

## Table of Contents

|  |   |
|--|---|
| How to configure CoreStation with an external wiegand device ..... | 1 |
| Relay work video .....   | 7 |

# How to configure CoreStation with an external wiegand device

\*If you would like to get basic information about configuration of CoreStation, please refer to [How to configure CoreStation](#)

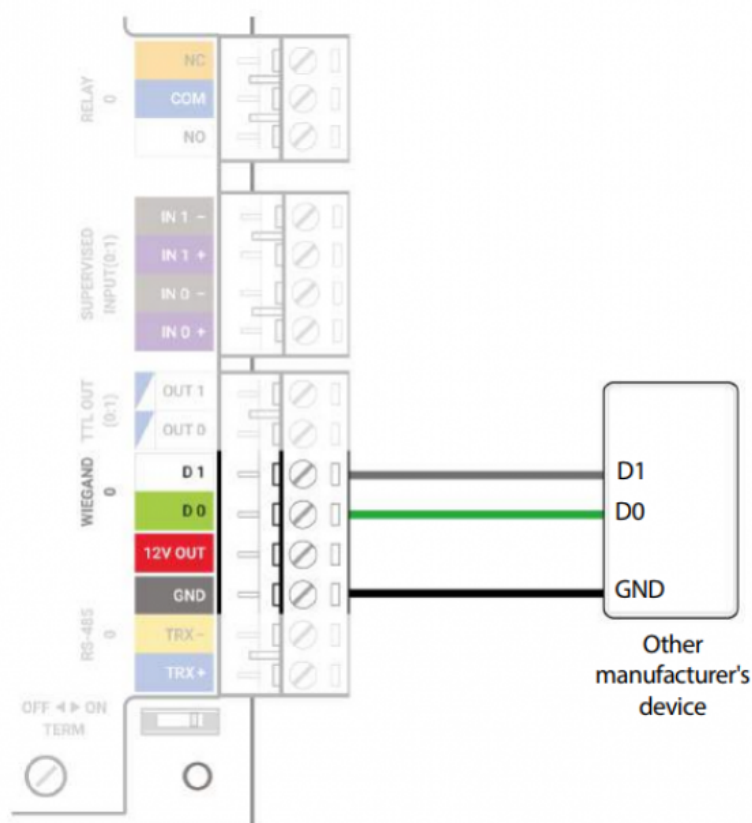
In this article, you will be able to learn how to connect an external Wiegand device to CoreStations. And use it for certain operations such as authentication and entrance management with a door.

## Materials used in this example:

- 1) HID Proximity Reader 5355
- 2) CoreStation
- 3) HID Prox Card 125kHz

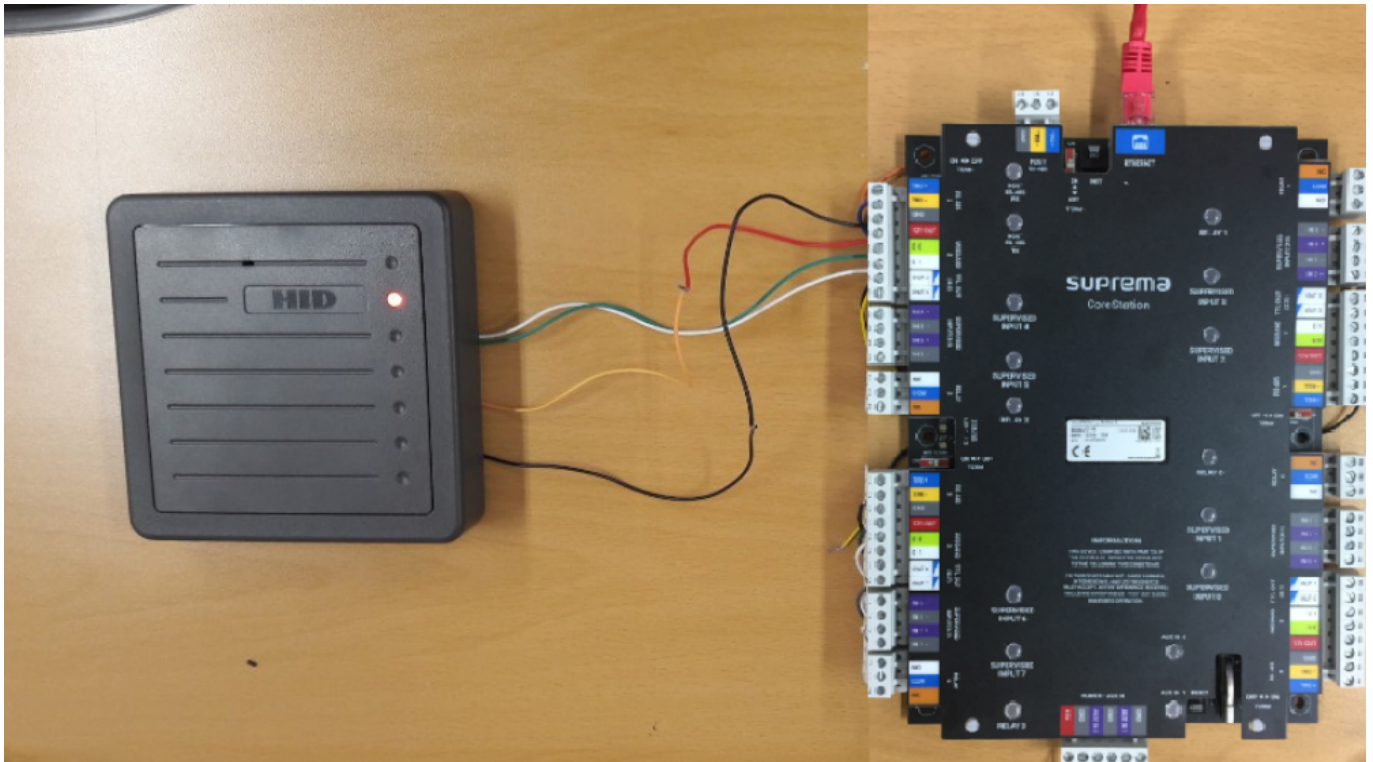
1. When you take a look at the CoreStation(CS-40) manual, you can see a wiring diagram for the product. [CoreStation Manual](#)

## Wiegand IN



2. In this example, we will make use of “Wiegand 2” input as well as a power supply on this side

3. When you find the correct manual for the Wiegand reader product that you use, you can also find its wiring diagram in it. Wire your Wiegand reader properly to CoreStation.
4. When you have wired it correctly you should have the wiring set up as below
  - TTL Output ports 4&5 will be used for LED & Buzzer



5. Now let's go to BioStar 2, go to the Device menu, and click Search Device, add the CoreStation device

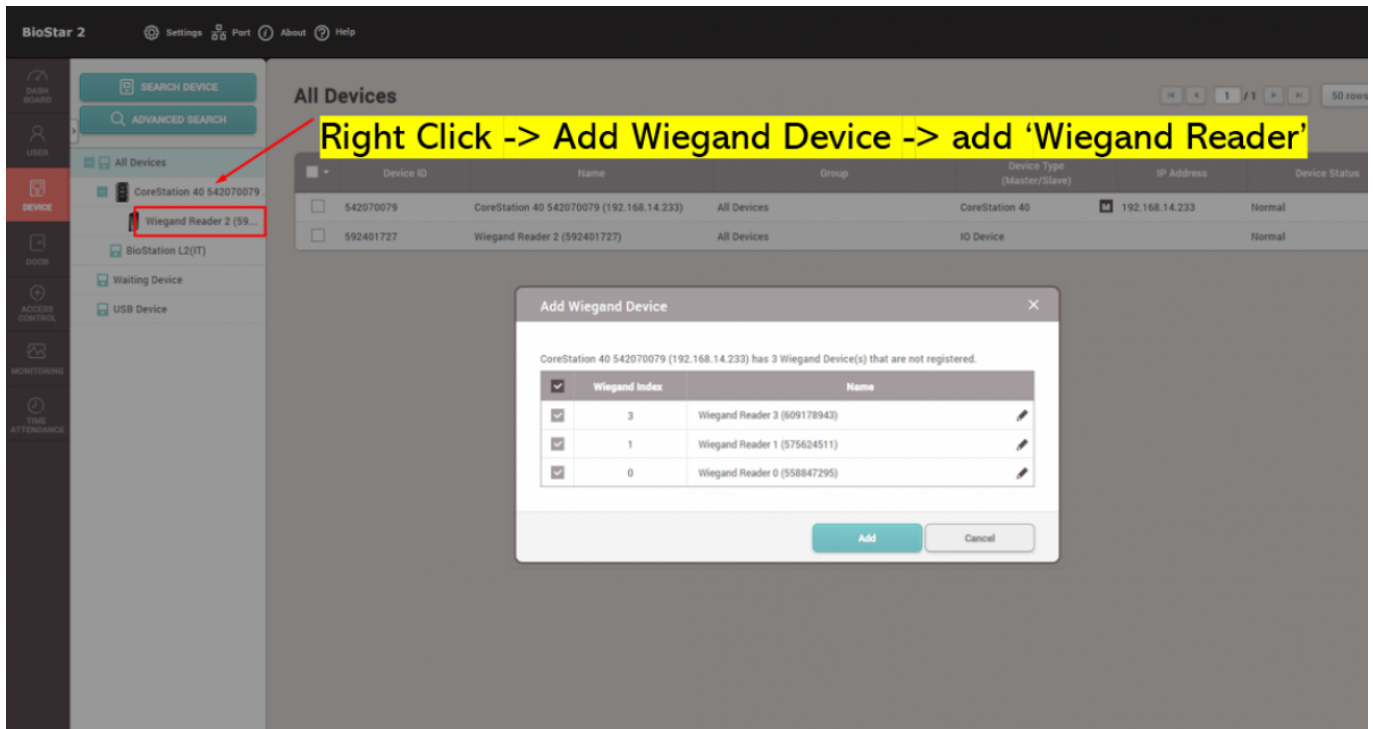
Search Device

Found 6 device(s). 5 device(s) have invalid IP addresses.

|                                     | Device ID | Name                                     | Group       | Device Type (Master/Slave) | IP Address     | Status               | Secure Mode Status |
|-------------------------------------|-----------|--|-------------|----------------------------|----------------|----------------------|--------------------|
| <input type="checkbox"/>            | 546832586 | BioStation 2 546832586 (192.168.14.152)  | All Devices | BioStation 2               | 192.168.14.152 | N/A (192.168.14.26)  | Connectable.       |
| <input type="checkbox"/>            | 541531008 | BioStation A2 541531008 (192.168.14.223) | All Devices | BioStation A2 <b>M</b>     | 192.168.14.223 | N/A (192.168.14.25)  | Connectable.       |
| <input type="checkbox"/>            | 939254309 | BioStation A2 939254309 (192.168.14.217) | All Devices | BioStation A2              | 192.168.14.217 | N/A (192.168.14.16)  | Connectable.       |
| <input type="checkbox"/>            | 939258556 | BioStation A2 939258556 (192.168.14.185) | All Devices | BioStation A2 <b>M</b>     | 192.168.14.185 | N/A (192.168.14.26)  | Connectable.       |
| <input type="checkbox"/>            | 545393281 | BioLite N2 545393281 (192.168.14.133)    | All Devices | BioLite N2                 | 192.168.14.133 | N/A (192.168.14.204) | Connectable.       |
| <input checked="" type="checkbox"/> | 542070222 | CoreStation 40 542070222 ...             | All Devices | CoreStation 40 <b>M</b>    | 192.168.14.87  | OK                   | Connectable.       |

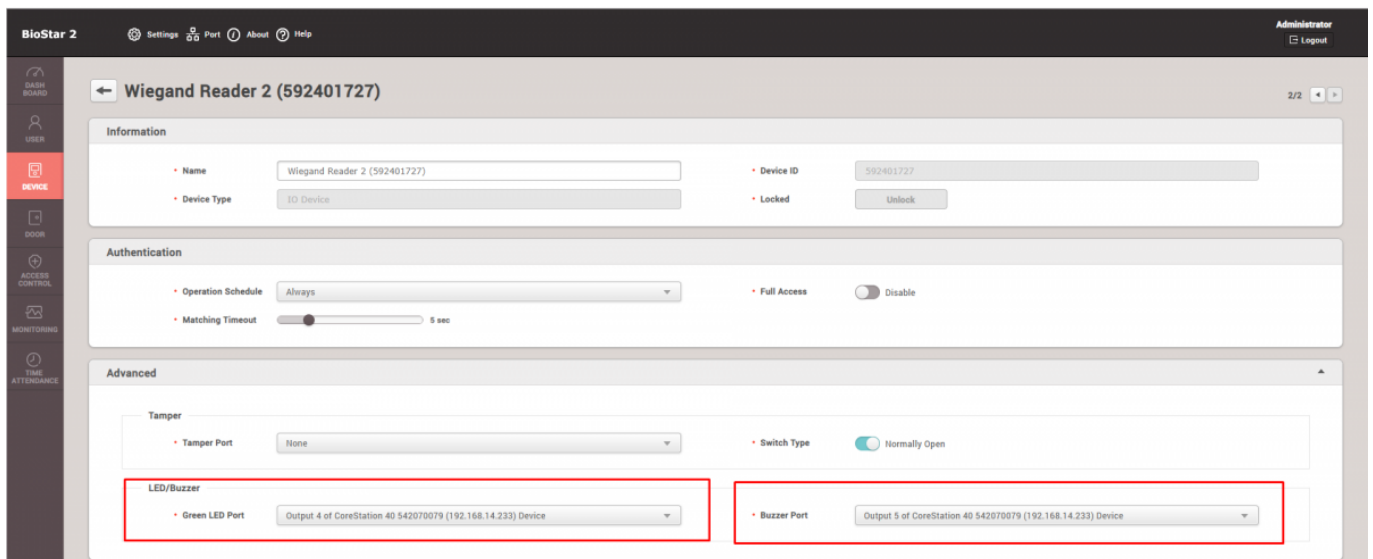
Set IP Add Close

6. Right-click on added CoreStation 40, and click "Add Wiegand Device", in the new popup window "Add Wiegand Device" add "Wiegand Reader 2."

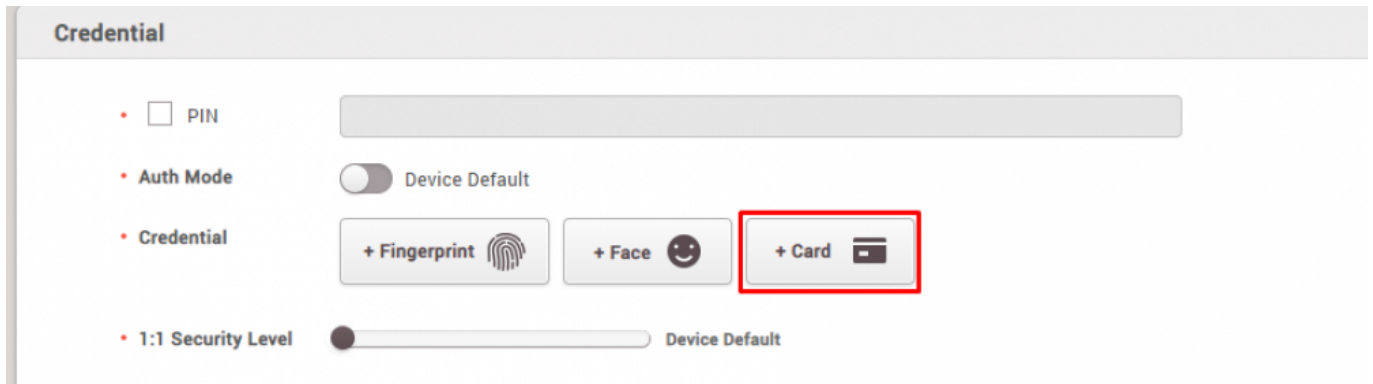


7. Click on added Wiegand Reader 2 and set the settings as you like. If you would like to control LED/Buzzer, you can set it to a certain output.

- In this example, since Output 4 & Output 5 are close to Wiegand 2 Input, we will assign them to these output ports.



8. Now go to the user tab, and select a user, in this example the default administrator is selected. Let's click on the +Card button on a Credential section to assign a card to this user.

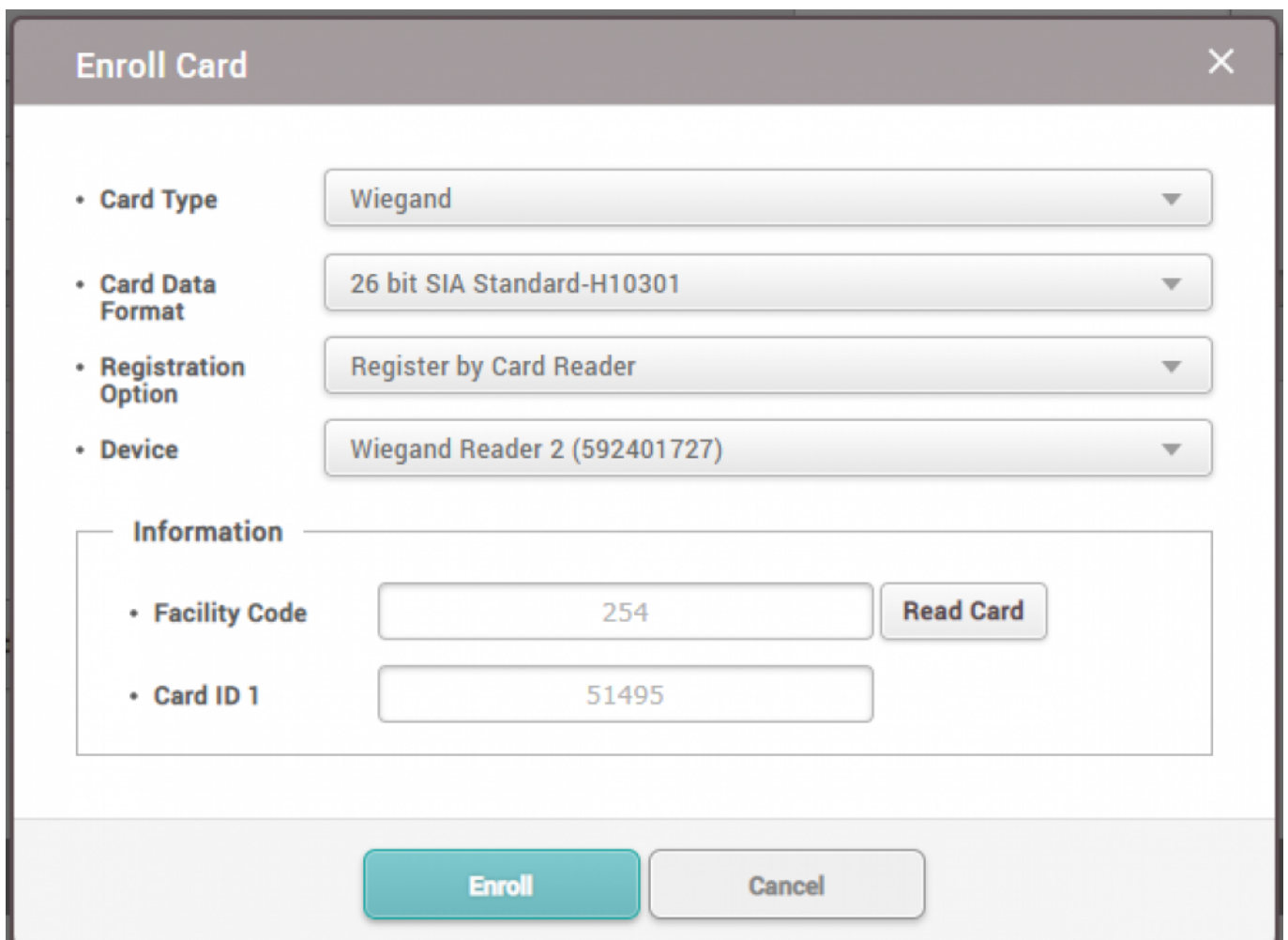


**Credential**

- ☐ PIN
- Auth Mode: ☒ Device Default
- Credential:
- 1:1 Security Level:  Device Default

9. In the “Enroll Card” popup window, please set appropriate Wiegand settings according to the type of card that you will use. The device will scan the card to obtain its card ID information automatically. In our case 26-bit SIA Standard will be used as the card format.

- 1) Set Registration Option as “Register by Card Reader”
- 2) Set Device as “Wiegand Reader 2”
- 3) Click “Read Card” and scan the device with the card
- 3) Click Enroll.



**Enroll Card**

- Card Type: Wiegand
- Card Data Format: 26 bit SIA Standard-H10301
- Registration Option: Register by Card Reader
- Device: Wiegand Reader 2 (592401727)

**Information**

- Facility Code: 254
- Card ID 1: 51495

\*Do not forget to hit the “Apply” button on all main menus to take the changes into effect.

**Information**

Name: Administrator

ID: 1

Group: All Users

Period: 2001/01/01 00:00 - 2030/12/31 23:59

Operator Level: Administrator

Login ID: admin

Password: \*\*\*\*\*

Email:

Telephone:

Status: ☒ Active

Access Group:

**Credential**

☐ PIN

Auth Mode: ☒ Device Default

Credential:

1:1 Security Level:  Device Default

| Type        | Card Data Format           | Summary       |  |
|-------------|----------------------------|---------------|--|
| Fingerprint | -                          | 1             | <input type="button" value="Edit"/> <input type="button" value="Delete"/>  |
| Wiegand     | 26 bit SIA Standard-H10301 | ID: 254-51495 | <input type="button" value="Block"/> <input type="button" value="Delete"/> |

10. Go to the Monitoring menu and click on the Real-time log. When you scan cards on the Wiegand reader, you will be able to see that the Wiegand reader sends card information to CoreStation for authentication, and that authentication is successful with the card ID that we registered for the user. You will also be able to hear the Buzzer sound and see LED lights turn to green when scanning the card.

**BioStar 2** Settings Port About Help Administrator Logout

Event Log

Real-time Log

Device Status

Door Status

Alert History

**Real-time Log**

| Date                | Door | Device ID | Device               | User             | Event                               | View |
|---------------------|------|-----------|----------------------|------------------|-------------------------------------|------|
| 2018/10/30 11:39:53 |      | 592401727 | Wiegand Reader 2 ... | 1(Administrator) | 1:1 authentication succeeded (Card) |      |

11. Now let's take this a little bit further. Go to the Door menu and click on the "Add Door" button. Set its appropriate name (in this example we will call it "Suprema").

- 1) Set the entry device as Wiegand Reader
- 2) Set Door Relay as Relay 2
- 3) Set Exit Button and Door Sensor to Supervised Inputs 4&5
- 4) Set the Open Time, this will dictate how much time you will have between locking and unlocking when the relay goes ON and OFF



**BioStar 2** Settings Port About Help Administrator Logout

**Suprema** 1/1

**Information**

- Name: Suprema
- Description: Main Office
- Group: IT Main Office A1

**Configuration**

- Entry Device: Wiegand Reader 2 (592401727)
- Door Relay(+): Relay 2 of CoreStation 40 542070079 (192.168.14.233) Device
- Exit Button: Supervised Input Port 4 of CoreStation 40 542070079 (192.168.14.233) Device
- Door Sensor: Supervised Input Port 5 of CoreStation 40 542070079 (192.168.14.233) Device
- Exit Device: None
- Switch: Normally Open
- Switch: Normally Open

**Option**

- Open Time: 3 sec
- Lock when door is closed: OFF
- Use Automatic Door: OFF

12. Go back to devices and click on CoreStation. Scroll down and expand the Advanced tab and turn on Supervised Inputs 4&5 as we had set them up for Exit Button and Door Sensor. The resistance can stay as 2.2K Ohms, as they are default. When you hit apply you can see that Supervised Inputs 4&5 will turn on their Green LEDs.

\*For the reasons why 2.2k Ohms of **circuit resistance** for these **Supervised Inputs** are necessary, please refer to article [DM-20 Wiring Examples](#)

**BioStar 2** Settings Port About Help Administrator Logout

**Trigger & Action**

Configuration Trigger Action + Add

**Wiegand**

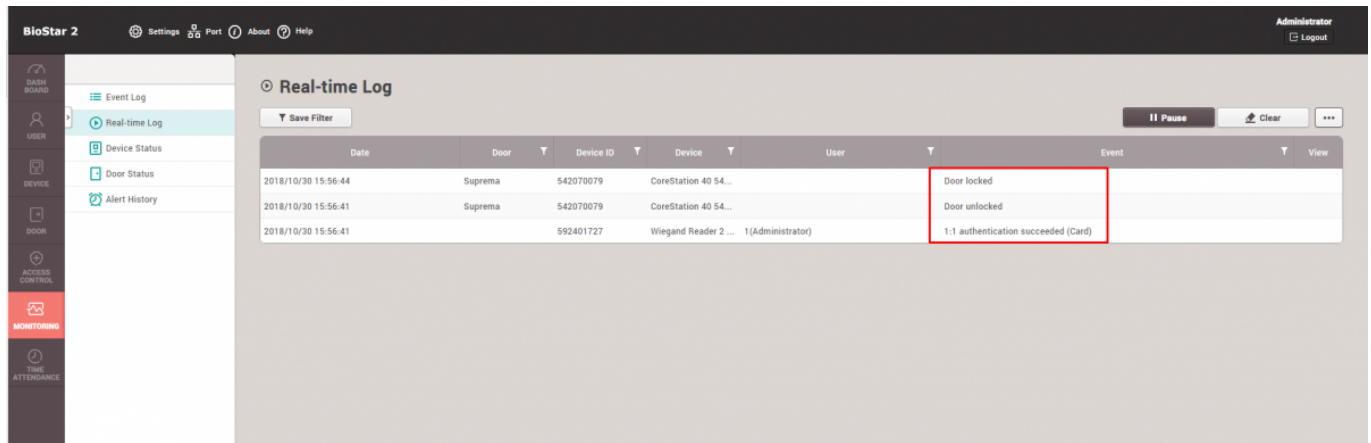
- Input/Output: Input
- In/Out Format: ID#1 26 bit SIA Standard-H10301
- Pulse Width(us): 40
- Pulse Interval(us): 10000

**Supervised Input**

Configuration

| Index | Supervised       | Supervised Input Resistor |
|-------|------------------|---------------------------|
| 0     | Input            |                           |
| 1     | Input            |                           |
| 2     | Input            |                           |
| 3     | Input            |                           |
| 4     | Supervised Input | 2.2k                      |
| 5     | Supervised Input | 2.2k                      |
| 6     | Input            |                           |
| 7     | Input            |                           |

13. Now go back to the Monitoring menu → Real-Time log. Scan the card on the Wiegand reader. You will now see that not only authentication is successful but also the Door Relay will go ON and OFF, indicating the door is being unlocked and locked. You can also notice this by seeing the red LED turning ON and OFF on Relay 2, as well as the tipping sound that is coming from it. The time delay between unlocking and locking will depend on Open Time that you set in step 11.



| Date                | Door    | Device ID | Device               | User             | Event                               | View |
|---------------------|---------|-----------|----------------------|------------------|-------------------------------------|------|
| 2018/10/30 15:56:44 | Suprema | 542070079 | CoreStation 40 54... |                  | Door locked                         |      |
| 2018/10/30 15:56:41 | Suprema | 542070079 | CoreStation 40 54... |                  | Door unlocked                       |      |
| 2018/10/30 15:56:41 |         | 592401727 | Wiegand Reader 2 ... | 1(Administrator) | 1:1 authentication succeeded (Card) |      |

## Relay work video

[Ixio6068.mp4](#)

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<http://kb.supremainc.com/knowledge/> -

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[http://kb.supremainc.com/knowledge/doku.php?id=en:how\\_to\\_configure\\_corestation\\_with\\_an\\_external\\_wiegand\\_device](http://kb.supremainc.com/knowledge/doku.php?id=en:how_to_configure_corestation_with_an_external_wiegand_device)

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