



MATRIX® V INTEGRATED SECURITY MANAGEMENT SYSTEM

The Matrix V Integrated Security Management System (ISMS) is ELID Sdn Bhd's premier security management system for advanced security needs. It is suited for large-sized, complex areas equipped with a TCP/IP Local Area Network infrastructure, with a high level of regular/visiting human traffic and requiring only the highest quality in security management. Examples of such areas include high-rise intelligent buildings, airports and government centers.

Matrix V takes advantage of the EL5000 Advanced Multi-door Controller, ELID's state-of-the-art, multi-purpose, TCP/IP network-ready controller. It is capable of numerous security management functions previously available only in separate component systems. Now, you can manage alarm monitoring, door access, car park access, visitor management and many other functions, all through a single EL5000 Controller. Each Controller comes equipped with a powerful, high-speed 32-bit Intel Processor and a large memory space for the storage of data for up to 100,000 user cards (with memory expansion board), plus Time Zones, Timers, PIN Code data, etc.

Matrix V system software extends the EL5000 Advanced Multi-door Controller's stand alone functionality with numerous value-added software modules, enabling you to manage your security system more easily and efficiently than ever before. Matrix V can manage up to 1,000 EL5000 Advanced Multi-door Controllers and 32 ISMS client workstations distributed over a single or multiple remote areas connected over a TCP/IP network. This translates to 8,000 doors, 8,000 remote field devices (144,000 input points (sensors) and 288,000 output points (alarms)), and an additional 8 input and 8 output points in the immediate proximity of each EL5000 Controller. Its wide capabilities make it suitable for even the largest, most complex building architectures and the most demanding security requirements.

DEMO MODE

DEMO MODE



YOUR ONE CARD SOLUTION PROVIDER ...

DEMO MODE

DEMO MODE

MATRIX V FEATURES

Network and Internet Capability

Manage your entire security system over a TCP/IP network or even remotely over the Internet through a Telnet client or HTML web browser. Connect together and simultaneously control multiple EL5000 Controllers and their controlled field devices, card readers, alarms, etc. by simply plugging them into your TCP/IP network. Matrix V supports direct control over all readers, field devices and input/output points compatible with ELID's EL5000 Controller as well as system access from up to 32 client workstations connected locally or remotely through a TCP/IP network.

Made-to-Fit

Matrix V possesses scalable system architecture, in terms of both hardware and software. A single controller can control a maximum of up to 8 door readers, 208 input and 344 output points (with the appropriate number of I/O Modules, Reader Interface Units and Electronic Field Devices as required for a particular system configuration). More controllers may be added as needed - up to 1000 controllers per Matrix V system. Only enough controllers and optional components needed for the coverage necessary for a particular security system have to be acquired. New components may be added as necessary to meet the expanding needs of a growing or changing organization.

In terms of software, numerous optional modules such as CCTV Support or Guard Tour functions may be added to the standard functionality of Matrix V as needed. Also, custom system interfaces may be introduced to Matrix V to meet the particular needs of certain third party systems such as fire control systems, office automation systems, etc. Matrix V is thus highly scalable, and can be made to fit to the individual security needs of any organization.

Matrix V software is fully compatible with all access reader systems, electronic field devices and input/output devices compatible with the EL5000. From infrared sensors and motion detectors to proximity card readers and biometric scanners, Matrix V possesses the functionality to meet any security need.

Powerful, Easy-to-Use Graphic User Interface

Matrix V is equipped with a 32-bit Windows-based GUI point-and-click interface. Perform powerful commands on your security system from your workstation with just a few clicks of your mouse. Your security system interface is displayed as an interactive image of your floor plan, with a menu of icons. This security interface animates whenever activity occurs on your security system, be it a door opening on the 2nd floor or a vehicle entering the building at the basement car park gantry. Events that would generate an alert such as a forced door or a fire will create more attention-grabbing effects such as loud colors, more dynamic animations, sound effects, pop up message boxes giving alert details, etc. Click directly on icons on the interactive security interface for more details of different areas of your security system as well as to give commands to the various devices in your security layout.

Instant, Accurate and Powerful Data Gathering and Reporting Features

Every Matrix V module contains powerful transaction logging and database look-up features that can collect, sort, compile and store thousands of transactions from all modules daily for analysis. For example, every card access attempt, and details including where, when and who's card was used, is automatically stored in the security system database. Stored data is maintained at a fully shared and integrated relational database system based on Microsoft® SQL Server, that is compatible with any ODBC-compliant SQL database engine. Reports can be generated on demand with a simple click of the mouse.

Total Integrated Solution

Matrix V incorporates numerous standard modules.

1. Real Time Intrusion Alarm Monitoring

Receive alert messages regarding security breaches on your security system, such as unauthorized intrusions or device tampering, as well as a map of the immediate vicinity of the alert highlighting the location(s) of the occurrences directly on your computer screen in real time as they occur. This helps your response time and assists you in organizing and implementing a response such as contacting the police or deploying security personnel to the scene.

2. Door Access Management

Maintain total control and surveillance of all door access in your secure areas directly from any of the 32 connected client workstations. All door access activity is transmitted directly to your computer screen. You can also give specific commands to doors such as opening and closing them directly, sealing them off from further access, etc. Features include:

Anti-Passback Options - In order to prevent a single user card from being re-used to allow more than one person through a door access area, Anti-passback forces users who enter a secure area with a card to leave the area before the card may be used to enter that secure area again.

Inhibit Access and Permanent Lock Release – Permanently lock and unlock particular doors instantly on demand in response to specific events such as an escaping thief or a fire that demands immediate evacuation or to facilitate the movement of furniture through a particular route.

Special door configurations such as dual card mode, where in order to access a door, a higher level "escort" card is required, and Inter-Lock configurations, where one has to enter and close one door before another door ahead will be unlocked.

3. Addition optional features which can be incorporated into Matrix V's standard functionality:

◆ CCTV Support

CCTV Remote Security Cameras may be logically linked to particular security devices, such as card readers. Should an alarm originate from that security device, footage from the linked camera can be fed directly to your computer screen through the Matrix V software to aid security personnel in assessing the situation. Also, event-triggered recording allows a video recorder to automatically record footage from CCTV cameras whenever a system event occurs

◆ Car Park Access Control

Control access to a car park through the use of User ID Cards at the car park gantry areas.

Matrix V User and Visitor Cards can be used to gain access to car park gantries. Anti-passback applies to vehicles as well - once a card has been used for entry it can only be used to exit. This is to prevent multiple vehicles from using the same card to enter the car park area.

Monitor vehicle traffic and directly control the gantry from the client workstation.

- Log vehicle traffic according to Card ID, dates, entry and exit times, etc.
- Give commands such as opening and closing the gantry for special occasions, such as to facilitate the entry of a convoy of delivery vehicles quickly.

◆ **Time Management System**

Users coming and going from work have their access times logged at the card reader entrances and exits of their work areas. This enables human resource personnel to notice personnel access behavior such as promptness, tardiness, early out, overtime, absenteeism, lengthy breaks, incomplete entries (i.e. an out-entry but no in-entry, an in-entry but no out-entry), abnormal permissible movement (i.e. a person from Accounting and Finance in the R&D department, etc.).

◆ **Cardholder Messaging System**

Allows brief messages to be left for particular cardholders as they access card reader points. The message is displayed on the accessed card reader's LED/LCD display upon the recipient(s) swiping his/her card on the card reader. This system is similar to the Short Message Service (SMS) used with mobile phones and can be very useful alternative method for the proliferation of urgent short messages to one or a number of personnel within a large building quickly.

◆ **Photo ID Badging System**

Design and create your own unique card layout. Cards may also be optionally created with a photo of it's assigned cardholder printed onto the card. This photo can be acquired quickly and easily using a digital video camera linked to the Photo ID Badging System.

Photo ID cards add an extra layer of security to your security system. Photo ID images taken during card creation are also stored in the security system's user database. This aids security personnel in verifying the identity of cardholders on sight. This function is also useful with CCTV support as door entries may be verified through a comparison between a card user's image on the CCTV and an archived digital photo of that card's authorized user.

◆ **Visitor Management System**

Manage a large volume of visitor traffic through your premises quickly, easily and accurately.

- Create and assign visitor cards instantly on demand.
- Keep track of visitor locations, areas visited, visitor population in a secure area, etc
- Restrict Access to sensitive areas based on security areas, floors or even particular doors.
- Temporary cards expire automatically within a specified time so they cannot be reused later.
- Old temporary cards can be easily recycled and reassigned.
- Analysis of visitor movement can identify popular routes and visitor destinations.
- Track Visitor Vehicles in the Car Park (in conjunction with car park access control).

◆ **Guard Tour System**

Guard Touring is an additional security feature involving the close monitoring of guard patrol movement through their assigned routes in security areas. During a Guard Tour, patrolling guards swipe their Guard Tour cards specific card readers along their tour, which registers on the security interface. Each Guard Tour has a strict schedule, with a list of periods during which the patrolling guard must swipe his or her Guard Tour card at a particular Tour card reader. If a guard is late swiping his or her card, or misses swiping a card reader along the tour, it is automatically assumed that the guard may have run into some kind of trouble and an alert will be activated, alerting other security personnel.

◆ **Lift Access Control**

Lift access may be restricted according to the access rights of a particular lift access cardholder to access particular floors. Unauthorized floor entry is restricted at the lift car level, as restricted floors buttons will be rendered inoperative. In addition, floor call overriding can be enabled to give lift usage priority to very important persons (VIP) such as Executive Officers, visiting dignitaries, etc.

Interfacing with Third Party Systems

Matrix V can be customized for interfacing with virtually any 3rd party system. As a standard data-sharing feature, Matrix V is able to transmit logs of all activity on the security system to third party software via a TCP/IP network or through the manual transferring of data and/or transaction log files.

Also, third party systems such as building automation systems and fire supervisory systems, etc. may be hard wired into input/output points on the EL5000 Controller and controlled through relays that trigger these systems on the occurrence of certain detected events. Matrix V can also communicate directly and interface with third party systems through the TCP/IP network by sharing a common protocol.

Stable and Reliable Software Platform with Data Sharing

Matrix V is built to take advantage of a powerful and reliable platform - Microsoft® Windows 2000 Server and Microsoft® SQL Server. This operating system is perhaps the most widely used operating system in the world and offers a high level of compatibility with various third party software and hardware as well as alternate operating systems. This platform facilitates easy data sharing between third party applications that use this operating system as a common platform, eliminating redundant data entry, inconsistent data on different databases, incompatible report formats, etc. For example, a Business Automation System that uses an SQL database managed by Microsoft® SQL Server may easily share data with Matrix V software, integrating card user information with employee information, etc.

Design and customize your Security System to your own preferences

Create your own custom interactive floor-plan layout. Import images of your floor plans then add animated security device icons according to their physical locations onto the layout. These icons can be used to give commands to those particular devices as well as alert security administrators to real-time activity in the system (such as a door opening), by highlighting themselves with animations and sounds on your computer screen.

Define special behavior on your own security system in response to certain events through the use of Event Driven Output. This feature allows you to program a set of responses on the output points of your security system upon the occurrence of a particular transaction type detected by a reader. For example, upon the detection of the first valid entry into a room, the room lights, air-conditioning and power to room devices can be automatically activated.

You can also customize your own Reaction Tables, a special logic programming control that automatically performs a set of actions when certain conditions occur. Reaction Tables are very flexible and robust and can be programmed for any purpose one can think of. Any device attached to the system such as security doors or alarms and third party equipment connected to the Matrix V system, such as fire detectors, lights, air-conditioning, etc. can be used in Reaction Tables. (See *Dealing with Emergencies* below.)

See, Hear and Control from One location or Many

Monitor and manage your entire security system from any network workstation of your choice. Permissions can be set so that only particular functions work on some workstations and only by particular users. All security system activity is immediately reflected on your computer screen through animated icons, sounds and messages. Receive and respond to alarms promptly through highlighted pop-up dialog boxes. You may also enable, disable and otherwise give commands to any security device on your network with just a few clicks of the mouse. All activity in your security system is logged, both normal (e.g. normal access to the IT department) and abnormal (e.g. Invalid entry, Device Failure, etc.). System activity and statistical reports can be automatically generated on demand.

Keep Track of the Population

Instantly receive a breakdown of the number of people inhabiting an area of the security system. Know details such as:

- How many people inhabit that area.
- Identify each person there.
- Log how long each has been there.

This information is also logged in the transaction database and can be retrieved for analysis at a later time.

Dealing with Emergencies

Customize your security system to respond to emergencies according to your exact specifications. Any relay controlled output device such as sirens, doors, lights, communication lines, etc. may be programmed to activate in response to direct user commands or an automatically detected emergency.

For example, should your security system sensors detect an emergency, it can automatically:

- Set off audible alarms and alarm signals and inform all personnel.
- Page or dial-up relevant authorities such as the fire brigade or police.
- Disarm security doors.
- Organize an evacuation of the premises by calculating the number of persons logged into the building and providing instructions to those persons to evacuate the building via "mustering stations", where evacuees may log their successful escape in the system. The system can be programmed to be intelligent enough to suggest evacuation routes that avoid "danger" areas that have triggered sensors within them as well as tally personnel who have mustered and who might be left behind in the premises.

Sophisticated Card Management System

Matrix V also comes with a sophisticated card management system, which enables you to set up basic User Cards with User Details, Anti-Passback options, Card Expiry and Access Time Zones.

All card access is logged, and cardholders can be traced down and located according to the last zone they accessed with their cards. Matrix V supports storage for an unlimited number of card details on-server, while each EL5000 Controller can store up to 33,000 User Cards (upgrade-able to 100,000 cards).

Matrix V also supports special card functions:

Escort Cards	Certain highly sensitive areas may be equipped with an extra layer of protection through the use of dual-card doors. Such doors can only be accessed by a holder of a normal user card and another special Escort card, which, for example, may be held by a security officer posted at the door entry point or a trusted executive officer.
Temporary Cards	These cards are meant for normal staff members who have somehow lost their normal user cards. These temporary cards are tagged with the staff member's identity number in the security system so that his or her movements may still be monitored within secure areas. They have a short expiry date, usually a day.
Visitor Cards	These cards are meant for visitors to a secure area. They have a short expiry date, usually a day, a few hours or even a one-use card that expires once the cardholder leaves the secure area. They are also restricted in terms of the areas in which they may access.

Guard Tour Guard Tour cards are used specifically with the Guard Tour Module previously described (see above). It is essentially a User Card that is recognized by the Guard Tour module.

Operator Decision Support

Operator Decision Support is activated upon Matrix V detecting a pre-determined event on the security system, such as a forced door. It suggests courses of action to the guard, such as:

1. Summoning the police.
2. Deploying guards at the alert location and along the intruder's possible route(s).
3. Sealing off nearby doors and alerting/evacuating staff.

This function is meant to supplement the normal training provided to security personnel when responding to such situations by providing a checklist of critical actions that need to be taken.