![ELID logo] Trusted by Professionals Since 1989
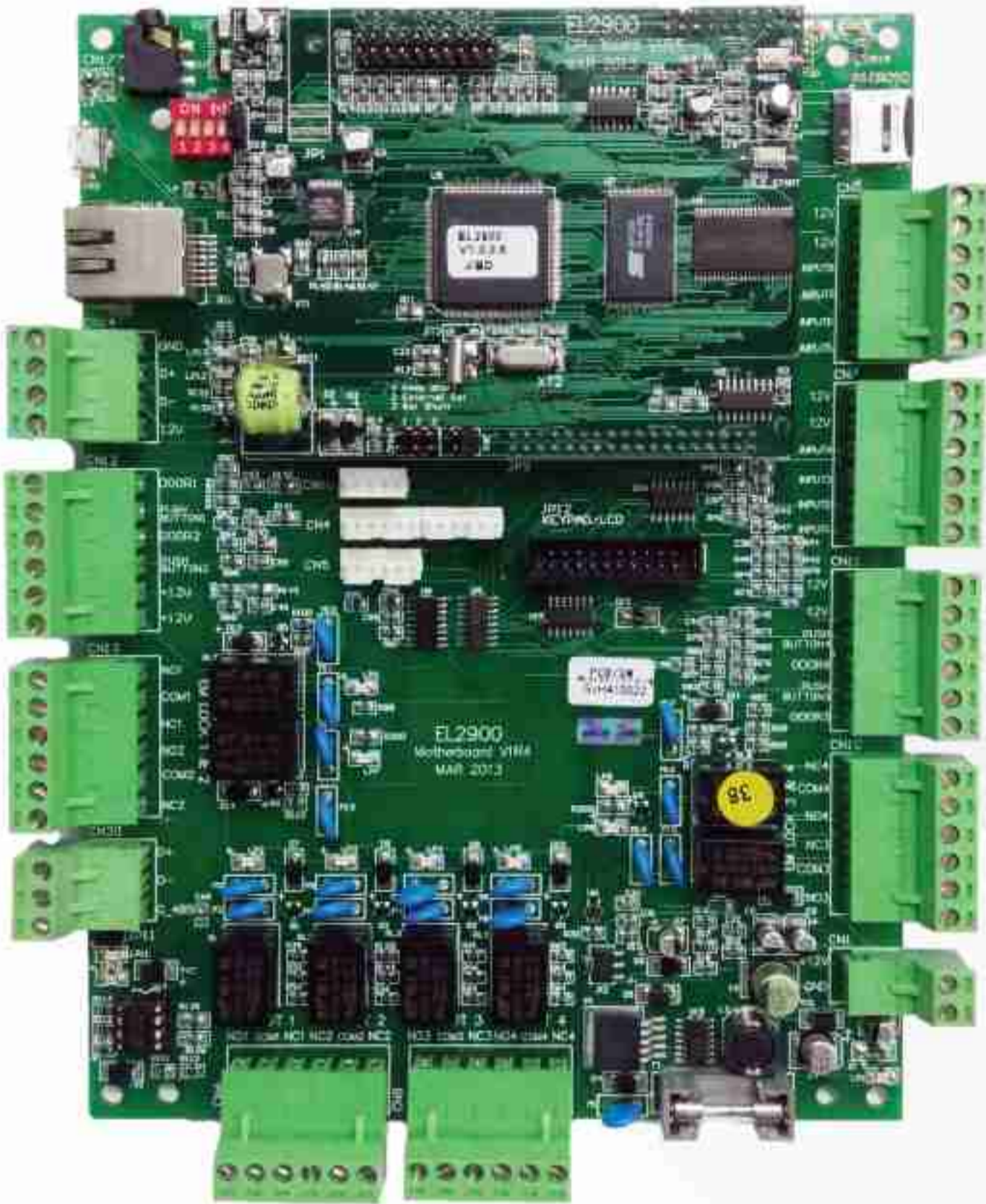
EL2800
IP Multi-Door Controller

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EL2800 is an IP-based four-door/eight-reader controller that supports 10-digit card numbering. It is driven by an ARM Cortex M3 32-bit MCU running at 120 MHz. Programs are stored on large flash memory and can be modified in-circuit. There is also generous provision of battery-backed SRAM for fast access. An SD card slot is also available.

EL2800 uses native LAN and has a built-in web-server which can respond to standard web browsers. EL2800 has flexible input/output programming features allowing non-standard control logic functions to be easily implemented in applications such as visitor management using flap barrier or turnstiles.

Large Database

EL2800 can store up to 10,000 user ID card numbers and 5,000 transactions. If SD card is inserted, the number of transactions can be increased significantly.

EL2800 recognizes 15 different types of activities (such as valid entry, door forced open, wrong PIN, etc). Each transaction is recorded with date, time, and card number.
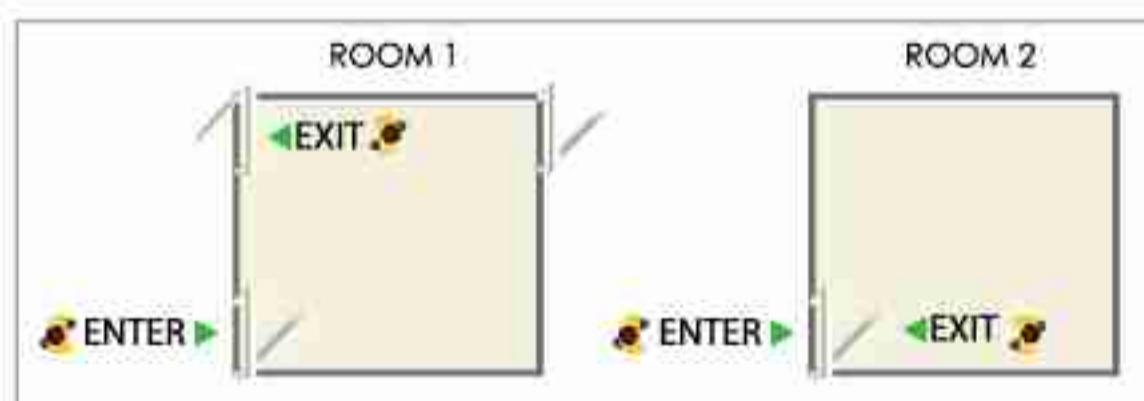
Anti-Passback Control

EL2800 offers 3 types of anti-passback and is particularly suited for controlling entries of cars in car parks. The controller maintains the In and Out status of each person in the system and bars double-entry.

• Local Anti-Passback is intended for small car parks with one entry and one exit.
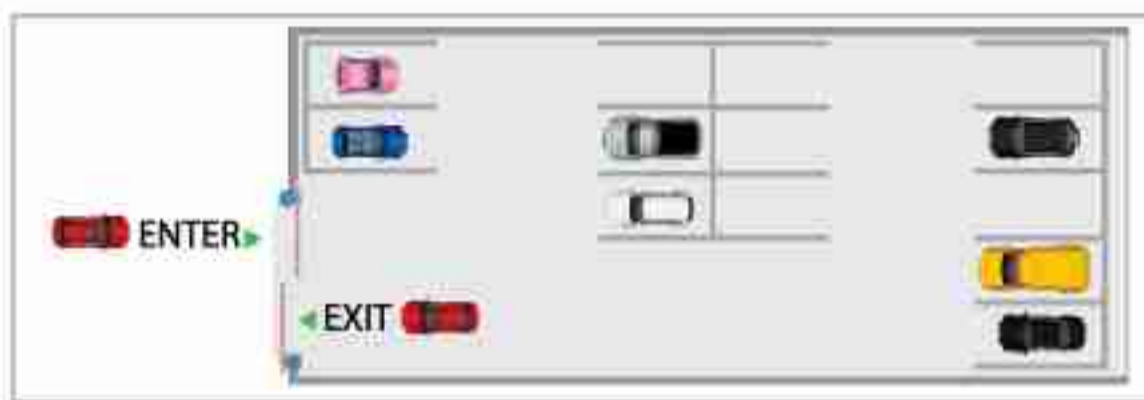
• Regional Anti-Passback allows doors within a single EL2800 to be grouped under different anti-passback areas. For example, 3 doors can be grouped in one anti-passback area (Room 1), while the remaining door (Room 2) can be configured as a local anti-passback.

• Global Anti-Passback is intended to work across multiple access points requiring more than one unit of EL2800 to handle. This requires peer-to-peer communication between the EL2800 controllers. This feature is often required in turnstiles or flap barriers for controlling human traffic flow.

Flexible Networking

2 networking modes are available on EL2800 depending on your specific needs. The first option is RS485. The second option is LAN, and is the preferred mode, as it allows users to reap the full benefits of EL2800 IP features.

Wide Choice of Readers & Formats

EL2800 is designed to work with RS485 readers such as ERM845, ERM848 and EK848 touch sense keypad with built-in reader module. In order for EL2800 to work with standard range of ELID readers with Wiegand signal, EA45 converter has to be added. EA45 is the size of a match box and can be easily installed behind the reader.

EL2800 allows selection of 4 different Wiegand formats:- 26-bit standard format, 20-bit free format, 32-bit free format, and ELID proprietary format.

Friendly Programming

EL2800 can be connected to a programming keypad, EK13 to handle basic communication set-up such as IP address, unit number and baud rate. Diagnostic test to check status of readers and Input/output devices can also be performed using EK13 keypad, and is particularly convenient to installers working on site.

Programming of access functions such as timer, time zones and enrolling or deleting cards can be done via PC running access management software such as E.WIN. Alternatively, programming can also be done by logging to the IP address of the controller using any web browser such as Internet Explorer.

Inputs and Outputs

EL2800 has 8 inputs and 4 relay outputs onboard. The inputs can be used for monitoring alarm or status signals. The outputs can be activated manually or automatically by timer, or in reaction to specific status/alarm changes.

The number of I/O can be expanded by adding EA62 I/O boards. Each EA62 provides 8 inputs and 4 relay outputs, and up to 3 boards can be added.

Multiple Modes of Operation

EL2800 can operate in PIN mode, CARD mode, or CARD+PIN mode. In CARD+PIN mode, the PIN can be set by the user. All modes of operation are subjected to time zone constraints. 10 time zones are provided, and each time zone has an 8-day schedule (7 weekdays + 1 holiday) with 2 start/stop periods per day.

Doors can be programmed to be unlocked automatically by timers. Changing from CARD to CARD+PIN mode can also be automatically activated by timers. Up to 20 holidays can be programmed into the controller, and a separate access routine set for holidays.

Flexible Configuration

EL2800 offers two types of configurations:-

• Centralized Configuration

Door sensors, EM locks and exit push buttons are directly wired back to EL2800 board. Readers are connected to EL2800 via RS485 in star-topology wiring. Note that in this mode, no power supply is required at the door. All power is taken from EL2800.
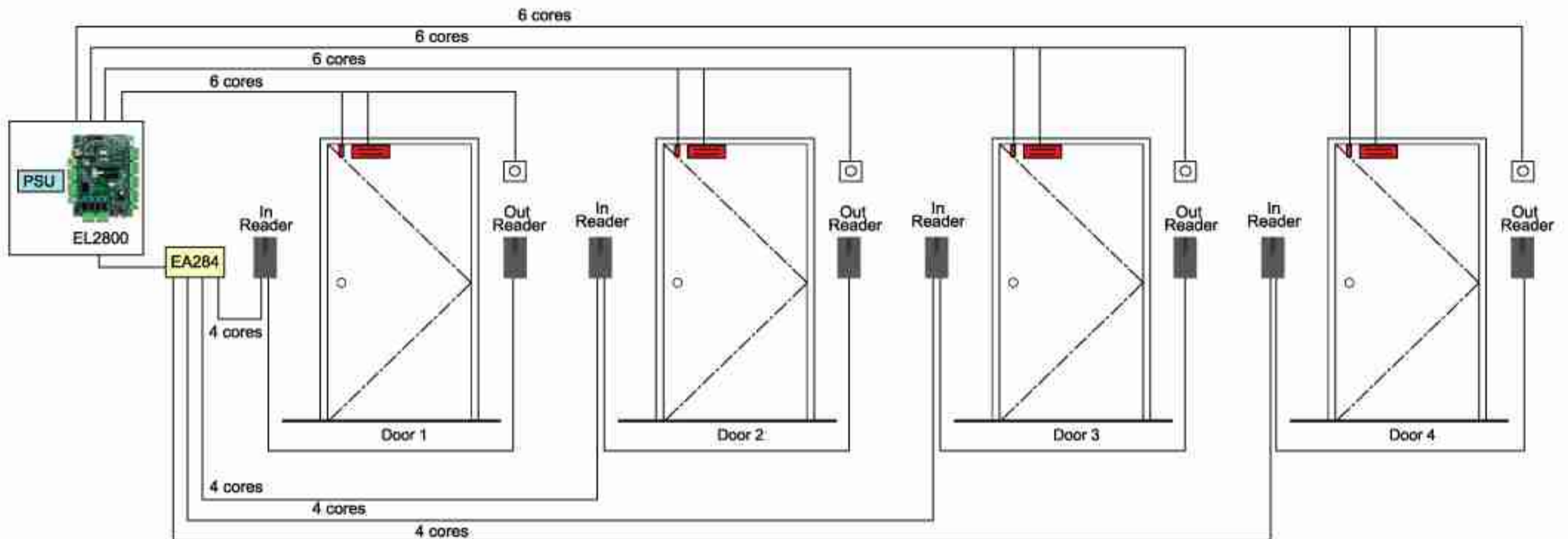
* RS485 Reader for entry & exit access point (maximum 1km)

• Distributed Configuration

EL2800 communicates to multiple units of ER351 Reader Interface Unit (RIU), one per door, via RS485 in daisy-chain mode. Door lock, door, sensor and exit push-button are connected to ER351 RIU, which comes with reader and PIN pad.
Note that each RIU requires its own power supply.
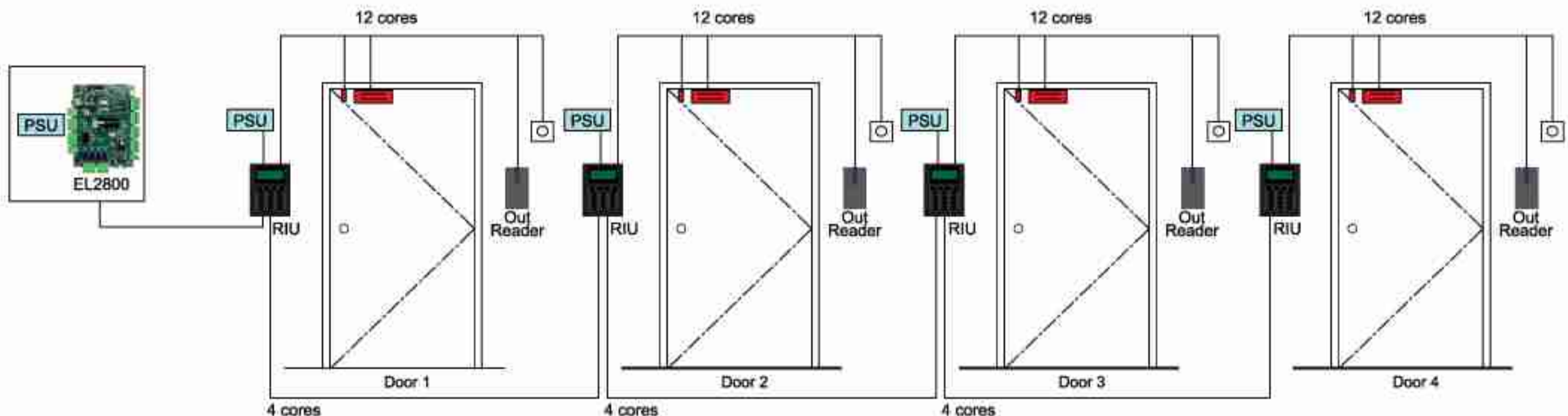
*ER351 RIU for entry access point (maximum 1km). Wiegand Reader for exit access point

Wide Choice of Access Management Software

EL2800 is compatible with all existing ELID Access Management Software such as EastWin, E.WIN and WinPro The software treats EL2800 akin to 4 units of single-door controllers.

EastWin is an easy-to-use, SQL-based, single-workstation access management software. EastWin's configuration is automated. It controls up to 32 access points and comes with basic time attendance functions.

E.WIN is a powerful single-workstation access management software that allows control of up to 128 access points. It supports Web-View via internet browser. It has access management and time management capability.

WinPro is a scalable, SQL-based, multi-workstation access management software. It can control up to 1,024 access points with sophisticated access and intrusion alarm functions. It supports Live View Access via internet browser. It can integrate with Time Attendance Software and Visitor Management Software. It is also able to integrate with selected brands of DVR for video surveillance.

Hardware Specification

EL2800 Controller

Microprocessor	32-bit 120MHz ARM Cortex-M3	Holiday	20
Memory	4MB Flash, 1MB RAM, SD Card (1GB)	Standalone Operation	Yes
Communication Interface	Native TCP/IP (10/100 Base-T), RS485	Adjustable Lock Release Time	Yes
Mode of Access	Card, Card + PIN, PIN, Fingerprint (1:1, 1:N)	Permanent Lock Release	Yes
Type of Supporting Reader	Proximity, Smart Card, Biometric	Automatic Pin Disable Time Zone	Yes
Supporting Card Type	HID, Mifare, EM	Automatic Lock Release Time Zone	Yes
Maximum Readers	8 units (2-wire RS485 protocol)	Inhibit Access	Yes
On-board Input	8 dedicated, 8 general purpose	Continuous Swiping	Yes
On-board Output	4 dedicated, 4 general purpose	Global Anti-Passback	Yes
Maximum Number of I/O Board	3 units of EA62	Power Supply	12 VDC
Card Database	10,000	Current Consumption	200 mA (Board only)
Transaction Database	5,000	On-board Battery	2.4V lithium cell
Time Zone	10	Operating Temperature	0° C to 60° C
Timer	24	Board Dimension	210(H) x 155(W) x 25(D)mm

EK848 Touch Sense LCD Keypad Reader

Microprocessor	8-bit 16MHz MCU	Display	128 x 32 LCD
Baud Rate	19200 bps	Keypad	4 x 3
Communication Interface	RS485	Output format	Wiegand
Mode of Operation	Card, Card + PIN, PIN	Power Supply	12 VDC
Reading Range	Between 3cm and 8cm	Operating Temperature	0° C to 60° C
Transmission Frequency	125 kHz (EM), 13.56MHz (Mifare)	Casing Dimension	100(H) x 135(W) x 30(D)mm

RS485 Reader

Microprocessor	8-bit 40MHz MCU	Transmission Frequency	125 kHz (EM), 13.56MHz (Mifare)
Baud Rate	19200 bps	Output format	Wiegand
Communication Interface	RS485	Power Supply	12 VDC
Mode of Operation	Card	Operating Temperature	0° C to 60° C
Reading Range	Between 3cm and 8cm	Casing Dimension	85(H) x 45(W) x 15(D)mm

ER351 Reader Interface Unit

Microprocessor	8-bit 20MHz MCU	Reading Range	Between 3cm to 8cm
Baud Rate	19200 bps	Transmission Frequency	125 kHz (EM), 13.56MHz (Mifare)
Communication Interface	RS485	Display	3 x LED and 1 x 7-Segment
Max. Doors Supported	1 Door	Keypad	4 x 4
Type of Reader Supported	EM, Mifare	Power Supply	12 VDC
On-board Input/Output	2 dedicated inputs, 1 dedicated output	Operating Temperature	0° C to 60° C
Mode of Operation	Card, Card+PIN, PIN	Casing Dimension	115(H) x 90(W) x 30(D)mm

EA62 I/O Expansion Module

Communication Interface	SPI	Power Supply	12 VDC
On-board Input	8	Operating Temperature	0° C to 60° C
On-board Output	4	Board Dimension	180(H) x 70(W) x 15(D)mm

EA284 4-Port Hub

Maximum Number of Device Usage	4	Power Supply	12 VDC
Application	Enable RS485 Star-Topology	Operating Temperature	0° C to 60° C
Communication Protocol	Half duplex RS485	Board Dimension	120(H) x 75(W) x 20(D)mm

Ordering Information

Control Panel	
EL-2800-002	EL2800 TCP/IP 4-Door Security Access System Module
ER-0013-B03	EK13/B Programming Keypad
CS-1098X	Metal Casing - 381(H) x 330(W) x 91(D)mm
EG-PSA6-002	EP44S Power Supply Adapter, 13.5V/4.4A c/w PS2
RS485 Reader	
ER-0845-B01	ERM845/B RS485 EM Proximity Reader
ER-0848-B01	ER848/B RS485 Mifare Contactless Card Reader
ER-0848-RE1	EK848R/EM RS485 Touch Sense Keypad (EM Reader)
ER-0848-RM1	EK848R/MF RS485 Touch Sense Keypad (Mifare Reader)
ER-0847-B01	EK847R/B RS485 Serial Keypad with LED Display (EM reader)

Wiegand Reader	
ER-0928-B07	ER928/B Mifare Contactless Card Reader
ER-0923-0M4	ERH923/B HID Short Range Proximity Reader
ER-0923-B06	ERM923/B EM Short Range Proximity Reader
Reader Interface Unit	
ER-0351-E01	ER351 Single-door Reader Interface Unit, built-in with EM reader
Accessories	
EA-0045-001	EA45 Reader Converter, Wiegand to RS485 (For standard range of ELID Wiegand readers)
EA-0284-001	EA284 4-Port HUB
EA-0062-001	EA62 Peripheral Module (8 inputs and 4 outputs)

For more information: Check out the website at: www.elid.com, or contact our dealers.
ELID has a policy of continuous research and development , and reserves the right to change specifications without notice.