

SOYAL[®]

Onyx Series

AR-888-H

Flush-Mount Backlight Multi-Function Controller

Elegant design with LED frame and backlight touch keypad, supporting multiple control modes design



Expandable User Capacity to More than 10,000 Users

Built-in multiple control modes:

1. One door, one and half door
2. Multiple doors (with multi-door controller), can be more than 10,000 user capacity

Various Scratch Resistance Touch Panel

Elegant and classic design, including black & white colors, US rectangle & EU square selectable

Flush Mount Installation, Bi-Color Frame LED



Green= Access granted

Red= Access denied / Alarm status

Ingress Protection

IP65, good dust and liquid resistance

Features



Total Solution with Aesthetic Design



Ultra-Thin
9mm



Full Frame LED



Illuminated Touch Panel



Black or White



Long Sensing Distance



Web



Youtube

- Built-in hardware watchdog, real time clock, arming, force alarm, door close delay alarm, doorbell and duress code & output
- Built-in door auto open time zone, holiday edit, door group & time setting. With multi-door control panel, support more time and group sets
- Standalone / Networking / Support Cascade Structure
- Support RS485 communication encryption, SSC (Soyal Security Communication)
- In-field firmware upgrade
- Support DESFire tags (Crypto comply with EAL4+)
- Multiple access mode: card only, card or password, card and password
- Multi output: door lock output (0.1-600 sec. and toggle mode) & alarm output (1-600 sec.)
- Silent operation mode: push button mute and all mute Auto relock for anti-trailing and sneaking
- Access control, lift control, time attendance, payroll and SCADA : graphic monitoring & remote control function
- Can be an encrypted RS485 reader if utilized with other brand's controller

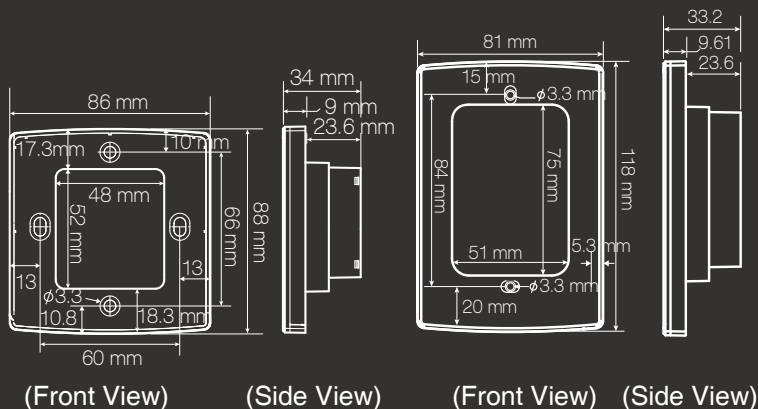
SPECIFICATION

Communication interface	Host	RS485/9600 bps (N, 8, 1)
	Serial	TTL Output /4800 bps (N, 8, 1) SSC (Soyal Security Communication)
Frequency	125kHz	13.56MHz
Supported Tags	ISO18000-2: EM4001 and EM4095 compatible	ISO 14443 Mifare Ultralight, Classic, DESFire EV1 NFC (card simulation)
	Crypto	CC Certification: 3DES Crypto comply with EAL4+
RFID Reading Range	2-5 CM	5-15 CM
UID Bits	24~32 (Adjustable)	
DI/DO	DI	Egress / Door State
	RO	Door Lock Relay
	DO	Door Lock Output / Duress Output / Alarm Output Arming Output (share same terminal with Security trigger signal Output)
Doors/Floors Number	1.5 Doors / 32 Floors	
User Capacity	3000	
Event Log	1500	
Indicator	LED	LED Frame(Green&Red)/3LED(White)
	Buzzer	1
TAMPER	Button Switch(Type A/50mA/30VDC)	
Dimension (mm)	Rectangle US: 110(H)X81(W)X34(D) Square EU: 88(H)X86(W)X34(D)	
Housing Material	Housing	Anti-Scratch PC+ABS
	Keypad	PC(Unified Body)
Color	White , Black ,Hairline texture printing	
Weight (g)	Rectangle US:approx. 120 / Square EU: approx. 110	
Power Consumption	<3W	
Power Voltage	9-24VDC	
Ingress Protection	IP65 (Surface)	
Enviroment	Operating Temperature	-20°C ~ +70°C
	Storage Temperature	-40°C ~ +75°C
	Operating Humidity	0%~90% (non-condensing)
	Storage Humidity	0%~95% (non-condensing)

WHAT WE OFFER

- ✔ **Industrial Grade / High Durability**
 Made of industrial grade materials in compliance with RoHS, which is far higher than general commercial grade, Soyal products work well in extreme environment with long working life.
- ✔ **Anti-Cloning and Anti-Duplicate**
 We provide anti-cloning and encryption for whole system to tighten up the security. It supports DESFire in compliance with EAL4+, more secure than other brand' s controller.
- ✔ **Support Soyal Cascade Structure**
 When scaling your system it is not only having more hardware, higher security level, and more spaces to control; it also means there will be more people with access. Without replacing or changing installed hardware, adjust your controller user capacities by adding external Multi-Door Controller; from a thousand to more than ten thousand user capacity.
- ✔ **High Scalability, Beyond Access Controller**
 Each product manufactured by Soyal is made for total solution and to offer flexibility. For instance, Soyal main product is access controller but you can find Soyal on other application like offline consumption device, charging device, and many more just by changing its firmware.
- ✔ **No Exclusivity, Open Integration Resources**
 SOYAL provides open sources such as SDK and protocol document that have "no-exclusively and open source integration" characteristic. SOYAL also supports integrations, like JSON, Graphic QL, Julia, Modbus, so customers can easily develop their own software.

INSTALLATION(mm)



▲ Square EU

▲ Rectangle US

HOW TO ORDER

AR-888-HXR111X

Frequency
B=125kHz / D=13.56MHz

RTC
R=Built-in RTC

Communication
1=RS485

Waterproof
1=Weatherproof

Type
7=Rectangle US Type
8=Square EU Type

Color
B=Black / P=White

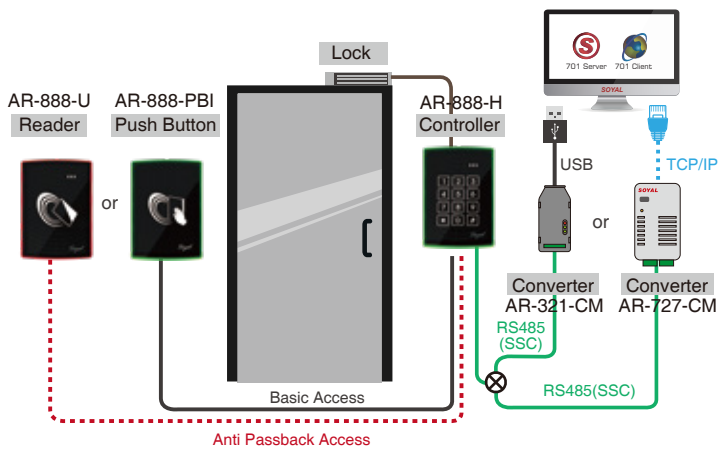
APPLICATION & STRUCTURE DIAGRAM

● STANDALONE & NETWORKING ACCESS CONTROL

Basic Access: the most basic access, exiting venue is only by pressing a push button

Anti Passback: restrict user to re-enter before exiting venue or increase security level by having access reader at the other side of the door. Both entering and exiting will required swipe card or keyfob for access.

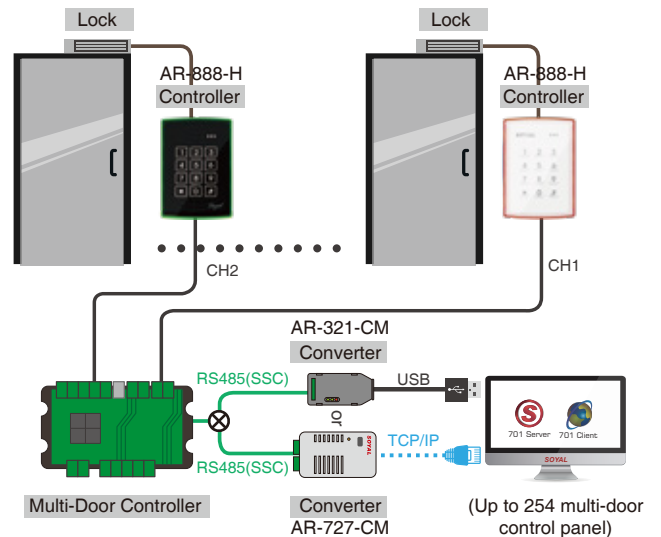
Networking: beside configuration through Wiegand Keyboard and Master Card, you can also link AR-888-H with Soyal converter to PC for configuration via SOYAL Software or for anti-cloning and encryption process.



--3000 User, 11 Timezone--

● CASCADE STRUCTURE

Upgrade user capacity without replacing AR-888-H installed with additional hardware of SOYAL Multi-Door Control Series. Under Multi-Door Control Panel, when RS485 communication is working normally, AR-888-H will be a Slave Reader of Control Panel. Once its communication is cut off, AR-888-H will automatically be Access Control and have control on its user and parameter setting.



--16000 User, 63 Timezone--

● CAPTURE USER PICTURE WITH INTEGRATED IP CAMERA

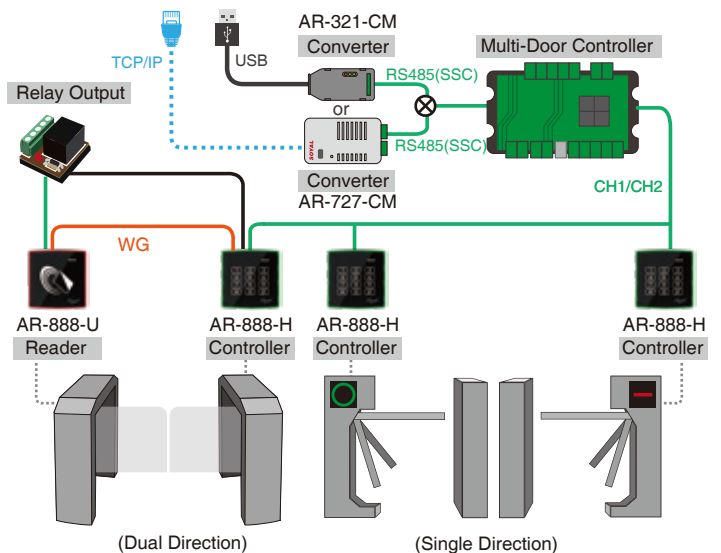
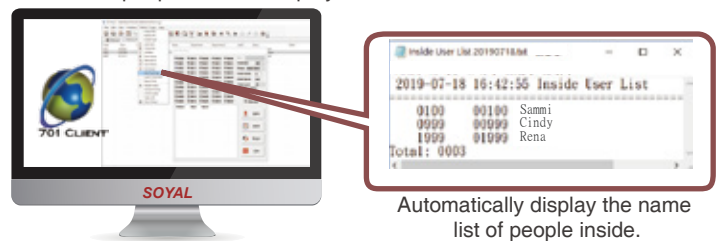
When the user swiping the valid card or pressing fingerprint for access at entrance, the action will be captured by IP camera and displayed on 701Client software in real-time providing the administrator to compare if the captured user picture is matched with the existing user picture data stored in software; at the same time, the captured picture will be automatically saved to the installation path of 701Client software with the file name defined by captured date and time for convenient tracking and review in future.

- Create a user and save user picture or take a picture directly with the IP Camera and saved to 701Client software as a record data.
- To prevent card being duplicated or pass to another person, when a user swipe card, it will automatically captured the user picture and personnel could compare both recorded picture and captured picture is the same person or not. If different person, stop unauthorized personnel from entering.



● TURNSTILE: COUNT AND DISPLAY NUMBER OF PEOPLE ON-SITE

Either with single direction or dual direction turnstile, with multi-door control panel AR-716-E16, restricts user access to re-enter venue without exiting first with anti-passback features and get the total number of people and the display the list of user on site via 701Client.



PERIPHERALS / ACCESSORIES

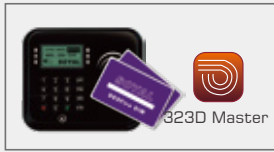
HIGH LEVEL SECURITY

- Anti-Cloning Kits



Mifare Encryption

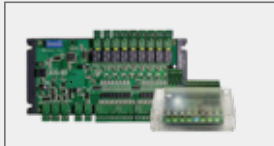
Encoder: AR-725-P
w/Authorization Tags
Software: Mifare Key



Desfire Encryption

Encoder: AR-837-P
w/Authorization Tags
Software: 323D Master

- Expansion I/O Control



I/O Modules

AR-401 Series:
Multiple Channel I/O Module
AR-403 Series: Tiny Digital I/O Module

STANDALONE

- Input/Output



Locks

Magnetic Lock
AR-0600M-270
Electric Bolt Lock
AR-1207 Series
Cabinet Lock
AR-1211-P/AR-1213-P
Electric Strike
AR-YS-130NO/AR-YS-131NO



Door Sensor / Alarm/Siren / Burglary Security System



AR-888-H

- Onyx Series



Wiegand Reader

AR-888-K / AR-888-U

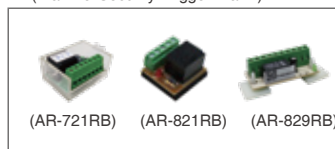
Infrared Touchless Button

AR-888-PBI

Room Control System

Modbus Switch
AR-888-T
DND&MUR Switch
AR-888-CPO/CPI
Card Energy Saver
AR-888-W

- External Relay Output
(Alarm & Security Trigger Alarm)



1 Form C relay with time delay

AR-721RB

1 Form C relay

AR-821RB

2 Form C relay

AR-829RB

- Necessary



Power Supply

BP-W12-1500 (1.5A)
BP-W15-2400 (2.4A)



Proximity Tags

125kHz: EM
13.56MHz: Mifare Classic,
Mifare Desfire, UltraLight
Tags Selection: Thin Card,
Thick Card, Round
Keyfob, Square Keyfob

NETWORKING

- Software



701 Server 701 Client



ISP Tools

File Based & Data Based Interchangeable Software for Access Control, Time Attendance, Status Monitoring and Configuration

701 Server & 701 Client

Firmware Upgrade

ISP Tools

- Signal/Interface Converter



Isolated USB to RS485

AR-321-CM

Isolated RS232 to RS485

AR-321-CM-485232



Ethernet to RS485

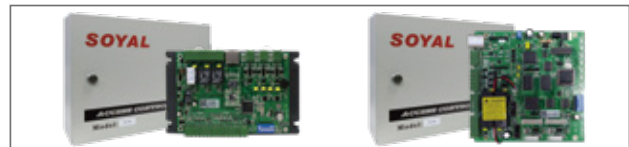
AR-727-CM
AR-727-CM-IO-0804M
(with I/O for Fire Alarm to open all doors)



TTL to RS-485

For external module converter

- Large User Capacity & Multi-Door AntiPassback



Multi-Door Control Series

AR-716-E16: 16 Doors IP Control Panel
AR-716-E18: 18 Doors Networking Control Panel

FAQ

Q: How to Integrate SOYAL with Face & License Plate Recognition?

A: As Face Recognition is more and more in demand, SOYAL provide resources and two integration method. The integration will grant access via face recognition by sending converting face data to UID to Soyals system (software/hardware) that later will resulting in access granted or denied, based on the availability user data on Soyals database system.

As the integration method is various, we offer flexibility of integration based on what customer preferred.

Q: What is the difference between SOYAL H Series and E Series Controller?

A: SOYAL access controller classified into two categories in term of specification; H Series and E Series. SOYAL H Series controller has already include all basic standalone and networking access controller that you need. But E series controller provide what H Series controller has already have, and more advanced features like built in more user capacity, UART Port for extension module, and extension interface like Ethernet and POE.



More FAQ