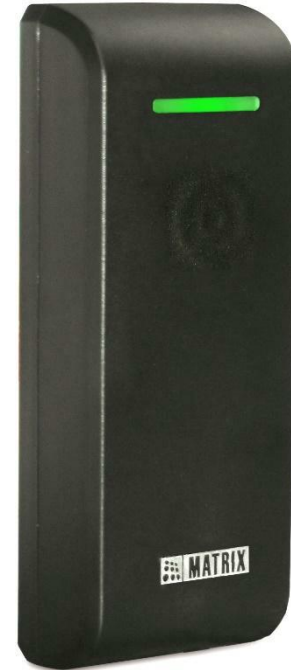
- Compact Fingerprint and RFID Card Reader
- Comes with IP65
- Easy to Install and Use
- RS-232 and RS-485
- Supports Proximity (EM Prox and HID Prox) and Smart (MIFARE® and HID iCLASS ) Card





# Matrix ACS Building Blocks: COSEC PATH RDCX

- Compact RFID Card Reader
- Comes with IP65
- Easy to Install and Use
- RS-232 and RS-485
- Supports Proximity (EM Prox) and Smart (MIFARE<sup>®</sup> and HID iCLASS) Card





# Matrix ACS Building Blocks: COSEC ATOM

- Bluetooth based Credentials
  - Your Mobile is Your Identity
  - Fast User Identification
- Multiple RFID Card Support
- PIN Support (Variant Dependent)
- Fingerprint





# Matrix ACS Building Blocks: MOBILE APP ACS

- Perfect for Bluetooth based Access Control through Mobile
- Access by Shaking Mobile in the Range of Bluetooth Enabled Devices
- Your Mobile is Your Identity
- Use Your Phone Instead of Smart Card
- Android Version 5.0 and above
- iOS 9.0 and above





# Matrix ACS Building Blocks: COSEC ARC IO800

- Compact Input-Output Controller
- Elevator/Floor Access Control
- Seamless Integration with Third-party Devices such as Fire Alarm Bell, Motion Detector, EM Locks etc
- Door Interlocking Solution (Standalone Mode)





# Matrix ACS Building Blocks: COSEC CENTRA/VYOM

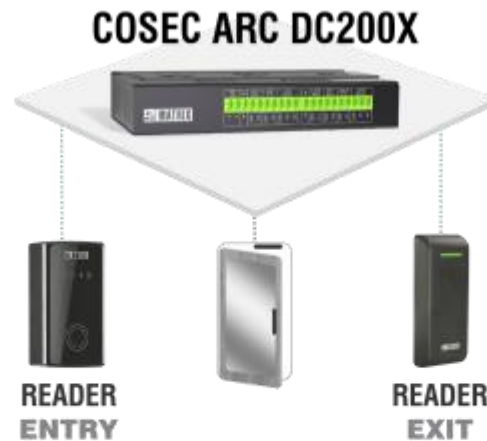
- *COSEC CENTRA*: On-Premise, Single-Tenant Server Application
- *COSEC VYOM*: Cloud, Multi-Tenant Server Application
- Seamless Integration with Third-party Devices and Application/Payroll System





# Matrix ACS DEPLOYMENT: TWO-WAY ACCESS

- Allows Entry and Exit Only to Authorized Users
- 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



# Matrix ACS DEPLOYMENT: ONE-WAY ACCESS

- Entry to Only Authorized Users
- Allows Everyone to Exit
- Requires a COSEC Reader at the Entrance and a Push-Button Switch at the Exit



## CONNECTIVITY OPTIONS FOR READERS:

- **COSEC READER** - RS-232/RS-485
- **THIRD-PARTY READER** - WIEGAND



# Matrix ACS Certifications



9001-20001-27001







# **MATRIX ACS FEATURES**



# MATRIX ACS Features: Access Zones, Access Modes etc.



**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



# MATRIX ACS Features: First-in User Rule, Access Mode etc.



**First-in User Rule:** Normal users are allowed only after the designated first-in user has entered



**Access Mode:** 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 check posts 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



# MATRIX ACS Features: Dead-man Zone, Access Route etc.



**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 with Local/Global and Soft/Hard Options:** 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



# MATRIX ACS Features: Occupancy Control, Smart Identification etc.



**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



# MATRIX ACS Features: Who's-In, Smart Identification etc.



**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



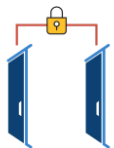
**Input-Output Linking:** COSEC supports an additional layer of automated security by activating a designated output port or sending a notification when triggered by a pre-configured input or an event



# MATRIX ACS Features: Mantrap, Door Interlocking etc.



**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



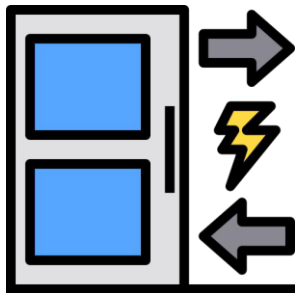
**Door Interlocking:** COSEC offers user-programmable flexible interlocking logic for multiple doors to meet complex, industry-specific needs such as R&D, pharma labs, semiconductor foundries, chemical plants, etc



**Elevator Access Control:** 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



# MATRIX ACS: Doors, Locks and Barriers



Sliding Doors



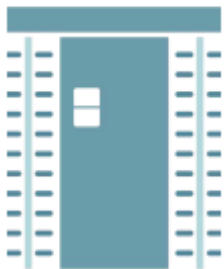
(EM) Magnetic Locks,  
Electric Strikes ,  
Bolt Locks,  
Electric Cylindrical Locks  
Server Rack Cabinet Locks



Speed gates, Flap  
Barrier, Swing  
Panels



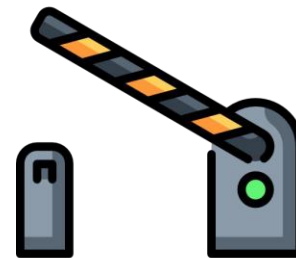
# MATRIX ACS: Doors, Locks and Barriers



Glass Pass  
Turnstile



Tripod Turnstile



Boom Barrier





# **Matrix Access Control: Ordering Information**



# Ordering Information: COSEC ACS Kits

Sr No	Product Variants	Description	PANEL 200P	ARC DC200P	ATOM RD100M	PATH RDFM
1	ACS2DCM	2-Door Card based One Way ACS	1	1	2	
2	ACS4DCM	4-Door Card based One Way ACS	1	2	4	
3	ACS8DCM	8-Door Card based One Way ACS	1	4	8	
4	ACS2DFP	2-Door Fingerprint and Card based One Way ACS	1	1		2
5	ACS4DFP	4-Door Fingerprint and Card based One Way ACS	1	2		4
6	ACS8DFP	8-Door Fingerprint and Card based One Way ACS	1	4		8



# Ordering Information: Building Blocks

Sr. No.	Product Name	Description
1	COSEC PANEL200P	One Site Controller for Every Building or Location up to 255 Doors
2	COSEC ARC DC200P	One Controller For Every 2 Readers
3	COSEC ARC IO800	A Compact Input-Output Controller
4	COSEC ARGO	Door Controller with Built-in Fingerprint Reader and Card Readers with PoE, Wi-Fi, Bluetooth
5	COSEC VEGA XXX	Door Controller with Built-in Fingerprint Reader and Card Readers with PoE, Wi-Fi, Bluetooth
6	COSEC PATH DCXX	Door Controller with Fingerprint and RF Card Support
7	COSEC PATH RDXX	Reader with Fingerprint and RF Card Support
8	COSEC ATOM	Contactless Reader with Bluetooth Credentials & Card Credentials



## Who We Are



**1M+**  
Customers



**4K+**  
Partners



**50+**  
Countries



**24\*7**  
Support



**40+**  
Awards



Stay Tuned & Subscribe



@Matrix Comsec



MatrixComSec



@Matrix\_ComSec



@MatrixComSec



Matrix\_Comsec



THANK YOU!



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