



INSTALLATION

MAC318M 16+2 Multi-Reader Interface Door Access



MAC318M: 16+2 Multi-Reader Interface Door Access

Description

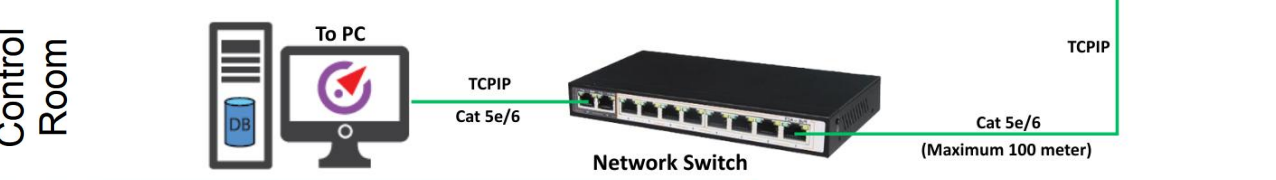
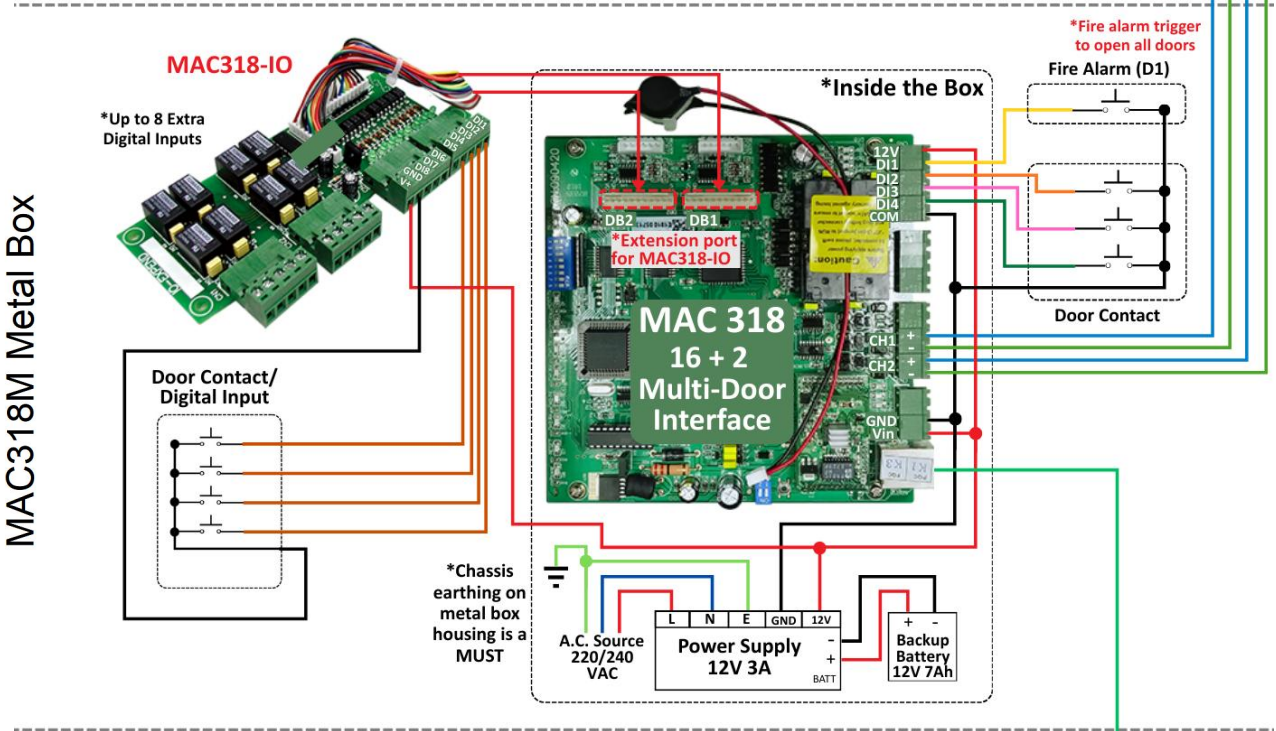
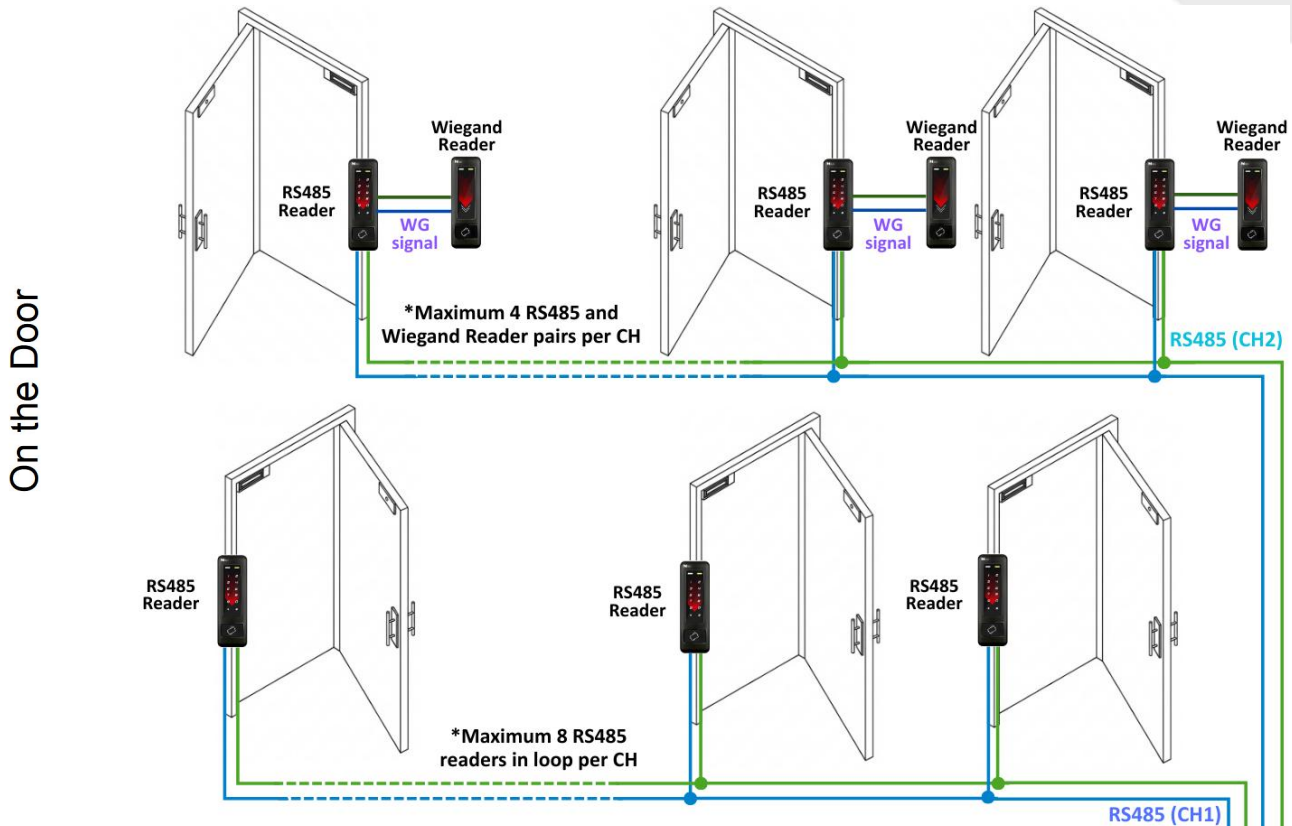
MAC318M is a professional multi-door control panel engineered for advanced and extensive access control management. It provides centralized, high-level control over user permissions, defining exactly who can access specific doors and at what times using various methods, such as card-only or card-plus-PIN authentication. Optimized for large-scale security environments, the MAC318M supports a substantial capacity of 15,000 users and features integrated global anti-passback functionality to maintain strict security protocols across all online readers.

Seamlessly integrating with MagEtegra software, the MAC318M offers a clean and efficient interface for real-time monitoring, centralized data collection, and manual control of connected electrical equipment.

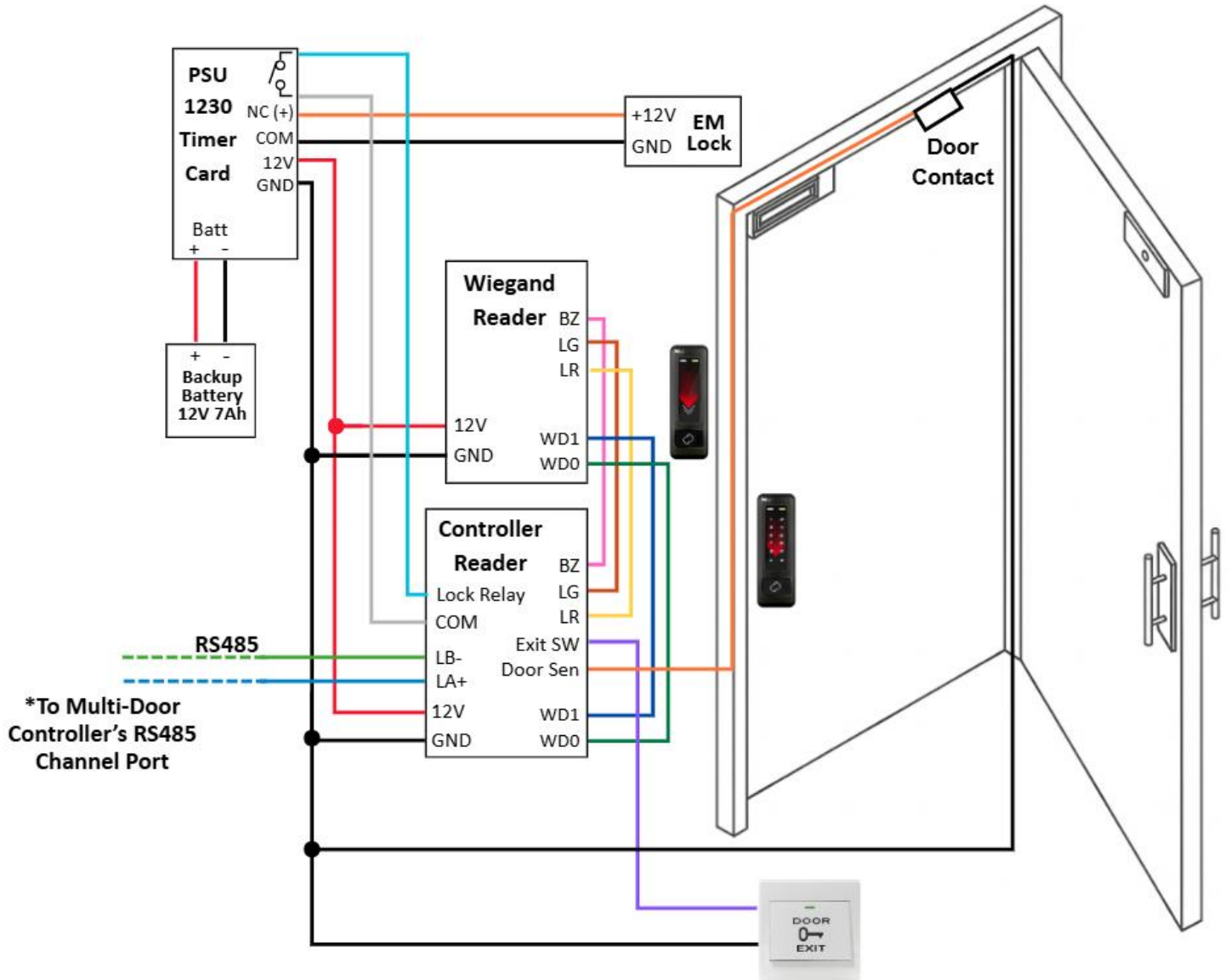
Features

1. **Global Anti-Passback:** Achieves centralized door lock control with supported scheduled auto-reset to provide tamper-proof security across the entire network.
2. **High User Capacity:** Reliably manages a database of up to **15,000 cardholders** for large organizations.
3. **Extensive Reader Management:** Provides efficient monitoring and centralized data collection for up to **16 connected readers**.
4. **Flexible Access Scheduling:** Supports automated door unlocking based on pre-set time zone schedules, access time zone with multiple interval in same day and door group.
5. **Flexible Communication Modules:** Features a built-in RS-485 interface with an optional TCP/IP module for seamless network integration and computer management.
6. **Emergency Integration:** Includes an emergency release function that can automatically unlock all doors upon receiving a fire alarm or emergency signal.
7. **Centralized Monitoring:** Enables administrators to manually control electrical equipment and receive instant notifications for force entry or anti-passback errors.
8. **Multi-Reader Support:** Connects up to **16 units of RS-485 readers** and **2 units of Wiegand readers**.
9. **Continuous Operation:** Supports rechargeable battery integration to keep the system running during power outages.

Connection Architecture

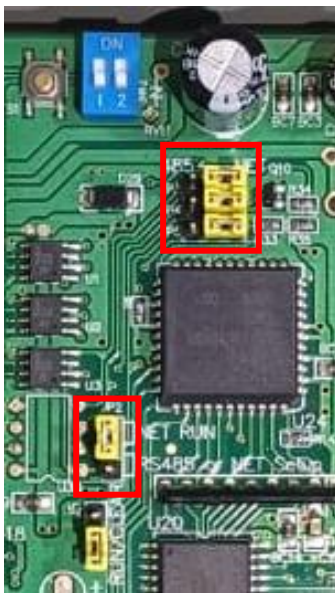


Door Wiring Diagram



MAC318 hardware setup

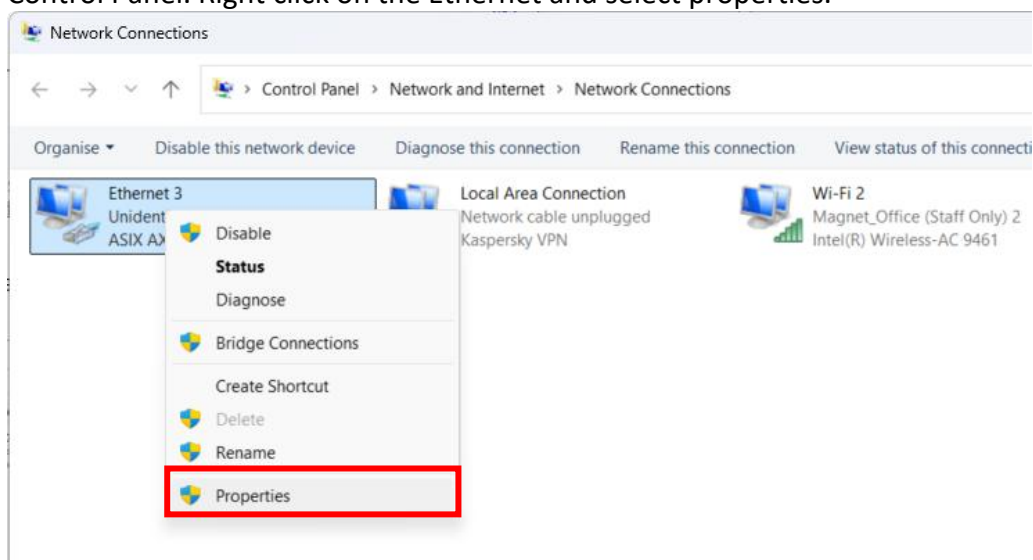
Before using the Ethernet mode, ensure that the yellow cap connectors are in the correct “NET” slots.



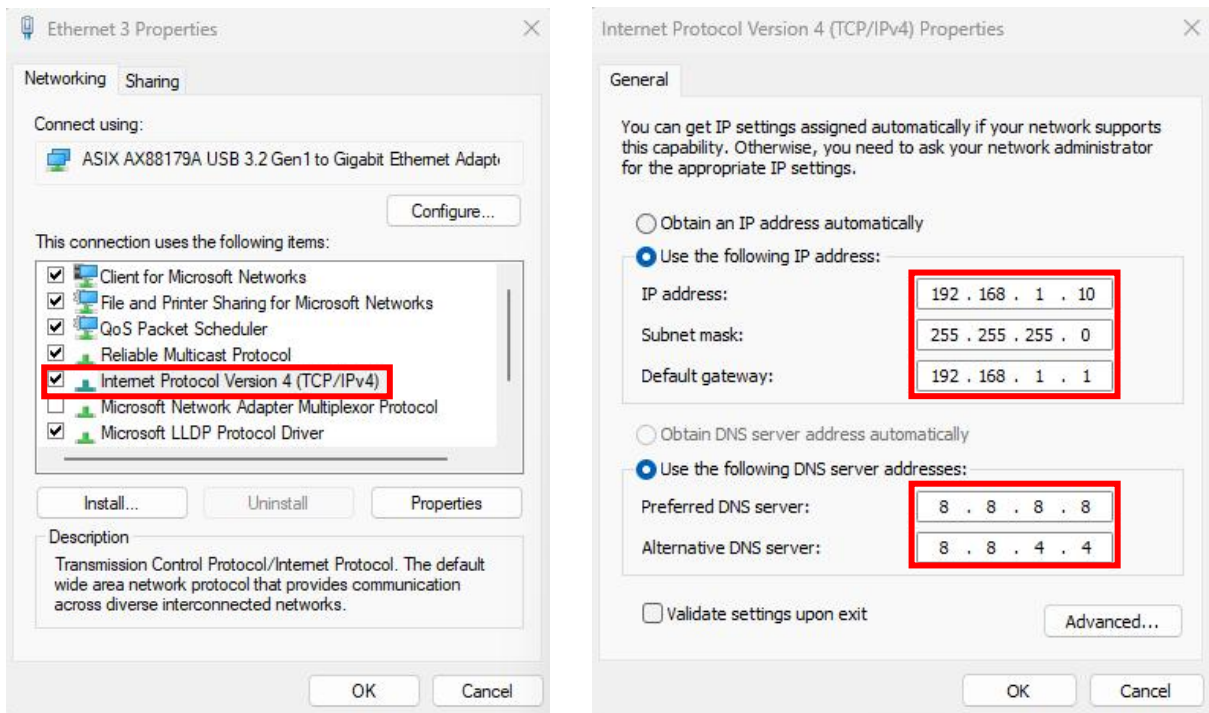
The default IP Address for MAC318 is 192.168.1.127. Ensure that the IP segment for the PC is similar.

1. Setting the PC’s IP Address.

- a) Go to the “Network connections” setting under “Network and Internet” option in the Control Panel. Right click on the Ethernet and select properties.



- b) Double click “Internet Protocol Version 4 (TCP/IPv4)”. Tick the “Use the following IP Address”. Set the IP Address, Subnet mask and Default Gateway accordingly. Click “OK” to save the settings.



2. Set the IP Address for MAC318.

To make sure that the MAC318 successfully connected to the PC, open the command prompt and ping the device IP Address.

“ping 192.168.1.127 -t”

```

C:\> Command Prompt - ping 192.168.1.127 -t
Microsoft Windows [Version 10.0.26100.7623]
(c) Microsoft Corporation. All rights reserved.

C:\Users\marketing3>ping 192.168.1.127 -t

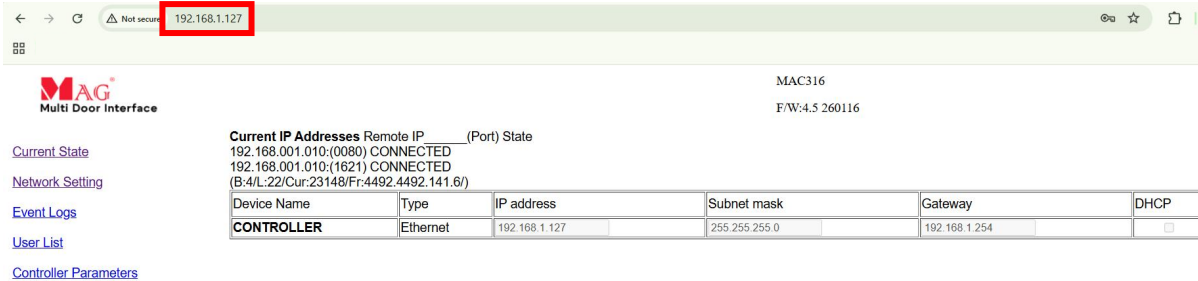
Pinging 192.168.1.127 with 32 bytes of data:
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64
Reply from 192.168.1.127: bytes=32 time<1ms TTL=64

```

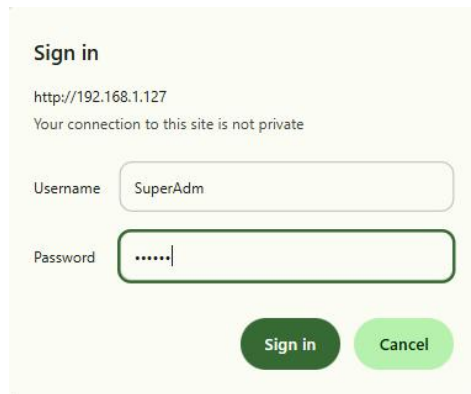


(if unsuccessful, try resetting
MAC318. Hold for 5 seconds.)

a) Open the web browser, key in the IP Address on the search bar, then click “Network Setting”.



b) Enter “Username : SuperAdm” & “Password : 721568” then click “Sign in” to enter the network setting.



c) Set the IP Address, subnet mask, gateway and node ID accordingly. Click update to save the setting. If the IP segment is different, make sure to change the IP Address for the PC same IP segment same with the device.

Network Setting

After you have changed the IP address, the device will **restart** (hardware reset). Please update the IP address in the browser after any changed.

Item	Setting
Device Name	CONTROLLER (Can be any unique identifier)
LAN IP Address	192.168.1.127
LAN Net Mask	255.255.255.0
Default Gateway	192.168.1.254
Primary DNS Server	0.0.0.0
Secondary DNS Server	0.0.0.0
MAC Address	00-13-57-06-35-51
DHCP Client	<input type="checkbox"/>
TCP Listen Port	1621 (1024~65530)
HTTP Server Port	80 (80~65530)
Socket Timeout	120 (0~600)sec. (TCP Client Keep Alive:0)
Area ID (0~15)	0
Node ID (Device ID)	3
Message Server IP 1st	0.0.0.0
Message Port 1st	0 (1024~65530, 0:disable, 8031:Text Mode)
Message Server IP 2nd	0.0.0.0
Message Port 2nd	0 (1024~65530, 0:disable or 8031:Text Mode)
	<input type="button" value="Update"/>

Node ID is set by DIP Switch.
Supports Node ID: 001 - 254

Value	1	2	4	8	16	32	64	128
DIP SW	1	2	3	4	5	6	7	8
Node 01	Off	ON	ON	ON	ON	ON	ON	ON
Node 02	ON	Off	ON	ON	ON	ON	ON	ON
Node 03	Off	Off	ON	ON	ON	ON	ON	ON
↓								
Node 253	Off	ON	Off	Off	Off	Off	Off	Off
Node 254	ON	Off	Off	Off	Off	Off	Off	Off

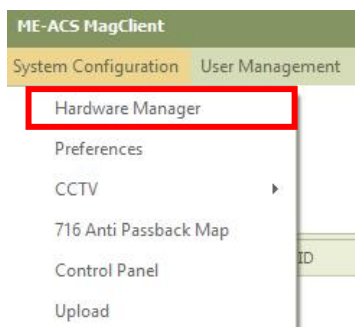


*DIP Switch Setting for Node ID: 3

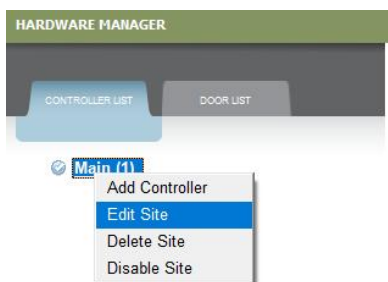
MagEtegra ME-ACS software setup

1. Add MAC318 into Hardware Manager

a) Run MagClient --> System Configuration --> Hardware Manager



Right click on Main--> Click "Edit Site"



b) Select "TCPIP" and key-in the Site Name, MAC318's IP address and port number.

EDIT SITE
✕

Site ID

Site Name

Server Location Local Remote

COM/TCPIP

IP Address

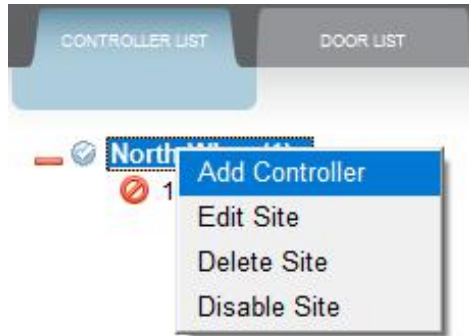
Port

TCPIP

Timeout

Polling Speed

c) Click on the selected site to highlight it, then right click and select “Add Controller” to add controller.



d) Key in the MAC318’s Node ID (Default is 1) --> Select Reader Model “MAC318”

Node ID: COM/TCPIP:
 Model: IP Address: Port:

WRITE TO HW

Online reader Settings Reader vs Relay output DI vs Relay output Scheduled relay output

Please specify all AR721H or AR727H connected to AR716 controller.

Channel 1 - Reader 1 to 8
 001 002 003 004 005 006 007 008

Channel 2 - Reader 9 to 16
 009 010 011 012 013 014 015 016

Wiegand reader
 017 Wiegand 1 018 Wiegand 2
 anti-passback IN anti-passback OUT
 DI3 as alarm input DI4 as alarm input

ADD EDIT DELETE SAVE CANCEL

Node ID is set by DIP Switch.
 Supports Node ID: 001 - 254

Value	1	2	4	8	16	32	64	128
DIP SW	1	2	3	4	5	6	7	8
Node 01	Off	ON	ON	ON	ON	ON	ON	ON
Node 02	ON	Off	ON	ON	ON	ON	ON	ON
Node 03	Off	Off	ON	ON	ON	ON	ON	ON
}								
Node 253	Off	ON	Off	Off	Off	Off	Off	Off
Node 254	ON	Off	Off	Off	Off	Off	Off	Off



*DIP Switch Setting for Node ID: 3

e) Select the respective Node ID's of all Readers being used. Click "Save" to save all settings.

Node ID COM/TCP/IP
 Model IP Address Port

Note:
 Each connected RS485 Reader needs to be assigned a distinct Node ID. This has to be programmed manually (refer to respective RS485 Reader's User Guide)

Online reader Settings Reader vs Relay output DI vs Relay output Scheduled relay output

Please specify all AR721H or AR727H connected to AR716 controller.

Channel 1 - Reader 1 to 8
 001 002 003 004 005 006 007 008

Channel 2 - Reader 9 to 16
 009 010 011 012 013 014 015 016

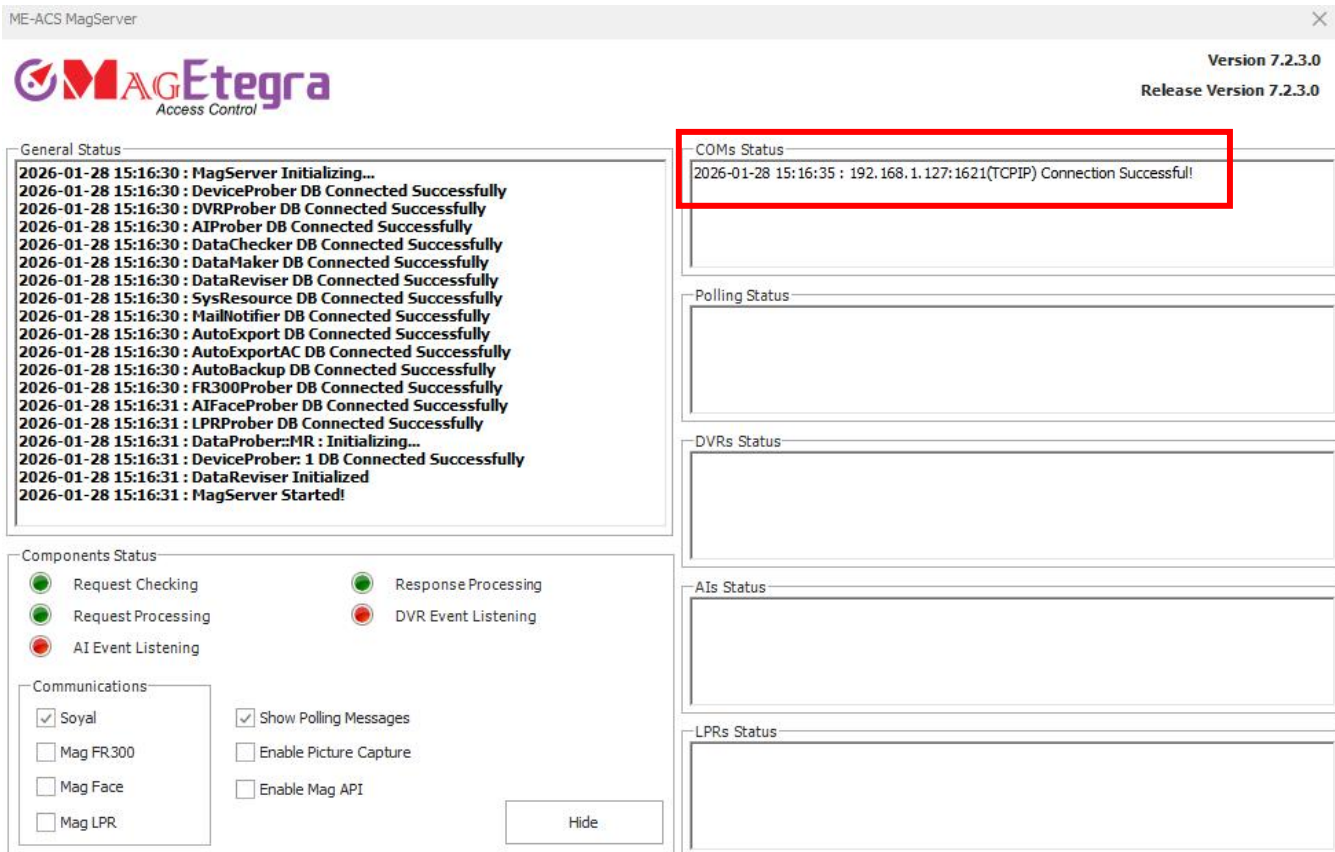
Wiegand reader
 017 Wiegand 1 018 Wiegand 2
 anti-passback IN anti-passback OUT
 DI3 as alarm input DI4 as alarm input

f) Select "Save & Write to HW" to save settings and upload to hardware.

Hardware Manager

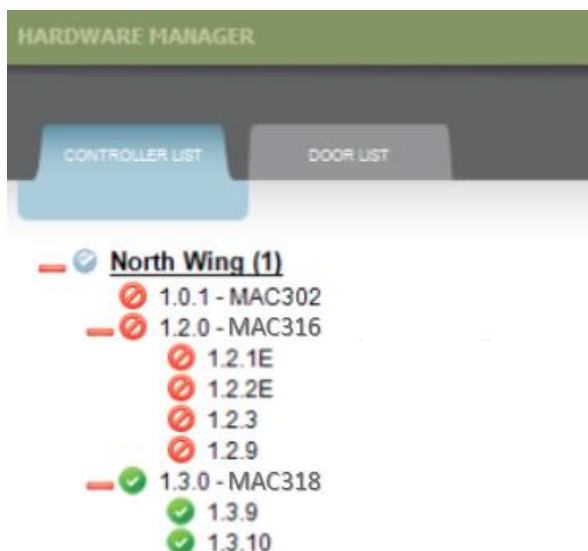
All setting must write to hardware for it to take effect.

g) Launch “MagServer” and wait for COMs Status



*If unsuccessful, check for loose cable connections or mistyped IP Address. By default, MAC318’s IP Address is “192.168.1.127”

h) Green Icon means connection of MAC318 to MagEtegra Software is successful.



Advanced Application Set-up

Fire Alarm Integration to unlock all doors during emergency

a) System Configuration --> Hardware Manager --> MAC318 --> Settings

b) Select “DI vs Relay output” and select all reader node ID’s for “DI 1”
(If you wish to keep specific doors locked during a fire emergency, you may choose to not select the respective door’s reader node ID)

c) Next tab arrow --> "Hardware I/O monitoring" --> Select "DI1" --> Click "Save" to save settings

Parking space output | Door Number | **Hardware I/O monitoring** | Maintenance

On board digital input

DI1 Fire Alarm Panel

DI2

DI3

DI4

Expanded digital input

DI5 DI9

DI6 DI10

DI7 DI11

DI8 DI12

ADD EDIT DELETE **SAVE** CANCEL

Anti-passback

MAC318's Anti-passback security feature forces a user to "exit" a secured area (using their card/credential) before they can "enter" it again. This added feature prevents sharing credentials to let someone else in (passing back) or tailgating, ensuring one card equals one person per entry/exit cycle.

a) To activate the anti-passback feature, program the Controller Readers(CA413-RK) with the following command:

1. Enter Programming Mode (By default: *123456#)
2. Press the following code to differentiate the readers:

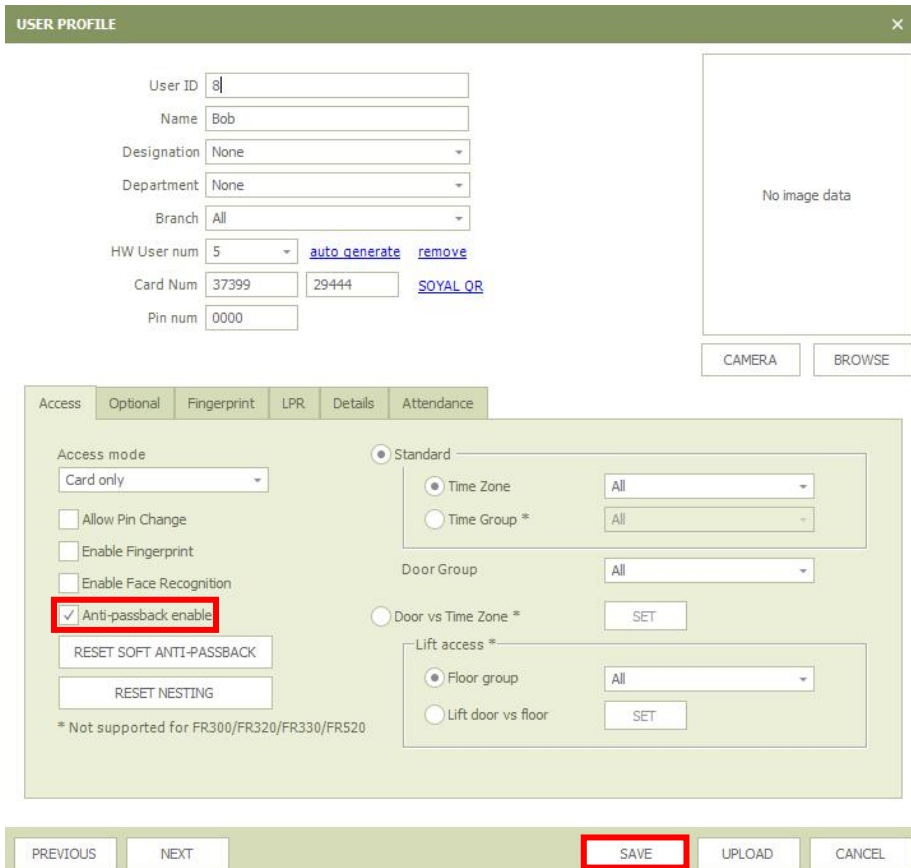
ENTRY READER - 20 * 208 #

EXIT READER - 20 * 144 #

3. Press *# to to save the setting and exit. (**# to save, arm and exit)

b) Anti-passback is enabled on all new users by default. To disable this feature on specific users:

1. Go to the specific user profile
2. Deselect "Anti-passback enable", click "Save".



USER PROFILE [X]

User ID:

Name:

Designation:

Department:

Branch:

HW User num: [auto generate](#) [remove](#)

Card Num: [SOYAL QR](#)

Pin num:

Access | **Optional** | Fingerprint | LPR | Details | Attendance

Access mode:

Allow Pin Change

Enable Fingerprint

Enable Face Recognition

Anti-passback enable

* Not supported for FR300/FR320/FR330/FR520

Standard

Time Zone:

Time Group *:

Door Group:

Door vs Time Zone *:

Lift access *

Floor group:

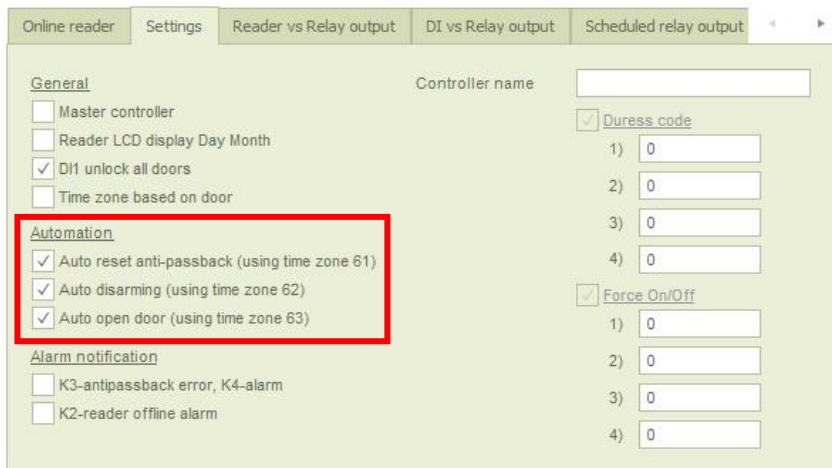
Lift door vs floor:

Automated Timezone Management

MAC318 has 3 Automation features when paired with MagEtegra software. This includes:

- **Auto reset anti-passback** - Automatically resets the anti-passback status for all users at an administrator-defined date and time.
- **Auto disarming** - Automatically disables the alarm function of **ALL readers** at an administrator-defined date and time.
- **Auto open doors** - Automatically releases **ALL door** locks at an administrator-defined date and time.

a) Select the controller under “Hardware Manager” and navigate to the “Settings” tab, select desired “Automation” option and click “Save”



Online reader | Settings | Reader vs Relay output | DI vs Relay output | Scheduled relay output

General

Controller name:

Master controller

Reader LCD display Day Month

DI1 unlock all doors

Time zone based on door

Automation

Auto reset anti-passback (using time zone 61)

Auto disarming (using time zone 62)

Auto open door (using time zone 63)

Alarm notification

K3-antipassback error, K4-alarm

K2-reader offline alarm

Duress code

1)

2)

3)

4)

Force On/Off

1)

2)

3)

4)



ADD | EDIT | DELETE | **SAVE** | CANCEL

b) Go to “Access Control” tab --> “Time Zone”



Access Control | Time Attendance

Holiday

Door Group

Block Door Group

Open Door Group

Time Zone

Time Group

c) Select "ADD" and create the following TimeZones for the respective Automation feature:

TIME ZONE
✕

Time Zone	Description	Group Num
0	Free	

Num

Description

Weekly time interval users are allowed to enter.

	START	END
<input type="checkbox"/> Sun	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Mon	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Tue	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Wed	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Thu	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Fri	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>
<input type="checkbox"/> Sat	<input style="width: 50px;" type="text" value="--"/>	<input style="width: 50px;" type="text" value="--"/>

Allowed to enter during holiday

24 hrs view
 am/pm view

ADD

Timezone 61 - Auto reset anti-passback

Select the required day(s) and set the exact time to reset all users' anti-passback status. For proper execution, ensure that the "Start" and "End" times are configured to the same value on the selected day.

Num

Description

Weekly time interval users are allowed to enter.

	START	END
<input checked="" type="checkbox"/> Sun	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>
<input checked="" type="checkbox"/> Mon	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>
<input checked="" type="checkbox"/> Tue	<input style="width: 50px;" type="text" value="23:00"/>	<input style="width: 50px;" type="text" value="23:00"/>
<input checked="" type="checkbox"/> Wed	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>
<input checked="" type="checkbox"/> Thu	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>
<input checked="" type="checkbox"/> Fri	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>
<input checked="" type="checkbox"/> Sat	<input style="width: 50px;" type="text" value="00:00"/>	<input style="width: 50px;" type="text" value="00:00"/>

Allowed to enter during holiday

SAVE

Timezone 62 - Auto disarming

Select the required day(s) and set the exact "Start" and "End" time to disarm all connected readers. The readers will be armed again after the set duration.

Num
 Description

Weekly time interval users are allowed to enter.

	START	END
<input type="checkbox"/> Sun	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> Mon	<input type="text" value="09:00"/>	<input type="text" value="10:00"/>
<input type="checkbox"/> Tue	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> Wed	<input type="text" value="15:00"/>	<input type="text" value="15:30"/>
<input type="checkbox"/> Thu	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Fri	<input type="text"/>	<input type="text"/>
<input type="checkbox"/> Sat	<input type="text"/>	<input type="text"/>

Allowed to enter during holiday

ADD EDIT DELETE **SAVE** CANCEL

Timezone 63 - Auto open door

Select the required day(s) and set the exact "Start" and "End" time to unlock all doors associated with a connected reader. The doors will be locked again after the set duration.

Num
 Description

Weekly time interval users are allowed to enter.

	START	END
<input checked="" type="checkbox"/> Sun	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>
<input type="checkbox"/> Mon	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> Tue	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>
<input checked="" type="checkbox"/> Wed	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>
<input checked="" type="checkbox"/> Thu	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>
<input checked="" type="checkbox"/> Fri	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>
<input checked="" type="checkbox"/> Sat	<input type="text" value="16:00"/>	<input type="text" value="22:00"/>

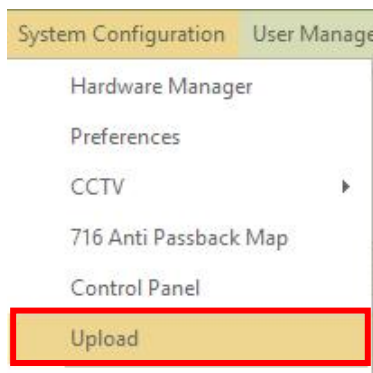
Allowed to enter during holiday

ADD EDIT DELETE **SAVE** CANCEL

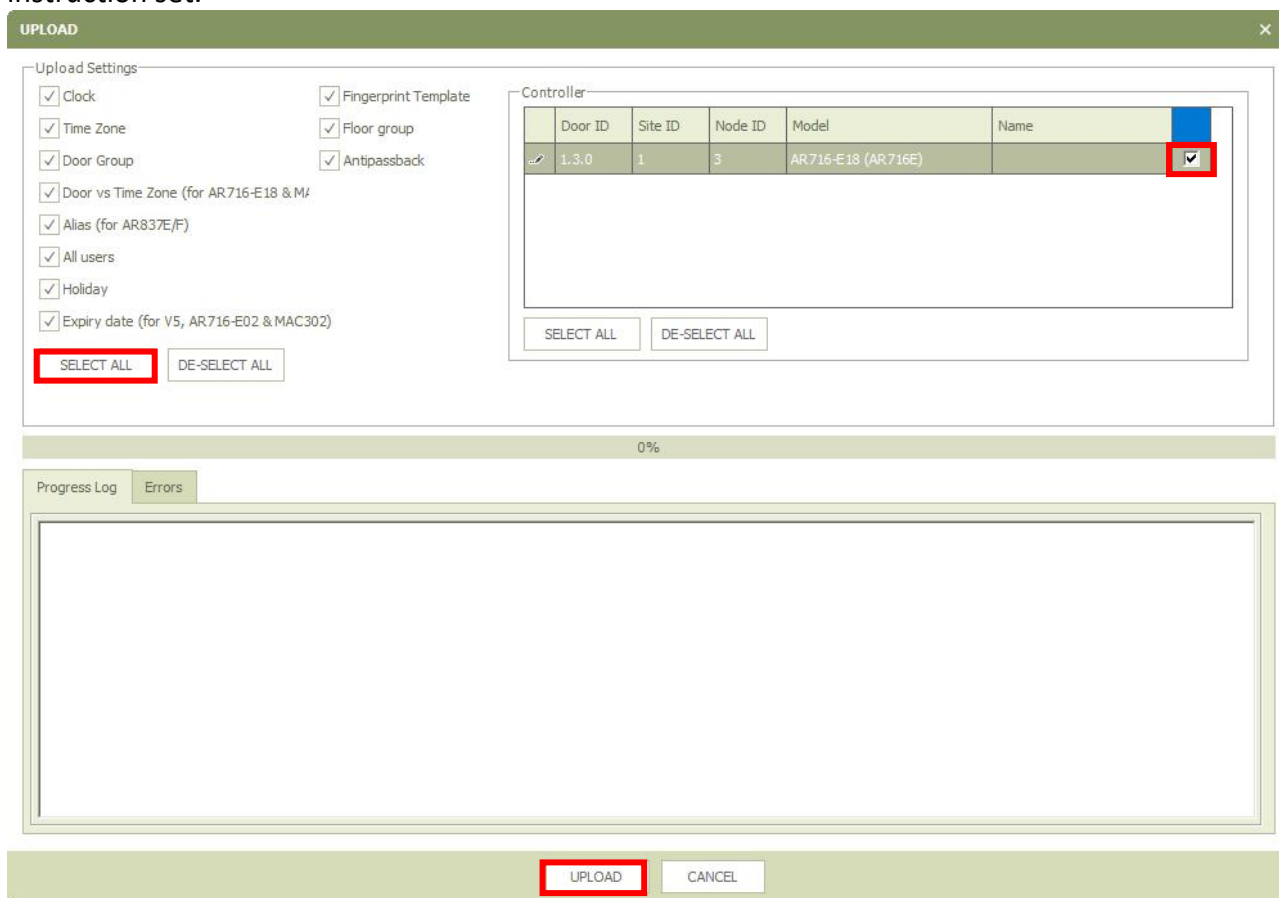
d) Program the Controller Readers(CA413-RK) with the following command:

1. Enter Programming Mode (By default: *123456#)
2. Press 24*001#(RK) or 20*0*020#(TK) to enable Open Zone Feature on the reader
3. Press *# to to save the setting and exit. (**# to save, arm and exit)

e) Go to “System Configuration” tab --> “Upload”



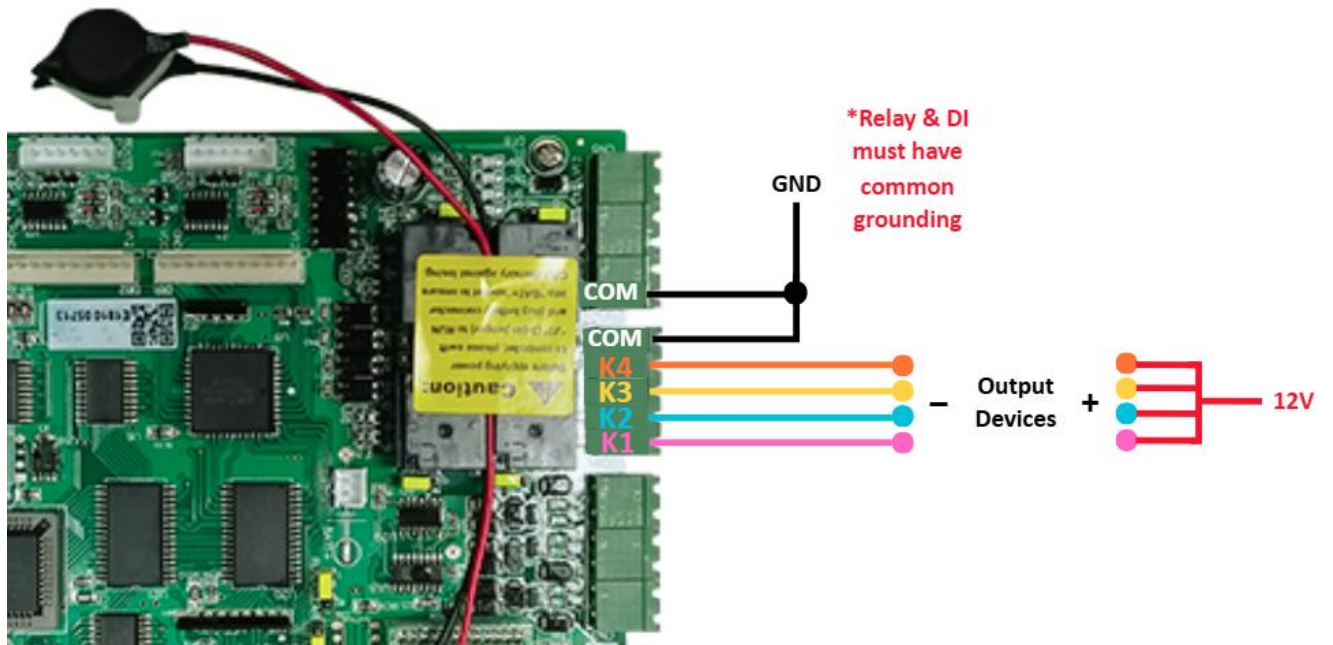
f) Click “Select All” and select the relevant Controllers. Click “Upload” to upload the new instruction set.



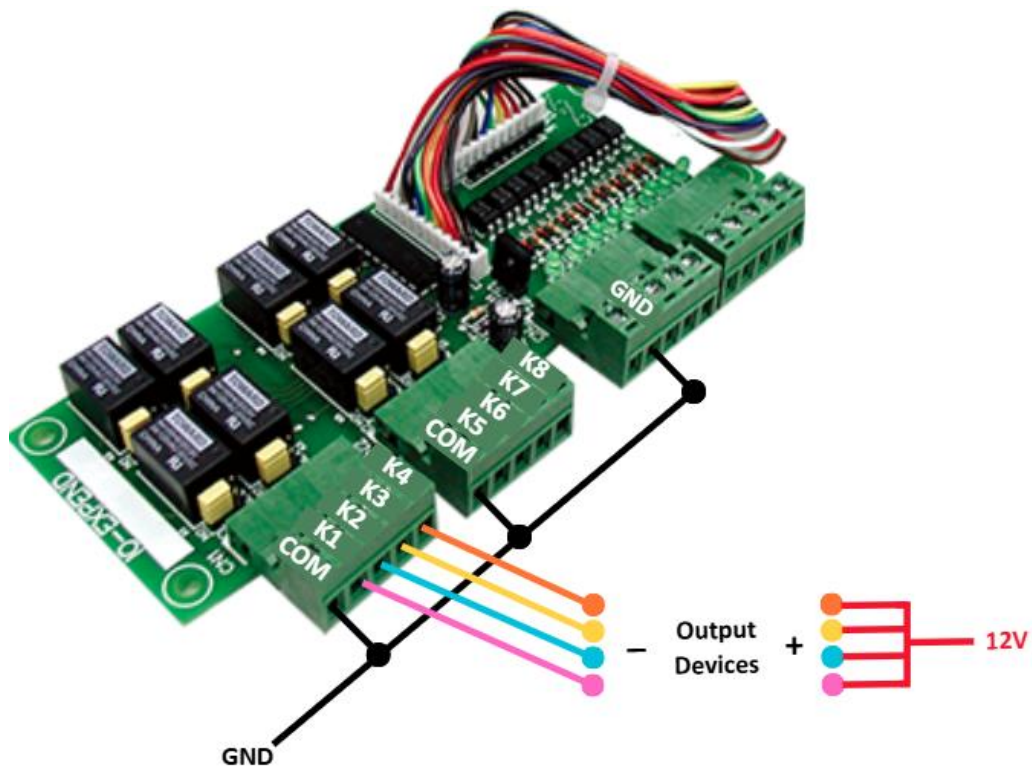
Output Relay Settings

a) Wire the relay accordingly

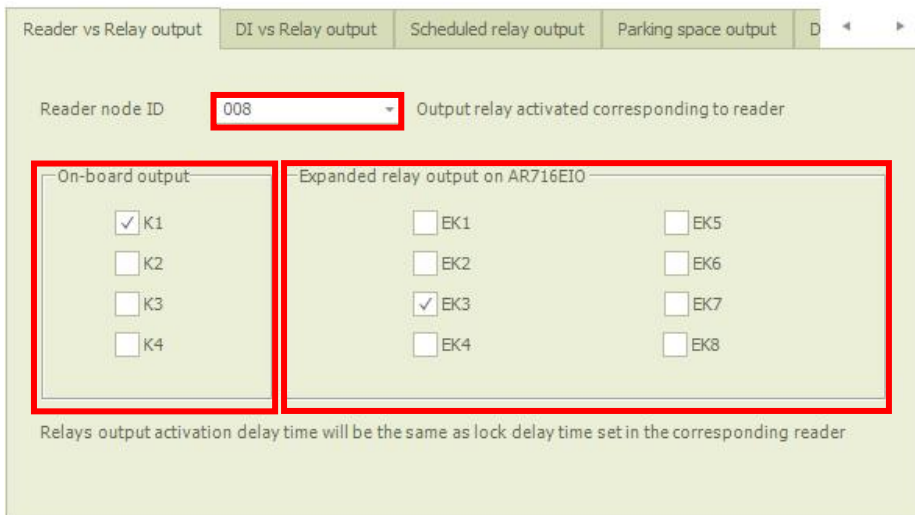
MAC318



MAC318-IO



- b) To trigger a relay output by reader verification, go to “Reader vs Relay output” tab:
1. Select the reader’s Node ID from the drop-down list
 2. Tick the relay that you want to trigger when the selected reader verifies access
 3. Click “Save” to save settings



Reader vs Relay output | DI vs Relay output | Scheduled relay output | Parking space output

Reader node ID: Output relay activated corresponding to reader

On-board output

K1
 K2
 K3
 K4

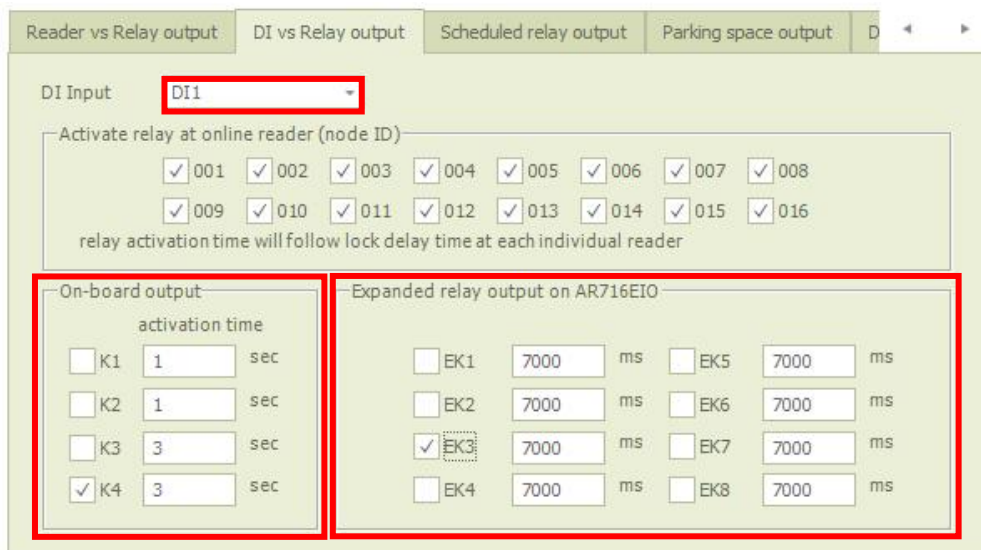
Expanded relay output on AR716EIO

EK1
 EK2
 EK3
 EK4
 EK5
 EK6
 EK7
 EK8

Relays output activation delay time will be the same as lock delay time set in the corresponding reader

ADD EDIT DELETE **SAVE** CANCEL

- c) To trigger a relay output by Digital Input (DI), go to “DI vs Relay output” tab:
1. Select the correct DI from the drop-down list
 2. Select the relays that you want to trigger upon DI activation. This feature can trigger controller readers to unlock doors as well.
 3. Set the relay activation(12V HIGH) time and click “Save” to save all settings.



Reader vs Relay output | **DI vs Relay output** | Scheduled relay output | Parking space output

DI Input:

Activate relay at online reader (node ID)

001 002 003 004 005 006 007 008
 009 010 011 012 013 014 015 016

relay activation time will follow lock delay time at each individual reader

On-board output

activation time

K1 sec
 K2 sec
 K3 sec
 K4 sec

Expanded relay output on AR716EIO

EK1 ms EK5 ms
 EK2 ms EK6 ms
 EK3 ms EK7 ms
 EK4 ms EK8 ms

ADD EDIT DELETE **SAVE** CANCEL

E-map (Door contact monitoring)

*Refer to Connection Architecture in page 3 for Digital Input(DI) hardware connection.

- a) System Configuration --> Hardware Manager --> MAC318 --> "Hardware I/O monitoring"
 Select and name the respective Digital Input ports being used.
 Click "Save" to save all settings.

To check if selected digital inputs are online, you can access "Monitoring" --> "I/O Commander"

I/O	Status	Selection
DI 1.3.1 - Fire Alarm Panel	DISARM	<input type="checkbox"/>
DI 1.3.2 - Level 1 Emergency Exit	DISARM	<input type="checkbox"/>
DI 1.3.3 - Level 2 Emergency Exit	DISARM	<input type="checkbox"/>
DI 1.3.4 - Level 3 Emergency Exit	DISARM	<input type="checkbox"/>
DI 1.3.5 - Level 4 Emergency Exit	DISARM	<input type="checkbox"/>
DI 1.3.6 - Level 5 Emergency Exit	DISARM	<input type="checkbox"/>
DI 1.3.7 - Level 6 Emergency Exit	DISARM	<input type="checkbox"/>

List of online Digital Inputs

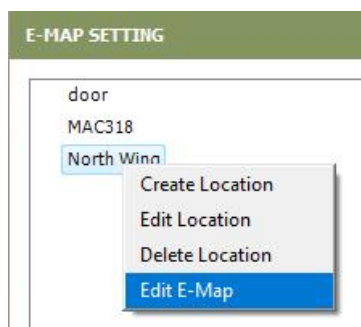
b) “Monitoring” --> “E-map” --> “E-Map Setting”



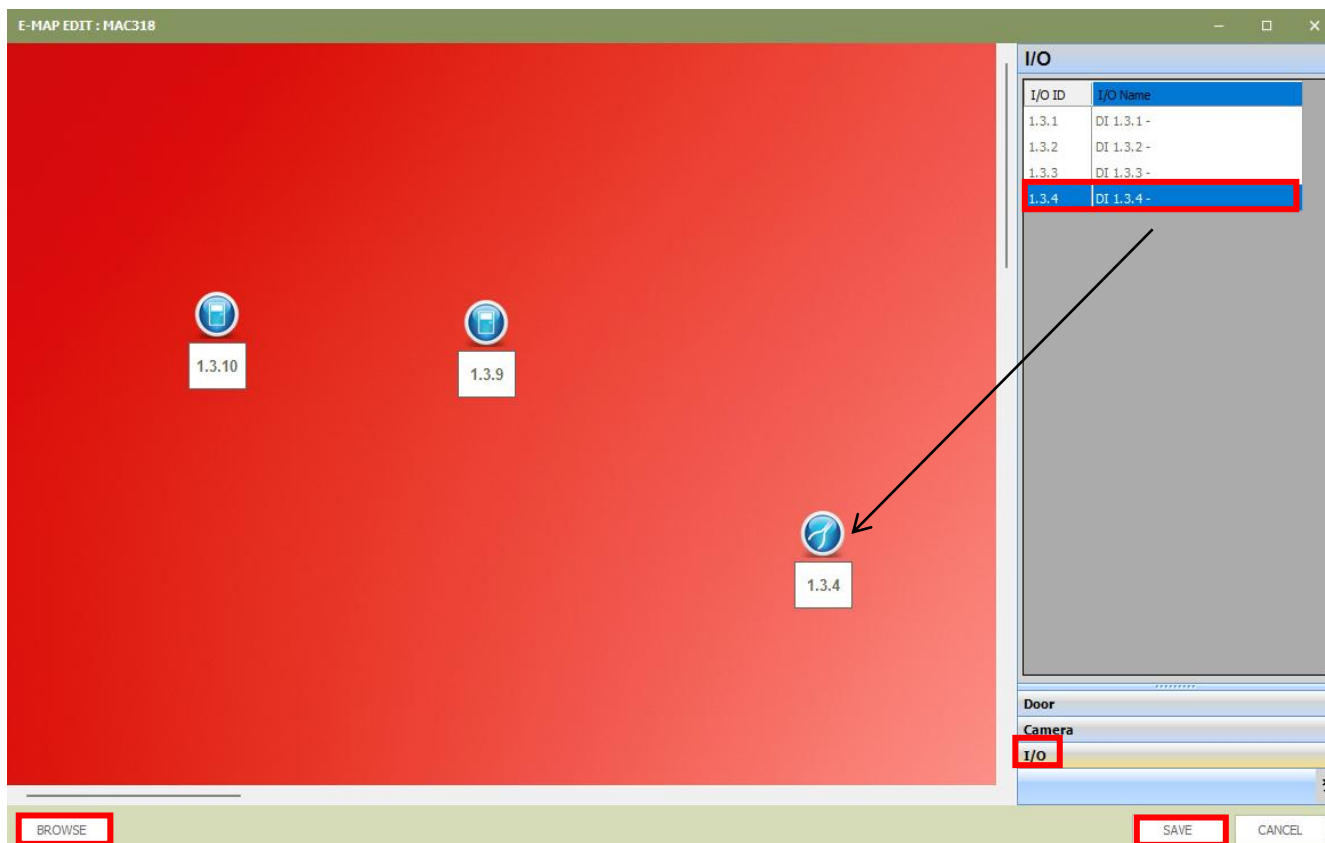
c) Right Click --> “Create Location” --> insert location name



d) Select new location --> Right Click --> “Edit E-Map”



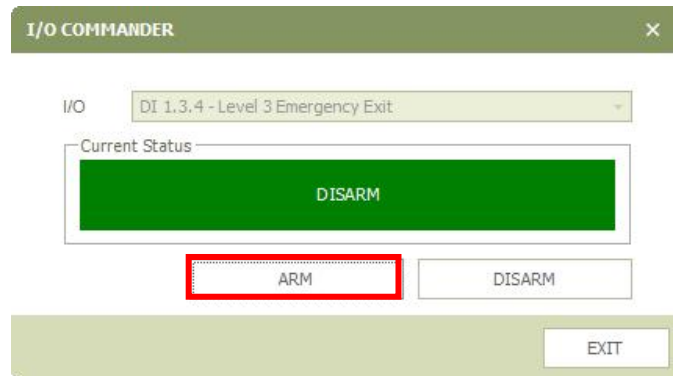
- e) Click “Browse” and select E-Map layout
 Click I/O Tab --> Right Click and drag Digital Input Icon to E-map
 Click “Save” to save all settings



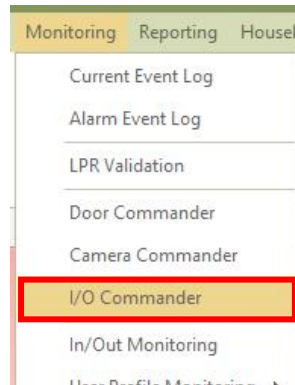
- f) “Monitoring” --> “E-map” --> “E-Map Monitoring”
 Right Click the Digital Input Icon, select “I/O Commander”



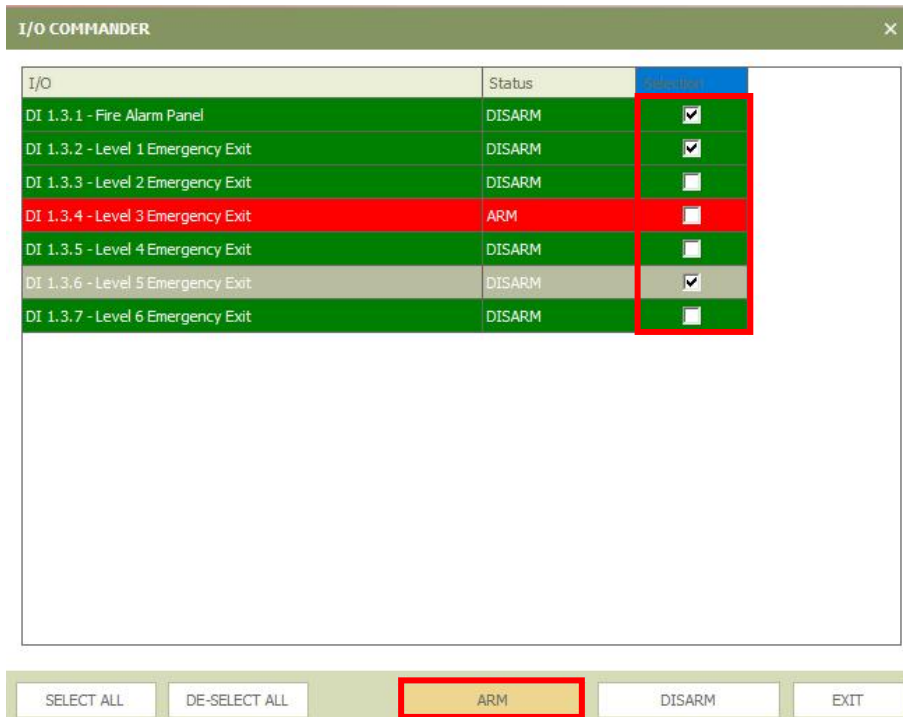
g) Select "Arm" to arm Door Contact



For a listed view to "Arm" or "Disarm" Multiple Digital Inputs at the same time, go to "Monitoring" --> "I/O Commander"



Select the respective Digital Inputs to modify their "Arm" status



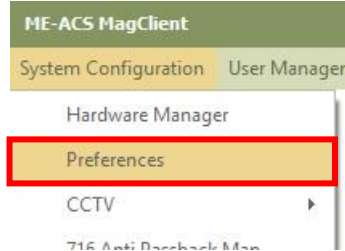
Note:
To prevent accidental triggers during installation, all Digital Inputs default to 'Disarm.'

To enable alarm functionality, simply switch the status of the desired DI to 'Arm.'

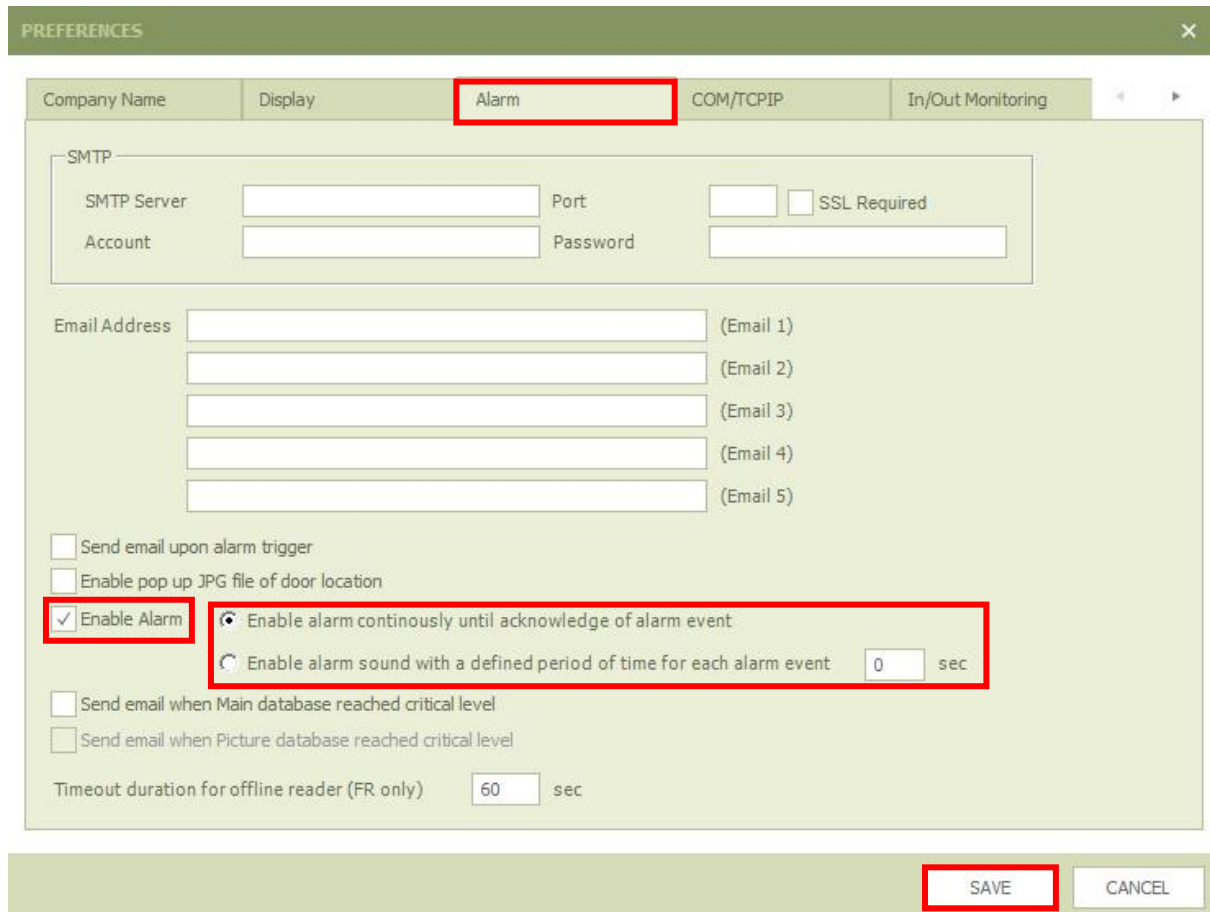
Enable Software Alarm (Pair with E-map)

To enable the audible software alarm, go to:

1. System Configuration Tab --> Preferences



2. Click the "Alarm" tab and select "Enable Alarm".
Choose between a continuous alarm or a fixed time period alarm.
Click "SAVE" to save all settings.



PREFERENCES

Company Name | Display | **Alarm** | COM/TCP/IP | In/Out Monitoring

SMTP

SMTP Server: Port: SSL Required

Account: Password:

Email Address: (Email 1)

(Email 2)

(Email 3)

(Email 4)

(Email 5)

Send email upon alarm trigger

Enable pop up JPG file of door location

Enable Alarm

Enable alarm continuously until acknowledge of alarm event

Enable alarm sound with a defined period of time for each alarm event sec

Send email when Main database reached critical level

Send email when Picture database reached critical level

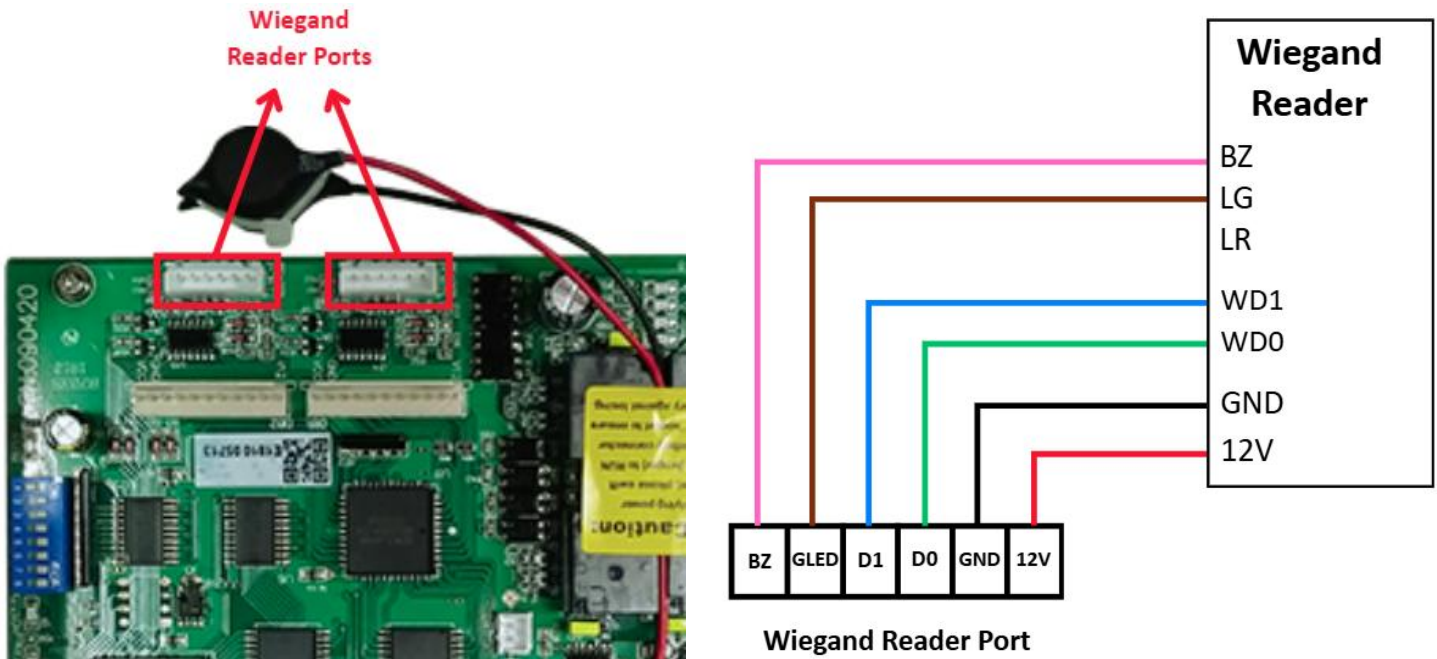
Timeout duration for offline reader (FR only) sec

SAVE **CANCEL**

Dual Wiegand Integration

The MAC318 Controller comes with 2 wiegand port integration. The following steps shows how to utilise these two wiegand ports for your project’s application.

a) Wire the wiegand reader accordingly:



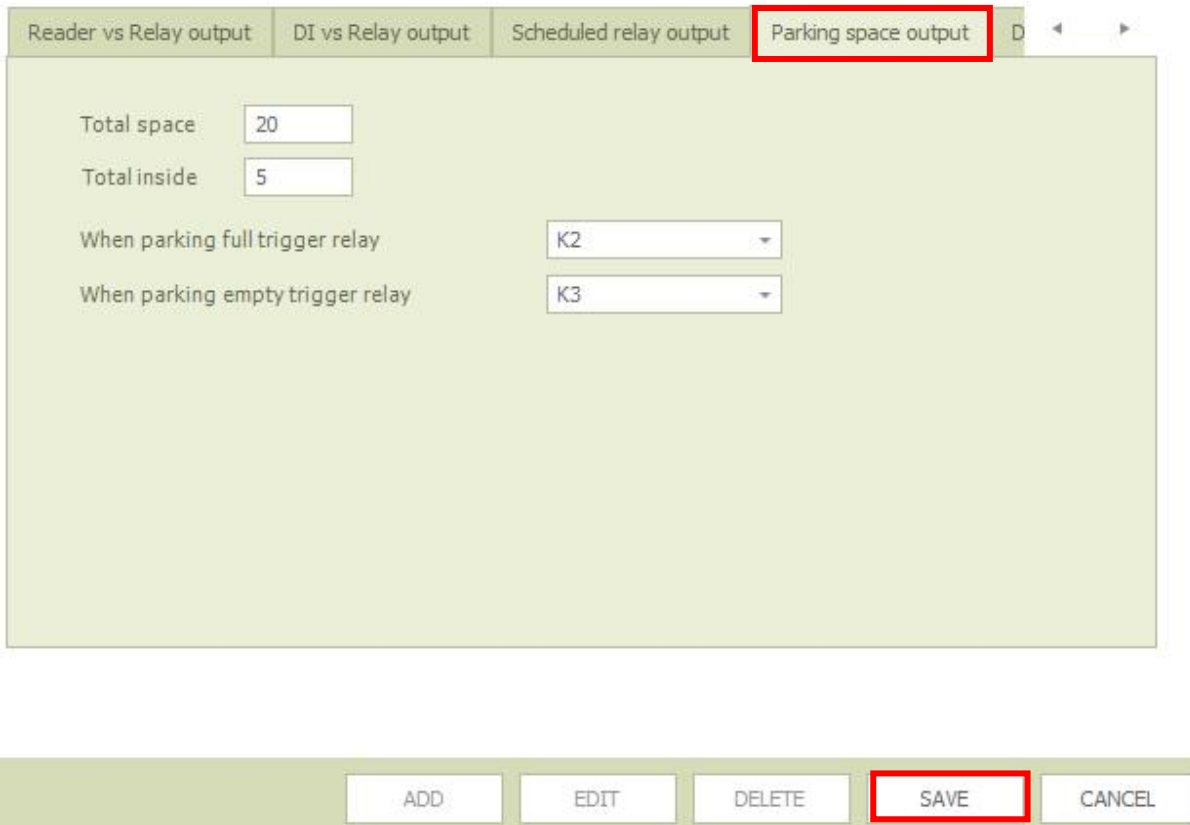
b) Software Settings



- Wiegand Readers are enabled by default.
- Enabling “Anti-passback IN/OUT” activates Anti-passback feature, where Wiegand 1 is entry reader and Wiegand 2 is exit reader.
- DI3 is the default digital input port for the Door Sensor/Tamper Switch signals for Wiegand 1, while DI4 is the default digital input port for Wiegand 2.

Parking Management System

a) System Configuration --> Hardware Manager --> MAC318 --> Parking space output --> Click "Save" to save all settings



Reader vs Relay output | DI vs Relay output | Scheduled relay output | **Parking space output** | D

Total space

Total inside

When parking full trigger relay

When parking empty trigger relay

ADD EDIT DELETE **SAVE** CANCEL

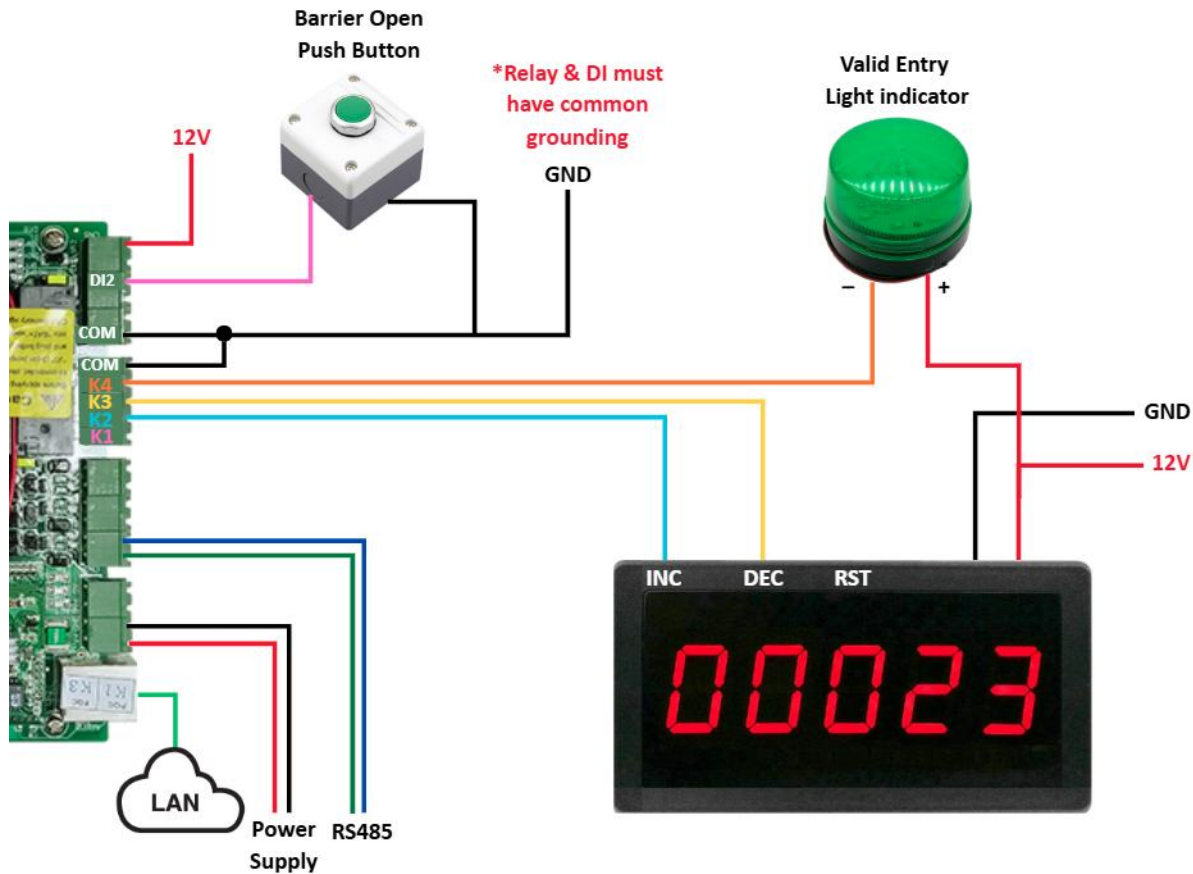
Total Space -> Total number of allowed entries into the space at any given moment

Total Inside -> Number of scanned entries currently in the space

When parking full trigger relay -> Output signal when Total Space limit is reached

When parking empty trigger relay -> Output signal when Total Inside is exactly "0"

INSTALLATION



The diagram consists of

1) A parking counter with the following relay connections:

K2 - Increment

K3 - Decrement

2) A Push Button connected to DI 2, which triggers Node ID 002 to open its barrier gate(visitor lane).

How this works

A 3 lane entry, 3 lane exit parking system is employed with MAC318 with one visitor lane controlled by Node ID 001. When a car enters by scanning the entry reader(Node ID 002~004) successfully, relay K2 is triggered and increases the counter. When a car leaves the parking lot by scanning the exit reader(Node ID 005~007) successfully, relay K3 is triggered and decreases the counter.

Should a visitor enter by the visitor lane, the guards can push the push button which triggers DI 2, lifting the visitor lane barrier gate. Every instance of entry is also recorded in MagEtegra's Event Log.

Visitor lane entry by guardhouse push button

Date	Time	Door	Event	User ID	Name	Site Code	Card Code
06/03/2026	18:01:27	DI 3.2 Visitor Barrier Gate Push Button	716E DI status change : ON				
06/03/2026	18:01:25	1.3.5 - Exit 1 Barrier Gate	Normal access by card only	8	Bob	37399	29444
06/03/2026	18:01:24	1.3.2 - Entrance 1 Barrier Gate	Normal access by card only	8	Bob	37399	29444

Entry by card reader

Exit by card reader

Software Settings

Online reader | Settings | Reader vs Relay output | DI vs Relay output | Scheduled relay output

Please specify all AR721H or AR727H connected to AR716 controller.

Channel 1 - Reader 1 to 8
 001 002 003 004 005 006 007 008

Channel 2 - Reader 9 to 16
 009 010 011 012 013 014 015 016

Wiegand reader
 017 Wiegand 1 018 Wiegand 2
 anti-passback IN anti-passback OUT
 DI3 as alarm input DI4 as alarm input

Settings | Reader vs Relay output | DI vs Relay output | Scheduled relay output | Parking space

Reader node ID: **002** Same settings for Node ID 002~004 Output relay activated corresponding to reader

On-board output: K1 K2 K3 K4

Expanded relay output on AR716EIO: EK1 EK2 EK3 EK4 EK5 EK6 EK7 EK8

Relays output activation delay time will be the same as lock delay time set in the corresponding reader

Online reader | Settings | Reader vs Relay output | DI vs Relay output | Scheduled relay output

Reader node ID: **005** Same settings for Node ID 005~007 Output relay activated corresponding to reader

On-board output: K1 K2 K3 K4

Expanded relay output on AR716EIO: EK1 EK2 EK3 EK4 EK5 EK6 EK7 EK8

Relays output activation delay time will be the same as lock delay time set in the corresponding reader

Settings | Reader vs Relay output | DI vs Relay output | Scheduled relay output | Parking space

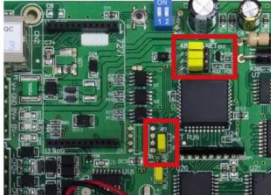
DI Input: DI2

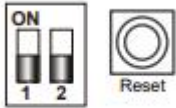
Activate relay at online reader (node ID):
 001 002 003 004 005 006 007 008
 009 010 011 012 013 014 015 016
 relay activation time will follow lock delay time at each individual reader

On-board output activation time:
 K1 1 sec K2 1 sec K3 3 sec K4 3 sec

Expanded relay output on AR716EIO:
 EK1 7000 ms EK2 7000 ms EK3 7000 ms EK4 7000 ms EK5 7000 ms EK6 7000 ms EK7 7000 ms EK8 7000 ms

FAQ

Problem	Solution
<p>Door opens with a delay after a card is flashed.</p>	<p>The card data must be sent to the MAC controller for verification before the door unlocks. Poor-quality cables or excessive wiring distance can slow RS485 communication.</p> <p>Use proper wiring such as Cat5 (up to 100m), RS422 cable like Belden 1419A (up to 300m), or RS485 cable such as Belden 9842 (up to 1km) to ensure stable performance.</p>
<p>No output when flashing a card at a Wiegand reader connected to MAC.</p>	<p>Ensure the Wiegand reader and MAC share a common GND reference. If they use separate power supplies, connect the GND of both power supplies together to establish proper signal reference.</p>
<p>MAC controller is easily damaged by surge.</p>	<p>Outdoor electronic devices are vulnerable to surge. Connect the MAC metal enclosure to EARTH from the AC socket to create a low-impedance reference shared with other equipment.</p> <p>Proper grounding and surge protection are especially important in exposed areas or locations prone to lightning strikes.</p>
<p>MAC controller behaves intermittently or unpredictably.</p>	<p>Surge events may partially damage the CPU without visible burn marks, causing unstable or random behavior. Installing proper surge protection and grounding can prevent this issue and ensure stable system operation.</p>
<p>Unable to ping the controller or access the web interface.</p>	<p>Check that all network jumpers are set to "NET".</p> <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin: 0 20px;"> <p>RS-485 Mode</p> <p>RS485 NET JP3 <input type="checkbox"/> RS485 <input checked="" type="checkbox"/> NET JP4 <input type="checkbox"/> RS485 <input checked="" type="checkbox"/> NET JP5</p> <p>JP2 <input checked="" type="checkbox"/> NET <input type="checkbox"/> RS485</p> </div> <div style="margin: 0 20px;"> <p>➔</p> </div> <div style="margin: 0 20px;"> <p>Ethernet Mode</p> <p>RS485 NET JP3 <input type="checkbox"/> RS485 <input checked="" type="checkbox"/> NET JP4 <input type="checkbox"/> RS485 <input checked="" type="checkbox"/> NET JP5</p> <p>JP2 <input checked="" type="checkbox"/> NET <input type="checkbox"/> RS485</p> </div> </div> <p>Verify that the Node ID is correctly configured according to binary numbering. Ensure the controller is using the correct IP address.</p>

<p>Unable to access the controller web interface.</p>	<p>Use the default IP 192.168.1.127.</p> <p>Log in with the default credentials: Username: SuperAdm Password: 721568.</p>
<p>How to reset MAC318 controller to factory settings.</p>	<p>Set the two DIP switches on the TCP/IP module to OFF, then press and hold the IP Reset button for more than 5 seconds.</p> <div style="text-align: center;">  </div> <p>The TCP/IP module will restore to factory default settings.</p>

***Product performances is based on testing in a controlled environment. Your result may vary due to several external and environment factors.**

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