



## COSEC

### Right People in Right Place at Right Time

Time-Attendance defines the productivity of any organization and Access Control defines security of the valuable assets. These two areas are inherently human-oriented, complex and challenging to automate.

Productivity of any organization depends on its effectiveness in putting the right people in the right place at the right time. No two organizations have identical attendance and leave policies. Even the same organization may follow different timings and holidays for its different facilities like head office, factory and branch offices. Various departments like manufacturing, R&D and marketing within an office differ in their timings, grace period and overtime calculations. Further, people working at levels in the same department need different time-attendance and access control policies.

Security depends on having right answers to Who, What, Where and When. Defining, controlling and monitoring entries and exits at each site, zone, floor, area and office is necessary for effective security.

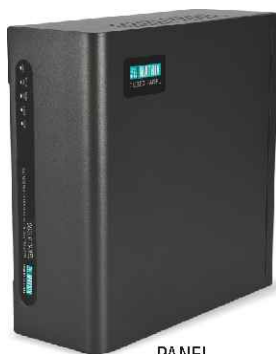
It is a herculean task to identify a Time-Attendance and Access Control solution that meets the organization's exact needs and integrates seamlessly with its existing IT/ERP infrastructure.

**Presenting Matrix COSEC - an adaptive, modular, scalable and function-rich Time-Attendance and Access Control solution designed for Small Office Home Office (SOHO), Small and Medium Businesses (SMB), Small and Medium Enterprises (SME) and Large Enterprises (LE).**

# COSEC BUILDING BLOCKS



COSEC Software



PANEL



DOOR FOP



DOOR FOS



DOOR CAP



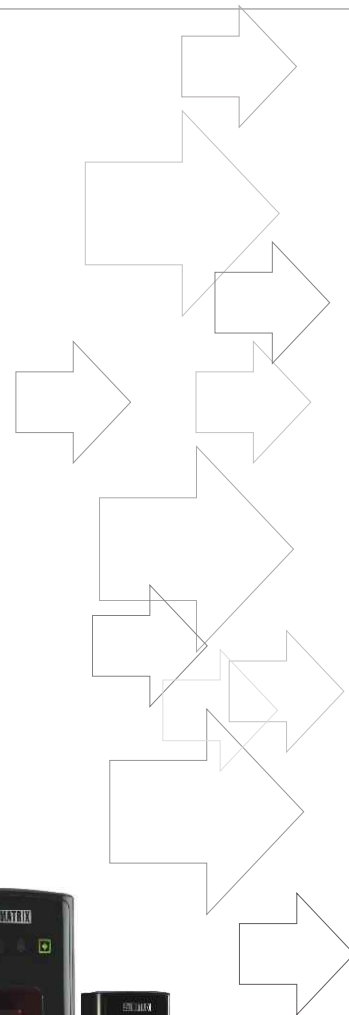
DOOR CAS



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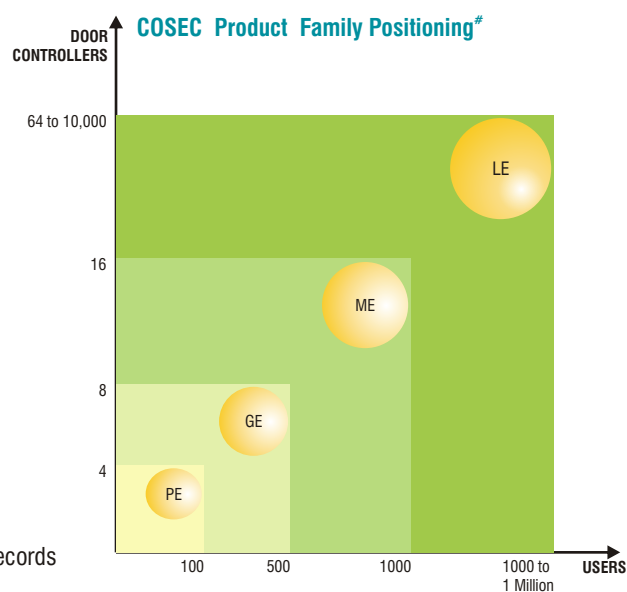
## When is COSEC PANEL Required?

The COSEC PANEL aggregates multiple doors and it provides a single interface for the server. COSEC PANEL is required if one or more of the following conditions exists:

1. More than 500 users per Door Controller
2. Greater than 5000, local events storage
3. When the following additional security features are needed:
  - First-In User
  - 2-Person Rule
  - Occupancy Control
  - Man Trap
  - Dead-Man Zone
  - Anti-Pass Back
  - Guard Tour
  - Do Not Disturb
  - Time-Zone based Access
  - Home Zone
  - Visit Zone
  - Access Level

## COSEC Application Software: Key Differentiators

- 3-Tier Architecture
  - Real-Time Processing of Events
  - Latest Status Views and Reports
  - Web-Based, Multi-User Application
  - Live Monitoring and Supervision
  - Remote Views and Reports
- Drill-Down on Reports
  - Calendar-Based Views
  - Automatic Finger Template Distribution
  - Past Adjustments of User Records



#Refer Selection Guide for More Details

# HIGHLIGHTS

## Comprehensive

Matrix COSEC provides a comprehensive, end-to-end Time-Attendance and Access Control Solution. The Matrix COSEC product range includes different products such as Door Controllers, Exit Readers, Site Controllers, Enrollment Stations, User Cards and Application Servers. The Matrix COSEC products, with an exhaustive list of features, are fully capable of satisfying the numerous time-attendance tasks or the most complex access control policies of any organization.

## Architecture

COSEC is built on layered, distributed processing architecture with intelligent components at each level. At the top is the enterprise-grade, web-enabled application server which controls and manages the entire system through local and remote site controllers (COSEC PANEL) or direct Door Controllers. It also provides web access to users at various levels for checking status, making requests and generating reports.

The site controller (COSEC PANEL) manages multiple Door Controllers and is a local bridge between the doors and the central server. It is responsible for synchronizing all the doors, implementing advanced access control features and storing events. The interface between Door Controller and PANEL could be Ethernet and/or RS485.

Door Controllers and their Readers are the front-end terminals guarding and monitoring the entry and exit points. Readers can read contactless proximity cards, smart cards and finger prints for identification. Door Controller can monitor and control additional readers, doors and auxiliary input and output ports. Door Controllers and Readers can be powered locally or from their site controller. However for time-attendance application, Door Controllers can be interfaced directly with the COSEC application server.

## Modularity

Matrix COSEC architecture is modular in nature allowing customers to pick and choose modules relevant to their business. Modularity helps in designing the right solution at optimum cost. To begin with, the number of users can be added to match the growth of an expanding enterprise. Additional modules such as Visitor Management or Employee Self Service portal can be added later without any disruption to an existing deployment.

## Scalability

Matrix COSEC architecture is truly scalable, allowing a customer to start with smaller configuration and expand step-by-step as the organization grows. One PANEL (Site Controller) can control from 1 to 75 Door Controllers. An enterprise can deploy up to 1000 such PANELs (Site Controllers) and 10000 Door Controllers, managing over 1 million users distributed over the entire globe.

## Flexibility

Matrix COSEC is designed to deliver high level of flexibility at various levels. Physical interfaces (Ethernet and RS485), Door Controller connectivity with application server (direct or through PANEL), readers (Card, Finger and PIN in any combination), Pluggable card personality modules, and sensors (Optical and Capacitive) are few examples of flexibility. Further, the same readers can be configured for either entry or exit with up to 10 fingers of users with 1:1 or 1:N matching. Attendance Policies, Leave Management, Access Control Policies are flexible enough to satisfy the most demanding real-world enterprise needs.

## Simplicity

An Ethernet based Master-Slave architecture simplifies cabling and installation. Discrepancies of time between multiple doors running independently are eliminated by synchronizing all the Door Controllers with the central system. In addition, different Time Zones options, selectable date-time format and Daylight Saving Time (DST) simplify time related issues. COSEC DOOR with built in touch sense keypad and dot matrix display with backlight make it easy to operate from Door Controller itself. Moreover, administrator can easily configure system, upload or download system configuration or upgrade firmware either locally or any part of the world provided by LAN or internet.

## Reliability

Foolproof security can be assured only with reliable performance of the security devices. COSEC is designed for long term uninterrupted performance. It is designed to work in variant temperature, dust full environment (Touch sense Keypad) and excessive humid conditions. Further, its Ethernet based architecture, battery back-up, SMPS based power supply and power and main fail alarms contributes to the reliable performance of the system.

## Productivity

Matrix COSEC Time and Attendance software along with the other software modules fulfill a wide range of organizational requirements. They facilitate employee-wise shift planning, past adjustment of salaries and an automatic generation of work schedules. It offers flexibility to generate a graphical representation of time-attendance reports and calendar view of daily attendance for easier and faster interpretation. Personalized user portal helps employee to plan work schedule, view leave record and apply for leave electronically. With such intelligent, utilitarian and advanced features, COSEC serves to boost productivity of both-the employee and the organization.

## Integration

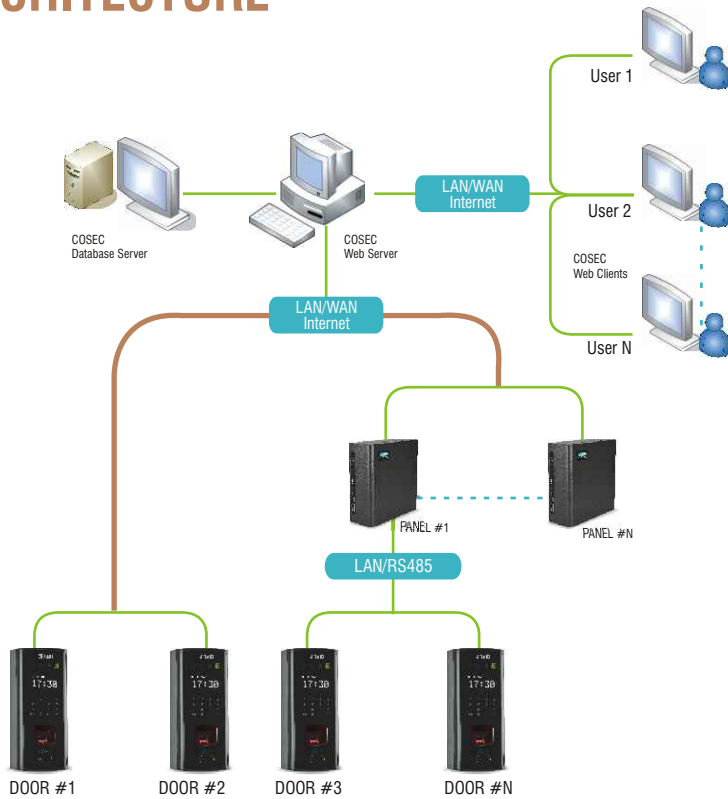
Matrix COSEC is fully integrated system allowing third party connectivity like fire alarm system, video surveillance system, exit readers, sensors and relay devices without any need of external module. Its unique design with pluggable card reader module eliminates the need of separate installation of reader at door. Moreover Door Controller has a built-in exit reader, exit switch and auxiliary ports to connect various devices. Web based management provides easy accessibility from anywhere without any local software installation.

## Technology

Matrix COSEC is built on a modern technology platform. On hardware side it employs powerful 32-bit ARM processor and high speed digital signal processing (DSP). COSEC application server is built on Windows platform, with advanced RDBMS (MS SQL, Oracle) support and Microsoft .NET technology. System offers distributed architecture that provides flexibility for an administrator to run application server, database server and real time monitoring at three different locations. This ensures unrestricted simultaneous communication and processing of events in real time.

All in all, Matrix COSEC is an ideal Time-Attendance and Access Control Solution for Private and Government Offices, Banking, Finance, Insurance, Services, IT, Manufacturing, Pharmaceutical, Education, Retail, many other industries as well as Ports, Airports and other Transport agencies.

# ARCHITECTURE

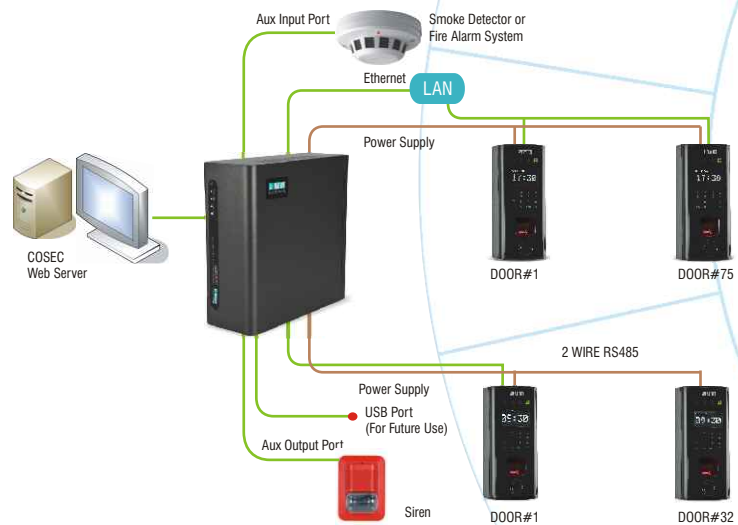


## Layered Architecture

COSEC has a layered architecture with intelligent components at each level. At the top is the enterprise-grade, web-enabled application server. As shown in fig, COSEC software can be deployed in three parts: web application server, database server and web clients. This gives the flexibility to install these parts at one location or three separate locations. COSEC PANEL manages multiple door controllers and is a local bridge between the door controllers and the COSEC application software. Door controllers and their readers are front end terminals, guarding and monitoring the entry and exit points. However, for time-attendance applications, Door Controllers can be connected directly with COSEC application software.

## PANEL with Interfaces

Matrix COSEC PANEL works as a site controller for up to 75 door controllers. It has a built-in power supply, Ethernet, RS485, auxiliary input and output port, USB Port and battery backup with charger to power up to 4 door controllers.



## Door Controller With Interfaces

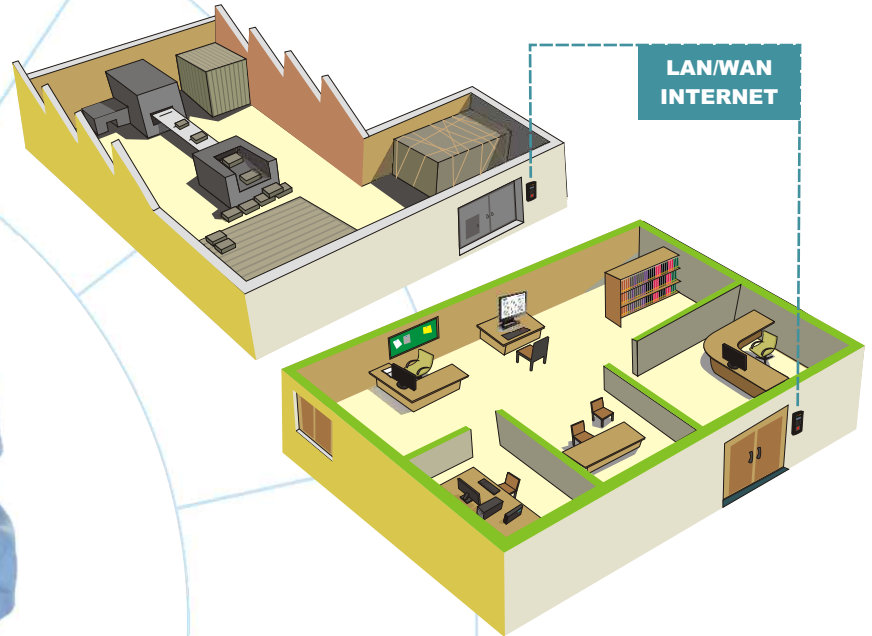
Matrix COSEC Door controller is a front end terminal with various interfaces like door lock, exit reader, exit switch, auxiliary input and output port, Ethernet and RS485. It can be powered through power adapter, COSEC PSBB or from COSEC PANEL.

# TIME-ATTENDANCE

## APPLICATIONS

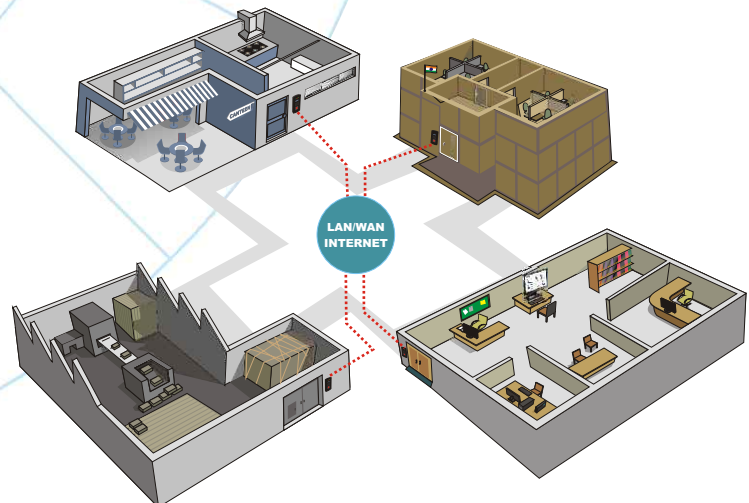
### TIME-ATTENDANCE APPLICATION FOR SMB

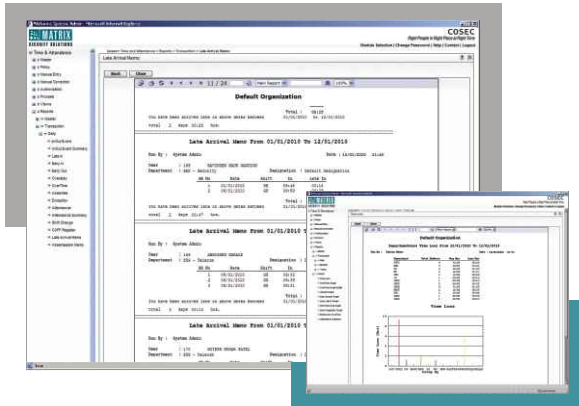
Matrix COSEC is an ideal time-attendance solution for all types of business organizations. Fig shows simple installation of the two door controllers for a time-attendance solution in a small business set-up. These door controllers are directly connected with COSEC application software for applying common time-attendance policies and centralized management of the system.



### TIME-ATTENDANCE APPLICATION FOR SME

Matrix COSEC is an ideal time-attendance solution for all types of business organizations. Fig shows simple installation of four door controllers for a time-attendance solution in a medium business set-up. These door controllers are directly connected with COSEC application software for applying common time-attendance policies, real time monitoring and control and centralized management of the system.





## KEY FEATURES

It is very challenging to capture Time and Attendance rules of an organization and automate them. Matrix COSEC meets this objective by offering a superlative range of flexible functions. Shifts and Schedules, Late-In and Early-Out, Overtime, Comp-OFF, Absenteeism, Multiple Organizations, Past Adjustments, etc. are some of these rules. Elaborate views and reports are also offered for people working at all different levels.

### Selectable Entry-Exit Mode on Readers

COSEC provides the flexibility of using the same reader for entry as well as exit and thus eliminates the need of separate exit reader. System will automatically consider user punches for entry and exit depending on system programming.

### Manual Entry and Corrections of Entry-Exit Events

Manual entry is a useful feature when employee is on tour or needs any modifications in attendance record. OT/Comp-OFF hours, late-in/early-out time, personal or official marking etc can be corrected manually. It provides systematic approach and accurate attendance data for proper salary calculation. Whereas, attendance corrections allow HR to correct punch timing of entry and exit events manually.

### Shifts and Schedules

Shifts and Schedules vary from organization to organization. It is very time consuming for managers to manually manage workforce schedules effectively and efficiently. COSEC application server is a powerful software and designed while considering this complexity. It can generate unlimited shifts and up to 99 shift schedules to manage workforce of any type of organization.

### Automatic Shift Correction

For organization working in shifts, sometimes due to an unforeseen reason employee has to come in a different shift instead of his regular shift. In such cases, COSEC time-attendance software offers an option to correct shift operation automatically and mark his presence for the day.

### Late-In/ Early-Out Policy

Many organizations have policy to allow certain late entries and early exits for employees in a month which are not considered as leave. System offers flexibility to incorporate such policies that can be applied to an employee or a group of employees.

### Late-In /Early-Out Correction and Authorization

Sometimes it is necessary to correct the punch timing of an employee when he gets the permission for late-in or early-out for personal or official work. COSEC time-attendance software provides this facility through late-in/early-out correction and authorization utility.

### Overtime Policy and Authorization

Overtime Policy is a complex process and varies from organization to organization. This software allows calculating overtime on daily basis or weekly basis and rounding the values as per the rounding options provided. Overtime should be authorized from his reporting officer in order to maintain proper system.

### Compensatory Off (Comp-OFF) Policy and Authorization

To motivate their employees, many organizations provide compensation for extra work they have done. With Comp-OFF policy, employee can easily convert overtime working hours into Compensatory OFF hours and exchange extra working hours in form of extra leave or encash money. Reporting officer has rights to authorize Comp-OFF hours, without it, employee cannot claim for encashment or leave.

### Absenteeism Policy

Absenteeism policy allows HR to define whether week off or holiday is allowed on one side or both sides of the employee's leave period.

### User-wise and Period-wise Option

User-wise policy offers to create different policies and assign to different employees whereas period-wise policy offers to create different policies based on different time periods and assigned to a single employee or a group of employees. Software offers this policy for Late-In, Early-Out, Overtime, Comp-OFF and Absenteeism.

### Attendance Summary

Attendance Summary comprises essential attributes for salary calculation. Time-attendance software summarizes employee data like attendance, leave details, week off and holidays. Furthermore, organization-wise, department-wise and user defined period-wise Attendance Summary can be generated.

### Multiple Organizations

Each organization has different policies related to time-attendance and leave management. This feature permits administrator to create Multiple Organizations with different policies and assign to an employee during user creation. It also permits to generate outputs separately for different organizations.



### Attendance Periods

COSEC time-attendance software provides an option to choose flexible attendance period for salary calculation. It offers month-wise attendance period i.e. 1st July-31st July and user defined date-wise attendance period i.e. 26th March-25th April. To set attendance period for different employees, HR can calculate this period user-wise also.

### Past Adjustments

Many times HR needs to correct employee data like attendance days, overtime hours, working hours and shift allowance after the attendance period closed. These data are important as it affects the employee attendance record and salary calculation. COSEC time-attendance software generates past adjustment data automatically and includes it into current month salary calculation data. Thus, employees never miss their deserving earnings!

### Authorization Hierarchy

Well organized authorization hierarchy in an organization helps managers to manage their workforce effectively and efficiently. System offers 99 reporting groups and each employee can be placed in one of this reporting group. This ensures all the leaves, OT/Comp-OFF authorization requests etc are approved by his reporting officer.

### Views and Reports

Users can view their daily/monthly attendance, leave balances, work shifts/ schedules and holidays. Reporting officers can view these data for an individual or a group of employees. Various filters like employee, date, month and year can be applied.

System can generate various master and transaction reports. Master reports are related to the organization, department, category, reporting group etc. whereas transaction reports are related to daily activities like in/out events, shift change, overtime etc and monthly activities like muster roll, salary data, absentee details etc. For easy and fast interpretation, these reports can be presented in the form of various charts.

### Holidays and Restricted Holidays

It is sometimes essential to restrict the entry of an employee during holiday. If any employee attempts to access any zone, it is recorded in the system database without opening the door. Software allows 4 holiday schedule groups with maximum of 32 holidays in each group.

System has the provision to define restricted holiday list which is common for all employees of the organization. Employees can enjoy predefined number of holidays from this list. It is useful feature especially designed for the employees who are coming from other regions and don't want to miss their festival.

### Global Attendance Parameters

Common rules and parameters can be defined at one place and applied to all users with this utility. These includes no. of duplicate punch allowed, auto shift correction, max late-in / early-out allowed time, password security etc. Thus administrator doesn't need to specify parameters for each user and saves time.

## INTEGRATION WITH ERP / HRM PAYROLL

### Export Attendance Data with Programmable Fields

Integration of web based application with 3rd party software can save lots of time and money for any business organization. With export data generation utility, System can create different templates with programmable data fields which can be exported from the system in three different formats like CSV, Text and Excel and given to any ERP, HRM or Payroll as an input. Moreover, static and database field values can be replaced with user defined values.

## ENROLLMENT

### User Creation and Management

System simplifies the employee data management for the HR Department. HR person can create new user with personal and organization details. Personal information like identification, contact details, photograph, PF no etc and organization-wise information like attendance policy, shifts and schedules, access rights etc can be recorded electronically in the database. He can also view and edit this information easily and generate reports on demand.

### User Enrollment

COSEC allows HR to enroll user's credentials like fingerprint, Card or PIN. He can initiate this process through COSEC application software, Special Function Card, Door Controller's keypad or from the enrollment station.

### Delete Credentials

Administrator can easily delete the existing credentials like fingerprint or card of an employee from database. He can initiate this process through COSEC application software, Special Function Card or Door Controller's keypad.

### Centralized Fingerprint Distribution

Matrix COSEC comes with a unique feature of distributing finger template automatically on each Door Controller connected with panel. This eliminates the need of separate enrollment of fingerprint on each Door Controller and reduces administrative complexity.

## LEAVE MANAGEMENT

### Leave Types Creation

Each organization differs in working from other organization and follows their leave policies with varied parameters. System gives wide options to HR to create different leave types like PL, CL, SL, EL, ML, OD etc with different parameters like balance check enable/disable, paid/unpaid leave, lay off, accumulation etc. It also gives option to define minimum and maximum leaves availed at a time.

### Organization-wise Leaves

Many organizations have different branches and divisions and need different leave policies because of their nature of work. Matrix COSEC is the perfect solution for this type of organizations wherein HR can create different leave policies, group them and apply to various organizations. Same leave group can be linked with multiple organizations.



### Leave Requests and Approvals

With just a single click of the mouse, employees instantly submit their leave request and those requests are routed to reporting officer and HR's window. If reporting officer does not respond in a pre-defined time, HR can approve or reject it. Furthermore, HR can view the leave status of all employees.

### Leave Balance

With COSEC application software, employees can view their leave balance for the current year. This Leave Balance starts with opening balance and automatically updated with sanctioned leaves, leave encashment and credited or debited leaves. System gives facility to HR persons to manually credit or debit leaves that help them to maintain leave balance correctly.

### Leave Accumulation Rules

HR person can define maximum number of leaves that an employee can accumulate in a year. When number of leaves exceeds this limit, he has to use or encash it.

### Leave Balance Carry Forward/Lapse Rules

COSEC Leave Management software offers HR the flexibility to carry forward the leave balance to the next year or lapse it at the end of the year. This can be defined at the time of leave type creation.

### Leave Accounting Periods

This feature offers flexibility to HR to calculate Leave Accounting Period user-wise and organization-wise to meet diverse requirements of the organization.

### Leave Encashment

HR can define some leaves as encashable leaves. This feature allows HR to provide encashment to a single user or group of users and for selected month and year.

### Views and Reports

COSEC Software provides an excellent utility of viewing latest details of an employee leave status. HR person can generate different reports related to leaves like leave master, leave application, leave encashment, leave credit/debit and leave register.

## EMPLOYEE SELF SERVICE (ESS)

### View Attendance/Leave Status

This portal empowers employees by providing direct access to view their attendance summary, attendance events and leave status for a particular day, current month, previous month and users defined periods. These details are presented with colorful marking for easy interpretation. Moreover, employee can check status of applied leaves and leave balance with full details.

### Plan and View Shift Schedule

This facilitates employee to view their own shift and schedule for current and upcoming months so that he can plan his activity and course of action in advance. This utility greatly helps employees to improve their efficiency by better time management.

### Request and Authorize Attendance Workflows

ESS offers an additional utility for an employee to request for the authorization of attendance, overtime, Comp-OFF and personal or official leaves. These requests are passed on to the reporting officer for authorization. The reporting officer can reject or authorize such requests using the same portal.

### Request and Approve Leave Workflows

Anyone who has applied for leave knows the frustration of filling the paper form and waiting as the hard copy travels up and down the approval hierarchy. This electronic leave management software removes the burden of paper and enables employee and reporting officer to request and approve leave without delays using ESS Portal.

### Message Board

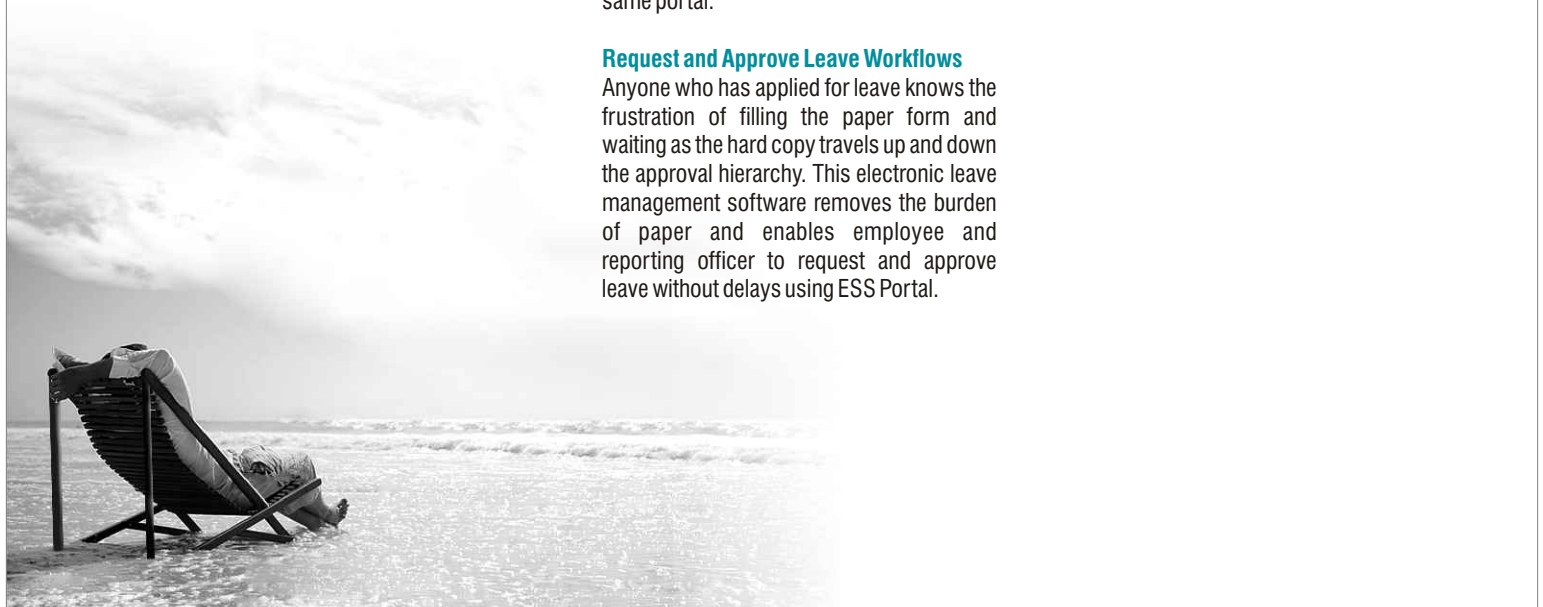
COSEC application software brings the notice board to a virtual location where notice is displayed on the home page of the software and viewable to each login user. This ensures that employees are updated with latest news and events of the organization.

### Reporting Officer Self Service

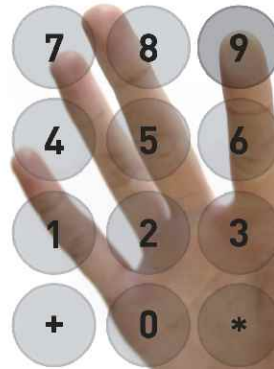
System offers self service portal for reporting officers to manage their team effectively. In addition to all employee facilities, reporting officer can create and manage work schedules, approve and manage leaves, authorize attendance and OT/Comp-OFF hours, change reporting group of his team members.

### SMS and Email Notifications

COSEC helps officers to maintain well-organized time and schedule management among their subordinates. Managers and employees can login into their accounts to send emails and SMS to each other for better shift schedule and time management. HR People can easily list out frequently absent users, late-in and early goers and send notification to them and their reporting officers.



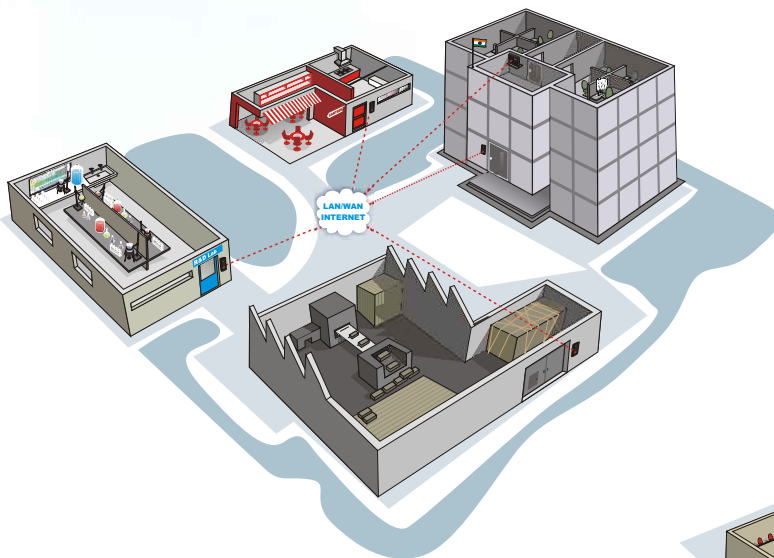
# ACCESS CONTROL



## APPLICATIONS

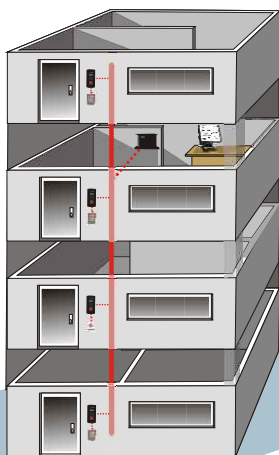
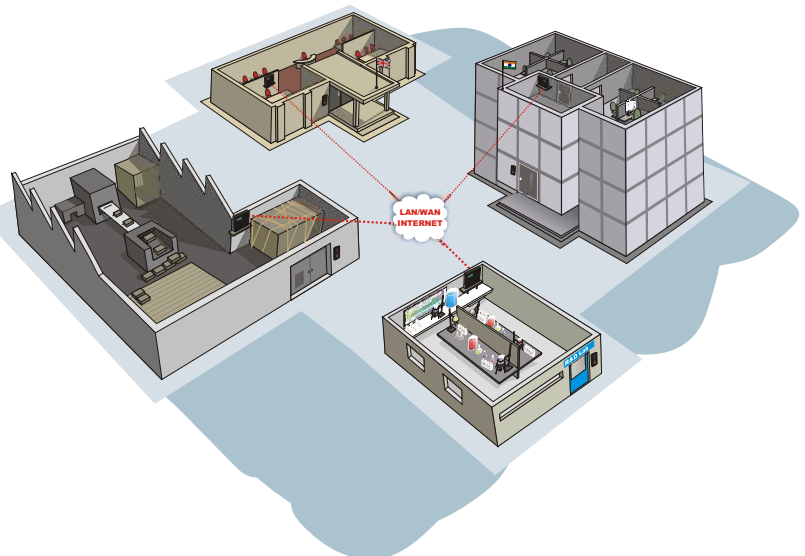
### CAMPUS APPLICATION

Fig shows the COSEC installation in an organization campus for access control. Door controllers are installed at various divisions of the organization and they are centrally connected with a PANEL. This complete system is monitored and controlled by COSEC application software. Various access control and time-attendance policies can be applied for each door controller.



### MULTI-LOCATION APPLICATION

For large enterprises, spread at various parts of the globe, COSEC can be deployed as shown in fig. COSEC PANELS are installed at each location with multiple door controllers at each site. Administrator can apply common access control and time-attendance policies for all locations. Moreover he can centrally program the system and keep the complete system database at one location.



### MULTI-FLOOR APPLICATION

Fig shows a typical deployment of COSEC in a multi-floor building for access control. Door Controllers are connected with the COSEC PANEL, installed at various floors with exit reader or exit switch to control entry of a person with various access control policies. This complete system is monitored and controlled by COSEC Software in real time.



COSEC Web Application Server



COSEC PANEL



COSEC DOOR  
(Installed outside for entry)



COSEC READER (Installed inside for exit)



Exit Switch (Installed inside for exit)



## KEY FEATURES

The basic objective of any access control solution is to protect enterprise assets. The range and flexibility of access control features provided by Matrix COSEC help to achieve this objective. The primary access is controlled on three dimensions – User, Zone and Time. This answers the three fundamental questions – Who, Where and When. In addition, a range of value-added features like Anti-Pass Back, 2-Person Rule, First-In User, Blocked Users, Door Auto Relock, Guard Tour, Man-Trap and Visitor Management ensure fool-proof security of manpower and material.

### Physical Zone

Matrix COSEC physical access zone controls who (User) goes where (Access Zone) and when (Time). Access Zones can be created by dividing organization into various departments like, accounts, production, marketing or IT. Using this feature, employee of one department can be restricted from entering into another department. Sub zones can be created within an Access Zone to further regulate entry.

### Home Zone

Home Zone is a pre-defined area, assigned to a user as a regular work place. System will allow access to home zone without checking his/her access level during working and break hours. The same user will be restricted from accessing other zones with less access level than the user access level.

### Visit Zone

Visit Zone is the area which a user needs to visit very often apart from his Home Zone. In COSEC, it is possible to provide additional access privileges to a user to visit such a zone without checking his access level.

### Access Level

Access Level gives privileges to a user to enter into a controlled area. It is assigned to a zone and a user ranging from 01 to 15. If user Access Level is higher or equal than Zone Access Level, he is allowed into that particular zone. Different Access Levels can be assigned to a zone for working, break and non-working hours.

### Time Zone

Time Zone decides when a user group is to be allowed in a particular zone. COSEC employs 99 Time Zones to grant time based access rights to user groups.

### Short Duration

People like electrician, mechanic, carpenter etc. often visit organization to perform certain tasks. Organization can't afford to offer them full access rights. With this feature, administrator can allocate them limited access on a temporary basis to perform their tasks.

### VIP Access

A User holding VIP Access has the highest level of access privilege that empowers him to access any controlled area.

### Occupancy Control

Occupancy Control is used to control the number of users within a designated area. Maximum number of users in a zone can be defined and when count reaches this limit, system blocks additional user entry. This is useful for facilities like conference room, canteen etc. where limited space is available inside the area.

### Zone-wise Card, Finger, PIN

User can enter into a zone by showing his credentials to the reader. Matrix COSEC offers flexibility for selecting credentials like Card, Fingerprint or PIN to access a zone. For higher security administrator can assign combination of two or all three credentials to that zone.

### First-In User Rule

In some organizations, employees or workers are not allowed to enter into certain work areas unless a designated person makes the first entry to ensure higher level of safety and security. With this feature, Matrix COSEC will keep the door locked until the designated first user registers his entry. Once the First-In entry is registered, other users are allowed to enter till the working time of the First-In user is over.

### 2-Person Rule

Certain sensitive zones contain valuable assets like cash, gold, data, intellectual property, etc. Security of such assets should not be entrusted on any single individual. 2-Person Rule allows entry only when two persons from an authorized group jointly use their access rights within a specified time and thus eliminating possibility of any fraud. COSEC supports 16 such groups with up to 6 persons in each group.

### Man-Trap

Many times two or more doors are arranged in a sequence to regulate traffic or control dust and heat. The second door should open only after the first has closed. Man-Trap offers programmable delay to regulate traffic or flow rate of people. It also prevents any intruder from escaping in hurry.

### Guard Tour

Guard Tour feature enables the administrator to keep an eye on the movements of security guards within the organization to ensure it is monitored properly during working and non-working hours or days. Guard has to show his credentials (card or fingerprint) on defined checkpoints at specified time period. This tour can be programmed in such a way that all doors are required to be visited sequentially. Maximum time period to complete a tour can also be defined.

### Door Auto Relock

Door Auto Relock is an important security feature for avoiding "tail-gating" of the other person along with authorized user. When user shows his credential to the reader, the door relay is energized for the pre-defined time to allow entry. After this period door relay will automatically deactivate and lock the door to restrict further entry.

### Bypass Finger

Many times the fingerprint reader is not able to read the fingerprint image of a particular user because of very low impression of finger print or other reasons. Matrix COSEC has an option to bypass the fingerprint of such a user and grant access based on other credentials.

### Do Not Disturb (DND) Zone

Do Not Disturb Zone feature is useful for meeting rooms, conference halls where people inside the area do not want to be disturbed by outside people. By declaring any zone as a DND Zone, user's entry can be restricted for predefined time. It is possible to grant access to certain people like VIP, who have a privilege to override the DND.

### Anti-Pass Back (APB)

Anti-Pass Back prevents a card holder from passing their card back to a second person to gain entry into the same zone unless the same card is registered for exit after each entry. This intelligent feature of COSEC helps organization to maximize security by preventing fraudulent use of card and helps to maintain an accurate record of the number of people in a specific zone and last position of the user.

Anti-Pass Back can work in two modes: (1) Anti-Pass Back Global: In this mode system verifies user's exit marking on all zones before allowing re-entry. (2) Anti-Pass Back Local: In this mode, system verifies user's exit marking on local zone (same zone of entry) only before allowing re-entry.

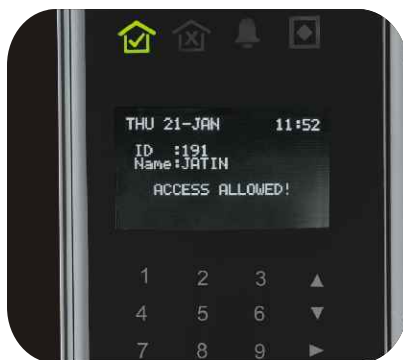
Matrix COSEC offers two types of Anti Pass Back restrictions when APB rule is violated. Hard Anti-Pass Back restricts the entry with log while soft Anti-Pass Back allows the re-entry but maintains a log.

### Anti-Pass Back-Forgiveness

Forgiveness works in association with Anti-Pass Back. With this feature, Anti-Pass back status is automatically reset at midnight and allows the employee to use all his access rights from next day. If an employee leaves premises without registering the exit marking and does not return on the same day, Matrix COSEC can forgive this and allow entry on the next day.

### Blocked Users

Matrix COSEC offers a unique feature for putting a user in Blocked Users' list and restricting him from entering into a controlled zone. This user is treated as a deactivated user and all the access privileges he has will be temporarily withdrawn. However, the user details in database will remain as it is.



A user can be blocked for three reasons: 1) Absentee user- Employee is absent for more than a predefined time, 2) Consecutive unauthorized attempts to access a zone and 3) Repeated attempts by an authorized user exceeds the number of allowed attempts within a time limit.

## ADDITIONAL SECURITY

### Tamper Detection

When a Door Controller or PANEL detects its enclosure being opened or any other tamper attempts, it declares the incident as Tamper Detection and generates an alarm on DOOR and PANEL. This ensures that COSEC can take care of its own security. Tamper Detection can be disabled temporarily for maintenance purpose.

### Additional Security Code

There are chances of duplication or fraudulent use of cards that can create security risk for the organization. Matrix COSEC can provide enhanced level of security by assigning an additional security code to the user.

### Dead-Man Zone

It is essential to track the physical safety of an employee who is working in hazardous environments like railroads, mines, chemical lab etc. Dead-Man Zone makes it compulsory for the employee to confirm his presence at pre-defined intervals. An alarm gets activated if he fails to punch-in on the pre-defined time.

### Access Levels with Password

System administrator, system engineer and system operator are three default roles that are pre-defined in the system with password protection. Using the COSEC application software, any number of additional login user accounts can be created with different access rights. These accounts are then used as a template for other users. This facility ensures that user can access only those details that are allowed to his profile.

## EMERGENCY HANDLING

### Degraded Operation

In the event of system crash or communication failure between Door Controller and PANEL, employees should be allowed access to a zone to ensure smooth operation of the organization. On occurrence of such incidents, COSEC scales down its security level and degrades its operation. It identifies a user with finger print or a card with Facility Code, without verifying access rights and allows them to access the facilities. Events are stored in Door Controller's memory and when system gets back to its normal mode of operation, stored events will be transferred to the PANEL.

### Facility Code

Facility code is a unique number string that identifies the organization as a whole and is encoded in the cards and Door Controller. On Degraded Mode operation, COSEC allows user to access the zone using this code.

### Override Access Policy

In case of an emergency, it is required to change setting of access control policies, 2-Person Rule, First-In User Rule etc in real time. This feature in COSEC allows an administrator to change system setting temporarily to meet the emergency.

### Duress Detection and Reporting

Sometimes user is forced to open the door or use his access rights under threat. Duress Detection allows user to enter duress code along with user code. This will inform security person that user is under duress condition and the door is opened forcefully. When duress code is entered, system will perform its normal operation of opening door without giving any duress alarm on that door.

### Who's In

Who's In allows administrator to monitor and identify user's present in a zone. It generates the list of users inside any controlled area at that point of time. This feature is very useful during an emergency.

### Fire Alarm Integration

Any fire alarm system can be integrated easily with COSEC. Input ports and output ports on Door Controller and PANEL can be linked and programmed for this type of applications. When any input is received from fire alarm system, it activates the output port and all doors will open automatically to allow occupants to vacate the premises.



## VISITOR MANAGEMENT MODULE (VMM)

### Visitor Access

Just like normal employee, VMM has the facility to provide fingerprint and card based access to each visitor. Moreover administrator can assign different access rights to each visitor to ensure that they can access permitted zones only. This will improve security without increasing complexity.

### Visitor Pass Creation

COSEC VMM gives an option to produce e-pass or paper pass either in advance or on the spot. It carries information like name, organization, contact, visitor's ID, pass validity, photograph etc.

### Visitor Document

With a single click operation, the system can take or upload photograph of visitors and scan from driving license, ID, passport and other documents. VMM has the facility to keep record of the materials carried by the visitor and list of other visitors accompanying the main visitor.

### Visitor Escort

VMM provides an option to select an escort with the visitor to ensure higher security of the organization. Door will open only if visitor's credential is shown followed by escort's credential within a specific time period.

### Visitor Pre-Registration

To speed up the registration process of a visitor, VMM authorizes users to register visitors' details in advance to create a pass before the actual visit. Information like personal details, date and time of visit, contact person etc can be stored in the database.

### Frequent Visitors

Some people such as courier boys, bank officials etc visit the organization regularly. VMM keeps a database of past visitors so that security need not enter the same user details every time and can get information directly from database.

### Blocked Visitors

With this utility administrator can block any visitor and deny them access to the facility. Blocked Visitor list is helpful at the time of new visitor pass creation by checking whether visitor is blocked or not and create pass accordingly.

### Reports

Administrator can generate various visitor reports like visitor details, blocked visitors, advance visitor information, visitor punch details, visitor pass status etc.

## SYSTEM MANAGEMENT

## ADMINISTRATION

### User Creation and Management

In COSEC application software, administrator can create unlimited number of login user accounts with password security. With this account, user can login into the software and access various functions. Administrator can activate or deactivate the user login anytime.

### User Roles and Privileges

Different roles are required to be used as templates for login users with previously defined rights. Three default roles-system administrator, system engineer and system operator are predefined in the system. In COSEC application

software, unlimited number of login user roles can be created with different access rights assigned to each role.

### Forced Password Change

Passwords are critical for ensuing privacy and security of login account. With this feature, administrator can define maximum number of days each user account is valid with the same password. After this time period, the user will be forced to change the password to his login account.

### Special Function Cards

Entering code number every time for routine functions is a tedious process for the user. In Matrix COSEC, administrator can assign Special Function Cards against various predefined functions. User has to show the Special Function Card followed by his credential to access special functions. With these cards, user can access various functions like late in, early out, lunch in/out, overtime, enrollment, etc. Administrator can assign up to four cards against each function.

### Centralized Management

COSEC provides an easy way to deploy security applications, define and distribute security policies, and monitor the system from a central place. This software is powerful enough to handle up to 1000 PANELS, 10,000 Door Controllers and 1 million users without compromising on its performance.

### Default Configurations

It is easier for the average user if some predefined configurations are available in the system with minimum inputs from him. COSEC application software is pre-loaded with default configurations so that the system starts working immediately after installation.

### Disable Passive Users

Matrix COSEC makes it compulsory for the users to login at least once within a predefined time period to keep the account active. When this feature is enabled, system checks user status every time he logs into the system. If the last successful last login is beyond the predefined period, then the user will be blocked from further access.

### File Formats

System can generate various reports of time-attendance, user information, hardware configuration, events transaction etc. It can be exported in different file formats like Excel, Word, XML, RPT, PDF and CSV depending on organization requirements for further time-attendance calculation and record keeping.

# MONITORING & CONTROL (M&C)

## Local and Remote Monitoring

This desktop based application offers real time monitoring and control facility to track the system in real time either locally or remotely. M&C software shows current status of PANELs, Door Controllers , alarm input, alarm output and alarm summary. It provides a window showing alarm management, I/O group status, soft override and incoming message to monitor system health in real time.

## Events Monitoring and Storage

Generated events should be updated in real time in order to maintain accurate time-attendance records and higher security of the organization. With M&C software, events like clock in, clock out, alarm, fault, etc can be monitored in real time. COSEC PANEL can store up to 1,00,000 events while there is no limitation of storage in database.

## Alarms Monitor, ACK and Clear

Alarms play a key role in ensuring security of the organization. Alarms like tamper, mains fail, battery fail etc can be monitored in real time from the software. Moreover these alarms can be acknowledged and cleared from a central location.

## PANEL and Door Controller Status with Control

COSEC software has enormous capability to monitor 1000 PANELs and 10,000 Door Controllers in real time from a single location. An administrator can lock or unlock door, enable or disable door sense and view readers connected with the Door Controller from a single window.

## Input-Output Ports Status and Control

COSEC software gives facility to link auxiliary input ports and output ports of PANELs and Door Controllers to perform various controlling applications like fire alarm integration, video surveillance etc. Administrator can check the status of all the auxiliary ports connected with PANEL and Door Controller in real time and enable or disable each port separately.

# ADDITIONAL HARDWARE

## Supervised Auxiliary Input Ports

Matrix COSEC PANEL and Door Controller provide a highly reliable supervised input port for various control applications. External devices like motion detectors, smoke detectors etc can be connected with this port. It can be programmed and linked with the output port for controlling various applications.

## Auxiliary Output Ports

Auxiliary Output Port of COSEC PANEL and Door Controller allows admin to integrate different external systems like fire alarm system, DVR, NVR, boom barrier etc. This port is also used for controlling various external applications like Temperature Control, CCTV, Siren, Strobe etc.

## Centralized Power Supply with Battery

Matrix COSEC PANEL offers provision for battery backup to secure the facilities in case of a power break down. This battery backup can supply power for up to four Door Controllers. This eliminates the need of local power supply at installation site.

## Buzzers and LEDs on Door Controller and PANEL

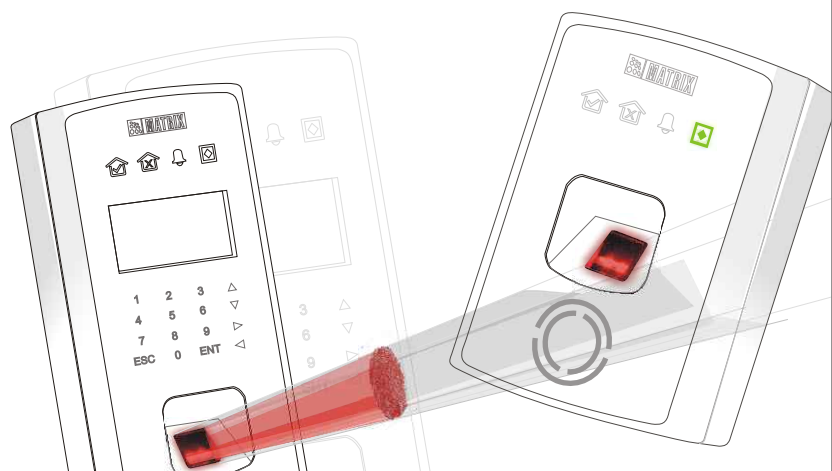
Alarms play a key role for managing the organization safety and security. Various alarms are pre-defined in the system and based on specific conditions, alarms are generated on PANEL and Door Controller to indicate the change in event, breach of access policy or unauthorized access. Both audio and visual indications are provided by means of buzzer and LEDs. These alarms can be monitored, acknowledged, cleared and controlled in real time.

## Request to Exit (REX) Switch

In many applications only the entry reader is monitoring the door and exit reader is not used. Matrix COSEC has a built-in exit switch port to connect a push button type switch to unlock the door for exit.

## External Reader Interfaces

Matrix COSEC DOOR has a built-in exit reader port where user can connect either finger print reader or card reader. These readers are connected via either an RS232 or a Wiegand interface. Power to this reader is supplied from Door Controller directly which eliminates need for separate power supply at the installation site.



# FEATURES LIST

## Access Control

- 2-Person Rule
- Degraded Operation
- Do Not Disturb (DND)
- First-in User Rule
- Occupancy Control
- Who's In

## Access Mode

- Card Only
- Finger Only
- Card + Finger
- Card + PIN
- Finger + PIN
- Card + Finger + PIN
- Card or Finger or PIN
- Verification 1:1 or 1:N
- Zone-wise
- Bypass Finger

## Access Policies

- Home Zone
- Physical Zones
- Short Duration
- Time Zones
- User Groups
- VIP User

## Admin

- Audit Trail
- Import Master Data
- Backup and Restore
- Default Configurations
- Restrict Work-Stations

## Alarm

- Door Communication
- Door Controller Tamper
- Door Fault
- Door Forced Open
- Door Held Open
- Door Lock Tamper
- Duress
- External Reader Tamper
- Network Fault
- PANEL Battery Fail
- PANEL Mains Fail
- PANEL Tamper
- Panic
- Zone Monitor (Dead- Man)
- Monitor, Acknowledge and Clear

## Anti-Pass Back

- Forgiveness
- Hard/Soft
- Local/Global

## Architecture

- Centralized Management
- Distributed Processing
- Web-based Interface

## Attendance

- Absenteeism Policies
- Compensatory Off (Comp-OFF) Policies
- Date-wise Policies
- Detail and Summary
- Early-Out Policies
- Global Parameters
- Late-In Policies
- Manual Entries and Corrections
- Multiple Organizations
- Overtime Policies
- Past Adjustments
- Real Time Processing
- Selectable Periods

## Authorization

- Attendance
- Compensatory Off (Comp-OFF)
- Early-Out Correction
- Hierarchy
- Late-In Correction
- Overtime

## Blocked Users

- Absentee
- Unauthorized Attempts
- Usage Count

## Cafeteria Management

- Card, Finger and PIN
- Credit/Debit Limit
- Define Menu
- Display Items with Rates
- Print Order Slip
- Reports
- Select Item and Order
- Time-based Menu
- Validate User

## Date-Time

- Clock Synchronization
- Country-Specific Format
- Daylight Saving Time

## Door Controller

- Auxiliary Input Port (Supervised)
- Auxiliary Output Port
- Buzzer and LEDs
- Touch Sense Keys
- Dot-Matrix LCD
- Duress Detection and Reporting
- Ethernet and RS485
- External Reader Support
- NVR/DVR Integration
- Programmable Entry/Exit
- Request to Exit (REX) Switch
- Tamper Detection
- User Name and ID Display

## Door Management

- Door Auto Relock
- Man-Trap (Door Interlock)

## Employee Self Service

- Attendance Approvals
- Leave Approvals
- Leave Requests
- Plan Shift Schedules
- Reporting Hierarchy
- View Attendance Details
- View Cafeteria Details
- View Leave Details
- View Shift Schedules
- Visitor Pre-registration

## Enroll

- Card
- Finger
- From Door Controller (Menu or Special Cards)
- From Enrollment Station
- Upload Photo (from Station)

## Export

- Access Control Events
- Attendance Events
- Attendance Summary
- Cafeteria Events
- Excel, Word, XML, CSV, PDF
- Programmable Fields

## Holidays

- Multiple Schedules
- Restricted

## Input-Output Ports

- Control
- Linking
- Status

## Leave Management

- Accounting Periods
- Accumulation Rules
- Balance, Carry Forward/Lapse
- Opening, Credit, Debit
- Encashment
- Organization-wise Groups
- Requests and Approvals
- Types Creation

## Login Policies

- Disable Passive Users
- Forced Password Change
- Multiple Levels and Rights
- Strong Password

## Monitor and Control

- Alarms
- Dead-Man Zone
- Door Controllers
- Events
- Guard Tours
- Input-Output Links
- Local
- PANEL Controllers
- Override Access Policies
- Ports Status
- Remote

## Panel Controller

- Alarm Input Port (Fire Alarm)
- Auxiliary Output Port
- Battery-Backup and Charger
- USB Port

## Report Formats

- Text and Graphical
- Excel, Word, XML, CSV, RTP, PDF

## Shift Schedule

- Automatic Corrections
- Multiple Shifts and Schedules
- Plan and View

## Smart Card

- Cafeteria Usage
- Organization Security Code
- User Profile
- User Templates

## Special Functions

- User Groups
- Cards
- Menu

## User

- Creation and Management
- Delete
- Enroll
- Synchronize

## User Alerts

- Email
- Message Board
- Notice Board
- SMS

## Visitor Management

- Blocked Visitors
- Documents Scan
- Escort
- Frequent Visitors
- Pass Creation
- Pre-Registration
- SMS and Email Notification

\*Check Availability

# TECHNICAL SPECIFICATIONS

## SYSTEM RESOURCES

Maximum Users	: 1,000,000 (1 Million)
Maximum Users per PANEL	: 10,000
Users per Direct DOOR	: 500
Total PANELS	: 1,000
Total Door Controllers	: 10000
Total Door Controllers (Direct with COSEC Application Server)	: 1000
Maximum Door Controllers/PANEL	: 75
Door Controllers/PANEL on Ethernet	: 75
Door Controllers/PANEL on RS485	: 32
User Credentials	: Finger, Card, PIN, Finger+Card, Finger+PIN, Card+PIN, Finger+Card+PIN
User Verification	: 1:1 and 1:N
Finger Templates per Door Controller	: 9,600 or 19,200
Templates per User	: 1 to 10
Cards per User	: 2 (Any Type)
Total Events	: Unlimited
Events per PANEL (Offline Storage)	: 100,000

## COSEC APPLICATION SERVER

Technology	: ASPNET
Architecture	: 3-Tier
Deployment	: Centralized or Distributed
Minimum Server Hardware	: Pentium Dual-Core Processor at 2.4GHz with 1GB DDR2 RAM or Higher
Recommended Operating System	: Windows XP/Windows 2003 Server or Higher
Database Compatibility	: Oracle 8.x or Higher or MS-SQL Server 2000 or Higher
Databases Bundled (Free)	: MS-SQL Server Express and Oracle Database XE
Reporting Tool	: Crystal Reports 2008
User Access	: Web Browser (Internet Explorer 6 and above, Mozilla Firefox and other)
Admin Module	: Built-in
Master Module	: Built-in
Access Control Module	: Built-in
Time and Attendance Module	: Built-in
Leave Management Module	: Built-in
Views and Reports	: Built-in
Visitor Management Module	: Optional
Enrollment Management Module	: Optional
Employee Self Service Module	: Optional
Cafeteria Management Module	: Optional

## COSEC PANEL

CPU	: 32-Bit RISC
Operating System	: Linux
LED Indicators	: Power, Mains Fail, Battery Fail, Alarm and Fault
Memory	: 32MB SDRAM, 32MB Flash
Host Communication	: Ethernet 10/100Mbps
Door Communication	: Ethernet 10 Mbps and RS485
USB	: 1 Port (Device)(Future Use)
Alarm Input Port	: 1 (Supervised)
Auxiliary Output Port	: Relay SPDT, Form C, 5A@28VDC
Tamper Detection	: Yes
Buzzer	: Yes
Power Supply	: 90-285VAC, 47-63Hz
Battery Backup	: Built-in Charger for Internal 12V/7AH Battery (Battery Not Supplied)
Power Output for Door Controller	: 4 Ports, Each 12VDC@1A
Dimensions (WxHxD)	: 231×231×85mm (9.1"×9.1"×3.3")
Weight	: 2.71Kgs, 5.98Lbs
Environmental	: -10° C to +50° C (14°F to 122°F), 5% to 95% RH Non-Condensing
Mounting	: Wall or Tabletop

# COSEC DOOR CONTROLLERS

	DOOR CAS	DOOR FOS	DOOR FCS	DOOR CAP	DOOR FOP	DOOR FCP
Readers	Card	Card and Fingerprint		Card and PIN	Card, Fingerprint and PIN	
Fingerprint Module	NA	Optical	Capacitive	NA	Optical	Capacitive
Fingerprint Template	NA	9600	19200	NA	9600	19200
LCD (128x64 Dot-Matrix)	-	-	-	Yes	Yes	Yes
Touch-Sense Keys (16)	-	-	-	Yes	Yes	Yes
Communication	Ethernet 10Mbps and RS485					
External Reader	1 Port for Card or Fingerprint Reader					
External Reader Interfaces	RS232 and Wiegand					
External Reader Power	12VDC@0.5A					
Exit Switch Port	Yes					
Door Status Sense	Programmable NO, NC, Supervised					
Door Lock Relay	Relay SPDT, Form C, 1A@30VDC					
Door Lock Power	Internal 12VDC@0.5A or External					
Auxiliary Input Port	Programmable NO, NC, Supervised					
Auxiliary Output Relay	Relay SPDT, Form C, 1A@30VDC					
Tamper Detection	Yes					
Buzzer	Yes					
Indications	4 LEDs for Status, Alarm, Allowed and Denied					
CPU	16-Bit Micro-Controller					
Memory	16KB SRAM, 256KB+128KB Flash					
Dimensions (WxHxD)	85 x 135 x 52mm (3.3" x 5.3" x 2.0")			100 x 220 x 55mm(3.9" x 8.7" x 2.2")		
Weight	0.26Kg (0.59Lbs)	0.30Kg (0.66Lbs)	0.30Kg (0.66Lbs)	0.46Kg (1.00Lbs)	0.49Kg (1.07Lbs)	0.49Kg (1.07Lbs)
Environment	-10° C to +50° C (14°F to 122°F), 5% to 95% RH Non-Condensing					

# EXTERNAL READERS

	COSEC READER CA	COSEC READER FO	COSEC READER FC
Reader Type	Card Reader	Finger Print	Finger Print
Reader Technology	Proximity or Smart Card	Optical	Capacitive
Interface	Wiegand and RS232	RS232	RS232
Tamper Detection	Yes	Yes	Yes
Buzzer	Yes	Yes	Yes
Indicators	4	4	4
Dimensions (WxHxD)	62 x 107 x 27mm (2.4" x 4.2" x 1.0")	85 x 135 x 52mm (3.3" x 5.3" x 2.0")	85 x 135 x 52mm (3.3" x 5.3" x 2.0")
Weight	0.08Kg, 0.176Lbs	0.238Kg, 0.524Lbs	0.238Kg, 0.524Lbs
Environment	-10°C to +50°C (14°F to 122°F), 5% to 95% RH Non-Condensing		

## FINGER PRINT READERS

	Optical	Capacitive
Sensor Technology	Optical	Capacitive
Waterproof	Yes	No
Sensing Area	15.9x17.9mm (0.62"x0.70")	12.8x18.0mm (0.50"x0.70")
Image Size in Pixels	288 x 288	256 x 360
Image Resolution in DPI	500	508
Identification Time	< 1 Sec	< 1 Sec
Verification Time	< 1 Sec	< 1 Sec
Equal Error Rate (EER)	< 0.1%	< 0.1%

## COSEC APPLICATION SOFTWARE SELECTION GUIDE

COSEC Software Platform	COSEC APPLICATION SOFTWARE			
	PE	GE	ME	LE
Customer Segment	SOHO	SMB	SME	Large Enterprises
Maximum Users	100	500	1,000	1 Million
Total Door Controllers	4	8	16	64 to 10,000
Users/Door Controller (Through PANEL)	100	500	1,000	10,000
Users/DOOR (Direct DOOR)	100	500	500	500
Events Buffer (Door Controller)	5,000	5,000	5,000	5,000
Events Buffer/PANEL	100,000	100,000	100,000	100,000
Events Buffer in Database	No Limit	No Limit	No Limit	No Limit
Organizations	99	99	99	99
Attendance Policies	99	99	99	99
Schedule Groups	99	99	99	99
Leave Types	No Limit	No Limit	No Limit	No Limit
Leave Groups	99	99	99	99
Login Users	No Limit	No Limit	No Limit	No Limit
Enrollment Management	Optional	Optional	Optional	Optional
Employee Self Service	Optional	Optional	Optional	Optional
Visitor Management	Optional	Optional	Optional	Optional
Compatible Hardware	All Door Controllers, Readers and PANEL			
Active Visitors/Door Controller (Direct DOOR)	100	100	100	100
Active Visitors/Door Controller (Through PANEL)	100	500	500	500

## CARDS SUPPORT

- Low Frequency (125KHz): EM, HID PROX
- High Frequency (13.56MHz): MIFARE 1k, MIFARE 4k, HID iCLASS 2k/2, HID iCLASS 16k/2, HID iCLASS 16k/16



mifare



# ORDERING INFORMATION

PRODUCT	DESCRIPTION
COSEC DOOR CAS	Standard Door Controller for any Smart or Proximity Card with Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, Auxiliary Input-Output having RS485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC DOOR CAP	Premium Door Controller for any Smart or Proximity Card with LCD, Keyboard, Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, Auxiliary Input-Output having RS485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC DOOR FOS	Standard Biometric Door Controller with any Smart or Proximity Card having Optical Finger Reader, 9600 Templates, Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, Auxiliary Input-Output having Rs485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC DOOR FOP	Premium Biometric Door Controller with any Smart or Proximity Card having LCD, Keyboard, Optical Finger Reader, 9600 Templates, Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, LCD, Keyboard, Auxiliary Input-Output having RS485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC DOOR FCS	Standard Biometric Door Controller with any Smart or Proximity Card having Capacitive Finger Reader, 19200 Templates, Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, Auxiliary Input-Output having RS485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC DOOR FCP	Premium Biometric Door Controller with any Smart or Proximity Card having LCD, Keyboard, Capacitive Finger Reader, 19200 Templates, Door Lock, Door Sense, Exit Switch Port, Exit Reader Port, LCD, Keyboard, Auxiliary Input-Output having RS485, Ethernet Interfaces and Power Adaptor. Card Personality Module not Included
COSEC PANEL	Panel Controller to Support up to 75 Doors having Ethernet, RS485, Power Supply and Battery Backup Provision for up to 4 Doors. Battery (12VDC/7AH) not Included.
POWER SUPPLY OPTIONS	
COSEC PSBB	Universal Mains Power Supply with Battery Backup to Support up to 4 COSEC Door Controllers. Country-Specific Mains Cord Supplied. Battery (12VDC, 7AH) not Included.
ADDITIONAL READERS FOR DOOR CONTROLLER	
COSEC READER CA	Any Smart Card or Proximity Card Reader with Wiegand/RS232 Interface. Works with any COSEC Door Controller. Card Personality Module not Included
COSEC READER FO	Biometric Finger Print Optical Reader with 9600 Templates and RS232 Interface. Works with any COSEC Door Controller.
COSEC READER FC	Biometric Finger Print Capacitive Reader with 19200 Templates and RS232 Interface. Works with any COSEC Door Controller.
HID READER PROX-POINT	HID Proximity Card Reader with Wiegand Interface. Works with any COSEC Door Controller.
HID READER iCLASS R10	HID iCLASS Card Reader with Wiegand Interface. Works with any COSEC Door Controller.
COSEC ENROLL	Enrollment Station for Proximity or Smart Cards and Finger Prints consisting of COSEC READER CA, USB Finger Print Reader, USB Camera, USB-RS232C Cable, Power Adaptor and Application Software CD. Card Personality Module not Included.
CARD PERSONALITY MODULES	
COSEC CPM EM PROX	EM Proximity Card Personality Reader Module with RS232 Interface
COSEC CPM HID PROX	HID Proximity Card Personality Reader Module with Wiegand Interface
COSEC CPM MIFARE SMART	Mifare Smart Card Personality Reader Module with RS232 Interface
COSEC CPM HID iCLASS	HID iCLASS Smart Card Personality Reader Module with RS232 Interface

### APPLICATION SOFTWARE (PLATFORM)

COSEC PE	Comprehensive System Management and Application Server Platform for Time-Attendance and Leave Management for 100 Users and 4 Door Controllers
COSEC PE ESS	Optional Employee Self Service Management Portal for COSEC PE
COSEC PE EMM	Optional Enrollment Management Module for COSEC PE
COSEC PE VMM	Optional Visitor Management Module for COSEC PE
COSEC GE	Comprehensive System Management and Application Server Platform for Time-Attendance and Leave Management for 100 Users and 8 Door Controllers. Expandable up to 500 Users.
COSEC GE USER100	Additional 100 User License for COSEC GE
COSEC GE ESS	Optional Employee Self Service Management Portal for COSEC GE
COSEC GE EMM	Optional Enrollment Management Module for COSEC GE
COSEC GE VMM	Optional Visitor Management Module for COSEC GE
COSEC ME	Comprehensive System Management and Application Server Platform for Time-Attendance and Leave Management for 500 Users and 16 Door Controllers. Expandable up to 1000 Users.
COSEC ME USER100	Additional 100 User License for COSEC ME
COSEC ME ESS	Optional Employee Self Service Management Portal for COSEC ME
COSEC ME EMM	Optional Enrollment Management Module for COSEC ME
COSEC ME VMM	Optional Visitor Management Module for COSEC ME
COSEC LE	Comprehensive System Management and Application Server Platform for Time-Attendance and Leave Management for 1000 Users and 64 Door Controllers. Expandable up to 1 Million Users and 10,000 Door Controllers.
COSEC LE USER1000	Additional 1000 User License for COSEC LE
COSEC LE DOOR8	Additional 8 DOOR License for COSEC LE
COSEC LE ESS	Optional Employee Self Service Management Portal for COSEC LE
COSEC LE EMM	Optional Enrollment Management Module for COSEC LE
COSEC LE VMM	Optional Visitor Management Module for COSEC LE



Touch Sense  
Keys



Up to 75 Doors  
per PANEL



Drill-Down  
on Reports



3-Tier  
Architecture



Web-Based  
Application Server



Real-Time  
Processing of Events



## ■ ABOUT MATRIX

An ISO 9001 Company, Matrix is a leader in Telecom and Security solutions for modern businesses and enterprises. An innovative, technology driven and customer focused organization; the company is committed to keep pace with the revolutions in the telecom and security industries. With around 30% of its human resources dedicated to the development of new products, Matrix has launched cutting-edge telecom products like IP-PBX, Universal Gateways, VoIP Gateways and Terminals, GSM Gateways and Security products like Access Control and Time-Attendance Systems and Fire Alarm Systems. These solutions are feature-rich, reliable and conform to the international standards. Having global foot-prints in Asia, Europe, North America, South America and Africa through an extensive network of more than 500 channel partners, Matrix ensures that the products serve the needs of its customers faster and longer. Matrix has gained trust and admiration of more than 150,000 customers representing the entire spectrum of industries. Matrix has won many awards for its innovative products



## SECURITY SOLUTIONS

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*Due to continuous technology upgradations, product specifications are subject to change without notice.*