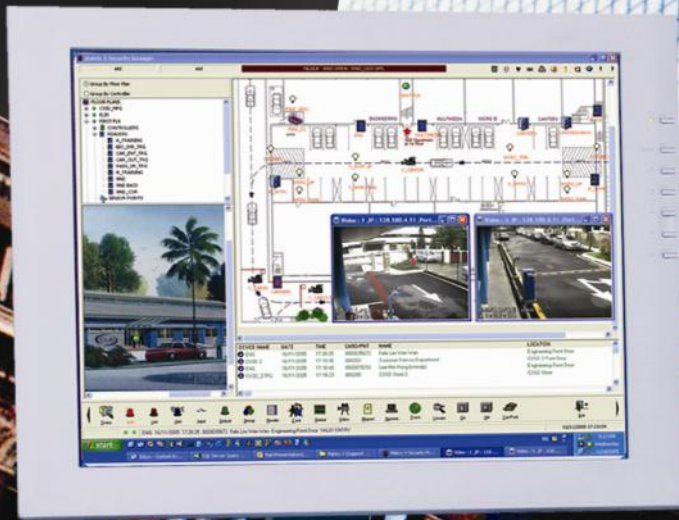




MATRIX Integrated Security Management System

... solution for the digital age



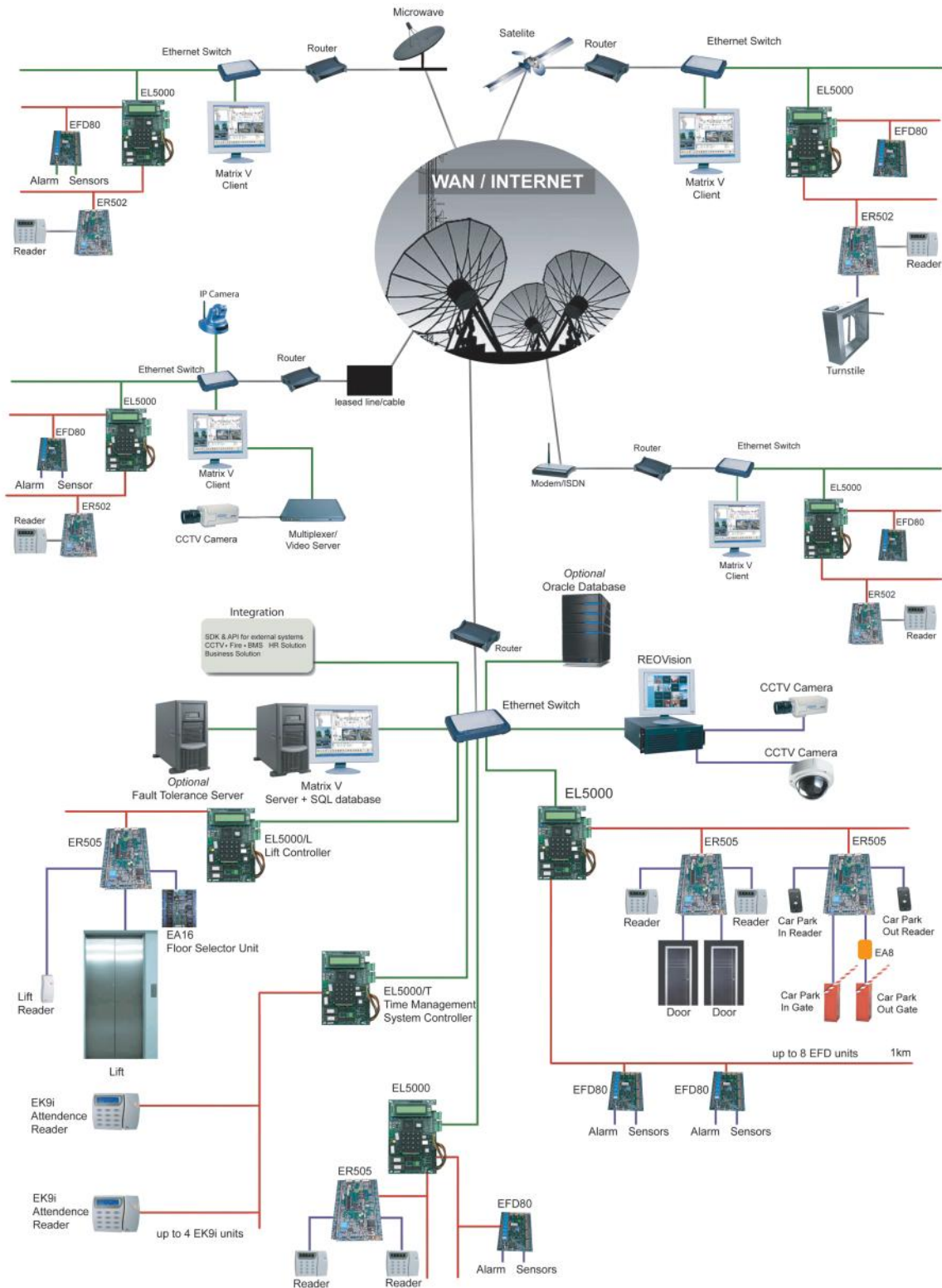
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ACCESS SECURITY SYSTEM



we make your world secure

Total Integrated Solution



Core Modules



Door Access Management

Maintain total control and surveillance of all door access in your secure areas directly from 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 configuration such as dual card mode, where in order to access a door, a high level "escort" card is required, and interLock configurations, where one has to enter and close one door before another door ahead will be unlocked.



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 floor 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.



REO Vision Digital Video Recording

REO Vision is an ELID's PC-based Digital Video Recording System (DVR) that provides for comprehensive surveillance with real time monitoring functions—a seamless integrated solution of surveillance technology with *Matrix V* system.



Car Park Access Control

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

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

Monitoring 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 vehicle quickly.



Real Time Intrusion Alarm Monitoring

Receive alert messages regarding security breaches on your security system, such as unauthorized intrusion 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 you response such as contacting the police or deploying security personnel to the scene.

Total Integrated Solution

Optional Modules



Visitor Manager

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

- Create and assign visitor cards instantly on demand.
- Keep track of visitor locations, area 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).



Pocket Matrix Module

Pocket Matrix allows system administrators at limited high-level remote access and control over the system through Mobile Devices such as a PDA via a wireless Local Area Network (LAN). Currently, these devices must support ARM/XSCALE—compliant hardware and Microsoft Pocket PC 2002 Operating System and above.

A user is also able to view & print transaction reports, control reader and sensor devices and perform card operation like add, delete, sort, search and download cards to controller.



Broadcast Manager

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 7-segment/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.



Time Track

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.).



Enterprise Modules

Matrix V Enterprise supports centralized online monitoring of an established group of Matrix V sites.

A system user will be able to log into any selected linked Matrix V database sites via an authorized login to centrally monitor online transactions, and this includes selective alarms.

For convenience, it provides both basic database management and reporting which can also be saved in preferred format such as QuickReport format (.QRP), text format (.TXT), Excel format (.CSV), or HTML.



Mobile Alert Email

This is useful for passive tracing or monitoring purposes. It allows registered personnel(s) to receive alert messages in the form of an e-mail whenever a pre-determined alarm/activities occurs within the boundary of the Matrix V system. It supports scheduled reporting whereby report settings can be per-defined, and correspondingly sent to registered personnel(s) according to defined schedules.

Unlimited Matrix V users can be registered into the module with valid e-mail address they can be categorized individually or as group.



ID Card Maker

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 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.



CCTV Interfaces

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.

Total Integrated Solution

Optional Modules



Mobile Alert SMS

GSM modules enable the instant sending of selected events to registered personnel(s) via a GSM (Global System for Mobile communication) handset in the form of SMS (Short Message Service) within the Matrix V System's boundary.

It also allows authorized personnel(s) to operate a limited number of Door Access Control and Alarm Monitoring Functions by using their mobile phones through SMS.

Authorized personnel(s) is able to track and trace card users according to first valid entry of one or all doors or, based on selective transactions. System devices' status can also be reported to registered personnel(s) on a pre-determined time daily or when prompted by personnel.



Web Matrix Module

Web matrix allows authorized users to log on the Matrix V system via the internet. These users are able to access to the system, operating at basic level from anywhere in the world. The basic operations include alarm monitoring function and generation of reports.



Guard & Patrol

The Guard Tour feature checks one or more card readers or alarm inputs during routine tours to verify that predefined tour routes have been followed and completed. Guards use IDs at card readers or trigger inputs in a sequence along their watch path. Events sent to the Matrix V Security Manager application inform system operators that the guard has reached a checkpoint at the appointed time, early or late.



Facility Manager

Facility manager is used to maintain and manage rooms (meeting rooms, function halls), facilities (sports, recreational) and control the access these different areas for predefined groups of people in multi-room and area facilities. The administrator will be able to control, Access & Duration for any of the facility is booked for. Facility manager helps the administrator or booking manager to pre-book events & issue booking slips and have an overview of all events in the facility to prevent double booking and managing events throughout the facility.

Total Integrated Solution

Application Modes

- Door access
- Car parking
- Turnstile access
- Lift access

Core Software Features

1. Designer (for devices configuration)
2. Security manager
3. I/O events and access reporting
4. Software license manager
5. User access right operator
6. Database backup and restore
7. Interface (for events data transfer)
8. Analyzer (for system information)
9. Verify and rectify cards database
10. Import and export (cards and transaction events)

Software Licensing

Server-station—USB Rockey (enable for inclusion of optional modules according to application)

Work-station—USB Rockey

Software Optional Modules

1. Visitor Manager
2. CCTV Interfacer
3. Guard & Patrol
4. ID Card Maker
5. Pocket Matrix
6. Mobile Alert Email
7. Broadcast Manager
8. Mobile SMS
9. Enterprise
10. Web Matrix
11. Time Track
12. Facility Manager
13. Weight Verifier

Power supplies

EP-0036-001 12V/3A with low battery & AC fail sensing

EP-0001-002 transformer c/w varistor 17VAC/3A

Reference Specification for Cable

Inter-Devices Data Cable

BELDEN cable. Type 22AWG, 1-pair 2 wire shielded, RS485

Power Cable

18AWG (32/0.2mm)

Maximum distance: 12V, 80m; 5V, 30m

LAN Cable

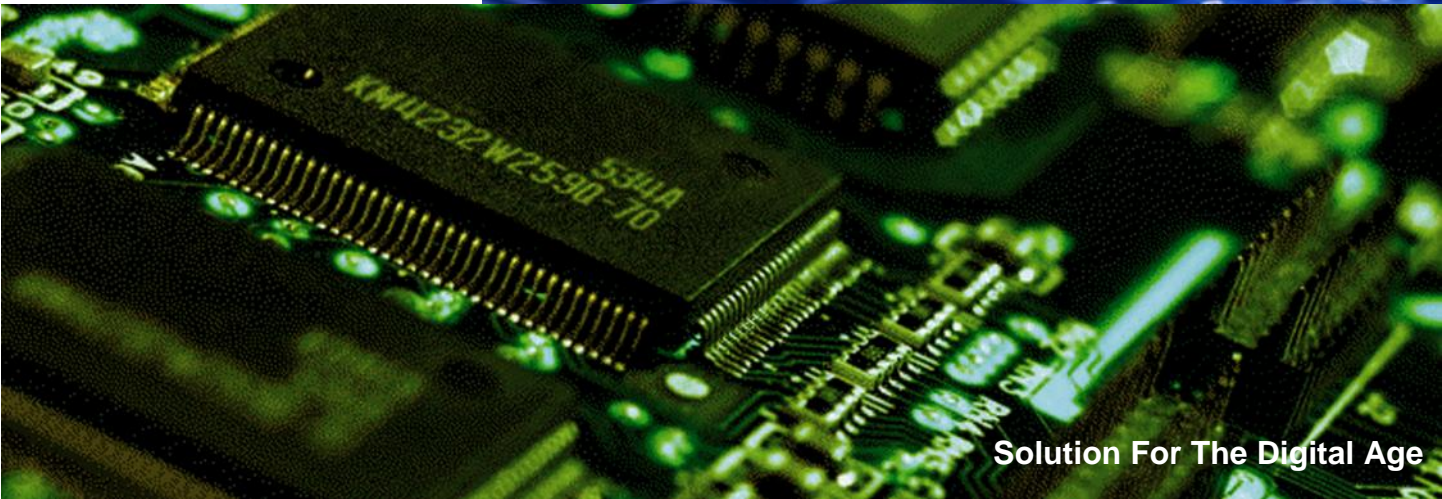
BELDEN cable type 24AWG, 4-pair twisted 8 wires CAT-5e

Software Main Languages

- English
- Simplified Chinese
- Other languages available



System Application Catalogue



ELID is a World Leader in Integrated Security Solutions

Main Access Peripherals



EL-5000-001

EL5000

A multitasking high end microprocessor with copious amounts of memory to handle high volumes of transactions, storage and reactions to various events. The EL5000 is able to hold up to 33,000 Card Users, and 23,000 Transactions Equipped with high speed up-link/downlink using TCP/IP to the Matrix V server, ensures that data is sent to the server in real time.

This unit is able to handle up to 8 Reader Interface units (RIUs) for simultaneous door transactions. It is able respond to events and communicate it's reactions to 8 doors and 8 EFD80 I/O Field Devices via RS485 connectivity .



EL-5002-001

EL5002

A multitasking high end microprocessor with copious amounts of memory to handle high volumes of transactions, storage and reactions to various events. The EL5002 is able to hold up to 33,000 Card Users, and 23,000 Transactions. Equipped with high speed up-link/downlink using TCP/IP to the Matrix V server, ensures that data is sent to the server in real time.

This unit is able to handle up to 2 simultaneous door transactions. It is able respond to events and communicate it's reactions to 2 doors and 8 EFD80 I/O Field Devices via RS485 Connectivity .

The EL5002 does not require any additional Reader Interface units as the RIU is already built into the EL5002. EL5002 is used instances when only 1 or 2 more doors needs to be added to the Matrix V system, without having to obtain an EL5000 and additional RIUs.



EL-5004-001

EL5004

A multitasking high end microprocessor with copious amounts of memory to handle high volumes of transactions, storage and reactions to various events. The EL5004 is able to hold up to 33,000 Card Users, and 23,000 Transactions .Equipped with high speed up-link/downlink using TCP/IP to the Matrix V server, ensures that data is sent to the server in real time.

This unit is able to handle up to 4 simultaneous door transactions. It is able respond to events and communicate it's reactions to 4 doors BUT without any support to EFD80 I/O Field Devices via RS485 connectivity. The EL5004 will only support I/O connected via EA5168.

Similar to the EL5002, the EL5004 does not require any additional Reader Interface units as the RIU is already built into the EL5004 to handle the first 2 door access units, but will require additional RIUs to handle the 3rd and 4th door. EL5004 is used instances when only up to 4 doors needs to be added to the Matrix V system, without having to obtain an EL5000 and additional RIUs.

Main Access Peripherals



EL-5500-001

EL5500




A multitasking high end microprocessor with copious amounts of memory to handle high volumes of transactions, storage and reactions to various events. The EL5500 has an option to configure the memory allocation in the following manner.

- a. 100,000 Card Users, 23,000 Transactions
- b. 33,000 Card Users, 160,000 Transactions
- c. 50,0000 Card Users, 80,000 Transactions

Equipped with high speed uplink/downlink using TCP/IP to the Matrix V server, ensures that data is sent to the server in real time.

This unit is able to handle up to 16 simultaneous door transactions. It is able respond to events and communicate it's reactions to 16 doors and 8 EFD80 I/O Field Devices via RS485 Connectivity.

Main Access Peripherals

 <p>ER-0502-001</p>	<p>ER502 Enhance Single Door Reader Interface</p> <p>The ER502 is the latest models in the range Reader Interface Units. Aside from the already existing features of an ER504 unit, it features enhanced baud rate for RS485 communication (up to 57600bps) & internal buzzer. For enhanced interface to other devices the board also houses 2 configurable input points and 3 configurable output points. It also houses a unit number display for each RIU, for easy identification by installers.</p>
 <p>ER-0504-001</p>	<p>ER504 Single Door Reader Interface</p> <p>This interface board provides for one set of door access functions. Its purpose is the same as that of ER0505.</p>
 <p>ER-0505-001</p>	<p>ER505 Two-Door Reader Interface</p> <p>2 sets of door access functions are provided in a single interface board. It is useful for doors that are of close proximity. Having this board located at a secured area would provide a dependable means of connectivity to readers, interactive keypads and doorlocking mechanisms to provide a tamper proof solution.</p>
 <p>ER-0009-005/ER-0009-006</p>	<p>EK9i LCD Display Reader Interface Unit</p> <p>ER-0009-001</p> <p>This interactive 2x16 LCD keypad display, houses a built-in Reader Interface for a single door access control function. Interactive & features supported</p> <ul style="list-style-type: none"> • Displaying Broadcast Manager messages • Time Attendance Portal • Individual Lateness Attendance Entry Terminal • User name Greeting • Personalized Reader Signage <p>It communicates via RS485 directly to the EL5000 series controller.</p>
 <p>EA-0008-001</p>	<p>EA8 2 Inputs by 6 Outputs Expander</p> <p>It is normally used with Reader Interface unit for additional sensors and outputs. It is also common being used for triggering of car park exit point.</p>

Intrusion Monitoring Peripherals



ES-1608-001

EFD80 16 Inputs by 32 Outputs Expander

It's application is to monitor other 3rd party sensors i.e. Perimeter photobeam sensors, seismic detectors, passive infrared detectors (PIR), smoke detectors and hardware based integration to Fire Alarm systems to release fire monitoring doors during fire evacuation mode.



XS-008A-001X

ES8A 8 Outputs Expander

This is an expander used with EFD80 expander for additional needed output points. EFD80 handles a maximum of 3 of these 8-output expanders and make up a total of 32 output points.



EA-5168-001




EA5168 8 Inputs by 8 Outputs Expander

This expander is connectable to the main controller via a short ribbon cable, normally used for short distance mounting, which may be convenient to be installed together in the same casing as the main controller

Reader Technology

 <p>ER-0928-E06</p>	<p>The ER-928/E is a Mifare Contactless Smart Card reader with built in antenna employing Elid's propriety encryption and algorithm for a more secure data transmission from smart card to reader. ER928/E interfaces with a Reader Interface Unit via wiegand protocols. For added PIN security, the EK9 series keypad can be mounted adjacently to the reader.</p> <ul style="list-style-type: none"> • Colour : Beige/Charcoal Grey • Data Format : Wiegand 40 Bit EMS (Elid Mifare Standard) • Read Range : 3-5 cm • Status Indication : By LED & Beeper • Radio Frerquency : 13.56MHz • Power Consumption : 12V/150mA • Communication Output : Free Wiegand • Dimensions : 110mm x 44mm x 21mm
 <p>ER-0928-G06</p>	<p>The ER928/G is a standard Mifare Contactless Smart Card reader with built in antenna ER928/G interfaces with a Reader Interface Unit via wiegand protocols. For added PIN security, the EK9 series keypad can be mounted adjacently to the reader.</p> <ul style="list-style-type: none"> • Colour : Biege/Charcoal Grey • Data Format : Wiegand 26-32 bits • Read range : 3-5 cm • Status Indication : By LED & Beeper • Radio Frequency : 13.56 MHz • Power Consumption : 12V/150mA • Communication Output : Wiegand/Free Wiegand • Dimensions: 110mm x 44mm x 21mm
 <p>ER-0923-0M2</p>	<p>ERH923</p> <p>The ERH923 is a Short-range Proximity reader which will read all HID Cards. ERH923 interfaces with a Reader Interface Unit via wiegand protocols. For added PIN security, the EK9 series keypad can be mounted adjacently to the reader.</p> <ul style="list-style-type: none"> • Color: Beige/Charcoal Grey • Data Format: Weigand 26-40 bits • Read Range: 3-5 cm • Status Indication: By LED & Beeper • Radio Frequency: 125Khz • Power Consumption: 5V/50mA • Communication Output: Wiegand • Dimensions: 110(H) X 44(W) X 35(D) mm
 <p>ER-0023-0M7</p>	<p>ERH23</p> <p>The ERH23 is a Short-range Proximity reader which will read all HID Cards. ERH23 interfaces with a Reader Interface Unit via wiegand protocols. It can be unobtrusively mounted on door mullions. It is epoxy coated and most suitable for weatherproofappplications.</p> <ul style="list-style-type: none"> • Color: Charcoal Grey • Data Format: Weigand 26-40 bits • Read Range: 3-5 cm • Status Indication: By LED & Beeper • Radio Frequency: 125Khz • Power Consumption: 5V/50mA • Communication Output: Wiegand • Dimensions: 120(H) X 44(W) X 20(D) mm

Reader Technology

 <p>ER-0029-002</p>	<p>ER29H</p> <p>ER29H Reader is ideal for installations incorporating parking control and medium read range applications. The ER29H reader packages all the electronics in one rugged, attractive and easy-to-install housing.</p> <ul style="list-style-type: none"> • Color: Charcoal Grey • Data Format: Weigand 26bits • Read Range: 50cm with EC-0021-02U passive HID Card • 8' (2.5m) with ProxPass Active Vehicle Tag • Status Indication: By LED & Beeper • Radio Frequency: 125Khz • Power Consumption: 12V/700mA • Communication Output: Wiegand • Dimensions: 305(H) X 305(W) X 25.4(D) mm
 <p>ER-0923-006</p>	<p>ERM923</p> <p>The ERM923 is a short range EM Proximity Card reader with built in antenna. ERM923 interfaces with Reader Interface Unit via wiegand protocols. For added PIN security, the EK9 series keypad can be mounted adjacently to the reader.</p> <ul style="list-style-type: none"> • Color: Beige/Charcoal Grey • Data Format: Weigand 26-40 bits • Read Range: 3-5 cm • Status Indication: By LED & Beeper • Radio Frequency: 125Khz • Power Consumption: 5V/50mA • Communication Output: Wiegand/Free Wiegand • Dimensions: 110(H) X 44(W) X 35(D) mm
 <p>ER-0023-006</p>	<p>ERM23</p> <p>The ERM23 is a Short-range EM Proximity reader with built in antenna. ERM23 interface with a Reader Interface Unit via wiegand protocols. It can be unobtrusively mounted on door mullions. It is epoxy coated and most suitable for weatherproof applications.</p> <ul style="list-style-type: none"> • Color: Charcoal Grey • Data Format: Wiegand 26-40 bits • Read Range: 3-5 cm • Status Indication: By LED & Beeper • Radio Frequency: 125Khz • Power Consumption: 5V/50mA • Communication Output: Wiegand/Free Wiegand • Dimensions: 120(H) X 44(W) X 20(D) mm

Reader Technology



ER-0823-G06 / ER-0823-G07

ERM823

The ERM823 is an ultra thin Short-range EM Proximity reader with built in antenna. ERM823 interfaces with a Reader Interface Unit via wiegand protocols. It can be unobtrusively mounted on door mullions. It is epoxy coated and most suitable for weather-proof applications.

- Color: Smoke Black/ Metallic Silver
- Data Format: Wiegand 26-40 bits
- Read Range: 3-5 cm
- Status Indication: By LED & Beeper
- Radio Frequency: 125Khz
- Power Consumption: 5V/80mA
- Communication Output: Wiegand / Free Wiegand
- Dimensions: 85(H) X 45(W) X 15(D) mm



ER-0009-R01

EK9R

The EK9R is a compact keypad with built-in EM Proximity card reader. They keypad with reader is compatible with ER505 Read Interface Units.

- Color: Beige/Charcoal Grey
- Display Type: 4 x 7 Segment Green LED
- Keypad Type: 12-key rubberized keypad
- Data Format: Weigand 26-40 bits
- Read Range: 3-5 cm
- Status Indication: By LED & Beeper
- Radio Frequency: 125 Khz
- Power Consumption: 5V/50mA
- Communication Output: Wiegand / Free Wiegand
- Dimensions: 110(H) X 90(W) X 35(D) mm



ER-0009-R02/ER-0009-R03

EK8R

The EK8R is a compact keypad with built-in EM proximity card reader. Functionally it is the same as the EK9R expect that is has different shape. They keypad with reader is compatible with ER504 & ER505 Reader Interface Units.

- Color: Smoke Black/Metallic Silver
- Display type: 4 x 7 Segment Red or Green LED / Blue LED
- Keypad: 16-key rubberized keypad
- Data Format: Wiegand 26-40 bits
- Read Range: 3-5 cm
- Status Indication: By LED & Beeper
- Radio Frequency: 125Khz
- Power Consumption: 5V/270mA
- Communication Output: Wiegand / Free Wiegand
- Dimensions: 115(H) X 90(W) X 30(D) mm

Reader Technology



EL-3000-001

EL3000/Mifare®

EL3000/Mifare® is a Biometric Mifare® reader-cum-controller that can be used for either door access or clocking alongside with fingerprint verification. This Fingerprint reader is introduced to enhance the level of security for High threat areas Capacitive Sensor Technology which reads the different electrostatic points on your finger to prevent identification theft that is possible on Optical Sensors.

Biometric Features:

- Scanner Type: Silicon fingerprint scanner (508dpi)
- False Rejection Rate: 0.5%
- False Acceptance Rate: 0.01%
- Storage Capacity: up to 10,000 Users and 10,000 transactions
- Format Support: Standard Mifare® & ELID Mifare® Standard (EMS)
- Verification Time: <1 sec
- Identification: One-To-Many (1:N) & One-To-One (1:1)
- Simultaneous Modes of Operation: Finger Only, Card + Finger, Card + PIN, Card only

Hardware Features:

- Color: Blue & Silver Scheme
- Display Type: 2 X 16 Characters backlit LCD
- Keypad: 16-key rubberized keypad
- Communication Interface: RS485, TCP/IP LAN (optional)
- Data Format: Wiegand 26-40 bits
- Read Range: 3-5 cm
- Status Indication: By LED & Beeper
- Radio Frequency: 13.56 Mhz
- Power Consumption: 12V/1000mA
- Communication Output: Wiegand/40 Bit Free Wiegand
- Dimensions: 190(H) X 120(W) X 50(D) mm

Reader Technology



EL-3000-002

EL3000/EM

EL3000/EM is a Biometric EM reader-cum-controller that can be used for either door access or clocking alongside with fingerprint verification. This Fingerprint reader is introduced to enhance the level of security for High Threat areas that uses Capacitive Sensor Technology which reads the different electrostatic points in your finger to prevent identification theft that is possible on Optical Sensors.

Biometric Features:

- Scanner Type: Silicon fingerprint scanner (508dpi)
- False Rejection Rate: 0.5%
- False Acceptance Rate: 0.01%
- Storage Capacity: up to 9000 Users and 10,000 transactions
- Format Support: Standard EM
- Verification Time: <1 sec
- Identification: One-To-Many (1:N) & One-To-One (1:1)
- Simultaneous Modes of Operation: Finger Only, Card + Finger, Card + PIN, Card Only

Hardware Features:

- Color: Blue & Silver Scheme
- Display Type: 2 x 16 Characters backlit LCD
- Keypad: 16-key rubberized keypad
- Communication Interface: RS485, TCP/IP LAN (optional)
- Data Format: Weigand 26-40 bits
- Read Range: 3-5 cm
- Status Indication: By LED & Beeper
- Radio Frequency: 125Khz
- Power Consumption: 12V/1000mA

Reader Technology



EL-3000-003

EL3000/HID

EL3000/HID is a Biometric HID EM reader-cum-controller that can be used for either door access or clocking alongside with fingerprint verification. This Fingerprint readers is introduced to enhance the level of security for High Threat areas that uses Capacitive Sensor Technology which reads the different electrostatic points on your finger to prevent identification theft that is possible on Optical Sensors.

Biometric Features:

- Scanner Type: Silicon fingerprint scanner (508 dpi)
- False Rejection Rate: 0.5%
- False Acceptance Rate: 0.01%
- Storage Capacity: up to 9000 User and 10,000 transactions
- Format Support: HID
- Verification Time: <1sec
- Identification: One-To-Many (1:N) & One-To-One (1:1)
- Simultaneous Modes of Operation: Finger Only, Card + Finger, Card + PIN, Card Only

Hardware Features:

Color: Blue & Silver Scheme
Display Type: 2 x 16 Characters backlit LCD
Keypad: 16-key rubberized keypad
Communication Interface: RS485, TCP/IP LAN (optional)
Data Format: Weigand 26-40 bits
Read Range: 3-5cm
Status Indication: By LED & Beeper
Radio Frequency: 125Khz
Power Consumption: Wiegand/40 Bit Free Wiegand
Dimensions: 190(H) X 120(W) X 50(D) mm

Reader Technology



ER-0900-001

ER900

ER900 RFID Long Range Reader uses UHF radio frequency identification (RFID) technology to create integrated automatic vehicle identification (AVI) system that offers superior performance characteristics over traditional long range proximity card systems.

- Format Support: UHF Tags
- Verification time : <1 sec
- Colour: Charcoal Grey
- Packaging: Weatherproof integrated antenna enclosure
- Communication Interface: RS485, TCP/IP LAN (optional)
- Read Range : 1.8m to 3.1m (depending on types of tags)
- Radio Frequency : FCC UHF Band, 902 - 928 MHz
- Power Consumption : 85 to 264 VAC/600mA
- Communication Output : Wiegand 26 Bits
- Dimensions: 305(H) X 254(W) X 102(D) mm



ER-1000-001 (handkey)

ER-1000-001 (Handkey)

Handkey CR

The Handkey is another Advanced Biometric device designed to verify the geometry of the user's hand to enhance the level of security. It can work in conjunction with card-based access control systems for dual technology verification. Handkey is used in situations where fingerprinting is not viable due to harsh & severe environments. In the dual technology mode the user can opt to utilize his card or integrated keypad to input his ID number for biometric verification.

- Verification time: <1 second
- Power Consumption: 12-24VDC or VAC
- ID Number : 1 to 10digit from Keypad or Card Reader
- Identification: One-To-One (1:1)
- User Capacity: 512 Users (internally expandable to 32,512)
- Card Reader Input/Emulation: Proximity 26-bit (8-bit facility code), Magnetic Stripe and Bar Code
- Communication: Wiegand, RS485 (4 wires and 2 wires), RS232, TCP/IP (optional)



ER-0009-001 (EK9S)

ER-0009-001

The ER-0009-001 keypad is aesthetically designed to fit with all ER92x series readers as a means for PIN Entry and Status display. It is compatible with all ELID Access Controllers.

Colour : Beige/Charcoal Grey
 Display type : 4x7 Segment Green LED
 Keypad : 12-key rubberised keypad
 Power Consumption : 5V/270mA
 Communication Output : Serial (8 Core)
 Dimensions: 115(H)X 90 (W) x 30 (D) mm






Power Management

 <p>EP-0036-001 (EP36)</p>	<p>EP-0036-001 This linear power supply unit is primarily used with the EL5000 Series Controller to supply 12VDC/5VDC/ 3A power rating. It features a built in Low Battery & AC Fail sensing circuitry as an indicator to alert the Matrix V System.</p> <p>Dimensions: 220 (L) x 115 (W) x 70mm (H) Weight: 1.8 kg Casing Material: Metal Enclosure Input Voltage: 230-240 VAC (for standard 17V/3A transformer) Output Voltage : 5V & 12V 3A</p>
 <p>EP-0023-000 (EP23S)</p>	<p>EP-0023-000 This switching power supply unit is normally applied to device interface units to supply 12VDC/2.5A power rating. It is packaged with a battery low cut-off module (PS2) to prevent controller instability when voltage falls below a specified value.</p> <p>Dimensions: 130(L) x 100(W) x 40(H) mm Weight: 0.4kg Casing Material: None Input Voltage: 115 – 240 VAC Output Voltage : 12V 2.5A</p>
 <p>EP-0033-001 (EP33)</p>	<p>EP-0033-001 This linear power supply unit is normally applied to device interface units to supply 12VDC/3A power rating. It comes equipped with a separate charger output for charging lead acid battery. The EP33 is further equipped with low-volt cut off relay which will disconnect battery from equipment to prevent controller instability when voltage falls below a specified value.</p> <p>Dimensions: 220(L) x 115 (W) x 70mm (H) Weight: 1.8kg Casing Material: Metal Enclosure Input Voltage: 110V – 240V Output Voltage : 12V 3A</p>
 <p>EG-PS30-002 (EP30S)</p>	<p>EG-PS30-002 This switching power supply unit is normally applied to device interface units to supply 12VDC/2.5A power rating. It is packaged with a battery low cut-off module (PS2) to prevent controller instability when voltage falls below a specified value.</p> <p>Dimensions: 130(L) x 100(W) x 40(H) mm Weight: 0.4kg Casing Material: None Input Voltage: 115 – 240 VAC Output Voltage : 12V 3A</p>
 <p>EP-0001-002 (transformer)</p>	<p>EP-0001-002 A transformer that comes with Varistor 17VAC/3A usually used with EP36 Power Supply.</p> <p>Dimensions: 80mm (L) x 40mm (W) x 75mm (H) Weight: 1.6kg Casing Material: None Input Voltage: 240V</p>





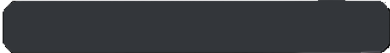
Miscellaneous

 <p>EA-0584-001 (star hub)</p>	<p>EA-0584-001</p> <p>This hub enables the EL5000 series controller to communicate with RIUs & EFDs via star topology instead of the conventional daisy chain topology. Up to 4 RS485 data lines are supported by this device for a distance of up to 1Km per data line. The star topology provides better security design & flexibility because, it allows each data line to be independent of the other data lines to eliminate tampering or data line failure. Control & communication is still maintained to the data lines that are still intact.</p>
 <p>CS-1098X (metal casing)</p>	<p>CS-1098X</p> <p>This metal casing provides an integrated enclosure for the RIUs together with the power supply and backup battery units.</p> <p>Dimensions: 381(H) x 330(W) 91(D)mm Weight: 5kg Material: Metal</p>
 <p>EG-0PS2-G01</p>	<p>EG-0PS2-G01</p> <p>The PS2 Low battery cut-off circuit board in plastic housing. It is usually applied with power adaptor or switching power supply disconnects battery from equipment to prevent controller instability when voltage falls below a specified value.</p> <p>Output: 5V/13.5V</p>
 <p>EL-5000-EP2 (microchip)</p>	<p>EL-5000-EP2</p> <p>Dedicated microchips are required in order for the controller to operate for lift application. It comes in a pair. Separate ordering of these IC Units is necessary</p>
 <p>EA-TC35-001(GSM Hardware)</p>	<p>EA-TC35-001</p> <p>A compatible GSM Terminal will be required for the purpose of urgent events transmission to Mobile phone in the form of SMS. The Matrix V Optional module 'GSM' runs on a server program at 24 hours by 7 days either to receive SMS command from a user or to transmit an important SMS to user for specific types of occurred event.</p>

Miscellaneous

 <p>MyKad Reader</p>	<p>MyKad Reader</p> <p>An external device connected to a registration terminal, used particularly with Matrix V Visitor Manager to extract smartcard details from Malaysian Identity Cards. It also can be used as a MyKad login reader into the matrix V system, instead of standard user and password login.</p>
 <p>Bar Code Scanner</p>	<p>Bar Code Scanner</p> <p>An external device connected to a registration terminal, used particularly with Matrix V Visitor Manager to extract barcode numbers from any Identity Cards.</p>
 <p>EA-0048-001 (EA48)</p>	<p>EA-0048-001</p> <p>The EA48 is designed to convert free wiegand and wiegand communication signals to RS232 PC communication signals or vice versa. This device facilitates direct communication of a reader card number to a PC used particularly with the Automatic Card Issuing facility on Matrix V Visitor Manager. EA48 Multiple format convertor comes with a 9 to 9 Cable, Adaptor and power adapter.</p>
 <p>EC-0008-4L1 (Mifare card)</p>	<p>EC-0008-4L1 (Mifare Card)</p> <p>Mifare contactless 1Kbyte smart card, 40 bit free wiegand (EMS format), thin card Proprietary ELID mifare® Standard format used only with ER923-E06 readers & EL3000M controllers, for Card Access and Fingerprint storage.</p> <ul style="list-style-type: none"> • Dimensions: 85.6 x 53.98 x 0.8 mm • Color: Plain white • Material: PVC Lamination
 <p>EC-0021-02U (HID card)</p>	<p>EC-0021-02U (HID Card)</p> <p>Proximity Card II 1326, Clamp Shell (Thick) Card, ELID format, 37 bit</p> <ul style="list-style-type: none"> • Dimension: 85.6 x 53.98 x 1.8 mm • Color: Plain white • Material: ABS Shell




Miscellaneous

 <p>EC-0024-02U (HID card)</p>	<p>EC-0024-02U (HID Card)</p> <p>ISOProx II 1386, Credit card size (Thin), ELID Format, 37 Bit Card</p> <ul style="list-style-type: none"> • Dimension: 85.6 x 53.98 x 0.8 mm • Color: Plain white • Material: Vinyl
 <p>EC-0021-E02 (EM card)</p>	<p>EC-0021-E02 (EM Card)</p> <p>Proximity Card (EM Compatible), Clamp Shell (Thick) Card, 40 bit card</p> <ul style="list-style-type: none"> • Dimension: 85.6 x 53.98 x 1.8 mm • Color: Plain white • Material: ABS Shell
 <p>EC-0024-E02 (EM card)</p>	<p>EC-0024-E02 (EM Card)</p> <p>Proximity Card(EM Compatible), Credit Card Size (Thin), 40 bit card</p> <ul style="list-style-type: none"> • Dimension: 85.6 x 53.98 x 0.8 mm • Color: Plain white • Material: PVC Lamination
 <p>EC-0090-001(UHF card)</p>	<p>EC-0090-001 (UHF Card)</p> <p>This battery-less card sized transponder work with the ER900 RFID Long Range Reader, for medium range reading applications.</p> <ul style="list-style-type: none"> • Dimension: 86 x 57 mm • Color: Plain White • Material: Polycarbonate • Working Range: up to 1.5m
 <p>EC-0091-001 (UHF Tag)</p>	<p>EC-0091-001 (UHF Tag)</p> <p>This battery-less transponder works with the ER900 RFID Long Range Reader, for long range reading applications.</p> <ul style="list-style-type: none"> • Dimension: 156 x 22 mm • Color: Charcoal Grey • Material: Vinyl • Working Range: up to 2.5m

Locking Mechanism

 <p>Drop bolt</p>	<p>Drop Bolt</p> <p>Drop bolt is a locking mechanism that is used with most types of doors: frames door, hollow framed door, and frameless door (require extra bracket and accessories) with a swing angle of 180degrees. It can be applied for both fail safe and fail secure applications.</p> <ul style="list-style-type: none">• Power DC 12V• Operating current 300 mA• Temperature 10° to 65° Celcius• Holding force up to 1000kg• Weight 1.05 kg• Delay time 0/3/6/9 seconds• Door swing angle 180°
 <p>Door strike</p>	<p>Door Strike</p> <p>The Electric strike was created for medium duty applications for framed doors, specially to control traffic flow through interior and exterior opening in retail and commercial environments. It can be applied for both fail safe and fail secure applications.</p> <ul style="list-style-type: none">• Power DC 12V• Operating current 200mA• Temperature 10° to 65° Celcius• Delay time : Specified by Controller• Door swing angle 90°
 <p>EM Lock</p>	<p>EM Lock</p> <p>The EM Lock was created for most types of doors: framed door, hollow framed door, and frameless door (require extra bracket and accessories), specifically to control traffic flow through interior and exterior openings in retail and commercial environments. . It can only be applied for fail secure applications.</p> <ul style="list-style-type: none">• Power DC 12V• Operating current 600 mA• Temperature 10° to 65° Celcius• Holding force up to 1200 lbs• Delay time: Specified by Controller• Door swing angle 90°

Locking Mechanism

 <p>EML Bracket (U)</p>	<p>EML Bracket (U)</p> <p>This EM Lock mounting bracket is used to clamp onto a frameless glass door for the purpose of mounting the metal armature used to latch the door to the EM Lock.</p>
 <p>EML Bracket (L)</p>	<p>EML Bracket (L)</p> <p>This EM Lock mounting bracket is used to clamp on most types of doors that are available for the purpose of mounting the metal armature used to latch the door to the EM Lock</p>
 <p>EML Bracket (Z)</p>	<p>EML Bracket (Z)</p> <p>This EM Lock mounting bracket is used to clamp on most types of doors that are available for the purpose of mounting the metal armature used to latch the door to the EM Lock</p>

Door Accessories



Door Sensor

Door Sensor

A simple magnetic device to detect the position of doors and windows to indicate if the door has been open, left-open or breached.

- Colour: White, Brown and Grey
- Material: De-activated Rhodium



Exit Push Button

Exit Push Button

This device is a simple push-to-close button. When depressed it will close the circuit loop and automatically spring back into open circuit position when the pressure on the button is released. It is used in application when the locking mechanism needs to be released by pressing a button located either next to the door or at a reception table. It is applied to low security areas, with high traffic and does not apply anti-passback



Emergency Break Glass

Emergency Break Glass

A bypass mechanism for emergency release of any locking mechanism in case of duress, fire etc. If the door is unresponsive to normal access methods or during emergencies, the glass plate of the unit is broken, thus deactivating the locking mechanism indefinitely until the glass plate is replaced.

- Colour: Blue, Green



Key switch

Key Switch

A bypass mechanism using a key deactivates the locking mechanism in the event the door is unresponsive to normal access methods.

- Colour: Silver, White and Grey



Buzzer

Buzzer

A buzzer is optional to provide audible warnings for the immediate locality where a monitored access or control accessed portal are breached or left ajar.

Door Accessories



Internal siren and strobe light

Internal Siren & Strobe Light

Siren is necessary to broadcast warnings where warning lights are not implemented to distinguish from other kinds of warning notification or to indicate the severity level of an occurred situation. Powering up the siren with particular sequence pattern of pulse or duration may be configured from the Controller units.

This unit may or may not be accompanied by a strobe light to provide an enhanced measure to capture the attention of personnel in the immediate vicinity.



battery

Sealed Lead Acid Battery

This device is a maintenance free battery used with Power Supply units in the event of a power failure. Choice of specifications of this battery is dependant on it's application and duration. Where devices require longer operational times, more of these units may be connected in parallel to supply more current for the extended period of time.

Vehicle Management Accessories



Barrier gate

Barrier Gate

Barrier Gates are utilized for the smooth operation at motorways, authorised access to premises & service of multi-story car parks.



Vehicle loop detector

Vehicle Loop Detector

Loop detectors are used wherever vehicles or metal objects have to be detected. Examples are in monitoring and safeguarding access roads or for counting vehicles. Loop detectors are installed under pavements or roads to detect the vehicles before and/or after the barrier or section of road for various applications. The output signal can be used for controlling door, autogates, barrier gates, activating proximity card access and card dispensers in car parks.








Goose neck

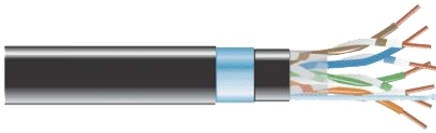
Goose Neck

A metal pole pedestal used to house the Entry or Exit reader units so that passengers in vehicles will be able to reach out of their vehicle windows to tag the cards onto the reader to gain access via the barrier gate.

Cables

	<p>Signal Cable to EA8 2 input by 8 output Expander</p> <p>24 AWG stranded (7x32) tinned copper 8 conductors, conductors cabled, semi-rigid PVC insulation, overall Beldfoil « shield (100% coverage), 24 AWG stranded tinned copper drain wire, PVC jacket. Belden 9538U.</p>
	<p>Inter-Devices Data Cable</p> <p>22 AWG stranded (7 x 30) tinned copper conductors, Datalene << insulation, twisted pairs, overall Beldfoil << shield (100% coverage) plus a tinned copper braid (90% coverage), drain wire, UV resistant PVC jacket. Belden 3105A</p> <p>Maximum length is 1 kilometer. This is used between EL5000 and ER504 / ER505 / EFD80.</p>
 <p>Cable with silicon rubber insulation</p>  <p>Earth</p>  <p>Earth Strap</p>	<p>Power Cable</p> <p>Power cable to the main source (220VAC) should be recommended having 3 core wires with silicon rubber insulation. Where power trips and surge occurrence are common, proper earthing should be implemented. Earth strap may be needed. In such a case, surge protectors are needed also.</p> <p>Cables used between 12V supplies and operating devices are suggested with the following criteria.</p> <p>18 AWG, 32/0.2 mm Working temperature between 0°C-70°C Rating 300V 6A</p> <p>Note carefully that voltage drops significantly beyond 80 meters. Choice of cables criteria and location of power supplies should be determined discretely.</p>

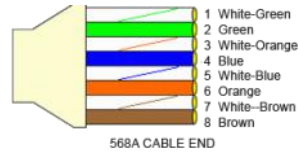
Cables



LAN Cable

Category 5e twisted 4 pair data cable will be needed for a common 100 Base-T (100Mbps) data transmission speed. Straight-thru clipping. Maximum length is 100 meters.

24 AWG 4 pair 8 wire DataTwist CAT-5e cable solid bare copper 8 conductors, non-plenum, Polyolefin insulation, twisted pairs, rip cord, PVC jacket. Belden 1583A.



Ribbon Cable

Ribbon cables are used with EA5168 I/O expander at about 6 inches apart between devices and controller. These cables are used together with IDC connectors. Normally the 20-way grey ribbon with 1 marked red is used.

Video Management



Reo Vision

Reo Vision

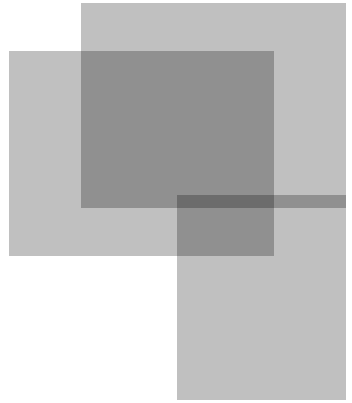
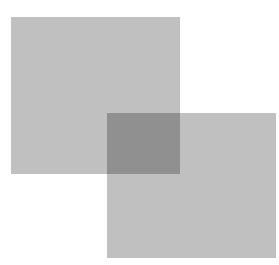
REO Vision, is ELID's PC-based Digital Video Recording System (DVR) that performs a number of functionalities to seamlessly integrate surveillance with the Matrix V System.

It provides:

- Comprehensive surveillance with real time monitoring functions
- Scheduled, Motion Detection & Event based recording
- Real Time Transaction tagged Recordings
- Comprehensive Audit Trails
- Alarm Reports
- Pre & Post Event Recordings-PTZ Support
- Remote Viewer

Requirements & Specifications:

- Operating system: Windows XP Pro or Windows 2000 Latest Service Pack
- Processor: Intel Pentium IV 2.66GHz
- HDD Capacity: 1000GB
- Recording Resolution: 720 x 576, 720 x 288, 352 x 288
- Multiplex Function: Duplex
- Video Transaction Speed: 10/100 base T Ethernet
- Live Video Division: 1, 4, 9, 16
- Dimensions: 177 x 483 x 660 mm (4U)
- Weight: 26kg



Software Solution Catalogue



Solution For The Digital Age

ELID is a World Leader in Integrated Security Solutions

Overview

Total Integrated Security Management Solution

The Matrix V Integrated Security Management System (ISMS) seamlessly integrates cohesive security and information technologies using open architecture design standards. Matrix V offers applications for digital video management, video footage analysis, advanced access control, alarm monitoring, intrusion detection, identity management, and visitor management. Individual application modules can be deployed as stand-alone systems or in any combination to deliver a single, seamlessly integrated solution. Matrix V is an established security integration platform.

Open Architecture Design

As part of its corporate philosophy, Elid is committed to open architecture. Matrix V has been designed in accordance with commonly agreed upon information technology standards. This approach strategically benefits customers by allowing them to select the best new products available and/or to leverage their previous technology investments. To that end, Matrix V has been developed in part using Delphi, Visual Basic & Microsoft .NET. Matrix V supports multiple off-the-shelf technologies for operating systems (Windows), database platforms (MS SQL Server, Oracle Server), network (Ethernet, TCP/IP), and administration utilities (Crystal Reports®)

Seamless Integration

All Matrix V application modules (Access Control, Alarm Monitoring, Card User Database Management, Digital Video, Intrusion Detection, Visitor Management, etc.) can be seamlessly integrated with one another. Matrix V uses a single database server and a single user interface for all applications. All Matrix V application software can be configured and managed from a single administrative workstation, and event activity can be monitored from a single alarm monitoring workstation.

Integration with Corporate Infrastructure

Matrix V Integration Tools enable advanced integration with existing business systems. Using sophisticated database tools, Matrix V can coordinate alarm/event data with emergency response systems, and provide/receive event information with building management, network management and third-party security systems.

Support

- Windows Server 2003/Vista/XP Pro/2000
- Microsoft SQL Server, OracleServer
- OPC Compliant
- High Availability
- Touch Screen Support
- Available in Multiple Languages

Configuration Options

- Software-only or TurnkeySystems Available
- Client/Server & Web Client Architecture
- Distributed Licensing
- Fault Tolerant Solutions Available
- Matrix V Lite (DVR or NVR Based)
- Matrix V Enterprise

Features

- Industry-Standard Database Backups
- Scheduling Management Tool
- Scalability - Full UpwardMigration Paths
- Custom Report Writers
- Advanced Monitoring Capabilities
- User Friendly GUI

Benefits

- Reduces Total Cost of Ownership
- Leverages Existing Infrastructure
- Increases Return on Investment



Overview

Software Security

- Matrix V login password is encrypted 3 DES-128 bits technology
- Supports Windows and SQL ID authentication mode
- Software and hardware TCP/IP data communication is fully encrypted with ELID propriety format.

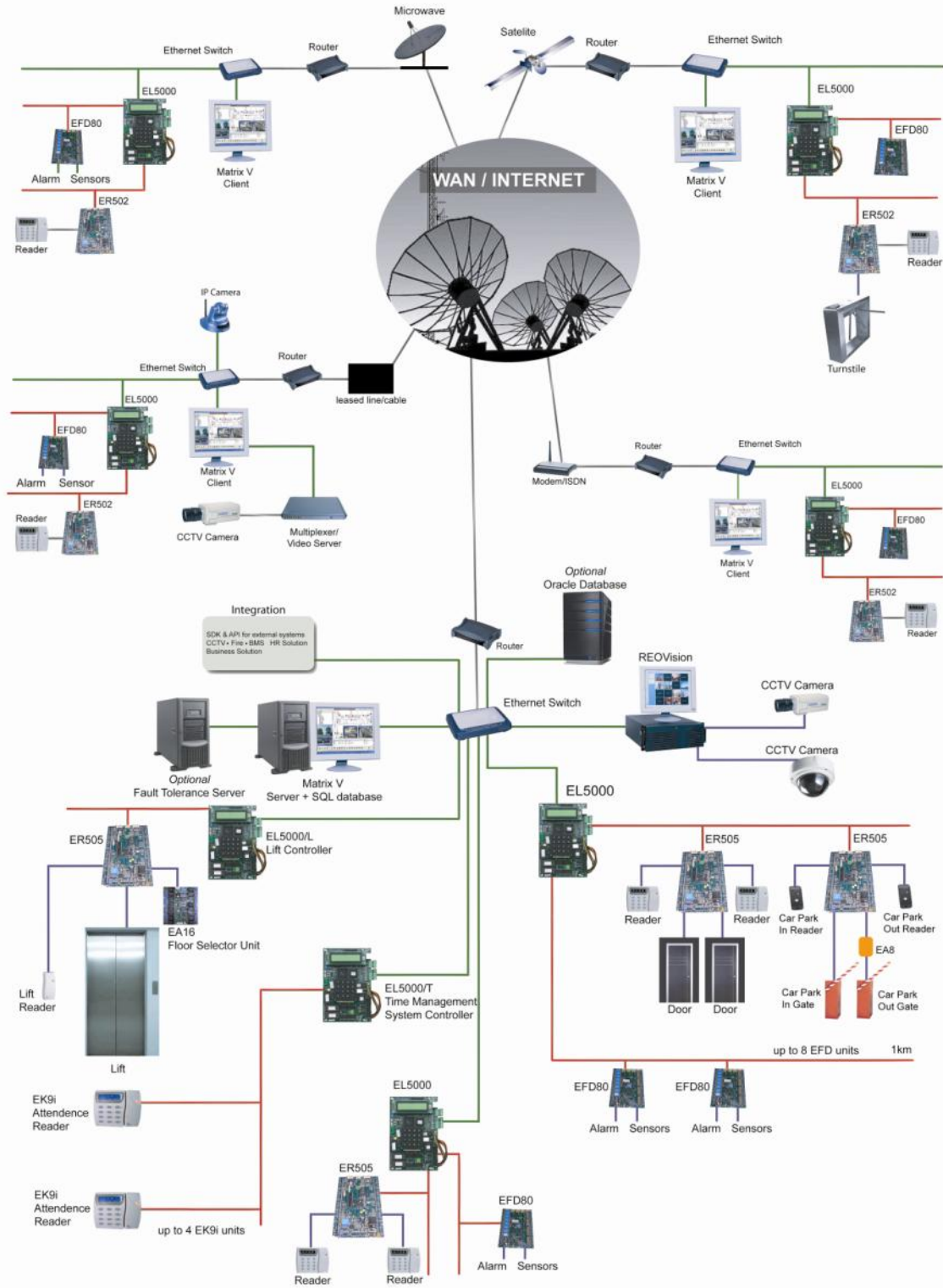
Applications to Integrate

- Matrix V Security Manager
- Matrix V Guard & Patrol
- Matrix V ID Card Maker
- Matrix V CCTV Interfacer
- Matrix V Mobile Alert (GSM & Email)
- Pocket Matrix
- Reo Vision
- Matrix V Enterprise
- Matrix V Visitor Manager
- Matrix V Time Track
- Matrix V Broadcast Manager
- Matrix V Facility Manager
- Web Matrix

Integration Toolkits and Standards to Enable

- OPC Server/Client





MATRIX V Overview



Distributed Intelligence Architecture

Matrix V's distributed intelligence architecture allows client workstations and intelligent field controllers to be placed directly on the existing network. All local access decisions are made and processed at the field panels, minimizing network traffic and providing real time access determinations. System administration, monitoring and video display can be performed at any client workstation on the network.

Access Rights & Partitioning

Using Matrix V's application and database partitioning, system administrators can provide each client workstation with only those applications & database segments that are required for that workstation via user login ID and password. This enables each user to have his own unique view of the site/department that he requires. Based on licensing, each client workstation can have any combination of Matrix V application modules installed as needed for daily operations, including access control, alarm monitoring, card user management, digital video, intrusion detection and visitor management. Administrators can allow users to log in to only those applications that they are authorized to utilize. Administrators can also restrict the functions and options available to any particular user within any application. From users with wide-ranging responsibilities to those with single function duties, Matrix V enables administrators to tailor users' system experience to their jobs.

Security Manager

Overview

Matrix V Access is an integrated access control and alarm monitoring system that delivers maximum protection, versatility, simple operation and cost efficiency. Matrix V Access incorporates the most advanced technologies available, including modern object-oriented software, an advanced client/server database architecture and Microsoft's multi-tasking, multi-threading 32-bit Windows 2000/XP/2003/Vista operating system. Solid technology and an intuitive graphical user interface combine to make Matrix V Access the most powerful yet easiest to use integrated security management system on the market.

Superior Scalability

Matrix V Security Manager offers unlimited scalability within a single, seamlessly integrated software solution. It has been designed to meet the needs of any size organization, from one that requires an entry-level, two-reader system to a large corporation with numerous facilities and thousands of card readers located around the world. Matrix V Access supports an unlimited number of card readers, alarm points and cardholders.

Versatile Accessibility & Automation

Accessibility is an important feature that provides a logical way to group database components. System administrators define accessibilities within the database, then assign each system user or object (access levels, alarm inputs, outputs, etc.) to one or more of those accessibilities. Accessibility is beneficial in environments where not every cardholder needs access to every area within a facility. A user sees only those objects that are in his accessibility level and those objects that are system-wide. In this kind of segmented system, only those records associated with a particular accessibility are downloaded to the Advanced Multi Door Controllers and associated field hardware in that segment. By minimizing the number of records that must be stored in a given device, Accessibility provides more efficient utilization of the memory contained in access control hardware.

Matrix V's allows system administrators to coordinate and plan system actions to be performed in the future. Many system operations can and are often anticipated to occur at certain times. To reduce the risk of error in performing these functions manually, administrators can set rules of execution for actions such as starting guard tour. Matrix V can also be configured to repeat security actions such as arming/disarming areas or masking/unmasking specific alarms. For any scheduled action, the iterations can be repeated at a specific time every day or on a specific day of the week.

Support

- Advanced Multi Door Controller (AMDC) Communications • Ethernet • Dual-Path (RS-485)
- 128-bit AES Encrypted ISC Communications
- Industry Standard Card Reader Technologies
- Desktop Based Client

Features

Flexible Programming Functions

- Elevator Control
- (Selective) System Downloads
- Import/Export Utility
- Occupancy Limit
- Local and Global Anti-Passback

Flexible Monitoring Functions

- Alarm Masking Groups
- Graphical Maps and System Overview Tree
- Monitor Zones
- Alarm/Event Mappings and Routings

Flexible Cardholder Commands

- Escort Control
- Card Enrolment Authorization

Flexible Card Reader Commands

- Cipher Mode
- Denied Access Attempts Counter

Reporting

- Audit Trail
- Complete Reporting Capabilities

Security Manager

Control & Administration

Matrix V allows individual operators to be appropriated with Access Rights to perform specific or designated tasks at the Matrix V Client Workstation which mimics the Matrix V Security Manager. The GUI is no different than what the Administrator would see at the Matrix V Server. This functionality is a business productivity solution that enables authorized managers to control cardholder access to specific physical areas. A manager need only log in to Matrix V Client Workstation using a standard desktop. Matrix V Security Manager displays a list of areas over which the manager has control, as well as a list of all personnel who have access to those areas. The manager can then assign or remove the access rights of employees to areas within his or her operational domain.

Reduce Total Cost of Ownership

Matrix V Security Manager provides a simple yet robust method for remotely administering access by individuals to specific areas in a facility. Using Matrix V Security Manager, corporate security departments can give managers independent control over the physical areas and staff for which they are responsible. This capability eliminates the ongoing need for intervention by a security administrator in order to assign or remove access privileges for each employee, thereby saving both time and money.

Audit Trail and Reporting Capabilities

Matrix V Security Manager's seamless integration with other Matrix V applications provides a complete audit trail and reporting capabilities. All access privilege assignments and removals are logged to the database with a time and date stamp and the identity of the manager who completed the transaction.

Intuitive Interface

Matrix V Security Manager uses an intuitive GUI to provide fast, efficient management of specific physical areas. The application simplifies process of adding or removing cardholder access privileges, thereby streamlining training and minimizing the learning curve.

Benefits

- Simple Management of Access level permissions
- Powerful Business Productivity Tool
- Decentralization of Access Privilege Management
- Reduced Training Costs
- Less Time Invested in Modifying Access Levels



Security Manager

Comprehensive Monitoring & Surveillance

Matrix V Security Manager primary interface is the core of the Matrix V system. It maintains total control and surveillance of all door access in your secure areas directly to Matrix V GUI. The Matrix V Security Manager also allows the Administrator to execute specific commands to doors such as opening and closing them directly, sealing them off from further access etc.

Matrix V Security Manager also receives 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 the computer screen in real time as they occur. This increases the response time and assists in organizing and implementing a response such as contacting the authorities or deploying security personnel to the scene.

Matrix V Security Manager video component that is built into the user interface, allows department managers to view direct video streaming related to their specific areas.

Portal Access Control

- Global Hard Anti-passback allows administrators to require that Cardholders present ID to both enter and exit an area. This prevents the same ID from simultaneously being used elsewhere in the area and not granting access when enforced, while reporting an alarm to the Alarm Monitoring workstation(s).
- Global Soft Anti-passback allows administrators to require that Cardholders present ID to both enter and exit an area. Soft Anti-Passback allows only one entry transaction followed by at least one exit transaction. This means that while an entry transaction cannot be immediately followed by another entry transaction, multiple exits on the same card may be made without any entry transactions. An alarm to the Alarm Monitoring workstation(s) will be sent when anti-passback in this scenario occurs.
- Alarm Anti-passback allows administrators to require that cardholders present ID to both enter and exit an area. Alarm Anti-Passback is similar to Hard Anti-Passback, however it would allow the same ID to be simultaneously used elsewhere in the area, and only accompanied by an alarm will be reported to the Alarm Monitoring workstation(s).



Security Manager

- **Forgiveness Anti-passback** automatically resets anti-passback flags on a card at 00:00 hours (midnight) every night. Thus, a person who registered an entry transaction but no exit transaction will not find himself or herself unable to enter that area again the next day.
- **Antipassback Delay** This feature, sets the graceperiod just after a successful access is made, during which antipassback violations are recorded but allowed by the system. This is to cater for cases such as when, somehow, the card user fails to open the door within the door lock release period after logging a successful entry.
- **Escort Card control** allows administrators to require that two individuals be present before being able to access high-security areas and both IDs be presented upon exit of those areas. In betweenentry and exit of the first two and last two cardholders, individual access may be allowed as the two-cardholder minimum is in effect.
- **Continuous Swiping** enables card users to continuously flag their cards at a card reader while the door is unlocked for card transaction logging purposes.

Output Event Reaction

Matrix V allows administrators to configure reactions where any input/output/event can be linked to any other input/output/event in the system. These linkages can be derived from any Matrix V application and associated hardware. Events such as invalid access level, valid card read, or motion detection might trigger such outputs as unmasking an alarm masking group, open an area or activate/deactivate a card reader. With Global I/O, Matrix V is easily automated to ensure rules are executed properly and security can be engaged instantly as necessary.

Cardholder Reports

Any cardholder can potentially be involved in a security incident. A good security program will immediately recognize when a security incident occurs. It can also promptly and accurately identify problematic trends that might indicate that an incident is about to occur. Matrix V provides standard reports that can be quickly generated. For example, the Access report can list exactly when and where a specific card was used within a given period of time.



Security Manager

Cardholder Records

A cardholder record in Matrix V ID Card Maker can be created manually. Once a cardholder profile has been established, the balance of the person's security permissions can be configured. Categories include:

- Access Levels - single access points or logical combinations of access points.
- Biometrics - manage the biometric templates of cardholders needing access to secured areas requiring biometric templates be used and when necessary encode or program this template to a smart card or manage it in an Matrix V Intelligent System Controller.
- Visits - records of individuals who have visited a facility that were sponsored by the cardholder.

Applications to Integrate

- Matrix V Security Manager
- Matrix V Guard & Patrol
- Matrix V ID Card Maker
- Matrix V CCTV Interfacer
- Matrix V Mobile Alert (GSM & Email)
- Pocket Matrix
- Reo Vision
- Matrix V Enterprise
- Matrix V Visitor Manager
- Matrix V Time Track
- Matrix V Broadcast Manager
- Matrix V Facility Manager
- Web Matrix

Standards to Enable

- OPC Server/Client



Detect & Alert

Detect & Alert Alarm Intrusion Systems

Matrix V Detect & Alert is an advanced solution for managing fire and intrusion events and maximizing return on investments in legacy intrusion/burglar/fire panel and central station receivers. Events generated in these parallel systems now have an additional means of monitoring and response. Matrix V allows customers to monitor these different systems from a single interface.

Elid Alarm Hardware

Elid offers input and output devices panel that are seamlessly integrated within the Matrix V field hardware architecture. Elid Advanced Multi Door Access Controllers can manage a mix of EFD80 and EA5168 (Input/Output Control Module) panels. Each EFD80 can manage up to 16 inputs with 8 outputs (expandable to 32 outputs).

Required Applications

- Matrix V Security Manager

Support

- Elid Alarm Hardware
 - EFD80 Alarm Input/Output Module
 - EA5168 Alarm Input/Output Module
- RS485 Communication
- Unlimited Panels and Receivers

Features

- Complete Monitoring & Reporting Capabilities
- Programmable Automated Alarm Response
- Integrated User Interface
- Command and Control of Daily Operations
- Complete Audit Trail
- Centralized Data Management
- Reliable Information Delivery
- Complete Configuration of Alarm Areas for Each Account
- Custom Alarm Zone Configuration
- Centralized Monitoring
- Full Reporting of All System, User and Alarm Events

Benefits

- One System to Monitor, Learn, and Manage the Security Environment





Fingerprint Template Manager

Integrated Biometric and Smart Card Management

Biometrics and smart cards are two of the most powerful security solutions available today. While there is an assortment of products on the market purporting to offer high security, not all of them provide the optimal experience for the user. Elid has developed Matrix V Fingerprint Template Manager to help customers leverage their Matrix V systems to support industry leading biometric and smart card technologies. This solution offers customers a seamless enrollment and verification experience, to simplify management and optimize security while providing added functionality.

Biometric Templates

Many organizations have begun to use biometrics to add a layer of protection beyond using cards and PIN at specific access points. Cardholders who must use biometrics for secure-Security can enroll their fingerprint, hand geometry or iris data easily and securely using the integrated Matrix V Fingerprint Template Manager. System administrators that add biometric verification capabilities to secured doors and desktops continue to use a single point of enrollment for all cardholders. Rolling out Matrix V Template Manager involves capturing the cardholder's biometric data, managing it in a secured database, and storing the template. Fingerprint templates can be managed in the Advanced Multi Door Access Controllers or on smart cards. The templates stored on smartcards are uniquely applied with Elid Mifare Standard (EMS) smartcards. Both models are achieved by leveraging existing investments made in Matrix V Advanced Multi Door Access Controllers and cardholder credentials. The cardholder's biometric template is securely managed, ensuring that the individual's personal data will not be compromised.

Biometrics & Smart Cards

Secure Cards

The enhanced security offered by smart cards has increased their popularity. Although magnetic stripe and proximity cards are easier to manage than traditional locks and metal keys, their vulnerability is that someone who can obtain the card-based data can reproduce the cards. By contrast, smart cards perform a procedure known as mutual authentication, which requires the smart card and the card reader to identify each other before data can be communicated. While proximity merely waits for a signal from a badge and automatically transmits data for verification, smart cards work in conjunction with readers to safeguard biometrics and other data on the card.

Support

- Supports Template-On-Card and Template-on-Controller Models
- Supports Biometric Readers from:
 - EL3000
 - ET3000
 - ET3100
- Supports Contactless Smart Cards / Readers from:
 - Elid Mifare Standard (EMS)

Features

- Fast, Efficient, Enrollment Using Matrix V Security Manager
- User Friendly GUI
- Accurate, Non-Intrusive
- Biometric Verification
- Single Networked System
- Unique Distributed Architecture
- Access Decisions Made at the Pane or Credential Level, Even When Off-line with the Database Server
- Centralized Reporting and Audit Trail

Benefits

- Increases Security
- Eliminates Multiple Systems and Databases
- Reduces Total Cost of Ownership





Fingerprint Template Manager

Smart Card Profiles

The ability to use a smart card for multiple applications besides security presents new opportunities for users. A magnetic stripe card contains a unique identifier that is accessed whenever the card is used—in vending machines, at doors, etc. By contrast, a smart card can support multiple, independent applications, each of which is protected by its own software key stored on the card. Each different application protects its own data, but all data is stored on one physical card. An advantage of the Matrix V solution is its ability to perform in-line encoding of multiple applications on a smart card during cardholder enrollment or badge printing. A Matrix V system administrator can create a unique smart card profile for each cardholder to manage and update the person's card data.

Required Applications

- Matrix V Access Security Manager



Visitor Manager

Advanced Visitor Management

Matrix V Visitor Manager is a dependable and cost-effective visitor management application that enables an organization to manage and track visitors throughout its facilities, using standard desktop technology. Whether it is implemented as a standalone system or seamlessly integrated with other Matrix V application modules to create a total security management environment, Matrix V Visitor Manager Offers unlimited flexibility by allowing IT and security managers to further capitalize on the existing IT investments made in their facilities.

Visitor Enrollment

Visitors can be quickly and efficiently enrolled into the system. Prior to a guest's arrival, an Matrix V operator can enter pertinent visitor data into the system, assign an employee host to the visitor, assign active date ranges for the person's scheduled visits, optionally capture the visitor's photo and signature, and assign access privileges to the visitor. Then, upon arrival, the visitor can be signed in with a simple mouse click, a guest badge can be printed for the person, and the employee host can be notified electronically. For large groups, Matrix V Visitor Manager provides bulk sign-in and printing capabilities.

Matrix V Visitor Manager also offers the ability to enroll in advance both visitors and their upcoming visits. Visitor information can be either imported into the system or manually entered from any licensed desktop within the organization. Employee hosts can be preassigned at the time the visit is scheduled, and a printed badge can be ready for the guest upon arrival.

Visitor and Visit Tracking

Matrix V Visitor Manager provides detailed visitor and visit tracking mechanisms. Matrix V system administrators can track visitors scheduled arrival and departure times against their actual in and out times. If a visitor has been assigned access rights to card readers, system operators can tightly track the visitor's movement throughout the facility using the Matrix V Alarm Monitoring application. Matrix V Visitor Manager can be integrated with Matrix V Reo Vision, allowing administrators to link digital video clips to visitor activity.

Support

- Uses Existing Desktop Infrastructure
- Easy Installation and Deployment
- Photo/ID Capture
- Employee Host Assignment Function
- Single Click Sign-In/Sign-Out Process
- Assign Visitors Access to Secured Areas
- Visitor Tracing
- Business Card Scanner Interface
- Send E-mail to Hosts Upon Visitor Arrival

Reports

- Daily Visitors
- Visitor Activity
- Visitor Arrival and Departure Times
- Visitor Abnormality Report
- Additions and Changes to Visitor Record

Benefits

- Reduced Total Cost of Ownership
- Streamlined Data Collection and Management



Visitor Manager

Complete Reporting Capabilities

Matrix V Visitor Manager has complete reporting and auditing capabilities. All visitor transactions and movements that occur throughout the facility are recorded and stored in a detailed audit trail. All additions and changes to visitor records are also tracked by the system. Standard reports include Daily Visitors, Visitor Activity, and Arrival and Departure Times, among others..

Integration Toolkits and Standards to Enable

- OPC Server/Client

Support

- Uses Existing Desktop Infrastructure
- Easy Installation and Deployment
- Photo/ID Capture
- Employee Host Assignment Function
- Single Click Sign-In/Sign-Out Process
- Assign Visitors Access to Secured Areas
- Visitor Tracing
- Business Card Scanner Interface
- Send E-mail to Hosts Upon Visitor Arrival

Reports

- Daily Visitors
- Visitor Activity
- Visitor Arrival and Departure Times
- Visitor Abnormality Report
- Additions and Changes to Visitor Record

Benefits

- Reduced Total Cost of Ownership
- Streamlined Data Collection and Management



Time Track

Comprehensive Employee Management

Matrix V Time Track is used to assist management to keep track of employee attendance and provide management with details of employee's working hours, their overtime hours and lateness in school, colleges construction companies and factory with different time and shift.

By leveraging on the existing Matrix V Hardware infrastructure using the readers as time clocking units, data is stored in the Database from which Time Track will then process the data into a comprehensible form for use by the management Time Attendance purposes.

Matrix V Time Track is designed for management to keep track of employees' daily or monthly attendance, employees' working hours, computation of overtime, shift allowances leave management and others. It has been designed for data capturing either from external sources like Proximity Card, Finger-Print Reader, Magnetic Card Reader, Barcode Reader or direct from the Terminal Simulator. The system is suitable for all types of businesses. It is user-friendly with user definable overtime and allowance computation and it also provides exception reports.

Extensive Reporting

Matrix V Time Track has complete reporting and auditing capabilities. All employee's transactions and movements that occur throughout the facility are recorded and stored in a detailed audit trail. All editing and changes to employee attendance records are also tracked by the system. Standard reports include Summarized Daily/ Monthly Attendance, Leave Reports, Late IN and Early OUT reports, Overtime, Leave Reports and Individual and Departmental Reports, among others.

Required Applications

- Matrix V Security Manager

Support

- Uses Existing Desktop Infrastructure
- Easy Installation and Deployment
- Online Monitoring
- Flexible ID Technology
- Data Import/Export
- Client / Server Architecture

Reports

- Attendance
- Daily Attendance Analysis
- Monthly
- Leave Report
- Department List
- Holiday List
- Audit Trail ,
- Daily Attendance Details
- Lateness Report
- Early-out Report
- Incomplete Report
- Absenteeism Report
- Attendance Sheet
- Overtime Report
- Edited Attendance Report

Benefits

- Time and cost savings for organization,
- Increases Efficiency and effectiveness in controlling and managing staff.
- Provides control in systematic work scheduling
- Parameter-driven; flexible customization and user-friendly
- Exception reports allows management to take corrective action promptly

REOVision

Overview

REOVision is a flexible and dynamic video system. REOVision offers customers the scalability to take small and simple video needs to large and sophisticated enterprise video. REOVision is seamlessly integrated with Matrix V, offering customers the many benefits of applications inside the Matrix V portfolio, including Matrix V Security Manager and Matrix V Detect & Alert. By integrating with Matrix V, customers can realize a true, event-driven system architecture whereby automated security is enabled by linking real, live security-related events. Event video can be monitored in several ways. For those organizations with sophisticated monitoring needs, REOVision offers an array of algorithms and packaged solutions for everyday security challenges such as, objects entering an area or object leaving an area.

Configuration

REOVision's powerful configuration options enable administrators to design simple and straightforward systems, or expansive and sophisticated solutions tailored to their specific needs. Camera resolution support high resolution 4CIF (D1) real time (PAL: 704*576, NTSC: 704*480) quality. An array of frame rates are available, and are dependent on video capture modules with H.264 compressions. REOVision also offers several recording, extended storage and monitoring options. Customers can record in continuous, time-lapse, event-driven, and store that video on industry-standard, off-the-shelf hardware, including Direct Attached Storage (DAS) & Network Attached Storage (NAS). Once video is set up, it's time to monitor it. REOVision offers several options for viewing, including through Matrix V Security Manager, REOVision Playback, Remote Manager. REOVision lets you build your video system with our software.

Event-Driven Solution

For every aspect of a video system, alarm event conditions drive the solution. PTZ on event. Auto-launch on event. Record on event. Monitor events. Investigate events. Archive event video. REOVision is the event-driven solution.

Support

Resolution:

- 4CIF(D1) real time (PAL: 704*576, NTSC: 704*480)

Multiple Frame Rates:

- Up to 25, depending on recorder device

Compression:

- H.264

Recording Options:

- Analog video input
- Continuous
- Time-lapse
- Event-driven

Extended Storage Options:

- Direct-Attached Storage (DAS)
- Network Attached Storage (NAS)

Monitoring Options:

- Integrated monitoring
- REOVision Playback
- Remote Manager

Event Options

- PTZ on event
- Auto-launch on event
- Record on event (Pre & Post)
- Monitor events
- Investigate events
- Archive event video

REOVision

Monitoring

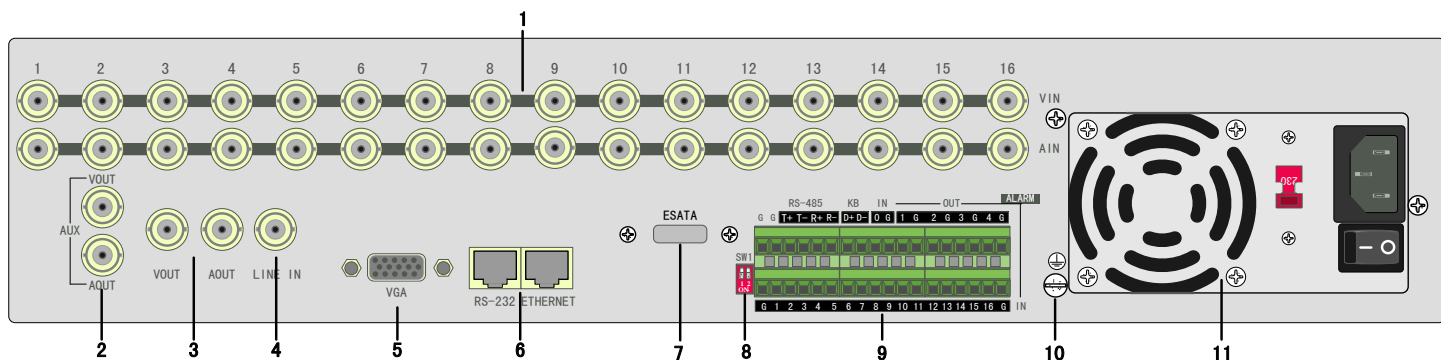
Matrix V leads the industry with the most robust monitoring application available. Matrix V Security Manager with Detect & Alert communicates the status of video recorders and network cameras, illustrates alarm location with the use of multimedia graphical maps, and enables operators with in-view PTZ control, auto-launch of video on alarm and camera touring. Matrix V also offers users a variety of monitoring interfaces, from the Remote Manager to Matrix V Security Manager. No matter what the monitoring requirement is, Matrix V has an interface to match.

Stand-alone Digital Video

Customers looking for stand-alone digital video recorders can use an Elid video recorder with the REOVision configurations. Customers can take the single stand-alone video recorder and add Matrix V's robust Security Manager, as well as countless software options. For customers expanding an existing analog environment by upgrading to a REOVision DVR, Elid video recorders offer the flexibility to initiate an integrated security architecture by focusing on stand-alone digital video, then expanding the system when the time is right.



REOVision



1. VIN video input interface, AIN audio input interface;
2. AUX VOUT auxiliary local video surveillance interface, AUX AOUT auxiliary local audio surveillance interface;
3. VOUT local surveillance interface, AOUT local monitoring interface;
4. LINE IN voice talk input interface;
5. VGA display output interface;
6. RS-232 serial interface, ETHERNET network interface;
7. eSATA backup/ storage extension interface (optional);
8. RS-485 match resistor switches;
9. RS-485 serial interface, keyboard interface, ALARM IN alarm input, ALARM OUT alarm output module;
10. Grounding terminal;
11. Power: 110/220V AC.

Model name	EO-CF16-002
Video compression	H.264
Preview resolution	4CIF real time (PAL: 704*576, NTSC: 704*480)
Playback resolution	CIF/QCIF real time
Video input	16 BNC (1.0Vp-p, 75Ω)
Main video output	1 channel, BNC (1.0Vp-p, 75Ω)
Aux video output	1 channel, BNC (1.0Vp-p, 75Ω)
Frame rate	PAL: 1/16—25FPS, NTSC: 1/16—30FPS
Stream type	Video/ Video & Audio
Max bit rate	32Kbps--2Mbps, self-define
Audio input	16 BNC (2.0Vp-p, 1kΩ)
Main audio output	1 channel, BNC (Linear Electrical Level, 600Ω)
Aux audio output	1 channel, BNC (Linear Electrical Level, 600Ω)
Audio compression	OggVorbis, 16Kbps
Voice talk	1 channel, BNC (Linear Electrical Level, 1KΩ)
Communication interface	1 RJ45 10M/100M Self-adaptive Ethernet Interface 1 RJ45 RS232 Port
RS-485 Port	1 Port (T+, T-, R+, R-)
Keyboard interface	1 Port (D+, D-)
SATA interface	8
USB interface	1 USB interface, USB1.1, can support USB flash memory, USB HDD and USB CD-R/W
VGA interface	1 VGA interface, support resolution: 800×600/60Hz, 800×600/75Hz, 1024×768/60Hz
External alarm in	16
Relay output	4
Power supply	100~240VAC, 6.3A, 50~60Hz
Power consumption	20—42W (without HDD and CD-R/W)
Working temperature	-10℃--+55℃
Working humidity	10%--90%
Size	19" Standard (450mm*450mm*95mm)
Weight	≤8Kg (without HDD and CD-R/W)

Matrix V Lite - Now everyone can own an Integrated Security Management System

Matrix V Lite is the easiest track to using the most powerful security platform in the industry. With access control, ID management available on the same server as the database with direct access to a separate REOVision digital video recorder. Customers with entry-level system requirements have the luxury of all applications in one unit, saving valuable IT resources by not requiring a separate security server. Matrix V Lite is the choice for customers with one to many stand-alone locations and the need for consistent deployments of access control, ID management and direct access to REOVision. Customers who start with the simplicity of Matrix V Lite also have the flexibility to expand to larger systems that might require additional computing resources, while maintaining a consistent user interface and system administration experience with no retraining required. Matrix V Lite can start your security deployment today!

Single Unit for Everything

Customers with security applications ranging from access control, to ID management, to digital video can start with one application and add more as requirements evolve. Customers who want to start with video only and add modules later can do so without needing additional server hardware. Matrix V Lite is built with an additional hard drive for the Matrix V application and database, enabling a true single unit solution for entry-level access control, ID management and digital video.

Easy Upgrades to Traditional Matrix V Architecture

Matrix V Lite can make sense for customer needs today, but what will they do in a couple of years when they need more? Matrix V Lite is designed to offer standard, entry-level access control, ID management and digital video. Many customers have realized the investment value of addressing today's needs with the simplicity of Matrix V Lite. Many more have also expanded on that initial investment and, when expansion was necessary, upgraded the Matrix V Lite system to a traditional Matrix V architecture. This migration involves a couple of straightforward steps. A new Matrix V security server is introduced; the database is moved to the new server, and the original Matrix V Lite unit is converted to a dedicated Client Workstation. Matrix V Lite can start small and grow big to satisfy any customer's requirements.

Support

- Windows XP/Vista
- SQL 2005 Express Database
- 8 Access Portals (Scalability ensured)

Features

- Access Control, and ID Management, all in one unit
- Ease of migration to traditional Matrix V architecture

Benefits

- Preconfigured for implementation
- Minimum 4U rack space savings



Enterprise

Advanced Enterprise Security Integration

Matrix V Enterprise is the industry's first multi-server, synchronized database solution designed for enterprises with multiple facilities spread across geographical areas. Matrix V Enterprise allows corporate security and IT managers to maintain central control over the entire integrated security system, while allowing regional offices to maintain independence and autonomous operations of their respective individual regional security systems.

Central Database Storage Facilities

Matrix V Enterprise gives corporate security and IT managers complete command and control over all system and event information. All cardholder and access control field data accumulated at the regional servers is synchronized and logged to a master enterprise server. This gives corporate security managers full viewing control over central alarm monitoring, reporting, and auditing functionality.

Autonomous Regional Operations

Matrix V Enterprise gives regional system administrators autonomous control over their individual regions, independent of the enterprise server and corporate wide area network. Each regional system administrator has total control over all access control field hardware and system information related to his respective region. Additionally, regional administrators and operators can view, control, and modify only the information and field hardware that is related to their regions.

Scalability for Multinational Sites

Matrix V Enterprise is scalable, which makes it ideal for any size installation. It supports an unlimited number of regional servers and client workstations without system degradation. Its powerful, transaction-based architecture allows the system to grow and expand as the organization grows, while utilizing the same access control field hardware and application software.

Support

- Unlimited Regional Servers
- Unlimited Cardholders
- Unlimited Simultaneous Users
- Unlimited Card Readers
- Unlimited Alarm Inputs
- Unlimited Client Workstations
- Unlimited Time Zones
- Unlimited User Privilege Levels
- Unlimited Relay Outputs
- 6 Simultaneous Regional Servers Monitoring

Features

- Card User Interface Functionality for Enrolling Cardholders at Remote Sites
- Segmented Database Architecture
- Open Architecture Design Utilizing Commercial, Off-the-Shelf Products
- Intelligent Fault Tolerant Response System
- Advanced Network Design
- Powerful Import & Export Capabilities

Options

- Multi-Regional Alarm Monitoring



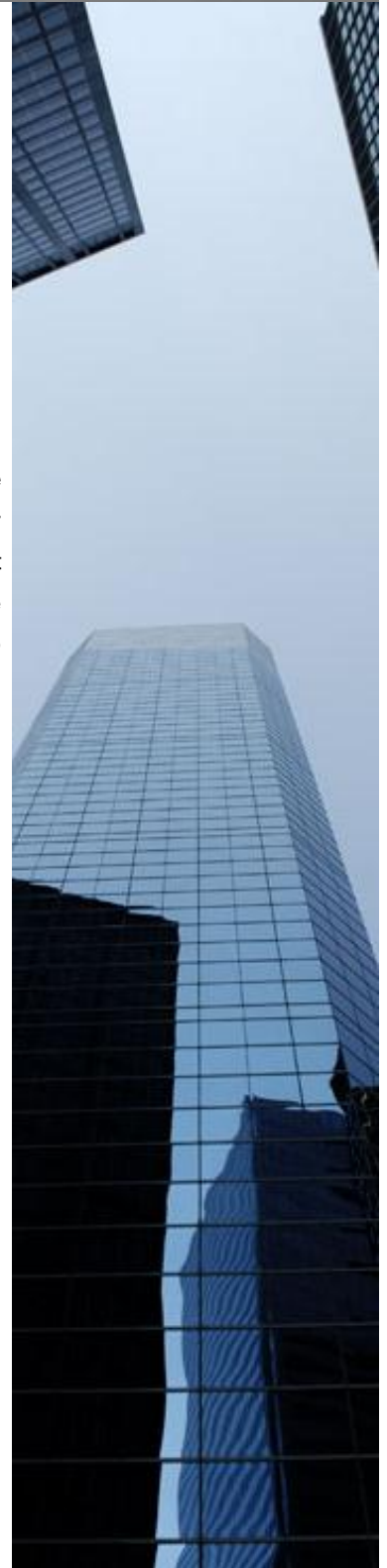
Enterprise

A Single Card Enterprise Solution

With Matrix V Enterprise, each cardholder carries a single ID card that is usable at all regional sites in the system. Once the cardholder database has been distributed to the regions, each regional administrator can assign unique access levels for the cardholders that are allowed at his region. Matrix V Enterprise's advanced security allows system administrators and operators to assign access levels for only those card readers that are in their respective regions.

Multi-Regional Monitoring and Administration

Matrix V Enterprise's power and flexibility allows system operators to monitor alarms in multiple regions simultaneously. This means that regional operators might, for example, monitor alarm and event information locally during working hours, while enterprise operators might monitor alarms from all of the regions after hours. An unlimited number of regions can be monitored simultaneously. Matrix V Enterprise also allows enterprise system administrators to configure and administer multiple regions from a single site.



Integration

Increased Security Intelligence

Information sharing is critical to the implementation of effective business systems. Proper integration of different systems is essential to increasing a company's return on investment. Applications that use the same data through the same process increase productivity and reduce maintenance. Matrix V is built to help customers achieve this level of integration by leveraging Matrix V as the central repository for all security information, and integrating through customization to other applications such as human resources, ERP, SAP etc.

OPC Client/Server

Matrix V supports OLE for Process Control (OPC) interfaces, which are based on Microsoft OLE/COM technology. OPC was designed to allow interoperability of building automation and process control systems, enabling the systems to bidirectionally communicate. Matrix V allows customers to utilize their systems as client or server for OPC alarms & events (historical) and OPC data access (real-time).

Standards to Enable

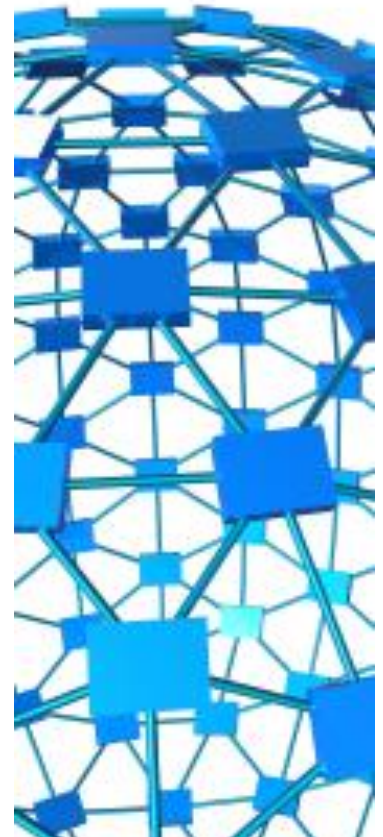
- OPC Server/Client

Features

- Technology Independent with Support for OLE

Benefits

- Leverages Existing Available Information
- Automates Business Process
- Increases Return on Investment
- Stronger Security
- Reduces Total Cost of Ownership
- Increases Security Intelligence & Accountability
- Vast Integration Opportunities



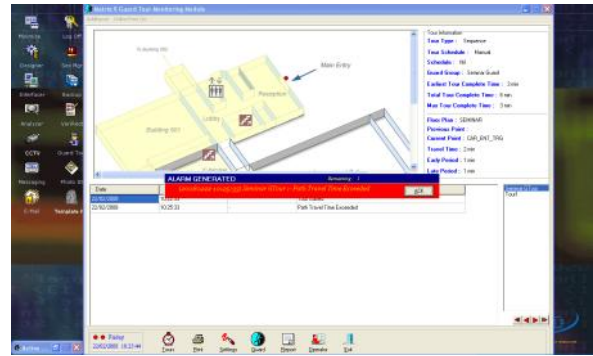


GUI Display

Guard & Patrol

ELID SDN BHD
GUARD TOUR EXCEPTION REPORT
Printed on : 2/22/2008 9:17:25 AM

TOUR	ALARM DATE	ALARM TIME	ACK DATE	ACK TIME	REASON
Securor 07 car	25/01/2008	13:53:00	25/01/2008	13:53:31	CAR_IN_TRO In Sequence: Too early
Securor 07 car	25/01/2008	13:53:04	25/01/2008	13:53:32	CAR_OUT_TRO Out of Sequence: Too early
Securor 07 car	25/01/2008	13:53:24	25/01/2008	13:53:32	MARL_CR_TRO1 Out of Sequence: Too early
Securor 07 car	25/01/2008	13:53:25	25/01/2008		Sequence tour ended but too early
Securor 07 car	25/01/2008	13:54:30	25/01/2008	13:54:31	CAR_IN_TRO In Sequence: Too early
Securor 07 car	25/01/2008	13:54:43	25/01/2008	13:54:31	CAR_OUT_TRO Out of Sequence: Too early
Securor 07 car	25/01/2008	13:54:47	25/01/2008	13:54:31	MARL_CR_TRO1 Out of Sequence: Too early
Securor 07 car	25/01/2008	13:54:40	25/01/2008	13:54:32	Sequence tour ended but too early
Securor 07 car	25/01/2008	14:16:33	25/01/2008	14:17:41	CAR_IN_TRO In Sequence: Too early
Securor 07 car	25/01/2008	14:17:37	25/01/2008	14:17:41	CAR_OUT_TRO Out of Sequence: Too early



Time Track

Matrix Guard Patrol Monitoring

STAFF NAME	IN	OUT	IN (Min)	OUT (Min)	IN (Sec)	OUT (Sec)	IN (Min)	OUT (Min)	IN (Sec)	OUT (Sec)
Chia Wan Hoon	08:29	16:38	0	0	0	0	0	0	0	0
Chia Wan Hoon	08:31	14:30	0	0	0	0	0	0	0	0
Chia Wan Hoon	08:25	07:03	0	0	0	0	0	0	0	0
Hoek Bee Soon	08:31	15:29	0	0	0	0	0	0	0	0
Hoek Bee Soon	07:10	17:06	0	0	0	0	0	0	0	0
Hoek Bee Soon	08:46		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	08:29	16:18	0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	08:27		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0

Matrix Guard Patrol Monitoring

STAFF NAME	IN	OUT	IN (Min)	OUT (Min)	IN (Sec)	OUT (Sec)	IN (Min)	OUT (Min)	IN (Sec)	OUT (Sec)
Chia Wan Hoon	08:29	16:38	0	0	0	0	0	0	0	0
Chia Wan Hoon	08:31	14:30	0	0	0	0	0	0	0	0
Chia Wan Hoon	08:25	07:03	0	0	0	0	0	0	0	0
Hoek Bee Soon	08:31	15:29	0	0	0	0	0	0	0	0
Hoek Bee Soon	07:10	17:06	0	0	0	0	0	0	0	0
Hoek Bee Soon	08:46		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	08:29	16:18	0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	08:27		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0
Hoek Myak Voo-Cheong	[Absent]		0	0	0	0	0	0	0	0

ELID Sdn Bhd
Daily Attendance Report
Viewing ACC for 20/02/2008 to 22/02/2008

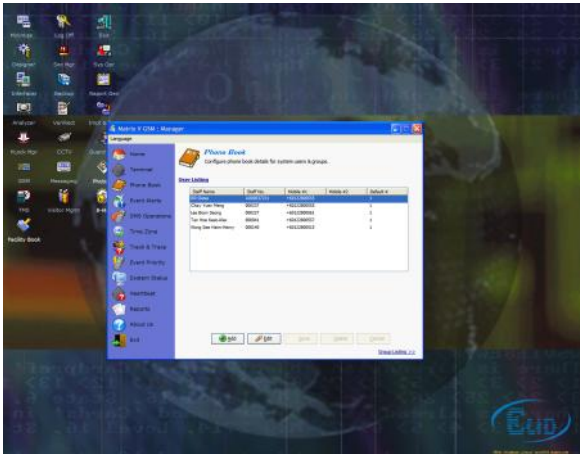
Date	Name	IN	OUT	OTI	OTO	OT (Min)	Late (Min)	Exc (Min)	Inc (Min)	Edt	Znc
21/02/2008	Chia Wan Hoon	08:29	16:38			0.00	8.15	0	0.00		
21/02/2008	Chia Wan Hoon	08:31	14:30			0.00	5.98	1	2.00		
22/02/2008	Chia Wan Hoon	08:25	07:03			0.00	0.03	0	5.57		
23/02/2008	Hoek Bee Soon	08:31	15:29			0.00	6.97	1	1.51		
23/02/2008	Hoek Bee Soon	07:10	17:06			0.00	7.93	0	0.00		
23/02/2008	Hoek Bee Soon	08:46				0.00	0.00	1.0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	[Absent]				0.00	0.00	0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	08:29	16:18			0.00	7.92	0	1.00		
23/02/2008	Hoek Myak Voo-Cheong	08:27				0.00	0.00	0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	[Absent]				0.00	0.00	0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	[Absent]				0.00	0.00	0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	[Absent]				0.00	0.00	0	0.00		
23/02/2008	Hoek Myak Voo-Cheong	[Absent]				0.00	0.00	0	0.00		





GUI Display

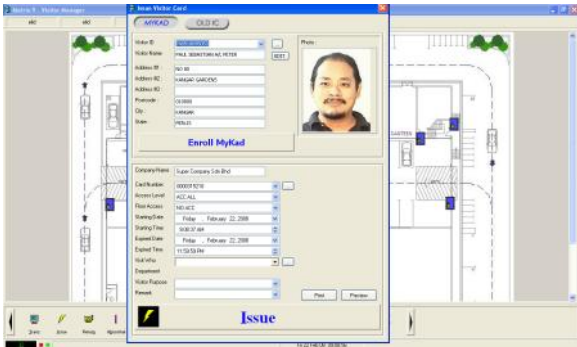
Mobile Alert GSM



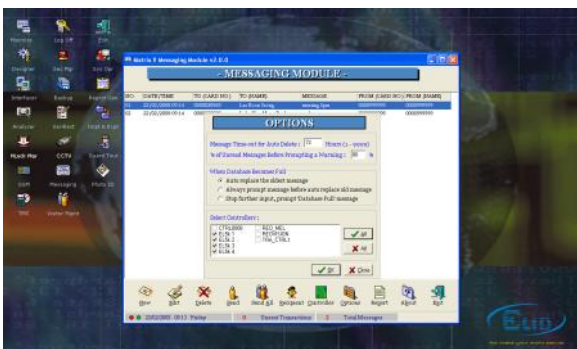
A screenshot of an 'Audit Trail Report' window. The report is dated 28/01/2008 and lists various system events. The data is organized into columns: Time, User ID, Workstation, and Details.

Time	User ID	Workstation	Details
17:08:32	elid	MATRIX	User Logged In
17:14:00	elid	MATRIX	Terminal Siemens Added
17:14:03	elid	MATRIX	User Logged Out
17:36:09	elid	MATRIX	User Logged In
17:36:42	elid	MATRIX	Terminal Siemens Edited
17:38:35	elid	MATRIX	User 000227 Added
17:40:17	elid	MATRIX	User 000227 for Event Alerts Added
17:43:25	elid	MATRIX	User 000140 Added
17:44:17	elid	MATRIX	User 000140 for Event Alerts Added
17:48:55	elid	MATRIX	User 000140 for Event Alerts Deleted
17:48:58	elid	MATRIX	User Logged Out
17:49:21	elid	MATRIX	User Logged In
17:49:50	elid	MATRIX	User 000227 Edited
17:49:57	elid	MATRIX	User Logged Out
17:51:42	elid	MATRIX	User Logged In
17:52:10	elid	MATRIX	User 000041 Added
17:52:49	elid	MATRIX	User 000041 for Event Alerts Added
17:52:58	elid	MATRIX	User Logged Out
17:54:17	elid	MATRIX	User Logged In
17:55:01	elid	MATRIX	User 000041 for Event Alerts Edited
17:55:04	elid	MATRIX	User Logged Out
17:56:50	elid	MATRIX	User Logged In
17:59:31	elid	MATRIX	User Logged Out
18:02:36	elid	MATRIX	User Logged In
18:03:19	elid	MATRIX	User A000037231 Added
18:03:31	elid	MATRIX	User 000237 Added

Visitor Manager



Broadcast Manager





GUI Display

Security Manager

The screenshot displays the Matrix V Security Manager interface. It features a central floor plan with various rooms and security points. A red alarm notification is visible: "ALARM : 22/02/2008 11:04:56 ALARM POINT : LOBBY DOOR LOCATION : LOBBY Door Forced Open Alarm". Below the floor plan, there are two video camera feeds. At the bottom, a table lists security transactions.

DEVICE NAME	DATE	TIME	CARD/PNT	STAFF NO	NAME	LOCATION	TRANSACTION
ESD	22/02/2008	11:07:11	000105		ESD Main Door	ESD	Pulse Door Open
FAC	22/02/2008	11:05:48	0000030253	000361	Rahmat Suhael Bin Mohamed Tauhid	FAC	Valid Entry
FAC	22/02/2008	11:05:53	000202		Manufacturing Department	FAC	Pulse Door Open
RND ROOM	22/02/2008	11:04:56	000404		RSD Disparient	RND	Door Forced Open Alarm
FAC BACK	22/02/2008	11:04:41	0000034546	000066	Lee Siew Fong	FAC BACK	Valid Entry
CS5D_STR2	22/02/2008	11:04:29	0000008986	000144	Bahhar Bin Bahri	CS5D_STR	Valid Entry
ESD	22/02/2008	11:03:48	000105		ESD Main Door	ESD	Pulse Door Open
CANTEEN BACK	22/02/2008	11:02:53	000305		Canteen Back Door	CANTEEN	Pulse Door Open
CS5D_STR2	22/02/2008	11:02:01	000205		CS5D Store 2	CS5D_STR	Pulse Door Open

Mobile Alert Email

The screenshot shows an email message with the following details:

Message
You forwarded this message on 31/01/2008 16:41.

From: henry@eld.com
To: wscheng@eld.com
Cc:
Subject: Valid Entry Transaction

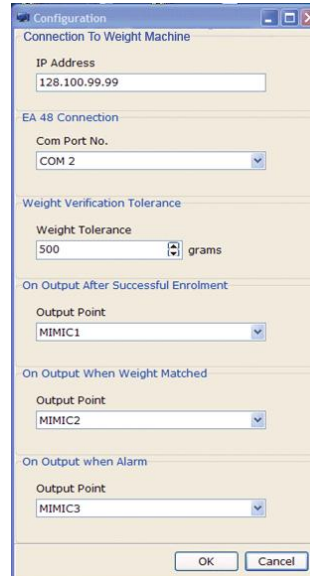
Date: 31/01/2008
Time: 16:27:20
Device: RND BACK
Card No./Point No.: 0000040975
Name: Lee Yew Hoong
Description: Valid Entry

No virus found in this incoming message.
Checked by AVG Free Edition.
Version: 7.5.516 / Virus Database: 269.19.17/1252 - Release Date: 30/01/2008 20:51



GUI Display

Weight Verifier



Software Options

Hot Standby

Elid offers hot standby solution for disaster recovery, featuring redundancy on fault tolerant servers. This helps organizations maintain 99.5% uptime on Windows, SQL Server and Matrix V system. In addition on this, hot standby solution provide a real time synchronization to a backup secondary server, to protect the integrity of your data.

Weight Verification Option

In highly secure environments where theft prevention is of paramount importance, Elid employs a technique to detect the slightest change or variation in weight of a person due to suspected theft of equipment. A person who enters the high security area will have his weight logged in and upon his or her exit from the area will be verified according to the login weight. When a variation is detected, access is immediately prohibited and an alarm is generated.

Extended Databases Options

Matrix V supports databases from industry-leading vendors. Matrix V ships standard with Microsoft SQL Server & Oracle 9i Server support is also available for the Matrix V Security Server database. Organizations can choose the database that conforms to their corporate standards and support.

Thin Client Support

Matrix V can distribute Matrix V Security Manager Applications via Microsoft .NET over the intranet or the web using Web Matrix. This is ideal for organizations that have multiple-facility systems and dispersed client workstations that aren't easily accessible when installations and upgrades are required.



Software Options

Evacuation Initiative

The Matrix V Evacuation Initiative capability provides a way to account for cardholders who are located on-site during an emergency. Designated entry and exit card readers are used by cardholders to enter and depart hazardous and safe areas. When an incident occurs that warrants evacuation, an online roll call report is generated that provides a complete list of all personnel located within hazardous & even non hazardous areas, as well as those who have registered at safe locations. The Roll Call report updates in real time whenever a cardholder registers at a safe location.



Guard Tour

The Guard Tour feature checks one or more card readers or alarm inputs during routine tours to verify that predefined tour routes have been followed and completed. Guards use IDs at card readers or trigger inputs in a sequence along their watch path. Events sent to the Matrix V Security Manager application inform system operators that the guard has reached a checkpoint at the appointed time, early or late.

Web Matrix

The WEB Matrix interface allows the administrator or super operator the capability to monitor and control your Matrix V server unit from any Internet Explorer Browser via the Internet. Running on the popular .NET platform, Web Matrix negates the necessity of installing any application on your desktop or mobile device to get you connected to your Security System via a highly secure IIS (Internet Information Services) portal. Web Matrix offers convenience & full control to you by enabling interaction with your Security system whenever and wherever you are be it work or play. This is truly the way to empower you with full accessibility & control over your Security System.



Software Options

Mobile Alert (GSM & Email)

The Mobile Alert module is a Matrix V module that allows system registered personnel(s) to receive alert messages in the form of SMS or E-Mails utilizing any cellular network (i.e 3G, GSM or HSDPA) whenever pre-defined alarms occur within the boundary of the Matrix V system. Mobile Alert delivers information to a third party security enforcement unit or your dedicated group for security monitoring if such need arises due to suspicion, or policy requirement for specialized regular or periodical assessment. Mobile Alert offers convenience by enabling you interaction with your Security system whenever and wherever you are be it work or play.



Facility manager

In a multi level and multi functional facility, the need to maintain and manage rooms (meeting rooms, function halls), facilities (sports, recreational) and control the access these different areas for pre-defined groups of people can be managed by the Facility Manager. When any facility is managed by Facility Manager, the administrator will be able to control, Access, Duration for which the facility is booked for. Facility manager helps the administrator or booking manager to pre-book events & issue booking slips and have an overview of all events in the facilities.



Language Packs

Matrix V software can be translated into multiple languages, to provide regional support in environments where languages other than English are required. Currently supported languages include: Arabic, Simplified Chinese, Traditional Chinese, Portuguese, English and Thai.

CCTV Interfacer

The CCTV Interface allows users to integrate Matrix V with any Closed-Circuit Television (CCTV) system that utilizes ASCII switching commands. For each alarm or event in the system, up to three signals can be sent from a Matrix V Security Manager server to the CCTV switcher. Matrix V supports Pelco, TeleEye, DigiEye and other CCTV brands that are willing to provide their protocols. The CCTV Interface allows the CCTV devices to be automated for optimal performance during an incident, giving administrators and operators an effective surveillance tool.



Software Options

Video Verification

The Video Verification option enables system operators to compare a live view of a person with the photo stored in that cardholder record in the database. As a real-time video stream is received from a CCTV camera at a particular access point, Matrix V displays the stored photo and the user can compare it to a live video image, providing an additional layer of cardholder verification for access to high-security areas. The system operator can visually determine whether the person at the door is actually the cardholder or someone else who is using the card.



Pocket Matrix

Pocket Matrix allows administrator at limited high-level remote access and control over the system through mobile devices such as a PDA via wireless LAN. Currently these devices must support ARM/Xscale compliant hardware and Microsoft Pocket PC2002 OS and above.

A User is also able to view & print transaction reports, control reader and sensor devices and perform card operations like Add, Delete, Sort, Search & Download cards to controller.

Broadcast Manager

Broadcast manager allows brief messages to be left for particular cardholders as they access card reader points. The message is displayed on the access card readers LED or LCD display upon the recipients badging his or her card on the card reader. The system is similar to the Short Message Services (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.



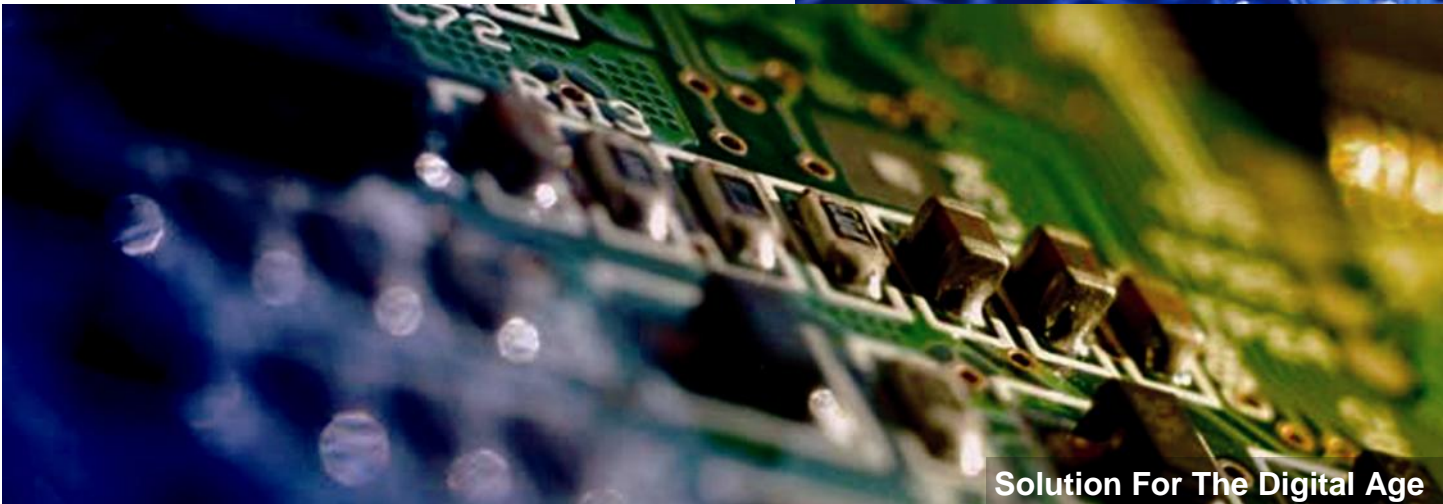
ID Card Maker

Cardholders are often issued physical IDs which can be used to enable access to facilities and logical resources. For cards, Matrix V offers ID Card Maker, a program that allows you to import user information from the Card Database directly to the ID Template. It also allows you to create/insert graphics into badge layouts that are used when producing cards. This user-friendly program allows users to manage layouts, both simple and sophisticated, for single sites or enterprise systems.





Hardware Catalogue



Solution For The Digital Age

ELID is a World Leader in Integrated Security Solutions

EL5000



EL5000 Networked Controller

The EL5000 Multi-function Integrated Networked Controller by ELID serves as the core access control engine for Matrix V system. The EL5000 provides power, performance, and flexibility for the most demanding applications. Multiple combinations of Input/Output Field Devices, Card Reader Interface Units and local Input/Output modules can be connected.

The EL5000 can communicate upstream with server host via Ethernet TCP/IP networks. The controller can store up to 33,000 cardholders and 23,000 reader transactions. The EL5000 can have two downstream 2-wire RS-485 channels. You may connect up to 8 reader interface units for up to 8 ENTRY and 8 EXIT readers, and 8 EFD80 for field alarm monitoring and control. Similarly, the EL 5000 can connect up to 8 EA5168 via ribbon cable as an on-board expansion for I/O monitoring

Features and Functionality

- Host communications - Ethernet TCP/IP, or ADSL modem with Dynamic DNS support
- 5VDC / 1A input power
- Multi-function, configurable for either Card access, Lift control, Carpark control, Time clock or Mixed Mode
- Enhanced anti-passback capabilities
- 40 holidays
- 99 timezones, with 99 timers, each with 4 time intervals
- Escorting dual-card mode for high security door
- Special Card capability to arm and disarm sensors
- Lift control, support for 64 floors
- 2 MB on-board memory (Up to 33,000 cardholders and 23,000 transactions)
- Status LEDs for DC Power, Database Health, CPU heartbeat, Ethernet and RS485 communication
- Dedicated inputs for tamper, battery low and AC power failure status
- Advanced Encryption Standard 128-bit secured communication algorithm

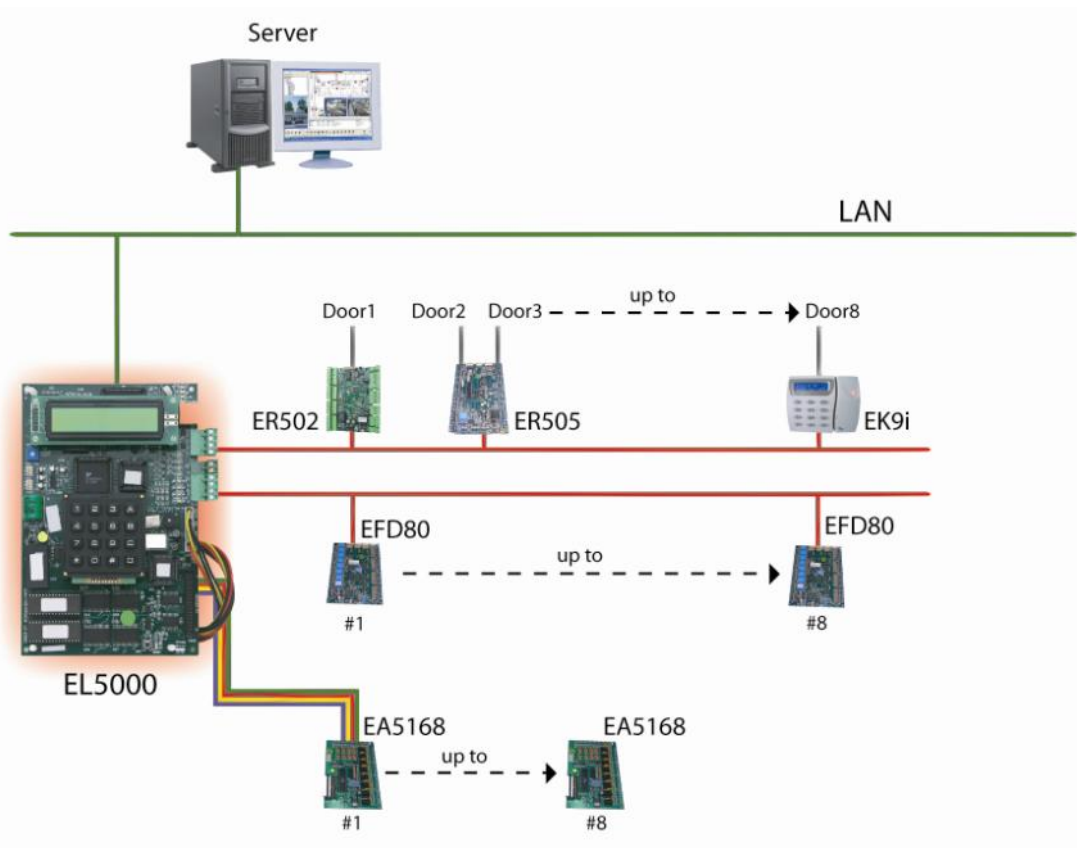
EL5000 Network Controller

Model	EL5000
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	32-bit 386EX running at 25 Mhz
Card Users	33,000 local
Transactions	23,000 local
Memory	2MB RAM
Modes of Operation	Card, PIN & Card + PIN
Standalone Operation	YES
Real-Time Scanning	YES
Tamper Detection	YES
Display	2 x 20 alphanumeric

EL5000

EL5000 Network Controller

Connectivity	TCP / IP, RS485
No of RS485 BUS	2
Access Applications	Door, Car Park Access, Time Clocking
Max. Doors Supported	8 Doors
Type of Readers Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	16 (8 IN and 8 Out Readers)
Max. RIU Supported	4 units of ER505 2-Door Reader Interface unit (RIU) or 8 units of ER504 1-door RIU
Max. EFD Supported	8 units of EFD 80 Electronic Field Device
Max. I / O Modules	8 units of EA5168 I / O Module
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	5VDC / 12VDC with 3 Amp Charger
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	7 kg with casing and Power Supply
Approximate Weight	600gm without casing and Power Supply



EL5002



EL5002 Networked Controller

The EL5002 Multi-function Integrated Networked Controller by ELID serves as the core access control engine for Matrix V system. The EL5002 provides power, performance, and flexibility for the most demanding applications. Multiple combinations of Input / Output Field Devices, Card Reader Interface Units and local Input / Output modules can be connected.

The EL5002 can communicate upstream with server host via Ethernet TCP/IP networks. The controller can store up to 33,000 cardholders and 23,000 reader transactions. Built in to the EL5002 is a Reader Interface Units, from which you may connect to 2 portals that are in close proximity to the EL5002. Each of these portals may have 1 ENTRY and 1 EXIT reader.

The EL5002 has one downstream 2-wire RS-485 channels on which you may connect up to 8 input and output field devices. Each device uses one device address.

Features and Functionality

- Host communications - Ethernet TCP/IP, or ADSL modem with Dynamic DNS support
- 5VDC / 1A input power
- Multi-function, configurable for either Card access, Carpark control, Time clock or Mixed Mode
- Enhanced anti-passback capabilities
- 40 holidays
- 99 timezones, with 99 timers, each with 4 time intervals
- Escorting dual-card mode for high security door
- Special Card capability to arm and disarm sensors
- 2 MB on-board memory (Up to 33,000 cardholders and 23,000 transactions)
- Status LEDs for DC Power, Database Health, CPU heartbeat, Ethernet and RS485 communication
- Dedicated inputs for tamper, battery low and AC power failure status
- Advanced Encryption Standard 128-bit secured communication algorithm

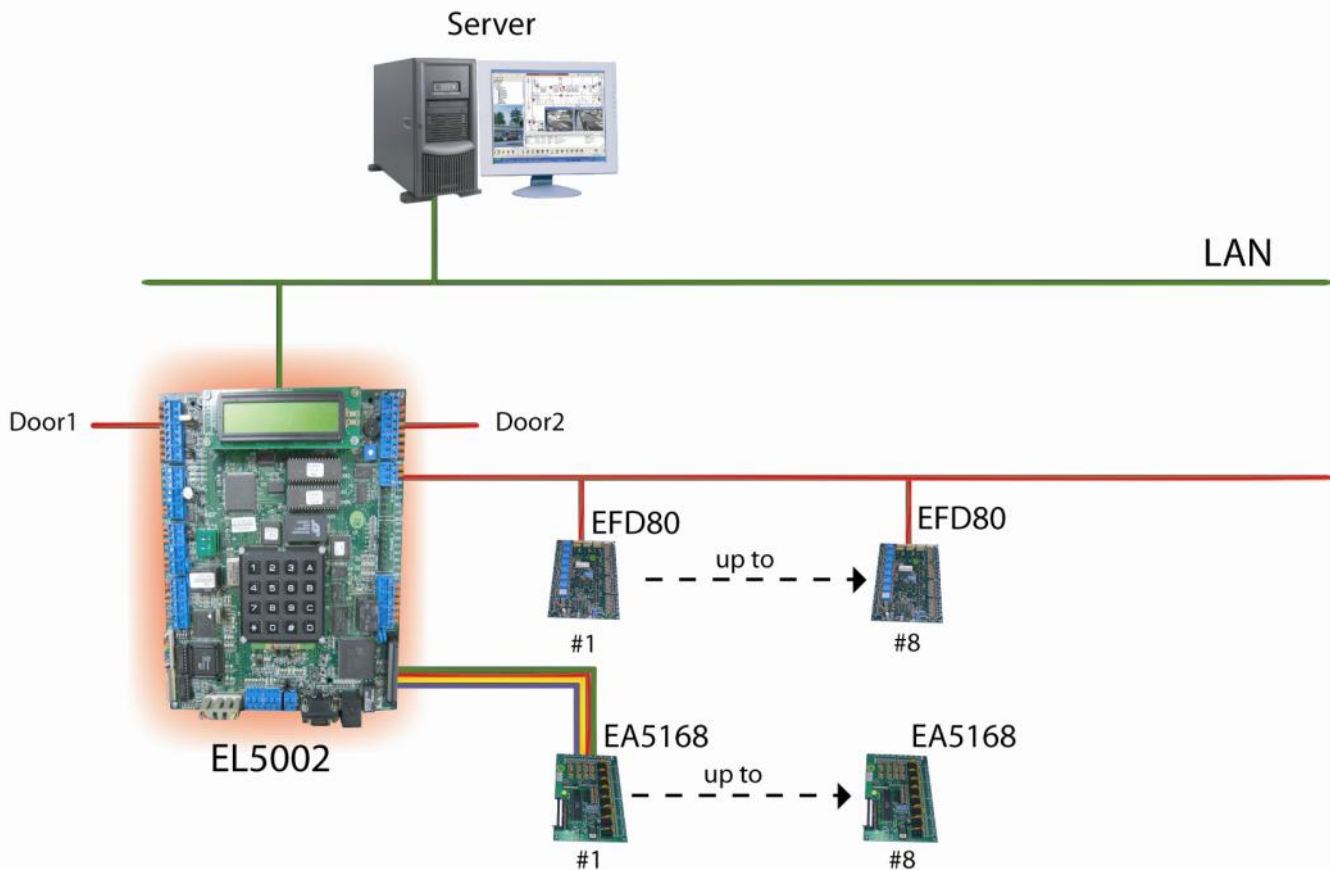
EL5002 Network Controller

Model	EL5002
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	32-bit 386EX running at 20 Mhz
Card Users	33,000 local
Transactions	23,000 local
Memory	2MB RAM
Access Modes Supported	Card, PIN & Card + PIN
Standalone Operation	YES
Real-Time Scanning	YES
Tamper Detection	YES
Onboard Display	2 x 20 alphanumeric
Connectivity	TCP / IP, RS485

EL5002

EL5002 Network Controller

No of RS485 BUS	1
Onboard I / O	2 Input Points / 1 Output Point
Max. Doors Supported	2 Doors
Type of Readers Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	4 (2 IN and 2 Out Readers)
Access Applications	Door, Car Park Access, Time Clocking
Max. EFD Supported	8 units of EFD 80 Electronic Field Device
Max. I / O Modules	8 units of EA5168 I / O Module
Operating Temperature	-8°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	5VDC / 12VDC with 3 Amp Charger
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	7 kg with casing and Power Supply
Approximate Weight	1.2 kg without casing and Power Supply
EA8 I / O Capacity	2 units of EA8



EL5004



EL5004 Networked Controller

The EL5004 Multi-function Integrated Networked Controller by ELID serves as the core access control engine for Matrix V system. The EL5004 provides power, performance, and flexibility for the most demanding applications. Multiple combinations of Input/Output Field Devices, Card Reader Interface Units and local Input/Output modules can be connected.

The EL5004 can communicate upstream with server host via Ethernet TCP/IP networks. The controller can store up to 33,000 cardholders and 23,000 reader transactions. Built in to the EL5004 is a Reader Interface Units, from which you may connect to 2 portals that are in close proximity to the EL5004. Each of these portals may have 1 ENTRY and 1 EXIT reader.

The EL5004 has 2 downstream 2-wire RS-485 channels. On the first RS485 channel you may connect up to 2 additional reader interface units for 2 ENTRY and EXIT readers. On the 2nd RS-485 channel you may connect up to 8 input and output field devices. Each device uses one device address.

Features and Functionality

- Host communications - Ethernet TCP/IP, or ADSL modem with Dynamic DNS support
- 5VDC / 1A input power
- Multi-function, configurable for either Card access, Carpark control, Time clock or Mixed Mode
- Enhanced anti-passback capabilities
- 40 holidays
- 99 timezones, with 99 timers, each with 4 time intervals
- Escorting dual-card mode for high security door
- Special Card capability to arm and disarm sensors
- 2 MB on-board memory (Up to 33,000 cardholders and 23,000 transactions)
- Status LEDs for DC Power, Database Health, CPU heartbeat, Ethernet and RS485 communication
- Dedicated inputs for tamper, battery low and AC power failure status
- Advanced Encryption Standard 128-bit secured communication algorithm

EL5004 Network Controller

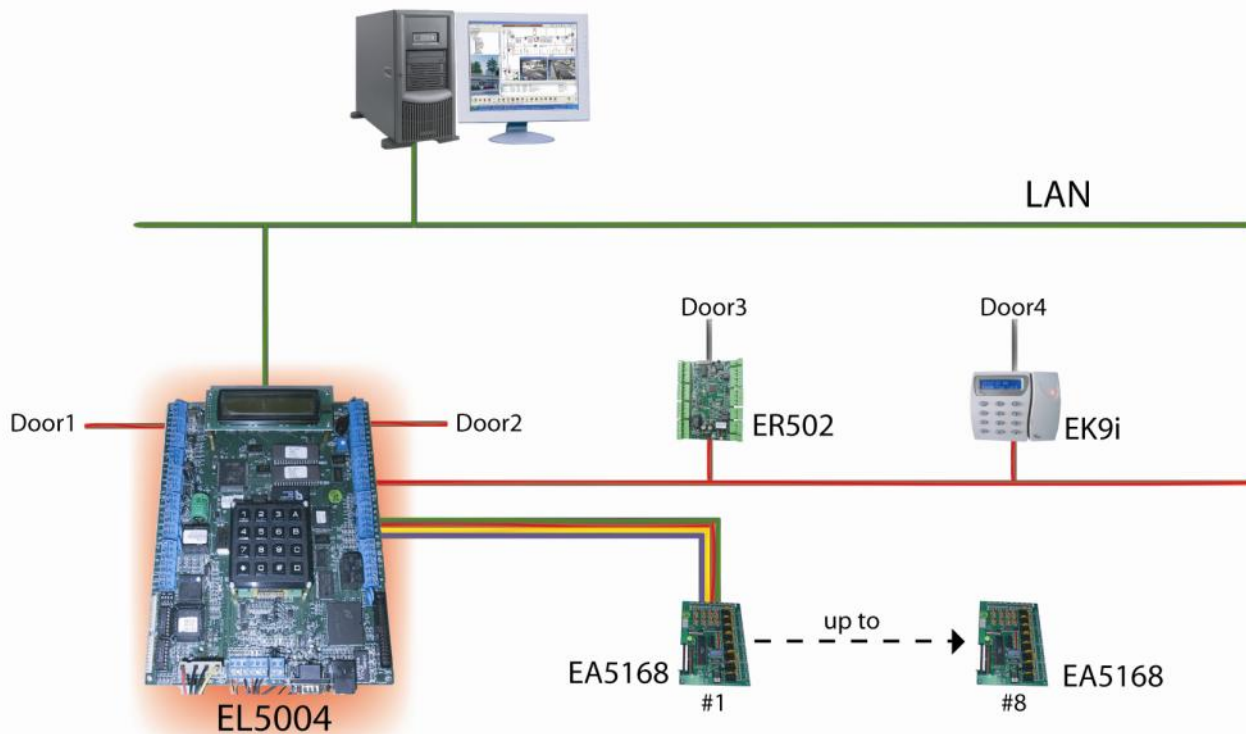
Model	EL5004
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	32-bit 386EX running at 20 MHz
Card Users	33,000 local
Transactions	23,000 local
Memory	2MB RAM
Access Modes	Card, PIN & Card + PIN
Standalone Operation	YES
Real-Time Scanning	YES
Tamper Detection	YES
Display	2 x 20 alphanumeric

EL5004

EL5004 Network Controller

Connectivity	TCP / IP, RS485
No of RS485 BUS	1
Onboard I / O	2 Inputs / 1 Output Point
Max. Doors Supported	4 Doors
Type of Readers Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	8 (4 IN and 4 Out Readers)
Max. RIU Supported	1 units of ER505 2-Door Reader Interface Unit (RIU) or 2 units of ER504 1-Door RIU or 2 units of ER502 1-Door RIU
EA8 I / O capacity	2 units of EA8
Max. I / O Modules	8 units of EA5168 I / O Module
Operating Temperature	-8°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	5VDC / 12VDC with 3 Amp Charger
Access Applications	Door, Car Park Access, Time Clocking
Casing Dimensions	410 (H) x 400 (L) x 120 (W)
Approximate Weight	7kg with Casing and Power Supply
Approximate Weight	1.2kg without Casing and Power Supply

Server



EL5500

EL5500 Networked Controller

The EL5500 Multi-function Integrated Networked Controller by ELID serves as the core access control engine for Matrix V system. The EL5500 provides power, performance, and flexibility for the most demanding applications. Multiple combinations of Input/Output Field Devices, Card Reader Interface Units and local Input/Output modules can be connected.



The EL5500 can communicate upstream with server host via Ethernet TCP/IP networks.

With Enhanced memory capacity, the EL5500 has an option to configure the memory allocation in the following manner.

- 100,000 Card Users, 23,000 Transactions
- 33,000 Card Users, 160,000 Transactions
- 50,0000 Card Users, 80,000 Transactions

The EL5500 can have three downstream 2-wire RS-485 channels.

For the first RS-485 channel you may connect up to 8 reader interface units.

For the second RS-485 channel you may connect up to 8 reader interface units.

Each RS-485 channel caters for 16 ENTRY and EXIT readers,

This gives the EL5500 unprecedented capability of handling up to 16 simultaneous access points.

On the 3rd RS-485 channel you may connect up to 8 input and output field devices. Each device uses one device address.

Features and Functionality

- Host communications - Ethernet TCP/IP, or ADSL modem with Dynamic DNS support
- 5VDC / 1A input power
- Multi-function, configurable for either Card access, Lift control, Carpark control, Time clock or Mixed Mode
- Enhanced anti-passback capabilities
- 40 holidays
- 99 timezones, with 99 timers, each with 4 time intervals
- Escorting dual-card mode for high security door
- Special Card capability to arm and disarm sensors
- Lift control, support for 64 floors
- 3 MB on-board memory (Configurable Memory Allocation)
- Status LEDs for DC Power, Database Health, CPU heartbeat, Ethernet and RS485 communication
- Dedicated inputs for tamper, battery low and AC power failure status
- Advanced Encryption Standard 128-bit secured communication algorithm

EL5500 Network Controller

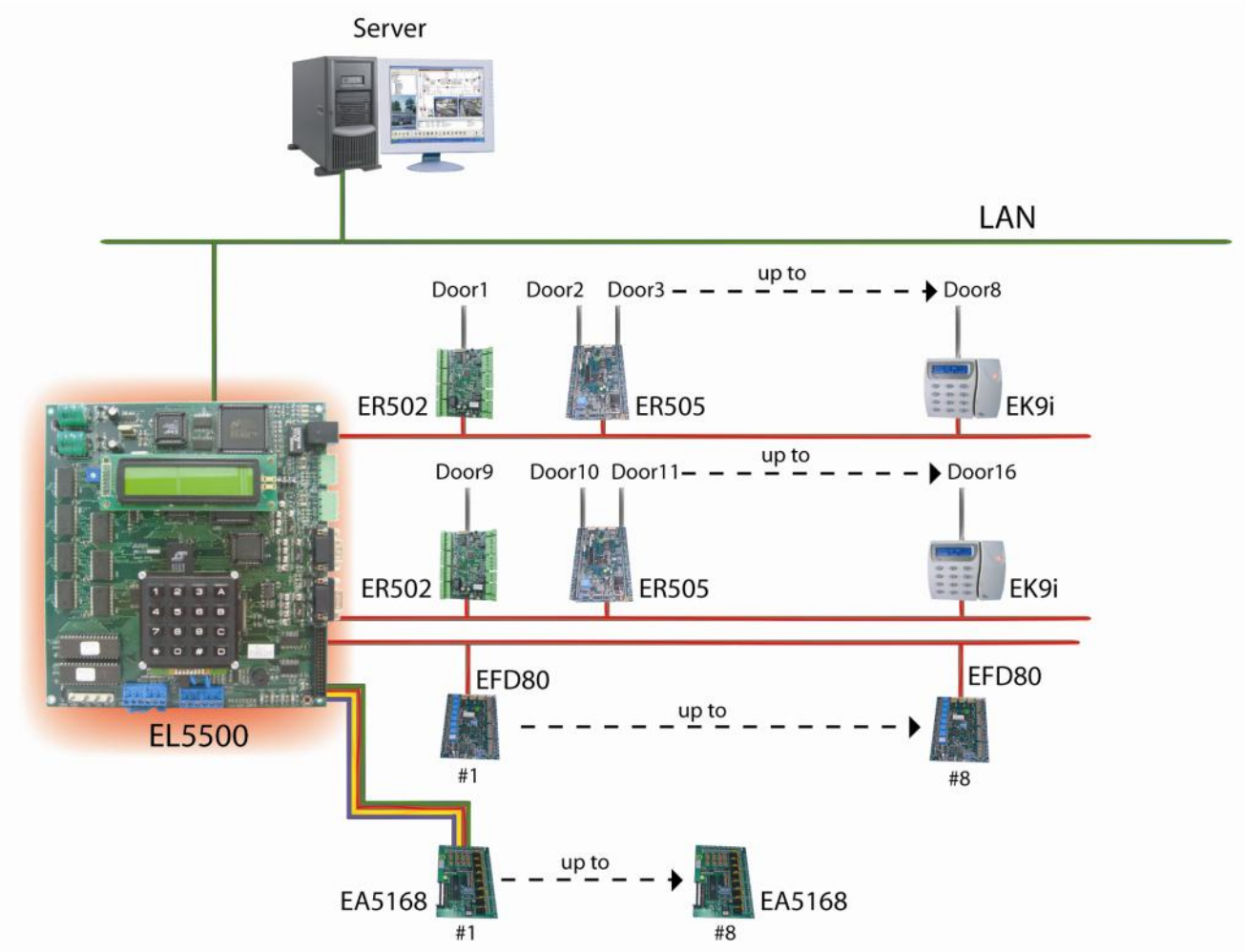
Model	EL5500
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	32-bit 386EX running at 25MHz
Card Users	100,000/33,000/50,000 local

EL5500

EL5500 Network Controller

Transactions	23,000/160,000/80,000 local
Memory	4 MB RAM
Modes of Operation	Card, PIN & Card + PIN
Standalone Operation	YES
Real-Time Scanning	YES
Tamper Detection	YES
Display	2 x 20 alphanumeric
Connectivity	TCP/IP, RS485
No. of RS485 BUS	3
Onboard I / O	2 Input Points / 1 Output Point
Max. Doors Supported	16 Doors
Access application	Door, Car Park Access, Time Clocking
Types of Readers Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	32 (16IN and 16 OUT Readers)
Max. RIU Supported	8 units of ER505 2-Door Reader Interface Unit (RIU) or 16 units of ER504 1-Door RIU or 16 units of ER502 1 Door RIU
Max. EFD Supported	8 units of EFD80 Electronic Field Device
Max I / O Modules	8 units of EA5168 I / O Module
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	5VDC / 12VDC with 3 Amp Charger
Casing Dimensions	410 (H) x 400 (L) x 120 (W)
Approximate Weight	7 kg with Casing and Power Supply
Approximate Weight	800grams without Casing & Power Supply

EL5500



EL5030



EL5030 Networked Controller

The EL5030 is a new 5-door Networked Door Access Controller introduced by ELID to serve as the low-cost family member for the IP-based Matrix V Integrated Security System. The EL5030 provides power, performance, flexibility and yet affordability. The EL5030 can communicate upstream with server host via Ethernet TCP/IP network. The EL5030 has a single downstream 2-wire RS-485 bus. You may connect up to four ER62 reader interface modules of 5 ENTRY and 5 EXIT card readers. Each ER62 reader interface modules also provides on-board 4 sensor inputs and 6 transistor outputs. The controller can store up to 4,000 cardholders and holds 10,000 transactions in case the communication is disrupted with the server host.

Features and Functionality

- Host communications - Ethernet TCP/IP, or ADSL modem/router with Dynamic DNS support
- 12VDC / 1.5A input power requirement with single CR2032 Lithium battery cell for data-backup
- 32-bit low-power and high-performance microprocessor
- 1 channel RS-485 communication bus
- Multi-function, configurable as either Standard card access, Car-park control or Time-clock Mixed Mode
- Enhances anti-passback capabilities (hard/soft/alarm)
- 40 holidays set,
- 10 timezones, with 24 timers, each with 2 time intervals
- 1MB on-board memory (up to 4000 cardholders and 10,000 transactions)
- Status LEDs for DC Power, Database Health, CPU heartbeat, Ethernet and RS485 communication
- Dedicated inputs for tamper, battery low and AC power failure status
- Advanced Encryption Standard 128-bit secured communication algorithm

EL5030 Network Controller

Model	EL5030
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	32-bit 386EX running at 25 MHz
Card Users	4000
Transactions	10000
Memory	1MB RAM
Access Modes	Card, PIN & Card + PIN
Standalone Operation	YES
Real-Time Scanning	YES
Tamper Detection	YES
Display	N/A

EL5030

EL5030 Network Controller

Connectivity	TCP / IP, RS485
No of RS485 BUS	1
Access Applications	Door, Car Park Access, Time Clocking
Max. Doors Supported	5
Type of Readers Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	10 (5 IN and 5 Out Readers)
Max. RIM Supported	5 units of ER62 RIM (Reader Interface Module)
Max. EFD Supported	N/A
Max. I / O Modules	N/A
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	12VDC with 1.5 Amp Charger
Access Applications	Door, Car Park Access, Time Clocking
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	5kg with Casing and Power Supply
Approximate Weight	600gm without Casing and Power Supply

ER502

ER502 Reader Interface Unit



Matrix V offers a single reader interface unit (RIU) module for access control solutions. The ER504 can be equipped with 1 ENTRY and 1 EXIT reader. Access control card readers, keypads, for readers with keypads that use standard Wiegand Data1/Data 0 or clock are supported. The ER502 employs 2 Wire RS-485 data communications. Lock, unlock and customer code functions, are supported on all readers connected to the RIU. Each RIU supports up to 7 different card formats as well as customer codes for both magnetic and wiegand card formats.

The RIU provides a vital link between, Advanced Multi Door Controller (AMDC) System, and the card reader attached to the interface. As many as 8 ER502 RIU modules can be multidropped using RS-485 2 wire communication up to 1km per port away from the AMDC. You may have a combination of ER502, ER504, ER505 or EK9i units on the same bus, for a maximum of 8 access points.

Each RIU is individually addressed for increased reporting capabilities with Matrix V Access Control Software applications. ER502 provides ample input & output points to include 8 inputs that supports normally open normally closed, supervised and non-supervised circuits. The RIU also supports up to 6 output relays support failsafe or fail secure operations.

Features & Functionalities

- 12 VDC power supply
- Supports Data1/Data0, Clock/Data and Keypads
- UP to 7 different card formats
- Customer Code Support
- Door Contact Open or Closed, Supervised or non supervised
- Push Button Monitor
- Bi Color or 2 wire status LED support
- Reader Beeper control
- Elevator Control, support for 32 floors
- Enhanced baud rate

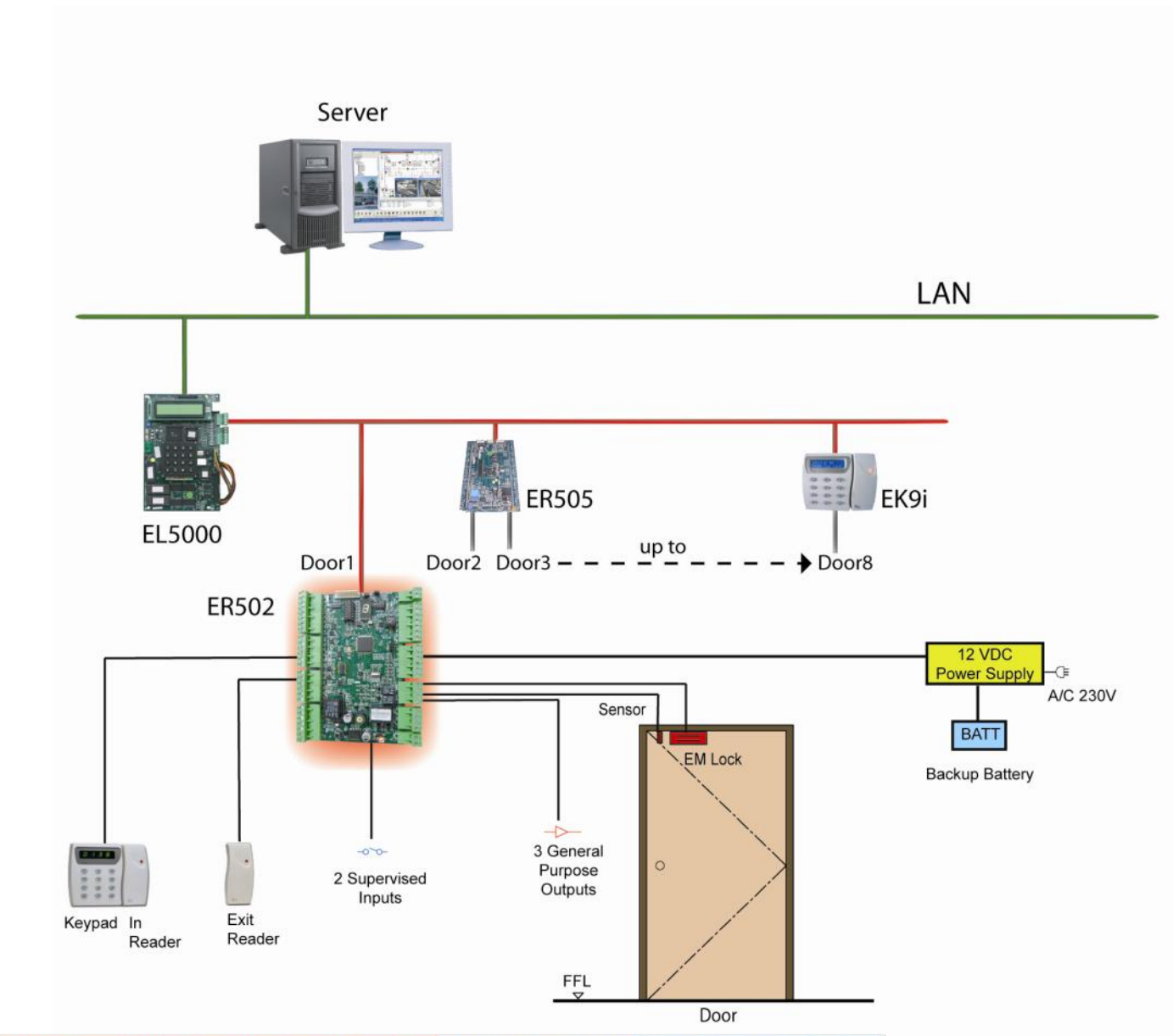
ER502 Reader Interface Unit

Model	ER502
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	16-bit MCU (MC9S12GC128) with 128K flash memory and 4K RAM
Bus Speed	25.8048 MHz
Communication	2 wires RS485 Interface (Data+, Data-)
Baud Rate	9600bps or 57600bps
Protocol	Peer-to-peer collision detection protocol (E-BUS)
Max. Doors Supported	1 Door
Standalone Operation	No
Modes of Operation	Card, PIN, Card + PIN, Time Clock
Status Detection	Tamper, Battery and Alternating Current
Type of Reader Supported	Proximity (HID, EM, MiFare, Barcode 3of9 and ITF)

ER502

ER502 Reader Interface Unit

Max. Readers Supported	2 (one IN and one OUT)
EA8 I / O Capacity	1 EA8 (2 Inputs and 6 Outputs)
Onboard Inputs / Outputs	8 Inputs, 4 Outputs
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	12VDC 100mA excluding reader
Approximate Weight	400grams



ER504

ER504 Reader Interface Unit



Matrix V offers a single reader interface unit (RIU) module for access control solutions. The ER504 can be equipped with 1 ENTRY and 1 EXIT reader. Access control card readers, keypads, for readers with keypads that use standard Wiegand Data1/Data 0 or clock are supported by ER504. The ER504 employs 2 Wire RS-485 data communications. Lock, unlock and customer code functions, are supported on all readers connected to the RIU. Each RIU supports up to 7 different card formats as well as customer codes for both magnetic and wiegand card formats.

The RIU provides a vital link between, Advanced Multi Door Controller (AMDC) System, and the card reader attached to the interface. As many as 8 ER504 RIU modules can be multidropped using RS-485 2 wire communication up to 1km per port away from the AMDC. You may have a combination of ER502, ER504, ER505 or EK9i units on the same bus, for a maximum of 8 access points. Each RIU is individually addressed for increased reporting capabilities with Matrix V Access Control Software applications. The RIU provides connectivity to an external board (EA-8) to include 2 inputs that supports, normally open normally closed, supervised and non-supervised circuits. The EA-8 also supports 6 output relays support fail-safe or fail secure operations.

Features & Functionalities

- 12 VDC power supply
- Supports Data1/Data0, Clock/Data and Keypads
- UP to 7 different card formats
- Customer Code Support
- Door Contact Open or Closed, Supervised or non supervised
- Push Button Monitor
- Bi Color or 2 wire status LED support
- Reader Beeper control
- Elevator Control, support for 32 floors

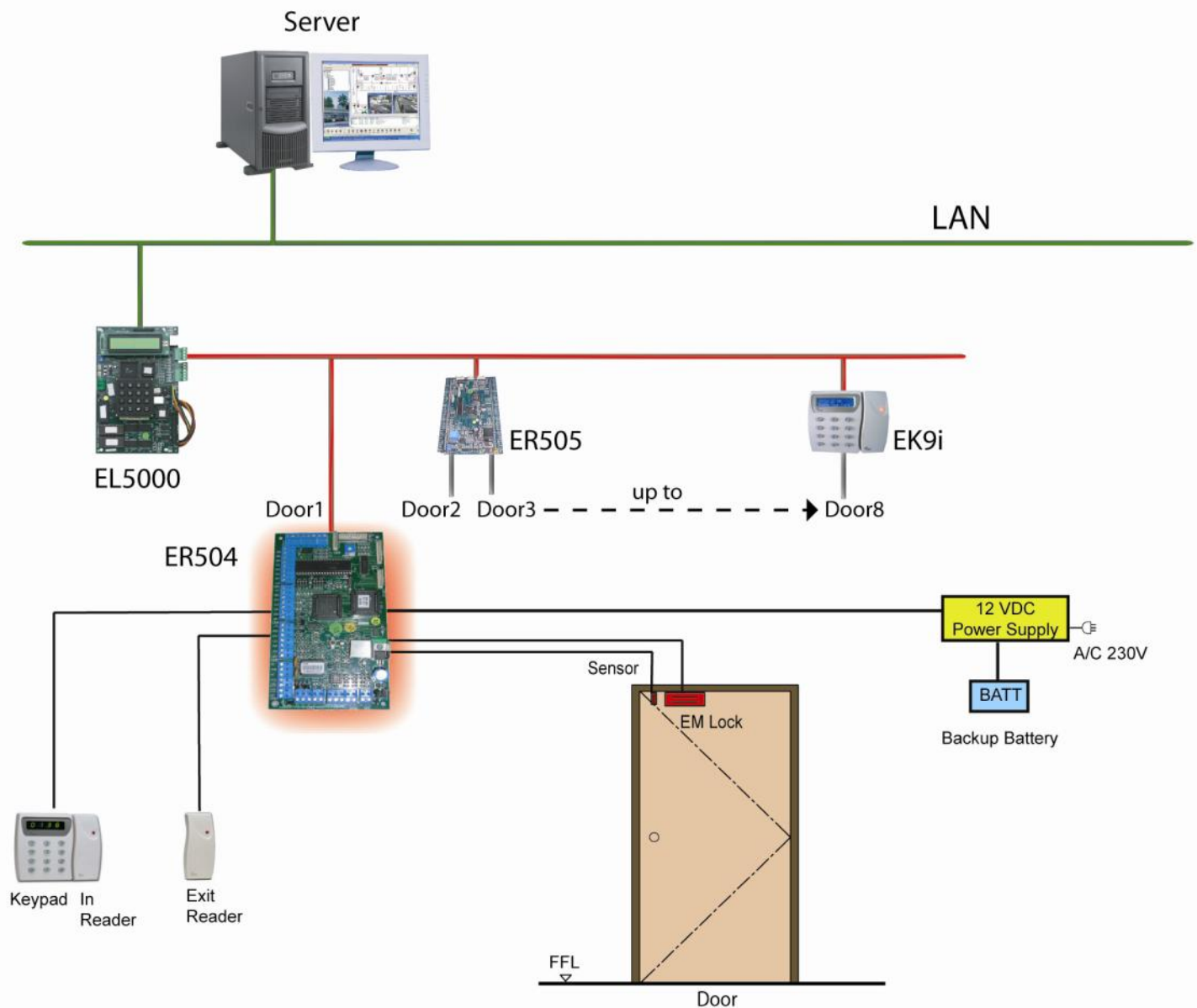
ER504 Reader Interface Unit (1 door)

Model	ER504
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	8-bit CPU (68HC11) with 128K ROM and 8K RAM
Communication	2 wires RS485 Interface (Data+, Data-)
Protocol	Peer-to-peer collision detection protocol (E-BUS)
Max. Doors Supported	1 Door
Modes of Operation	Card, PIN & Card + PIN
Standalone Operation	No
Type of Reader Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	2 (one IN and one Out)
Onboard Inputs / Outputs	3 Inputs, 1 Output
EA8 I / O Capacity	1 EA8 unit (2 Inputs and 6 Outputs per EA8)

ER504

ER504 Reader Interface Unit (1 door)

Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	12VDC 100mA excluding reader
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	400grams



ER505

ER505 Reader Interface Unit



Matrix V offers a dual reader interface unit (RIU) module for access control solutions. You may connect to 2 access points that are in close proximity to the ER505. The ER505 may be equipped with 2 ENTRY and 2 EXIT readers.

The ER505 Access control card readers, keypads, for readers with keypads that use standard Wiegand Data1/Data 0 or clock are supported. The ER505 employs 2 Wire RS-485 data communications. Lock, unlock and customer code functions, are supported on all readers connected to the RIU. Each RIU supports up to 7 different card formats as well as customer codes for both magnetic and wiegand card formats.

The RIU provides a vital link between, Advanced Multi Door Controller (AMDC) System, and the card reader attached to the interface. As many as 4 ER505 RIU modules can be multiplexed using RS-485 2 wire communication up to 1km per port away from the AMDC. You may have a combination of ER502, ER504, ER505 or EK9i units on the same bus, for a maximum of 8 access points.

Each RIU is individually addressed for increased reporting capabilities with Matrix V Access Control Software applications. The RIU provides connectivity to an external board (EA-8) to include 2 inputs that supports, normally open normally closed, supervised and non-supervised circuits. The EA-8 also supports 6 output relays support failsafe or fail secure operations.

Features & Functionalities

- 12 VDC power supply
- Supports Data1/Data0, Clock/Data and Keypads
- UP to 7 different card formats
- Customer Code Support
- Door Contact Open or Closed, Supervised or non supervised
- Push Button Monitor
- Bi Color or 2 wire status LED support
- Reader Beeper control
- Elevator Control, support for 32 floors

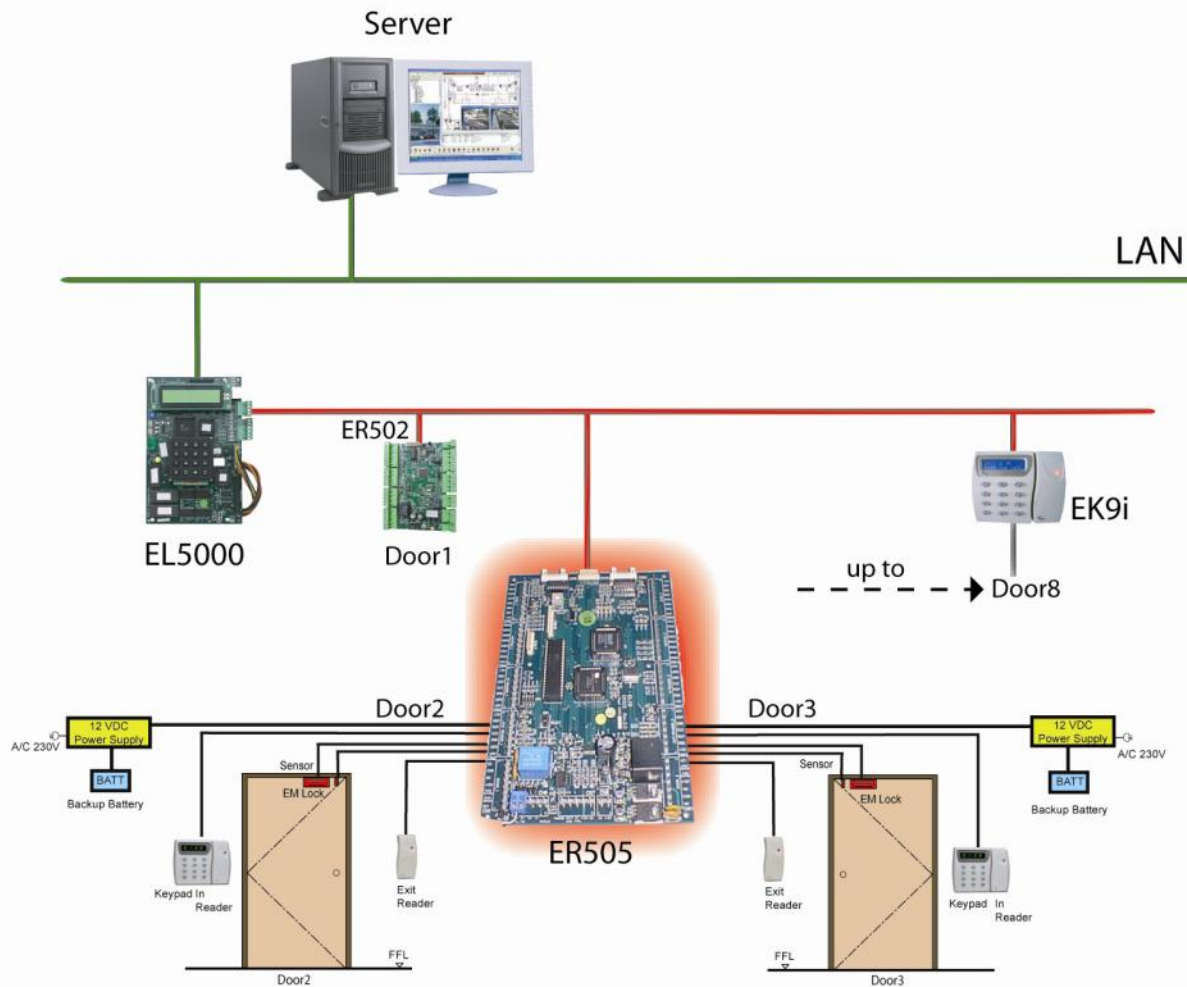
ER505 Reader Interface Unit (2 doors)

Model	ER505
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	8-bit CPU (68HC11) with 128K ROM and 8K RAM
Communication	2 wires RS485 Interface (Data+, Data-)
Protocol	Peer-to-peer collision detection protocol (E-BUS)
Max. Doors Supported	2 Doors (each with one IN and one OUT reader)
Modes of Operation	Card, PIN & Card + PIN
Standalone Operation	No
Type of Reader Supported	Barcode, Magnetic, Proximity, Smart Cards, Biometrics, Touch Memory
Max. Readers Supported	4 (2IN and 2 Out)
Onboard Inputs / Outputs	4 Inputs, 2 Output

ER505

ER505 Reader Interface Unit (2 doors)

EA8 I / O Capacity	2 EA8 units (4 dedicated door outputs, 2 inputs and 2 outputs per EA8)
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	12VDC 100mA excluding reader
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	400grams



EFD80

EFD 80 (16 Inputs by 8 Outputs Expander)

ES-1608-003

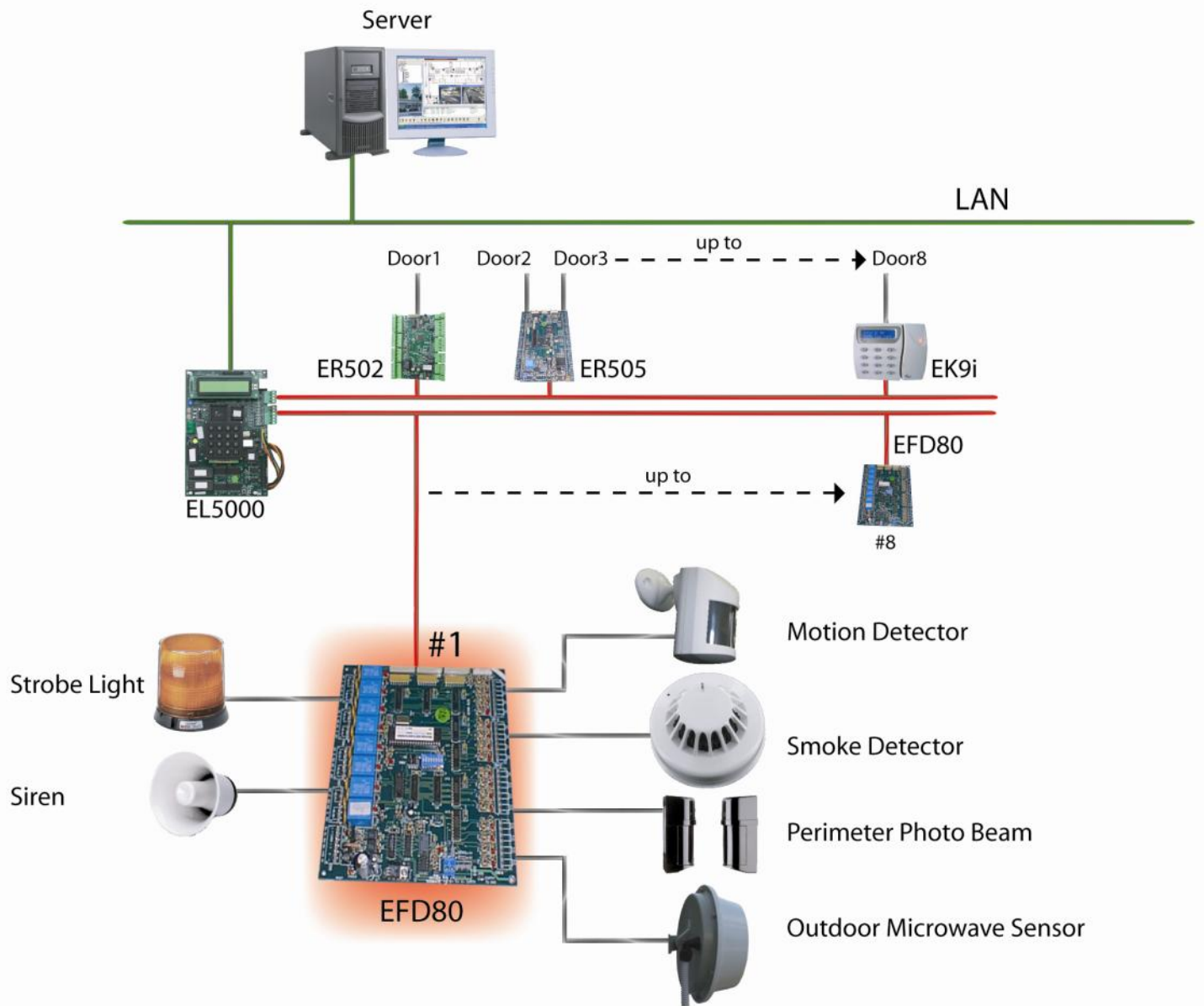
It's application is to monitor other 3rd party sensors i.e. Perimeter photobeam sensors, seismic detectors, passive infrared detectors (PIR), smoke detectors and hardware based integration to Fire Alarm systems to release fire monitoring doors during fire evacuation mode. Each EFD 80 can be expandable to support up to 32 output points via ES8A output card.



EFD80 (ES1608) Electronic Field Device (EFD) Technical Specifications

Model	EFD80 (ES1608)
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	Motorola 68 HC908 GP32 PLL at 4.9 Mhz
Onboard Supervised Inputs	16 Input Points
Onboard Relay Outputs	8 Output Points
Output Expansion Capacity	24 Output Points
Power Supply	12VDC
Dimension	350 (H) x 240 (H) x 80 (D) mm
Built-in Tamper Detection	YES
Operating Temperature	YES
Operating Temperature	0°C to 50°C
Humidity	10% to 90% non-condensing
Casing Dimensions	410 (H) x 400 (L) x 120 (W) mm
Approximate Weight	7kg

EFD80



EA5168

EA5168 (8 Inputs by 8 Outputs Expander)



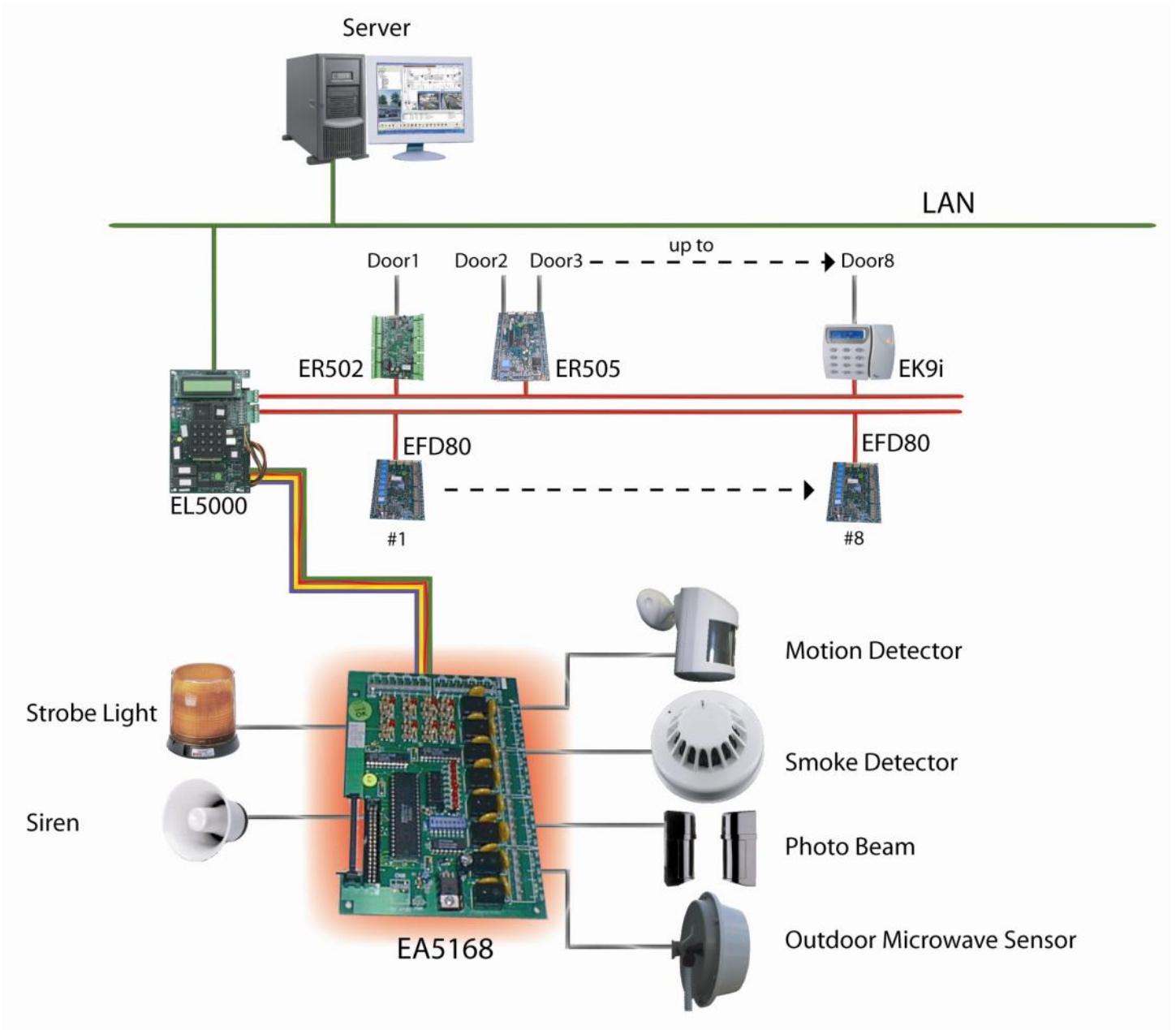
EA-5168-001

This expander is connectable to the EL5000 main controller via a short ribbon cable, normally used for short distance mounting, which may be convenient to be installed together in the same casing as the main controller

EA5168 Input / Output Module

Model	EA5168
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Onboard Supervised Inputs	8 Input Points
Onboard Relay Outputs	8 Output Points
Power Supply	12VDC
Dimension	350 (H) x 240 (H) x 80 (D) mm
Built-in Temper Detection	YES
Operating Temperature	0°C to 50°C
Humidity	10% to 90% non-condensing
Casing Dimensions	410(H) x 400 (L) x 120 (W) mm
Approximate Weight	400grams

EA5168



EA584



EA584 Star Hub

EA-0584-001

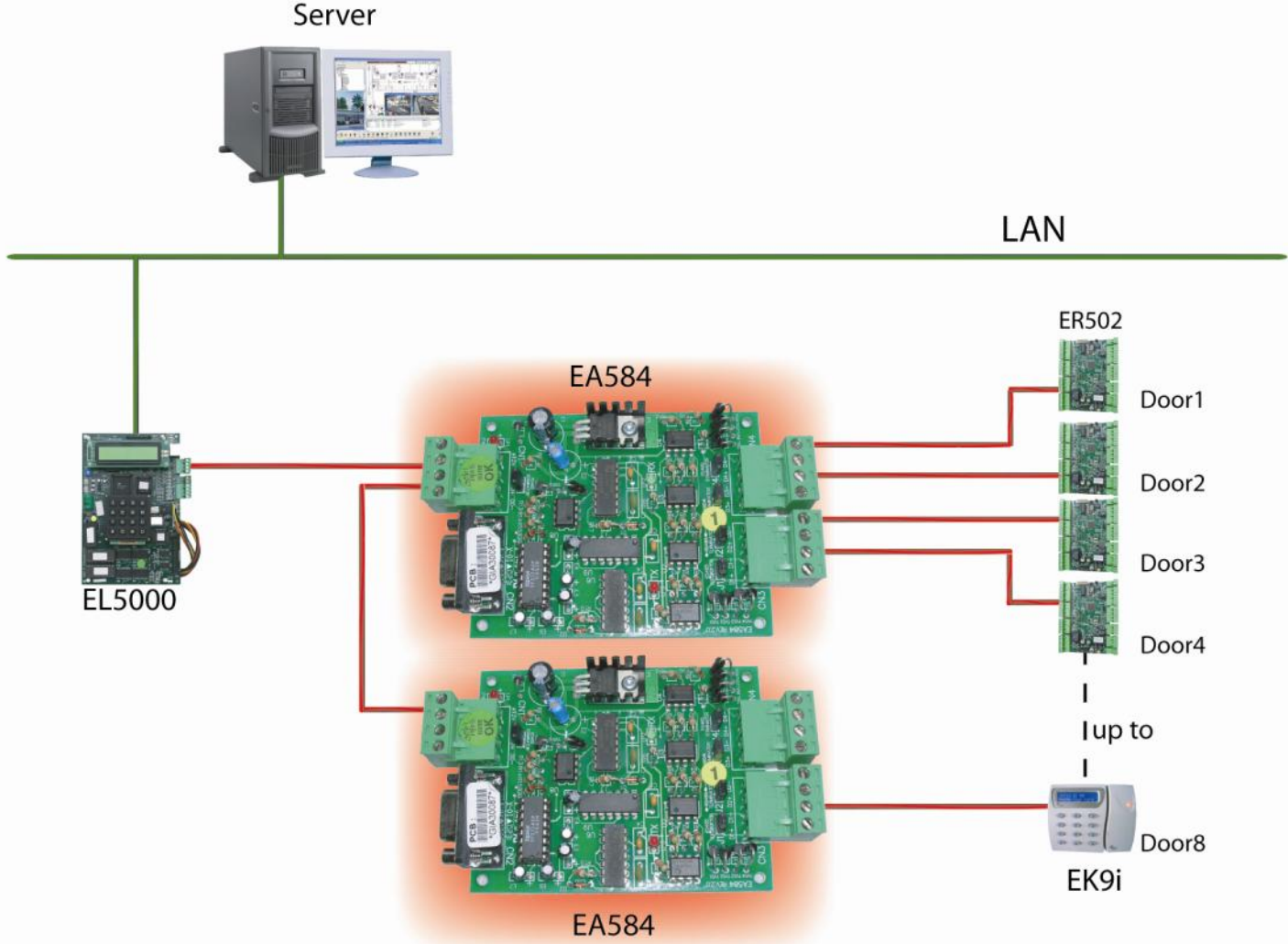
This hub enables the EL5000 series controller to communicate with RIUs & EFDs via star topology instead of the conventional daisy chain topology. Up to 4 RS485 data lines are supported by this device for a distance of up to 1Km per data line.

The star topology provides better security design & flexibility because, it allows each data line to be independent of the other data lines to eliminate tampering or data line failure. Control & communication is still maintained to the data lines that are still intact.

EA584 Star Hub Technical Specification

Maximum number of Devices Usage	4
Connection Usage	Between EL5000 and its reader or I / O Field Devices
Maximum connection distance between EA584 to each device	1km
Dimension	73 (L) x 92 (W) x 22 (D) mm
DIP switch usage	Half duplex RS485 or R-BUS Terminator
Communication protocol	Half duplex RS485 or RBUS (Proprietary to EL2500 controller)
Built-in Temper Detection	No
Standalone Operation	No
Operating Temperature	0°C to 50°C
Humidity	10% to 90% non-condensing
Power Requirement	12VDC
Casing Dimension (in mm)	Decide by user
Approximate Weight	200grams

EA584



EK9i

EK9i Keypad-Reader Interface Unit



EK9i is designed to replace the combination of EK9S and ER504 into a single unit. Up to 8 units can be installed to EL5000 over a single RS485 transmission line. This is to reduce the cost of installing LCD keypad reader with RIU (such as ER504). It combines the LCD keypad, reader, as well as the I/O ports to drive a single door access and it can be plug & play onto any existing E-Bus network. This device may be deployed in situations where an area contains only one door and security is not a major concern.

Access control card readers, keypads, for readers with keypads that use standard Wiegand Data1/Data 0 or clock are supported. The EK9i employs 2 Wire RS-485 data communications. Lock, unlock and customer code functions, offline access modes are supported on all readers connected to the RIU. Each RIU supports up to 8 different card formats as well as issue codes for both magnetic and wiegand card formats.

The RIU provides a vital link between, Advanced Multi Door Controller System, and the card reader attached to the interface. As many as 8 RIU modules can be multidropped using RS-485 2 wire communication up to 1km per port away from the AMDC, Each RIU is individually addressed for increased reporting capabilities with Matrix V Access Control Software applications. The RIU includes 6 inputs that support normally open normally closed, supervised and non-supervised circuits. 2 output relays support failsafe or fail secure operations.

Features & Functionalities

- 12 VDC power supply
- Supports Data1/Data0, Clock/Data and Keypads
- Up to 7 different card formats
- Issue Code Support
- Door Contact Open or Closed, Supervised or non supervised
- Push Button Monitor
- Bi Color or 2 wire status LED support
- Reader Beeper control
- Support for offline reader access mode
- Elevator Control, support for 32 floors

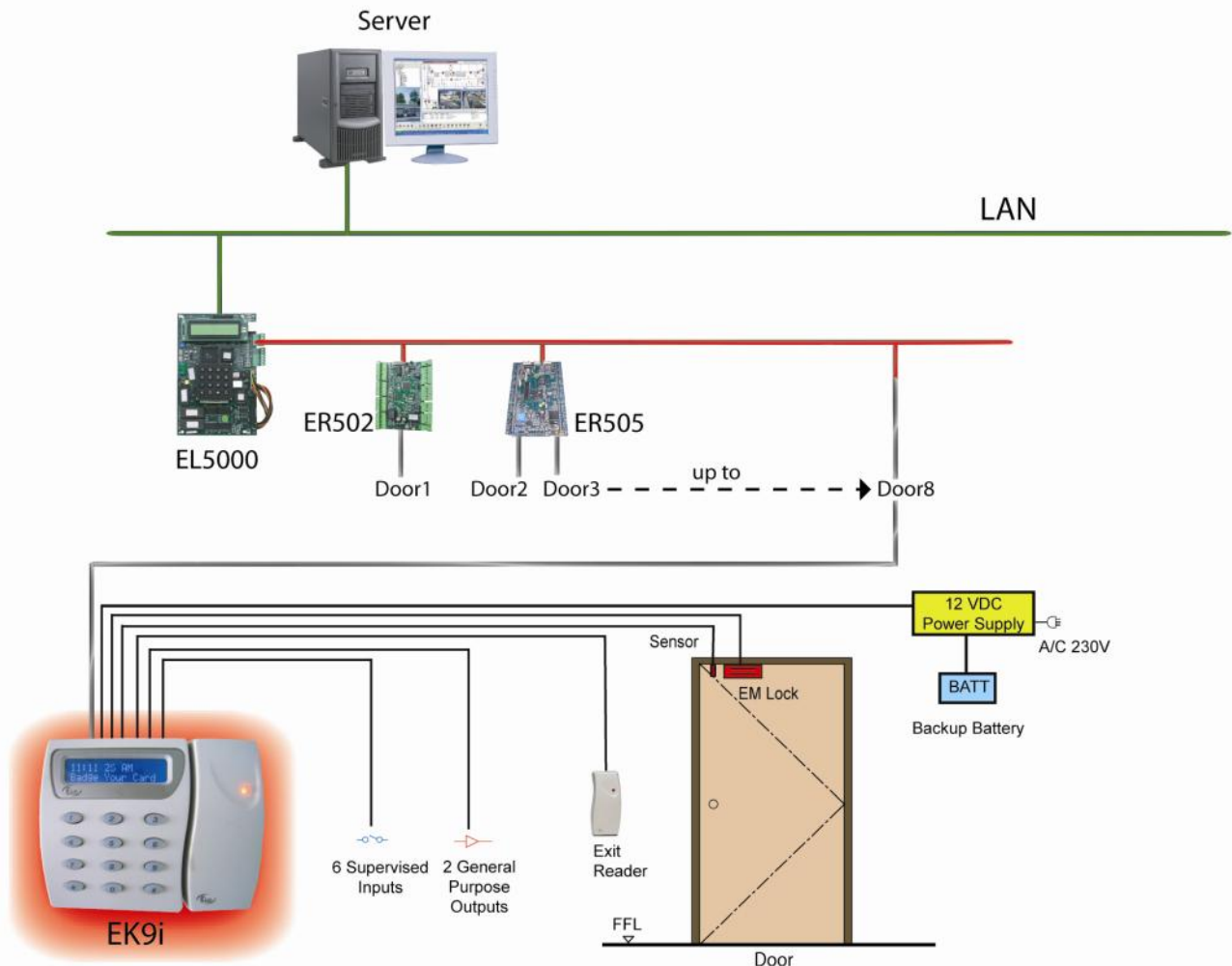
EK9i

Model	EK9i
Manufacturer	ELID Sdn Bhd
Country of Origin	Malaysia
Microprocessor	16-bit MCU (MC9S12GC128) with 128K flash memory and 4K RAM
Bus Speed	25.8048 MHz
Communication	2 wires RS485 Interface (Data+, Data-)
Baud Rate	9600bps or 57600bps
Protocol	Peer-to-peer collision detection protocol (E-BUS)
LCD Display	16 by 1 line yellow-green screen without backlight or 16 by 2 lines blue screen with backlight
Keypad	3 by 4
Max. Doors Supported	1 Door

EK9i

EK9i

Modes of Operation	Card, PIN, Card + PIN, Time Clock
Standalone Operation	Partial. Can store 10 card numbers to open door when main controller is down.
Status detection	Tamper, Battery and Alternating Current
Type of Reader Supported	Proximity (HID, EM, MiFare)
Max. Readers Supported	2 (one IN and one OUT)
Onboard Inputs / Outputs	6 Inputs, 2 Outputs
Operating Temperature	0°C to 60°C
Humidity	10% to 90% non-condensing
Power Requirements	12VDC 100mA excluding reader
Casing Dimensions	105 (L) x 80 (W) x 35 (D)
Casing Property	Heavy Duty PVC
Approximate Weight	400grams



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Sales & Training offices

MALAYSIA ▲
Kuala Lumpur (HQ)
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CHINA ■
Guangdong
ELID (Guangzhou) Electronics & Information
Technology Ltd.
2606, Hui Hua Building,
No 80, Xian Lie Zhong Road,
Guangzhou City, China
Tel: 86-020-3761 6478
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INDIA ■
Bangalore
ELID Security Electronics Private Limited
74&75, 1st floor, 3rd cross, 24th Main Road
II Phase, JP Nagar.
Bangalore-560078 India.
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Fax: 91 80 2649 1436

THAILAND ■
Bangkok
ELID Technologies (Thailand) Limited
49/114, Rattana Thet Road, Bangkrasoh
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ELID has been the pioneer and forerunner in Malaysia's software and hardware physical security applications since 1989. With many years of expertise in meeting our customer's security needs, ELID has proven to not only be a leader in South East Asia, but also in the worldwide market, for products ranging from simple door access systems to Integrated Security Management Systems (ISMS).

To meet the physical security requirements standards set by high end customers, ELID anticipated their needs by developing and launching the Matrix V Integrated solution in 2000. ELID met and surpassed these standards by employing the latest leading edge technologies, and employing on the best platforms and system architectures in the market. By rooting our product development on products that enable organizations to effectively protect and manage their people and property, and by maximizing their IT and infrastructure investments, we have been entrusted to set the de facto standard in software and integrated security management system.

In Malaysia, 30% of the top 100 public listed companies on the main board are using ELID Systems to protect their premises and personnel. Furthermore, with over 500 integrated security systems installed in 20 countries worldwide, it is fast gaining acceptance and recognition as the most preferred ISMS of choice. We are relentless in our development efforts, because we believe that human safety, intellectual & property safety is of paramount importance. ELID continues to commit to push the boundaries of Integrated Security Management Systems to ensure that our objectives are achieved to meet every customer's needs now and for the future.



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