

# SOYAL<sup>®</sup>

ACCESS CONTROL SYSTEM

**SOYAL** always **Catching your attention!**



Convenience, Security, the Best Solution.



RFID solutions · Proximity & Smart cards · Hardware & Software OEM/ODM Service



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# Selection Guide



Stand-Alone	EM/125kHz	User Capacity	1,024 (M4/M8)	AR-721H	AR-757H	AR-727H	AR-723H					
			3,000 (M4/M8)	AR-321H	AR-327H	AR-331H	AR-725H					
			10,000	AR-821EF	AR-821EV							
			15,000	AR-829E								
			16,000 (M4/M8)	AR-725E	AR-881EF	AR-881EV						
			65,000 (M6)	AR-321H	AR-327H	AR-721H	AR-757H	AR-727H	AR-725H	AR-725E	AR-331H	
			LCD Panel	AR-327H	AR-727H	AR-829E	AR-821EF	AR-821EV				
			Anti-pass-back	All Access Controllers								
			Lift Control	All Access Controllers								
			AUX. Reader	AR-737H/U	AR-721U	AR-725U	AR-725K	AR-721K	AR-661U			
MIFARE/13.56MHz	User Capacity	1,024 (M4/M8)	AR-721H	AR-757H	AR-727H	AR-723H						
		3,000 (M4/M8)	AR-321H	AR-327H	AR-331H	AR-725H						
		10,000	AR-821EF	AR-821EV								
		15,000	AR-829E									
		16,000 (M4/M8)	AR-725E	AR-881EF	AR-881EV							
		65,000 (M6)	AR-321H	AR-327H	AR-721H	AR-757H	AR-727H	AR-725H	AR-725E	AR-331H		
		LCD Panel	AR-327H	AR-727H	AR-829E	AR-821EF	AR-821EV					
		Anti-pass-back	All Access Controllers									
		Lift Control	All Access Controllers									
		AUX. Reader	AR-737H/U	AR-721U	AR-725U	AR-725K	AR-721K					
Keypad	User Capacity:500	AR-721KP										
Networking	Built-in TCP/IP	User Capacity	1,024 (M4/M8)	AR-721H	AR-757H	AR-727H	AR-723H					
			3,000 (M4/M8)	AR-725H	AR-321H	AR-327H	AR-331H					
			10,000	AR-821EF	AR-821EV							
			15,000	AR-829E								
			16,000	AR-881EF	AR-881EV	AR-829E						
			LCD Panel	AR-327H	AR-727H	AR-829E	AR-821EF	AR-821EV				
			Anti-pass-back	All Access Controllers								
			Multi-door Anti-pass-back	AR-716E	AR-XXXH	X16						
			Lift Control	All Access Controllers								
			AUX. Reader	AR-737H/U	AR-721U	AR-725U	AR-725K	AR-721K	AR-661U			
EM/125kHz	User Capacity	16,000	AR-725E	AR-881EF	AR-881EV							
		15,000	AR-716Ei	AR-XXXH	X16							
		10,000	AR-821Efi	AR-821Evi								
		LCD Panel	AR-821Efi	AR-821Evi								
		Anti-pass-back	AR-725E	AR-821Efi	AR-821Evi	AR-881EF	AR-881EV					
		Multi-door Anti-pass-back	AR-716Ei	AR-XXXH	X16							
		Lift Control	AR-725E	AR-821Efi	AR-821Evi	AR-881EF	AR-881EV					
		AUX. Reader	AR-737H/U	AR-721U	AR-725U	AR-725K	AR-721K	AR-661U				
		MIFARE/13.56MHz	User Capacity	16,000	AR-725E	AR-881EF	AR-881EV					
				15,000	AR-716Ei	AR-XXXH	X16					
10,000	AR-821Efi			AR-821Evi								
LCD Panel	AR-821Efi			AR-821Evi								
Anti-pass-back	AR-725E			AR-821Efi	AR-821Evi	AR-881EF	AR-881EV					
Multi-door Anti-pass-back	AR-716Ei			AR-XXXH	X16							
Lift Control	AR-725E			AR-821Efi	AR-821Evi	AR-881EF	AR-881EV					
AUX. Reader	AR-737H/U			AR-721U	AR-725U	AR-725K	AR-721K					
MIFARE/13.56MHz	User Capacity			1,024 (M4/M8)	AR-721H	AR-757H	AR-727H	AR-723H				
				3,000 (M4/M8)	AR-321H	AR-327H	AR-331H	AR-725H				
		16,000 (M4/M8)	AR-725E	AR-881EF	AR-881EV							
		15,000	AR-829E									
		10,000	AR-716E	AR-XXXH	X16							
		10,000	AR-821EF	AR-821EV								
		LCD Panel	AR-327H	AR-727H	AR-829E	AR-821EF	AR-821EV					
		Anti-pass-back	All Access Controllers									
		Multi-door Anti-pass-back	AR-716E	AR-XXXH	X16							
		Lift Control	All Access Controllers									
AUX. Reader	AR-737H/U	AR-721U	AR-725U	AR-725K	AR-721K							

## Products Selection and Part Number(How to Order)

Item No.: AR-XXX XXXXX

Product category	Frequency	RTC	Communication Interface	Waterproof	Color	Others
H Access Controller	A N/A	R Built-in	0 No	N No	1 Silver	0 OEM
U Access Reader	B 125kHz	X No	1 RS-485	1 Weatherproof	2 Gray	1 Standard
K Keypad Reader	C 13.56MHz (MIFARE UID Only)		2 RS-232	2 Waterproof	3 Blue	2 Chinese
P Programmer	D 13.56MHz(MF1)+Purse		3 Wiegand		4 Black	3 Metal Fream+ Standard
W Energy saver	E 13.56MHz(SL1)		4 ABA		5 Ivory	Other languages are able to be added by request
D Lock	F 13.56MHz(ISO 15693)		5 Ethernet		6 OEM	
			6 Blue Tooth		7 White	
					8 Matt Silver	
					9 Crimson	
					A Champagne Gold	
					B Piano Black	
					C Green	
					D Orange	
					P Pearl White	
					Y Yellow	

## Serial-to-Ethernet Networking Server AR-727CM



## Isolated RS-232/RS-485 Converter AR-701CM



## Isolated USB/RS-485 Converter AR-321CM



## TTL/RS-485 Converter AR-321L485



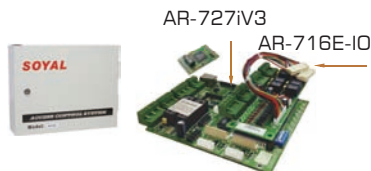
Interface	10/100M Base T Ethernet → RS-232/RS-485	RS-232 → RS-485	USB → RS-485	TTL → RS-485
Power Supply	9-16VDC	9-16VDC	5VDC	9-16VDC
Baud Rate	4800 bps-115200 bps	4800 bps-115200 bps	4800 bps-115200 bps	4800 bps-115200 bps
Power consumption	<2W	<1W	<1W	<1W
Operating Temperature	-20°C to +60 °C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Active Distance	50m(RS-232)/300m(RS-485)	2m(RS-232)/300m(RS-485)	300m(RS-485)	300m(RS-485)
Protocol	TCP/UDP,DHCP,IGMP V2,SNMP v1,v2,v3,ARP	—	—	—
Surge Protection	—	2kV	—	—
Optical Isolation	16kV ESD	8kV ESD	3kV	—
Electrical Isolation	—	—	2500V <sub>RMS</sub>	—
Dimensions(mm)	106.5(L)X66(W)X27.7(H)	64(L)X55(W)X16(H)	79(L)X37(W)X16.4(H)	52(L)X14(W)X11(H)
Weight(g)	86±5	40±5	50±5	14
	<ul style="list-style-type: none"> <li>Connect to network directly without PC.</li> <li>The serial ports include RS-485 and RS-232.</li> <li>Able to link readers and PC to achieve Networking Access Control.</li> <li>The Ethernet supports: ARP,IP,TCP,UDP,ICMP,HTTP,DHCP,Net BIOS,SNMP v1,v2,v3</li> <li>Indicators for power and communication, for debugging and status.</li> <li>Surge protection: 16 kV</li> </ul>	<ul style="list-style-type: none"> <li>Data transmission direction auto control.</li> <li>Able to link readers and PC to achieve Networking Access Control.</li> <li>Indicators for power and communication, for debugging and status.</li> <li>Surge protection: 16 kV</li> <li>Optical isolation protection:2 kV</li> </ul>	<ul style="list-style-type: none"> <li>The serial TTL signal can be converted to RS-485 signals.</li> <li>Expansion card machine peripherals, such as CG or floor controller.</li> </ul>	

# Multi-Door Networking Controller

## AR-716E/Ei

- Two ports of WG interface.
- Supports alarm output when device is disconnected.
- 4 Digital Inputs support Open All Doors function in case of emergency.
- Data and timer can be kept for 60 days after powerdown.
- Built-in power and data transmission LED indicators for debugging and status.
- 63 Time Zones can be set up holidays and levels, and combine with other time zones.
- Each user can be set to allow to enter/exit assigned doors with 16 sets anti-pass-back function.
- Alternative door group control selection: cluster door group or individual door group.
- With 4 replay outputs and 4 sets of passwords to control devices by from readers.
- Control up to 16 readers and 2 WG Inputs by one controller. Totally can connect with 254 controllers by parallel connection.
- AR-716Ei is built with network card, for connecting to LAN or internet; Supports ARP,IP,TCP,UDP,ICMP,HTTP,DHCP,Net BIOS,SNMP v1,v2,v3 protocol.

## Multi-Door Networking Controller AR-716E/Ei



## Serial-to-Ethernet Networking Module AR-727iV3



User Capacity	15,000	
Event log	11,000	
Power Supply	15-24VDC	
Power consumption	<2.5W	
Interface	Host Channel:	
	RS-485 (AR-716E)	9600bps(N, 8, 1)
	Ethernet (AR-716E)	10/100M Base T
	RS-485 ReaderX 2 Ports WG ReaderX 2 Ports	
Temperature	-20°C to +60 °C	
Digital Input	4+8 (AR-716-IO)	
Relay Output	4+8 (AR-716-IO)	
External Port	RS-485 ReaderX 2 WG ReaderX 2	
External RS-485 Reader	16	
External WG Reader	2	
Anti-Pass-Back	Yes	
Door Group	255	
Time Zone	63	
Dimension(mm)	180(L)X231(W)X62(H)	
Weight(g)	1,840±10	
Housing Material	Metal	
Miscellaneous	Provide UPS	

## Extension Relay Board AR-716E-IO



- An extension relay board for AR-716E.
- 8 optical isolation inputs, replacing the door open button of door node ID 1,2,3,4,9,10,11 and 12.
- 8 relay outputs of Form C, replacing the door relays of door node ID 1,2,3,4,9,10,11 and 12.
- Door open time can be set by software.

Interface	10/100M Base T Ethernet → UART(TTL)
Baud Rate	4800bps-115200bps
Power Supply	5VDC
Power consumption	<0.5W
Temperature	-20°C to +60°C
Protocol	ARP,IP,TCP Client,UDP,ICMP,HTTP,DHCP,NetBIOS,SNMP v1,v2,v3
Dimension(mm)	45(L)X28(W)X14(H)
Weight(g)	15±5
Miscellaneous	AUTO MDI/MDIX

- Built-in 10/100M bps Ethernet and TTL interface. Supporting ARP,IP,TCP,UDP,ICMP,HTTP,DHCP,Net BIOS,SNMP v1,v2,v3 protocol.
- Provides easy-to-set IP setting, with DHCP/IP switching function, for setting IP parameter remotely or by serial port.
- With its compact size, it can be operated as an intelligent communication IC to be installed onto AR-716E. Built-in Ethernet interface component only need an external RJ-45 to connect with Ethernet

## Power Management Board AR-716-TC



Input Voltage	DC 13.8 ~ 15 V
Output Voltage	When source from External PSU (Power Supply Unit): 12~15VDC. Output voltage same as input voltage. When source from Back-up Battery (9~12VDC). Output voltage same as battery voltage.
Output Current	3A max
Relay output	2 Form C, 10A/250VAC / 12A/28VDC
Relay control	Low trigger (trigger device must have 25V/25mA puncture capability).

# Access Controller

Access Controller  
with Touch-panel Metal Housing  
**AR-321H**



LCD Access Controller  
with Touch-panel Metal Housing  
**AR-327H**



Access Controller  
**AR-721H**



Access Controller  
**AR-757H**



LCD Access Controller  
**AR-727H**



Access Controller  
**AR-723H**



<b>Frequency</b>	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz
<b>Standard</b>	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC
<b>Reading Range (Depends on Tags)</b>	3-7cm	1-3cm	3-7cm	1-3cm	10-18cm	2-8cm	10-18cm	2-8cm	10-18cm	2-8cm	5-12cm	2-8cm
<b>Power Supply</b>	10-24VDC		10-24VDC		9-16VDC		9-16VDC		10-24VDC		9-16VDC	
<b>Power consumption</b>	<3W		<3W		<3W		<3W		<3W		<1W	
<b>Communication Interface</b>	RS-485		RS-485		RS-485		RS-485		RS-485		RS-485(Networking Only)	
<b>Baud Rate</b>	9600 bps(N,8,1)		9600 bps(N,8,1)		9600 bps(N,8,1)		9600 bps(N,8,1)		9600 bps(N,8,1)		9600 bps(N,8,1)	
<b>Temperature</b>	-20°C to +60°C		-10°C to +60°C		-20°C to +60°C		-20°C to +60°C		-10°C to +60°C		-20°C to +60°C	
<b>Digital Input</b>	Egress(R.T.E.) / Door contact		Egress(R.T.E.) / Door contact/ Arming Switch		Egress(R.T.E.) / Door contact		Egress(R.T.E.) / Door contact		Egress(R.T.E.) / Door contact		Egress(R.T.E.) / Door contact	
<b>Relay Output</b>	Lock Relay		Alarm Relay/ Lock Relay		Lock Relay		Alarm Relay/ Lock Relay		Alarm Relay/ Lock Relay		No	
<b>Lock Relay Time</b>	Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.	
<b>Alarm Time</b>	Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.	
<b>Tamper Switch</b>	Limit Switch(Form C)		Limit Switch(Form C)		Limit Switch(Form C)		Limit Switch(Form C)		Limit Switch(Form C)		No	
<b>User Capacity</b>	M4/M8	3,000	M4/M8	3,000	M6	1,024	M4/M8	1,024	M4/M8	1,024	M6	65,000
<b>Event log</b>	M4/M8	1,500	M4/M8	1,500	M4/M8	1,200	M4/M8	3,000	M4/M8	1,200	M4/M8	1,200
<b>External Reader</b>	1 Wiegand Port		1 Wiegand Port		1 Wiegand Port		1 Wiegand Port		1 Wiegand Port		1 Wiegand Port	
<b>Anti-pass-back</b>	Yes(M4/M8 Only)		Yes(M4/M8 Only)		Yes(M4/M8 Only)		Yes(M4/M8 Only)		Yes(M4/M8 Only)		Yes(M4/M8 Only)	
<b>Lift Control</b>	32 Floors, 3,000 Users		32 Floors, 3,000 Users		32 Floors, 1,024 Users		32 Floors, 1,024 Users		32 Floors, 1,024 Users		32 Floors, 1,024 Users	
<b>Serial Port</b>	TTL(4800bps,N,8,1) (Shared with alarm relay)		TTL(4800bps,N,8,1)		TTL(4800bps,N,8,1)		TTL(4800bps,N,8,1)		TTL(4800bps,N,8,1)		TTL(4800bps,N,8,1)	
<b>Real Time Clock</b>	Yes		Yes		Yes		Yes		Yes		Yes	
<b>LCD Panel</b>	No		128*64 (4 line messages, 16 Characters each line)		No		No		128*64 (4 line messages, 16 Characters each line)		No	
<b>Door Bell Button</b>	No		No		No		No		No		No	
<b>Transistor Output</b>	Arming LED(for Security trigger signal) Alarm/ Duress		Arming LED(for Security trigger signal) Duress		Arming LED(for Security trigger signal) Alarm/ Duress		Arming LED(for Security trigger signal) Duress		Arming LED(for Security trigger signal) Card present		Lock (for Security trigger signal)/ Alarm	
<b>Protection standard</b>	IP56		IP56		No		IP54		IP54		IP56	
<b>Indicator</b>	3 LED & 1 Beeper		4 LED & 2 Bi-Color LED & 1 Beeper		1 Bi-color LED & 1 Beeper		3 LED & 1 Beeper		8 LED & 1 Beeper		1 Bi-color LED & 1 Beeper	
<b>Keypad Material</b>	Illuminated Touch-Panel		Illuminated Touch-Panel		Rubber		Rubber		Rubber		No	
<b>Housing Material</b>	Zinc Alloy		Zinc Alloy		ABS		ABS		ABS		ABS	
<b>Time Zone</b>	11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)	
<b>Operation Mode</b>	Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking	
<b>Color</b>	Chrome		Chrome		Gray/Silver		Gray/Silver		Gray		Standard:Black/Gray/Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red	
<b>Dimension(mm)</b>	114(L)X78(W)X33(H)		140(L)X92(W)X40(H)		111(L)X77(W)X26(H)		126(L)X91(W)X32(H)		126(L)X91(W)X46(H)		81(L)X43(W)X18(H)	
<b>Weight(g)</b>	290±10		430±10		100±10		155±10		200±10		40±5   60±5	
<b>External Edit Keypad</b>											AR-WG-KEYBOARD	

# Access Reader

Proximity Reader  
**AR-737H/U**



Proximity Reader  
**AR-721U**



Proximity Reader  
**AR-725U/  
AR-725U-M**



Keypad Reader  
with Illuminated Touch-panel  
**AR-725K/  
AR-725K-M**








Keypad Reader  
**AR-721K**



Long Range  
Proximity Reader  
**AR-661U**



<b>Frequency</b>	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	
<b>Power Supply</b>	9-16VDC		9-16VDC		9-16VDC		9-16VDC		9-16VDC		10-24VDC	
<b>Standard</b>	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	EM Standard
<b>Reading Range (Depends on Tags)</b>	8-15cm	3-8cm	6-12cm	3-8cm	10-15cm (725U) 5-9cm (725U-M)	3-8cm (725U) 3-5cm (725U-M)	10-15cm (725K) 5-9cm (725K-M)	3-8cm (725K) 3-5cm (725K-M)	10-18cm	3-8cm	33-60cm	Read Only
<b>Read / Write</b>	Read Only	Read/Write	Read Only	Read/Write	Read Only	Read/Write	Read Only	Read/Write	Read Only	Read/Write	Read Only	Read Only
<b>Power consumption</b>	<1W		<1W		<1W		<1W		<1W		<3W	
<b>Communication Interface</b>	RS-485(737H only), Wiegand,ABA-II,ASYNC(737U only)		Wiegand, ABA-II, ASYNC		Wiegand, ABA-II, ASYNC		Wiegand, ABA-II, ASYNC		Wiegand, ABA-II, ASYNC		Wiegand / 34+4, ASYNC	
<b>Baud Rate</b>	9600 bps (N, 8, 1)		9600 bps (N, 8, 1)		9600 bps (N, 8, 1)		9600 bps (N, 8, 1)		9600 bps (N, 8, 1)		9600 bps (N, 8, 1)	
<b>Temperature</b>	-20°C to +60°C		-20°C to +60°C		-20°C to +60°C		-20°C to +60°C		-20°C to +60°C		-20°C to +60°C	
<b>Keypad Material</b>	No		No		No		Illuminated Touch-Panel		Rubber		No	
<b>Indicator</b>	2 LED & 1 Beeper		1 Bi-color LED & 1 Beeper		3 LED & 1 Beeper		1 Bi-color LED & 1 Beeper		1 Bi-color LED & 1 Beeper		3 LED & 1 Beeper	
<b>Protection standard</b>	IP56(Optional)		IP56(Optional)		IP55		IP55		No		IP56	
<b>Housing Material</b>	ABS		ABS		Zinc Alloy+PC(725U-M),PC(725U)		Zinc Alloy+PC(725K-M),PC(725K)		No		ABS	
<b>Color</b>	Gray		Standard:Black / Gray / Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red		Standard:Black / Gray / Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red		Standard:Black / Gray / Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red		Gray/Silver		Gray	
<b>Dimension(mm)</b>	113(L)X71(W)X36(H)		81(L)X43(W)X18(H)		110(L)X79(W)X26(H) (725U) 125(L)X89(W)X30(H) (725U-M) 150±10(725U) / 400±10(725U-M)		110(L)X79(W)X26(H) (725K) 125(L)X89(W)X30(H) (725K-M) 150±10(725K) / 400±10(725K-M)		111(L)X77(W)X26(H)		228(L)X228(W)X38(H)	
<b>Weight(g)</b>	80±10		40±5						90±10		1000±50	

Access Controller with Illuminated Touch-panel AR-725H/725H-M		Access Controller with Touch-panel Metal Housing AR-331H / AR-331H-S		3 Door Controller with Illuminated Touch-panel AR-725E-V2 AR-725E-V2-M		LCD Access Controller AR-829E-V5		Fingerprint LCD Access Controller AR-821EF-V5 (DO/MT)	
									
125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz
EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC
10-15cm(725H) 2-8cm(725H-M)	2-8cm(725H-M)	3-7cm	1-3cm	5-15cm(V2) 2-9cm(V2-M)	2-5cm(V2)	5-15cm	2-5cm	5-15cm	2-5cm
9-16VDC		9-16VDC		10-24VDC		10-24VDC		10-24VDC	
<3W		<3W		<5W		<5W		<5W	
RS-485		RS-485		RS-485+Ethernet		RS-485+Ethernet		RS-485+Ethernet	
9600 bps(N, 8, 1)		9600 bps(N, 8, 1)		9600 bps(N, 8, 1)   10/100M Base T		9600 bps(N, 8, 1)   10/100M Base T		9600 bps(N, 8, 1)   10/100M Base T	
-20°C to +60 °C		-20°C to +60 °C		-20°C to +60 °C		-10°C to +60 °C		0°C to +50 °C	
Egress(R.T.E.) / Door contact		Egress(R.T.E.) / Door contact		2 Egress(R.T.E.) / 2 Door contact		2 Egress(R.T.E.) / 2 Door contact		2 Egress(R.T.E.) / 2 Door contact	
Lock Relay		No		Lock Relay		Alarm Relay/ Lock Relay		Alarm Relay/ Lock Relay	
Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.	
Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.	
Limit Switch(Form C)		Yes		Limit Switch(Form C)		Limit Switch(Form C)		Limit Switch(Form C)	
M4/M8	3,000	M4/M8	3,000	16,000		16,000		16,000	
M6	65,000	M6	65,000	32,000		32,000		32,000	
M4/M8	1,500	M4/M8	1,500						
1 Wiegand Port		1 Wiegand Port		1 Wiegand Port		1 Wiegand Port		1 Wiegand Port	
Yes(M4/M8 Only)		Yes(M4/M8 Only)		Yes		Yes		Yes	
32 Floors, 3,000 Users		32 Floors, 3,000 Users		64 Floors, 16,000 Users		64 Floors, 16,000 Users		64 Floors, 16,000 Users	
TTL(4800bps, N, 8, 1) (Shared with alarm relay)		TTL(4800bps, N, 8, 1) (Shared with alarm relay)		Yes		Yes		No	
Yes		Yes		Yes		Yes		Yes	
No		No		No		128*64 (4 line messages, 16 Characters each line)		128*64 (4 line messages, 16 Characters each line)	
No		No		No		No		No	
Arming LED(or Security trigger signal) Alarm/Duress		Lock(or Security trigger signal)/ Alarm		Arming LED / Alarm / Duress WG Lock Relay/Security trigger signal		Arming LED / Alarm / Duress WG Lock Relay/Security trigger signal		Arming LED / Alarm / Duress WG Lock Relay/Security trigger signal	
IP55		IP56		IP55		No		No	
1 Bi-color LED & 1 Beeper		2 LED & 1 Beeper		1 Bi-color LED & 1 Beeper		6 LED & 1 Beeper		6 LED & 1 Beeper	
Illuminated Touch-Panel		Illuminated Touch-Panel / No		Illuminated Touch-Panel		Rubber		Rubber	
Zinc Alloy+PC(725H-M),PC(725H)		Zinc Alloy		Zinc Alloy+PC(725E-V2-M),PC(725E-V2)		ABS		ABS	
11 / 63 (connect to Multi-Door Networking Controller)		11 / 63 (connect to Multi-Door Networking Controller)		63		63		63	
Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking	
Standard:Black/Gray/Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red		Chrome		Standard:Black/Gray/Silver Option:Pearl White/Blue/Green/Yellow/Orange/Red		Gray/Silver		Gray	
110(L)X79(W)X26(H) (725H) 125(L)X89(W)X30(H) (725H-M)		154(L)X51(W)X21(H)		110(L)X79(W)X26(H) (725E-V2) 125(L)X89(W)X30(H) (725E-V2-M)		128(L)X96(W)X35(H)		132(L)X144(W)X102(H)	
110±10 (725H),360±10 (725H-M)		285±10		165±10 (725E-V2),510±10 (725E-V2-M)		230±10		470±10(DO),420±10(MT)	
		AR-WG-KEYBOARD-M							

Fingerprint Sensor	Optical Sensor (9000MT)
Fingerprint Module's CPU	400 MHz DSP
EER	<0.1%
Enrollment Time	800m Sec.
Auth. Speed(1:N)	800m Sec.
Auth. Speed(1:1000)	970m Sec.
Fingerprint Data	384 Bytes
Fingerprint Capacity	4,500 users 9,000 users (1-2 finger for each user)
Image Size	256bit AES
Dpi	500 (dpi)

Fingerprint Sensor	Capacitive Sensor (9000MT)
Fingerprint Module's CPU	400 MHz DSP
EER	<0.1%
Enrollment Time	500m Sec.
Auth. Speed(1:N)	500m Sec.
Auth. Speed(1:1000)	650m Sec.
Fingerprint Data	384 Bytes
Fingerprint Capacity	4,500 users 9,000 users (1-2 finger for each user)
Image Size	256bit AES
Dpi	500 (dpi)

## Room control system



Keypad Reader with Illuminated Touch-panel  
**AR-331K**

Proximity Reader  
**AR-331U**

Digital Door Lock (RF Card)  
**AR-323D**

Door Hinge(Cable)  
**AR-321DH4-C114**  
**AR-321DH4-C102**

125kHz	13.56MHz
9-16VDC	
EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC
3-7cm	1-3cm
Read Only	Read/Write
<1W	
Wiegand, ABA-II, ASYNC	
9600 bps (N, 8, 1)	
-20°C to +60 °C	
Illuminated Touch-Panel	
2 LED & 1 Beeper	
IP56	
Zinc Alloy	
Chrome	
154(L)X51(W)X21(H)	
270±10	

125kHz	13.56MHz
9-16VDC	
EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC
3-7cm	1-3cm
Read Only	Read/Write
<1W	
Wiegand, ABA-II, ASYNC	
9600 bps (N, 8, 1)	
-20°C to +60 °C	
No	
2 LED & 1 Beeper	
IP56	
Zinc Alloy	
Chrome	
154(L)X51(W)X21(H)	
270±10	

40mm-44mm	60mm-64mm	35mm-39mm
45mm-49mm	65mm-69mm	40mm-44mm
50mm-54mm	70mm-74mm	45mm-50mm
55mm-59mm	75mm-80mm	
If do not have fitting size, welcome to contact us.		
Door Swing Direction LH/ LHR/ RH/ RHR(Optional)		
Weight(g) 3.9kg 3.6kg		
Housing Material Zinc Alloy		
Temperature -20°C to +60°C		
Operating Humidity 15% - 95%RH		
Unlock Mifare Card, Mechanical Key		
Frequency MIFARE ,13.56MHz (ISO14443A)		
Reaching Range 0-2cm		
Respond Time <1.5 Sec.		
Low Battery Voltage Warning Yes(<5.3VDC)		
Low Battery Voltage Solution Capability to connect an external 9VDC power supply		
Power Supply Stand-Alone 6VDC(LR6-AA x 4, 2500mAh)		
Networking 12VDC(from AR-321DAX1 provides)		
Current Stand-Alone <80uA		
Networking <50mA		
Battery Life Stand-Alone About 8 month		
Networking Not recommend using battery		
Accessory Stand-Alone Master Card x2, Battery LR 6-AA x4		
Networking AR-321DAX1(exclusive for AR-323D)		

Door Hinge  
**AR-321DH4-N114**  
**AR-321DH4-N102**



Specification	32AWG, 4-Wire 12VDC 320mA, 4.5" X 4.5" or 4.5" X 4
Dimension(mm)	AR-321DH4-C114   114(L)X114(W)
	AR-321DH4-C102   114(L)X102(W)
	AR-321DH4-N114   114(L)X114(W)
	AR-321DH4-N102   114(L)X102(W)

• Built-in RTC.	
• Door Alarm Prompt. (Unclosed or Force-Open)	
• Capability to Unlock by Smart card or Mechanical Key.	
• Emergency Power Supply(9V).	
• Available for Stand-Alone and Networking System.	
• Built-in <b>SOYAL</b> logo.	
<p>RS-485/TTL Converter <b>AR-321DAX1</b></p> 	

## Finger Vein LCD Access Controller AR-821EV-V5



Dual Band Available

## Access Controller with Fingerprint AR-881EF



Dual Band Available

## Access Controller with Finger Vein AR-881EV



Dual Band Available

## Programmable Logic Controller AR-401E



## Digital Input Module AR-401DI16



## 16-floors Lift Controller AR-401RO16B



Providing N.O. & N.C. to apply Fire safety law

Frequency	125kHz	13.56MHz	125kHz	13.56MHz	125kHz	13.56MHz
Standard	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC	EM Standard	ISO14443A (Option) ISO15693 DESFire PSAM NFC
Reading Range (Depends on tags)	5-15cm	2-5cm	5-10cm	2-7cm	5-10cm	2-7cm
Power Supply	10-24VDC		10-24VDC		10-24VDC	
Power consumption	<5W		<5W		<5W	
Communication Interface	RS-485+Ethernet		RS-485+Ethernet		RS-485+Ethernet	
Baud Rate	RS-485 Ethernet	9600 bps(N.8,1) 10/100M Base T	RS-485 Ethernet	9600 bps(N.8,1) 10/100M Base T	RS-485 Ethernet	9600 bps(N.8,1) 10/100M Base T
Temperature	0 °C to +60 °C		0 °C to +50 °C		0 °C to +60 °C	
Digital Input	2 Egress(R.T.E.) / 2 Door contact		2 Egress(R.T.E.) / 2 Door contact		2 Egress(R.T.E.) / 2 Door contact	
Relay Output	Alarm Relay/ Lock Relay		Lock Relay		Lock Relay	
Lock Relay Time	Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.		Toggle, 0.1-600 Sec.	
Alarm Time	Toggle, 1-600 Sec.		Toggle, 1-600 Sec.		Toggle, 1-600 Sec.	
Tamper Switch	Limit Switch(Form C)		Limit Switch(Form C)		Limit Switch(Form C)	
User Capacity	16,000		16,000		16,000	
Event log	32,000		32,000		32,000	
External Reader	Wiegand		Wiegand		Wiegand	
Anti-pass-back	Yes		Yes		Yes	
Lift Control	64 Floors, 16,000 Users		64 Floors, 16,000 Users		64 Floors, 16,000 Users	
Serial Port	No		No		No	
Real Time Clock	Yes		Yes		Yes	
LCD Panel	128*64 <small>(4 line messages, 15 Characters each line)</small>		No		No	
Transistor Output	Arming LED / Duress WG Lock Relay/Security trigger signal		Arming LED/Alarm/Duress/Lock Relay/ Security trigger signal		Arming LED/Alarm/Duress/Lock Relay/ Security trigger signal	
Indicator	6 LED & 1 Beeper		7 LED & 1 Beeper		7 LED & 1 Beeper	
Keypad Material	Rubber		No		No	
Housing Material	ABS		ABS+PC		ABS+PC	
Time Zone	63		63		63	
Operation Mode	Stand-Alone/Networking		Stand-Alone/Networking		Stand-Alone/Networking	
Color	Gray		Black		Black	
Dimension(mm)	132(L)X144(W)X102(H)		151(L)X81(W)X73(H)		151(L)X81(W)X88(H)	
Weight(g)	460±10		330g±10		320g±10	
FAR/FRR	<0.001% / <0.01%		<0.001% / <1%		<0.001% / <0.01%	
Finger Registration Capacity	1,000-2,000 users <small>(1-2 finger for each user)</small>		4,500-9,000 users <small>(1-2 finger for each user)</small>		1,000-2,000 users <small>(1-2 finger for each user)</small>	
Auth. Speed(1:N)	1.1Sec.		0.8Sec.		1.1Sec.	
Operating Illuminance	20,000 Lux		No		20,000 Lux	
External Edit Keypad	AR-WG-KEYBOARD-M					

Event Log	10,000	Remote IO Capacity	512 I/O
Power Supply	10-24VDC	Virtual IO Capacity	512
Power consumption	1W	Real Time Clock	Yes
Communication Interface	RS-485/Ethernet(Optional)	Sequential Step	2,048
Baud Rate	RS-485 Ethernet	Housing Material	Metal
	9600bps/ 19200bps(N.8,1)	Dimension(mm)	97(L)X44(W)X180(H)
	10/100M Base T	Weight(g)	600±50
Channel	2 RS-485 Scan Channel 1 RS-485 for Host <small>(replaceable to Ethernet Module)</small>	<ul style="list-style-type: none"> <li>AR-401E is a distributed programmable controller. It's the best solution for industry application and system integration.</li> <li>Providing Input and Output triggered control in programming with user friendly operation, development kit.</li> </ul>	
Indicator	Power, Tx/Rx		
Data Capacity	8M Bytes SDRAM Memory 60 Days Memory Backup		

Event Log	No	No
Power Supply	10-24VDC	10-24VDC
Power consumption	1W	8W
Communication Interface	RS-485/Ethernet(Optional)	RS-485
Baud Rate	RS-485 Ethernet	4800bps/9600bps/ 19200bps(N.8,1)
		4800bps/9600bps/ 19200bps(N.8,1)
Channel	16 Contact Input (Sink, N.C Type)	16 Form C Relay Output
Indicator	Power, Tx/Rx, Input: Close/ Open/ Break	Power, Tx/Rx, Relay On/ Off
Housing Material	Metal	Metal
Dimension(mm)	97(L)X44(W)X180(H)	180(L)X231(W)X62(H)
Weight(g)	600±50	1,780±10

Energy saver(RF Card)

## AR-321W



Frequency	13.56MHz
User Capacity	1024/Unlimited(SOR only)
Power Supply	12-24VDC
Power consumption	<1W
Interface	RS-485
Temperature	-20°C to +60°C

Standard	• ISO14443A/B • 15693 • ISO15693
LED	White LED (Status) Green LED (OK) Red LED (Error)&1 Beeper
I/O	4 DI & 1 Relay Form C 3 Transistor outputs (Open Collector)
Color	Silver & Gray
Dimension(mm)	91(L)X86(W)X35(H)
Housing Material	ABS

- Integration with stored value system & home election, such as air conditioner, TV, fridge.
- Suitable for hotel and rental environment for power saving.
- Allows setting cards by Stand-alone or Networking.
- 4 LEDs indicate card is existed, valid or invalid.
- Built-in **SOR 99%**.

Don't Disturb Switch(indoor)

## AR-PB-323



Power Supply	9-16VDC
Indication	2 LED
Relay	24VDC/2A · 125VAC/1A
Do Not Disturb LED	Low Active / 20mA max.
Clean LED	Low Active / 20mA max.
Touch button	2

Don't Disturb Switch(outdoor)

## AR-PB-321



Power Supply	9-16VDC
Indication	3 LED
Relay	30VDC / 7A · 250VAC / 7A
Do Not Disturb LED	Low Active / 20mA max.
Clean LED	Low Active / 20mA max.
Touch button	1

MIFARE Programmer

(SOR Card Support)

## AR-737P



SIM	UIM	CIM

AR-737P provide not only completed operation commands but also advanced application commands for developing Mifare and SOR.

Power Supply	5VDC
Frequency	13.56MHz
Power consumption	<1.5W
Interface	USB 2.0 Virtual COM Port
Baud Rate	9600 bps(N.8,1)
Temperature	-20°C to +60°C
Standard	• ISO14443A/B • 15693 • DESFire • PSAM
Supported Tag	MIFARE 1
Indication	2 LED & 1 Beeper
Color	Gray
Housing Material	ABS
Dimension(mm)	113(L)X71(W)X36(H)
Weight(g)	150±10

### Features

- Supports auto error detecting and system back up.
- Able to be controlled by computer software.
- Easily integrated with any customized software.

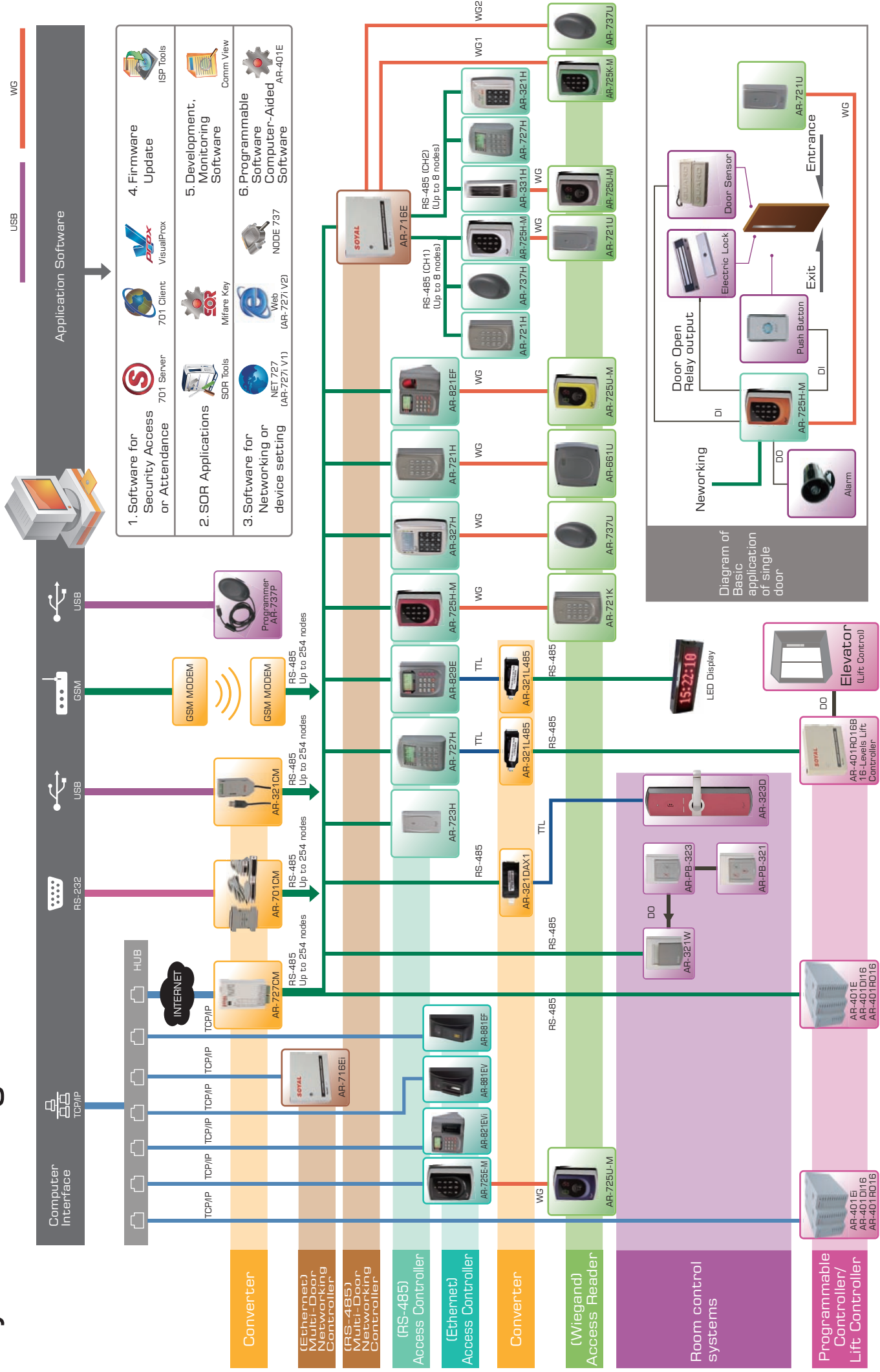
### Applications

- Hotel, Villa, Parking lot, Prepaid cards and Electric ticket system.
- Security access.
- E-wallet.
- User ID Management.

## SOR SOYAL MIFARE Advantages

- 1.6-layer agent management model
2. Off-line Operation Available
3. User ID Assignable
4. Data Protection for Key A/B
5. Issue cards for global access
6. Built-in hidden Command within Cards
7. Expiration Setup

# System Diagram



# Magnet Lock



Standard	AR-0090M	AR-0200M	AR-0300M	AR-0600M AR-0600M-DT	AR-0600M-R	AR-1200M-R AR-1200M-DT
Magnet Body(mm)	70(L)X35(W)X20(H)	160(L)X28(W)X17(H)	166(L)X38.5(W)X21(H)	251(L)X47(W)X25(H)	228(L)X38(W)X27(H)	266(L)X73.5(W)X40(H)
Strike Plate(mm)	62(L)X32(W)X9(H)	130(L)X28(W)X8(H)	130(L)X32(W)X10(H)	185(L)X38(W)X12(H)	185(L)X38(W)X12(H)	185(L)X61(W)X16(H)
Holding Force(kg)	40	110	150	250	250	500
Current Drawn	12VDC-100mA 24VDC-200mA(Optional)	12VDC-100mA 24VDC-200mA(Optional)	12VDC-370mA 24VDC-185mA(Optional)	12VDC-400mA 24VDC-200mA(Optional)	12VDC-400mA 24VDC-200mA(Optional)	12VDC-500mA 24VDC-250mA(Optional)

Standard/ Double	AR-0600M-DB AR-0600M-DB-DT	AR-1200M-DB AR-1200M-DB-DT	External	AR-0400WF(Face Mount) AR-0400WS(Side Mount)	AR-1500WF(Face Mount) AR-1500WS(Side Mount)	Door Holder	AR-0180M
Magnet Body(mm)	502(L)X47(W)X25(H)	532(L)X73.5(W)X40(H)	Magnet Body(mm)	164(L)X35(W)X26(H)	203(L)X63(W)X42(H) / 225(L)X65(W)X42(H)	Magnet Body(mm)	100(L)X38(W)X38(H)
Strike Plate(mm)	185(L)X38(W)X12(H)	185(L)X61(W)X16(H)	Strike Plate(mm)	130(L)X32(W)X10(H)	185(L)X61(W)X16(H)	Strike Plate(mm)	75(L)X32(W)X52(H)
Holding Force(kg)	250	500	Holding Force(kg)	180	600	Holding Force(kg)	80
Current Drawn	12VDC-400mA 24VDC-200mA	12VDC-500mA 24VDC-250mA	Current Drawn	12VDC-370mA 24VDC-185mA	12VDC-500mA 24VDC-250mA	Current Drawn	12VDC-200mA 24VDC-100mA

Bracket (For Electric Bolt)	AR-0300MZL	AR-0400MZL	AR-0600MZL	AR-1200MZL	AR-1500MZL-WS	AR-1500MZL-WF
L Dimension(mm)	166(L)X43(W)X33(H)	164(L)X43(W)X33(H)	251(L)X51(W)X33(H)	266(L)X75(W)X48(H)	225(L)X72(W)X48(H)	225(L)X72(W)X48(H)
Z Dimension(mm)	166(L)X50(W)X43(H)	164(L)X50(W)X44(H)	190(L)X50(W)X50(H)	190(L)X72(W)X72(H)	190(L)X72(W)X72(H)	190(L)X72(W)X72(H)

U Bracket (For Glass door)	AR-0300(O400)M-U	AR-0600M-U
Dimension(mm)	140(L)X43(W)X28(H)	190(L)X43(W)X28(H)

# Electric Bolt Series



Item NO.	AR-1203A (Fail-Safe/Power to Lock)	AR-1203L (Fail-Safe/Power to Lock)	AR-1203P (Fail-Secure/Power to Open)
Magnet Body(mm)	200(L)X35(W)X36.5(H)	200(L)X35(W)X36.5(H)	200(L)X35(W)X36.5(H)
Strike Plate(mm)	102.6(L)X25.4(W)X2(H)	102.6(L)X25.4(W)X2(H)	102.6(L)X25.4(W)X2(H)
Voltage	12VDC±0.10% / 24VDC±0.10%	12VDC±0.10% / 24VDC±0.10%	12VDC±0.10% / 24VDC±0.10%
Current Drawn	Initial 1000mA Hold 250mA	Initial 1000mA Hold 130mA	Initial 1200mA Hold 150mA

Bracket	AR-1203A-U(U-Brackets)	AR-1203A-BR(Plug Box)
Dimension(mm)	210(L)X47.3(W)X22(H) / 110(L)X47.3(W)X22(H)	210(L)X44(W)X46(H)

Mortise Lock Cylinder	AR-1203-KT	AR-1203-KK	AR-1203-KX	AR-1203-TX

Item NO.	LK-1201A	LK-1201B(with LED)
Magnet Body(mm)	205(L)X32(W)X43(H)	205(L)X32(W)X43(H)
Strike Plate(mm)	104(L)X32(W)X3.5(H)	104(L)X32(W)X3.5(H)
Voltage	12VDC±10%	12VDC±10%
Current Drawn	Initial 900mA Hold 380mA	Initial 900mA Hold 320mA

Bracket	LK-1201A-U(U-Brackets)	LK-1201A-BR(Plug Box)
Dimension(mm)	210(L)X22(W)X50(H) / 110(L)X22(W)X50(H)	210(L)X44(W)X50(H) / 110(L)X44(W)X50(H)

Item NO. (For AUTO-Door)	EM-1600-A	AR-1203H-L-12V(Fail-Secure/Power to Lock)
Magnet Body(mm)	203(L)X38(W)X41(H)	300(L)X53.5(W)X41(H)
L-Bracket (mm)	82.5(L)X27(W)X55.5(H)	82.5(L)X27(W)X55.5(H)
Voltage	12VDC±10%	12VDC±0.10% / 24VDC±0.10%
Current Drawn	Initial 650mA Hold 220mA	Initial 1000mA Hold 250mA

Bracket	EM-1600-A-1(Angle)
Dimension(mm)	100(L)X38(W)X40(H) / 100(L)X13(W)X40(H)

# Electric Strike Series



Standard	AR-YS-130NO	AR-YS-131NO
Dimension(mm)	150(L)X39.5(W)X33.5(H)	160(L)X25(W)X30(H)
Voltage	12VDC	12VDC
Current Drawn	450mA	450mA

# Stainless steel Push Button

Item NO.	AR-PB-1A(Silver)	AR-PB-1G(Gold)	AR-PB-2A(Silver)	AR-PB-2G(Gold)	AR-PB-3A(Silver)
Product picture					
Dimension(mm)	115(L)X42(W)X5(H)	115(L)X42(W)X5(H)	115(L)X70(W)X6(H)	115(L)X70(W)X6(H)	115(L)X70(W)X21(H)

# LED Piezo Push button

Item NO.	AR-PB-6A	AR-PB-7A	AR-PB-8A	AR-PB-MDL
LED Ring BR:Blue & Red GR:Green & Red WR:White & Red				
Dimension(mm)	114.3(L)X44.5(W)X7(H)	114.3(L)X69.9(W)X7(H)	86(L)X86(W)X7(H)	212(L)X38(W)X10(H)

# Peripherals

Item NO.	Power Adaptor(EU) BP-W12-1000-E0	Power Adaptor(US) BP-W12-1500-E0	Power Adaptor BP-W12-1500-US	Power Adaptor BP-W15-2 400	Power Cord(EU) CA-AC2-E0	Power Cord(US) CA-AC2-US
Input Voltage	100-240VAC, 50/60Hz, 0.5A	100-240VAC, 50/60Hz, 0.7A	100-240VAC, 50/60Hz, 0.7A	100-240VAC, 50/60Hz, 0.7A		
Output Voltage	12VDC, 1000mA	12VDC, 1500mA	12VDC, 1500mA	15VDC, 2400mA A, 36VA		
Dimension(mm)	65(L)X51(W)X66(H)	77(L)X45(W)X26.5(H)	73(L)X51(W)X35(H)	97(L)X46(W)X34(H)	177(L)	185(L)

Item NO.	Standard Card(Read Write Thick) AR-TAGCT1W50 Standard Card(Read Thick) AR-TAGCT1R50	ISO Card(Read Write Thin) AR-TAGCI1W50 ISO Card(Read Thin) AR-TAGCI1R50	MIFARE(Read Write Thin) AR-TAGCI3W50	Key Chain(Read Write) AR-TAGK71W20F Key Chain(Read Write/Blank) AR-TAGK71W20F-W0 Key Chain(Read Write/EM) AR-TAGK71W20F-EM Key Chain(Read) AR-TAGK71R20F	MIFARE(Read Write/ Economy) AR-TAGK73W20F-MF07 MIFARE(Read Write/ Standard) AR-TAGK73W20F-MF08
Product picture					
Data Format	EM4001/4012	EM4001/4012	MF1	EM4001/4012	MF1
Frequency	125kHz	125kHz	13.56MHz	125kHz	13.56MHz
Transponder Type	Passive(Non-battery operated)	Passive(Non-battery operated)	Passive(Non-battery operated)	Passive(Non-battery operated)	Passive(Non-battery operated)
Temperature	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Dimension(mm)	54(L)X86(W)X1.8(H)	54(L)X86(W)X0.8(H)	54(L)X86(W)X0.8(H)	47(L)X28(W)X5(H)	47(L)X28(W)X5(H)

Item NO.	External Keyboard AR-WG-KEYBOARD	External Keyboard AR-WG-KEYBOARD-M
Interface	WG 4/8/10	
Dimension(mm)	88(L)X60(W)X3.6(H)	
Support	AR-723H	AR-331series/AR-881series

Item NO.	Relay Output Module AR-821RB	Relay Output Module AR-721RB	Relay Output Module AR-829RB
Product picture			
Power Supply	12VDC	12VDC	12VDC
Current	20mA/40mA	40mA	20mA/40mA
Output Contact	1Form C, 12A at 125VAC, 7A at 250VAC, 7A at 30VDC		2Form C, 1A at 25VAC, 2A at 24VDC
Temperature	-20°C to +60°C		
Dimension(mm)	20(L)X32(W)X29(H)	33(L)X47.8(W)X22.6(H)	55(L)X25(W)X17.4(H)