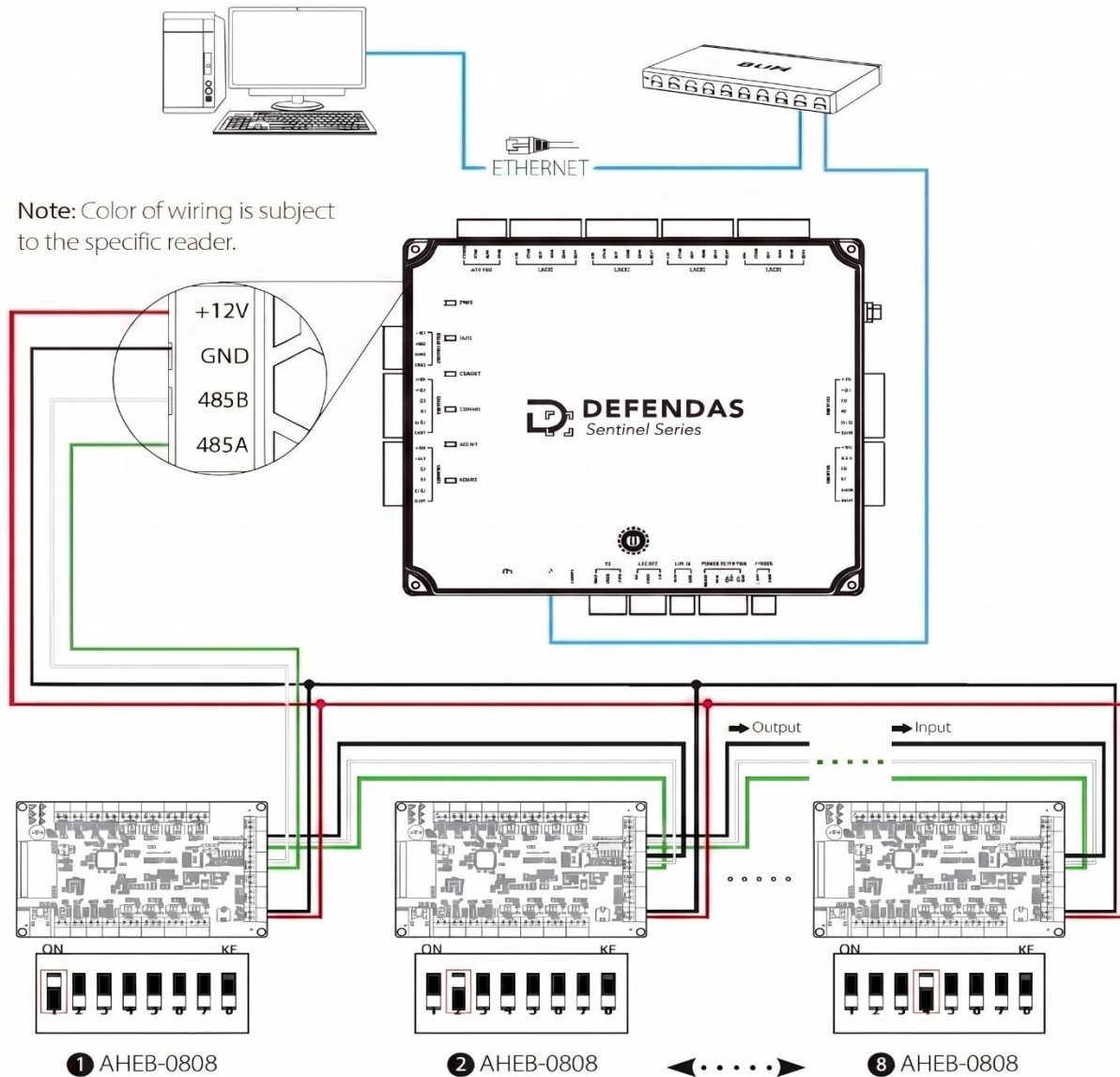


Expansion Board Connection & Elevator Control Setup

AHEB-0808 Wiring Connection

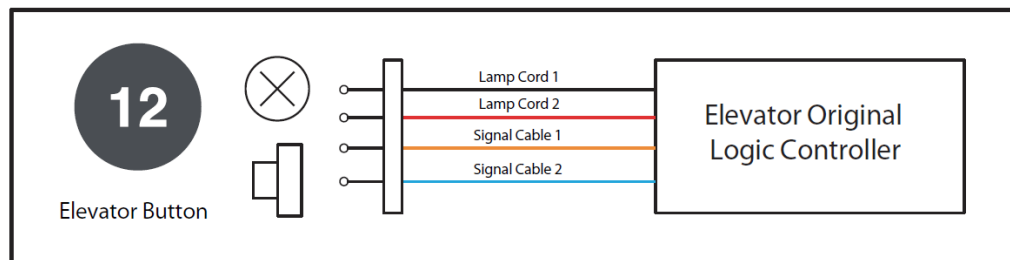
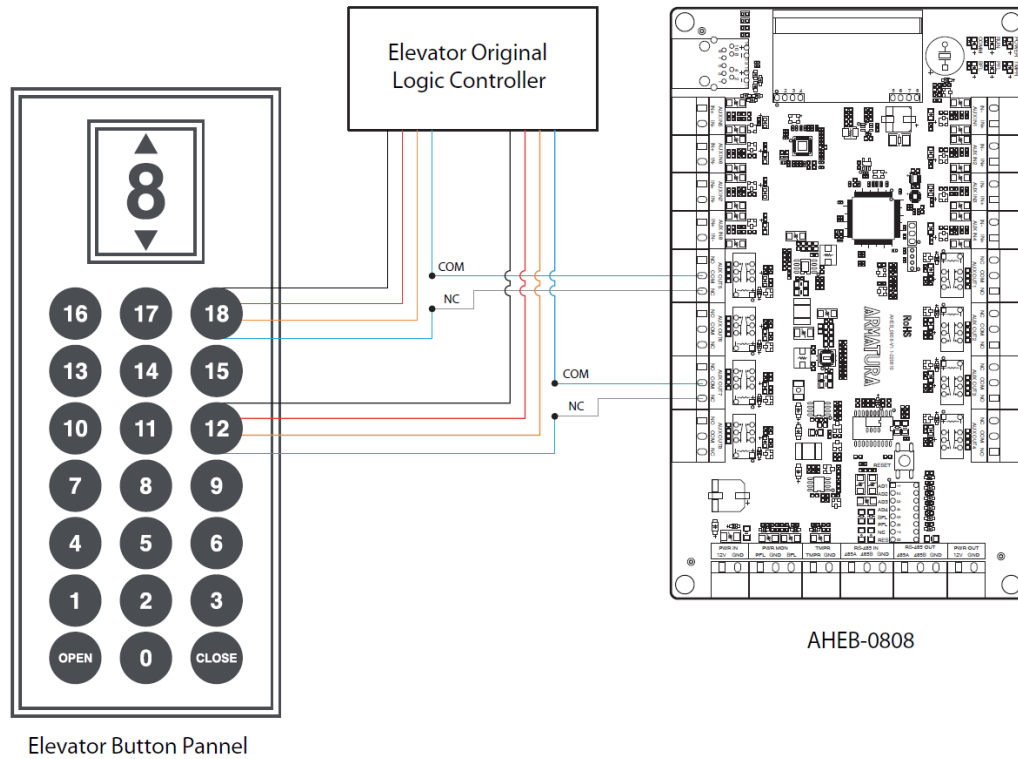
Connect the AHEB-0808 expansion board via the RS485 terminal. Each AHEB-0808 supports up to 8 inputs & 8 outputs.

NOTE: Configure the RS485 address for each AHEB-0808 using the DIP switch prior to applying power.



Elevator Control Mode Wiring

After connecting the AHEB-0808 expansion board correctly, set the controller's application scenario to Elevator Control mode. The expansion board will synchronize to this mode and connect with the elevator control board to enable elevator control functionality. Refer to the wiring configuration shown in the diagram below.



NOTE: Authorize the controller with elevator control permissions before switching to elevator control mode. **Only the AHEB-0808 can be added as the elevator controller.** Both the ST200B and ST400B support this feature.

Adding the AHEB-0808 Expansion Board

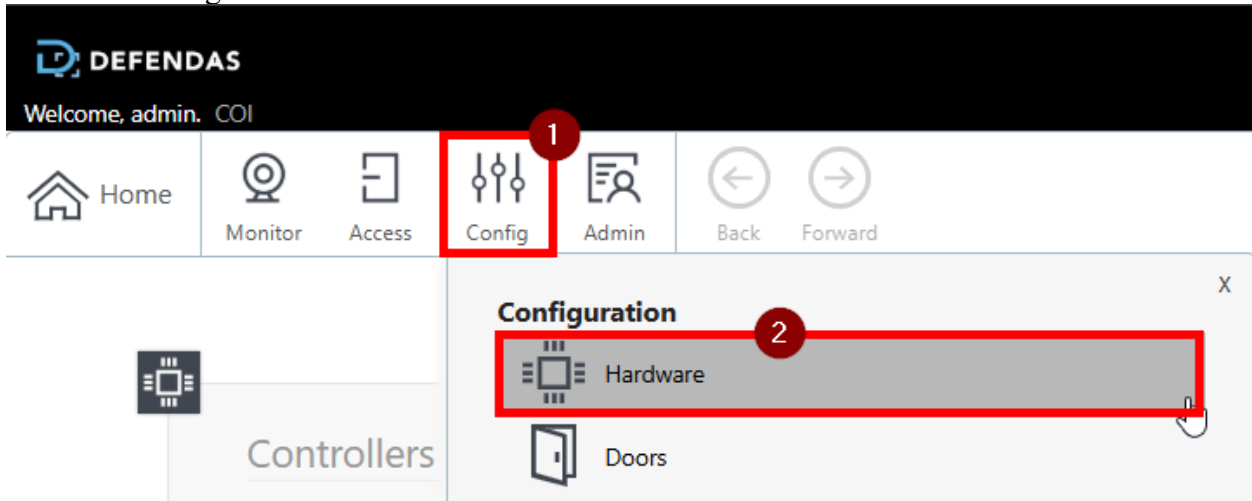
Step 1: Add the AHEB-0808 via the Web Management Application

Make sure the following steps have been completed before adding.

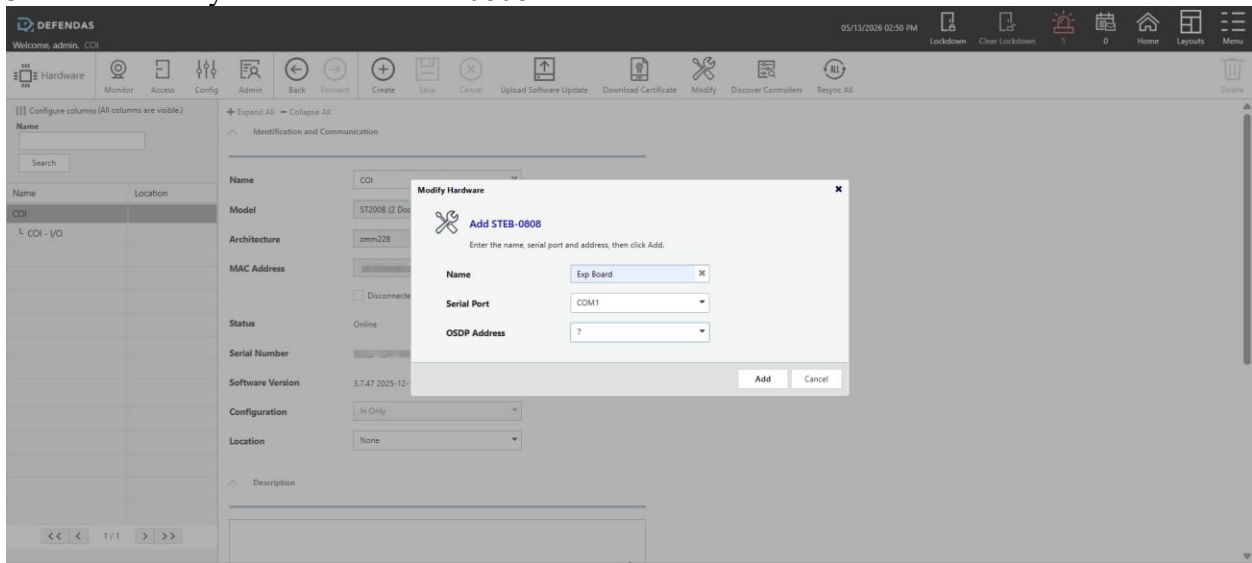
- Connect the AHEB-0808 expansion board to the controller as shown in the "AHEB-0808 Connection" above. Configure the RS485 addresses for each AHEB-0808 using the DIP switch before applying power.
- Ensure the baud rate of the expansion board is set to 9600.

To add the AHEB-0808 expansion boards:

1. Log in to the Web Management Application (on the primary controller).
2. Go to "Config → Hardware"



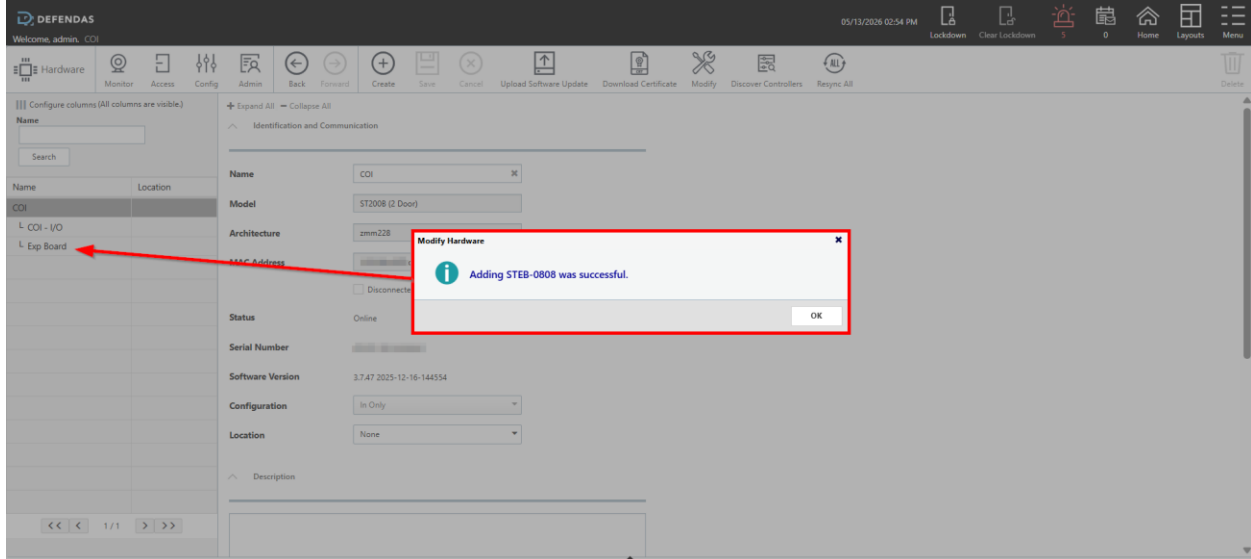
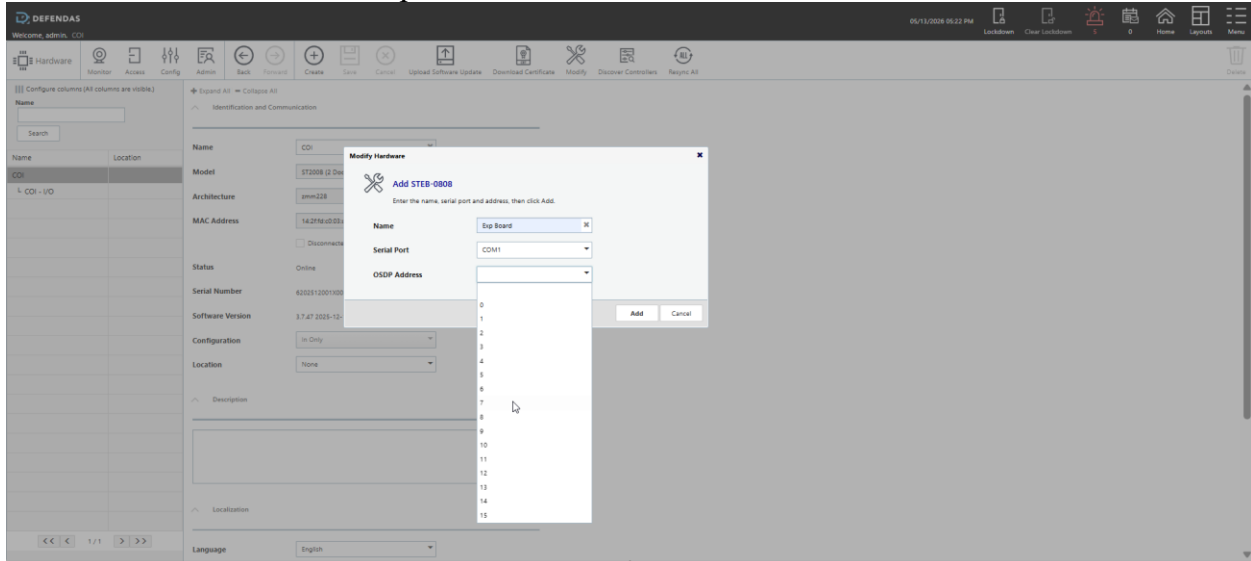
3. Click "Modify" to add an AHEB-0808.



4. Define a name for the expansion board.

5. Select COM1.

6. Assign the OSDP address of the board and click "Add". For this example, we flip DIP switches 1, 2, and 3 to the ON position to set the OSDP address to 7.



7. After adding the board, locate it in the device tree to configure the inputs and outputs as needed.

The screenshot displays the DEFENDAS web interface for configuring hardware. The top navigation bar includes the DEFENDAS logo, user information (admin, COI), and the date/time (05/13/2026 09:31 PM). A secondary toolbar contains various system actions like Lockdown, Clear Lockdown, Home, Layouts, and Menu. Below this, a main toolbar offers configuration options: Hardware, Monitor, Access, Config, Admin, Back, Forward, Create, Save, Cancel, Upload Software Update, Download Certificate, Modify, Discover Controllers, and Resync All. A 'Delete' icon is also present.

The main content area is divided into several sections:

- Left Panel:** A sidebar with a search bar and a tree view showing the device hierarchy: Name, COI, COI - I/O, and Exp Board (selected).
- Inputs Section:** A table listing six input configurations. All are enabled and set to 'Not Used'.
- Outputs Section:** A table listing six output configurations (spare relays). All are disabled and set to 'Not Used'.
- Software Update Section:** A section header for software update configurations.

Address	Name	Enabled	Normally Open	Function	Managed By	Linkage Type	Schedule
AUX IN1	Exp Board Input 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			
AUX IN2	Exp Board Input 2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			
AUX IN3	Exp Board Input 3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			
AUX IN4	Exp Board Input 4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			
AUX IN5	Exp Board Input 5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			
AUX IN6	Exp Board Input 6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Not Used			

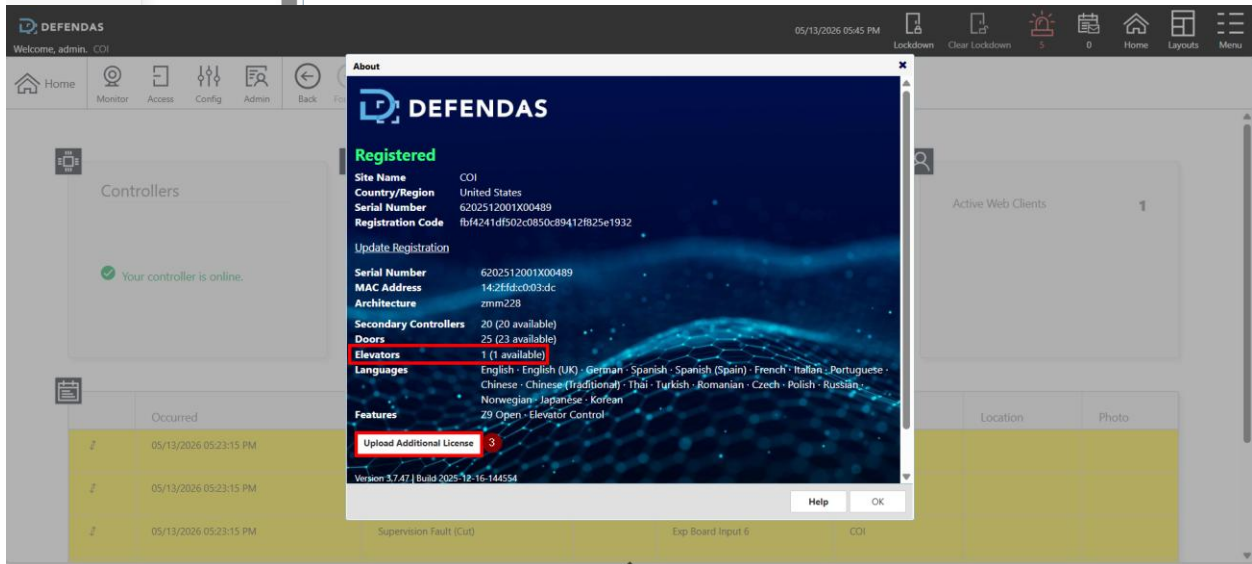
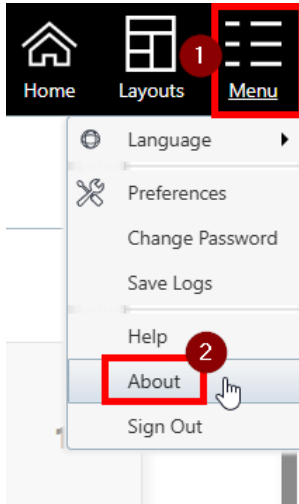
Address	Name	Invert	Function	Managed By	Event/Condition	Toggle/Pulse	Pulse Time	Schedule
AUX OUT1	Exp Board Spare Relay 1	<input type="checkbox"/>	Not Used					
AUX OUT2	Exp Board Spare Relay 2	<input type="checkbox"/>	Not Used					
AUX OUT3	Exp Board Spare Relay 3	<input type="checkbox"/>	Not Used					
AUX OUT4	Exp Board Spare Relay 4	<input type="checkbox"/>	Not Used					
AUX OUT5	Exp Board Spare Relay 5	<input type="checkbox"/>	Not Used					
AUX OUT6	Exp Board Spare Relay 6	<input type="checkbox"/>	Not Used					

Elevator Control Mode Configuration

Step 1: Confirm and Import Elevator Control License

Ensure the controller has the appropriate elevator control license before configuring elevator control. If the license is unavailable, contact sales to obtain the required license.

1. Log in to the Web Management Application on the primary controller.
2. Navigate to "Menu → About" and verify the elevator control license status.
3. Select "Upload Additional License".
4. Import the license file in .license format.
5. Follow the on-screen prompts to complete the license installation.



Step 2: Configure elevator control

1. Verify that the controller has unassigned spare door outputs. Readers 3 and 4 are currently not in use, so assign the elevator control to either Reader 3 or 4.

The screenshot shows the DEFENDAS web interface. The top navigation bar includes 'Welcome, admin. COI' and the date '05/13/2026 05:51 PM'. The main toolbar contains icons for Hardware, Monitor, Access, Config, Admin, Back, Forward, Create, Save, Cancel, Upload Software Update, Download Certificate, Modify, Discover Controllers, and Resync All. The left sidebar shows a tree view with 'COI - I/O' selected. The main content area is titled 'Hardware Template' and includes a search bar and a 'Create Hardware Template' button. Below this is a table of Readers:

Address	Managed By	Model	Reader Type	Keypad Type	Tamper	LED Type	Serial Port	OSDP/RS-485 A...	
READER1	Door 1	Custom	Data0/Data1 ...	Auto		1-Wire (Green)			
READER2	Door 2	Custom	OSDP	OSDP	OSDP	OSDP		0	Configure
READER3		Custom	Data0/Data1 ...	None		None			
READER4		Custom	Data0/Data1 ...	Auto		1-Wire (Green)			

Below the Readers table is an 'Inputs' table:

Address	Name	Enabled	Normally Open	Function	Managed By	Linkage Type	Schedule
AC FAIL	AC Fail	<input type="checkbox"/>	<input type="checkbox"/>	Power Monitor	COI		

2. Click "Modify → Remove Out Door, Muster or Card Enrollment Point" to remove the assigned out door if the readers are assigned to any out doors. If none are assigned, the option will be grayed out.

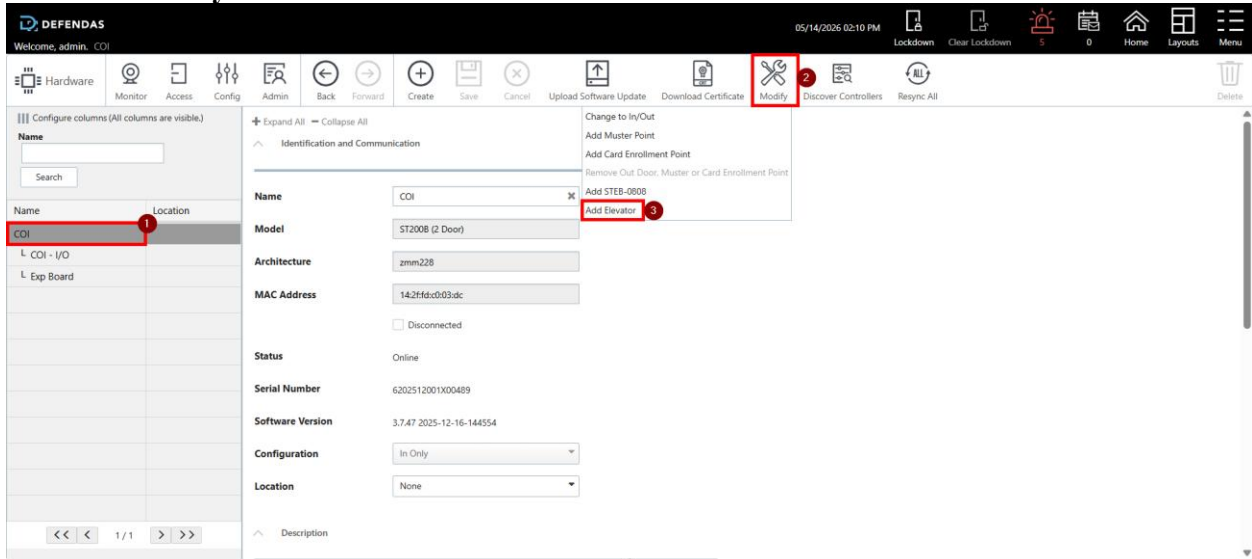
The screenshot shows the DEFENDAS web interface with the 'Modify' button highlighted. A dropdown menu is open, showing the following options:

- Change to In/Out
- Add Muster Point
- Add Card Enrollment Point
- Remove Out Door, Muster or Card Enrollment Point
- Add STEB-0808
- Add Elevator

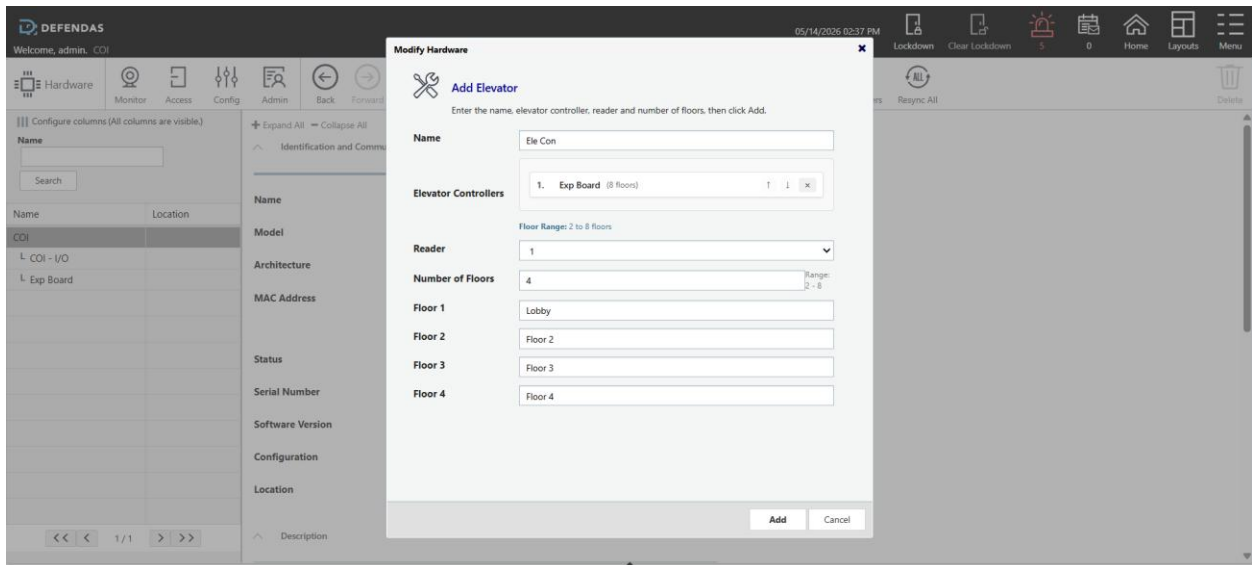
The 'Remove Out Door, Muster or Card Enrollment Point' option is highlighted with a red box and a '3'. The 'COI' device name in the left sidebar is highlighted with a red box and a '1'. The main content area shows the configuration details for the COI device:

Name: COI
Model: ST2008 (2 Door)
Architecture: zmm228
MAC Address: 14:2f:d1:c0:03:dc
Status: Online
Serial Number: 6202512001X00489
Software Version: 3.7.47 2025-12-16-144554
Configuration: In Only
Location: None

3. Click "Modify → Add Elevator".



The system will automatically recognize the expansion board. Customize the elevator control name and floor names, with support for up to 8 floors. All changes are saved after updating. Since a 2-door controller is used, only readers 1 & 2 will populate on the drop-down menu in Readers.



On the **Controller's Name** → **I/O** page, verify that Reader 3 is bound to the elevator control door, as shown in the figure below. Since elevator control uses the out door only, it is automatically assigned to Reader 3 when Reader 1 is selected in the previous step.

The screenshot displays the DEFENDAS web interface. The top navigation bar includes 'Welcome, admin. COI' and the date '05/14/2026 02:37 PM'. The main menu shows 'Hardware' selected. The left sidebar has 'COI - I/O' highlighted with a red box and a '1' icon. The main content area shows a 'Readers' table with the following data:

Address	Managed By	Model	Reader Type	Keypad Type	Tamper	LED Type	Serial Port	OSDP/RS-485 A...
READER1	Door 1	Custom	Data0/Data1 ...	Auto		1-Wire (Green)		
READER2	Door 2	Custom	Data0/Data1 ...	None		None		
READER3	Ele Con Door	Custom	OSDP	OSDP	OSDP	OSDP		0
READER4		Custom	Data0/Data1 ...	Auto		1-Wire (Green)		

Below the Readers table is an 'Inputs' table:

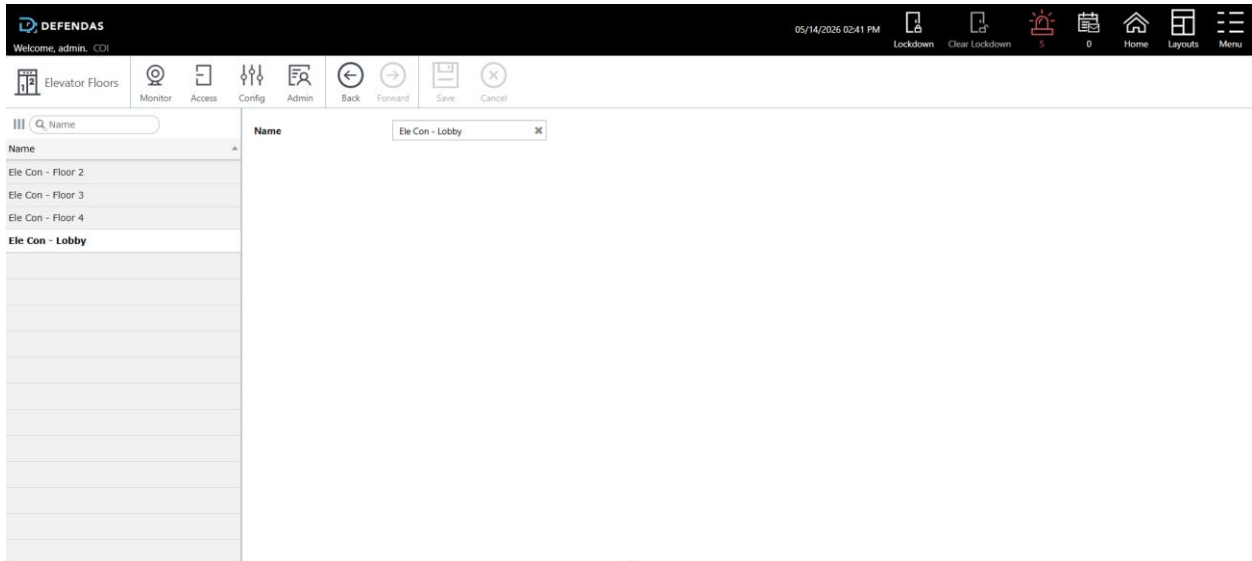
Address	Name	Enabled	Normally Open	Function	Managed By	Linkage Type	Schedule
AC FAIL	AC Fail	<input type="checkbox"/>	<input type="checkbox"/>	Power Monitor	COI		
AUX IN	Aux In	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not Used			
BAT FAIL	Battery Fail	<input type="checkbox"/>	<input type="checkbox"/>	Battery Monitor	COI		
BREAK	Tamper	<input type="checkbox"/>	<input type="checkbox"/>	Tamper	COI		

4. Click **Config** on the menu bar. Navigate to **Elevators** and **Elevator Floors** to view the corresponding configurations. From these pages, modify the elevator controller name and floor names.

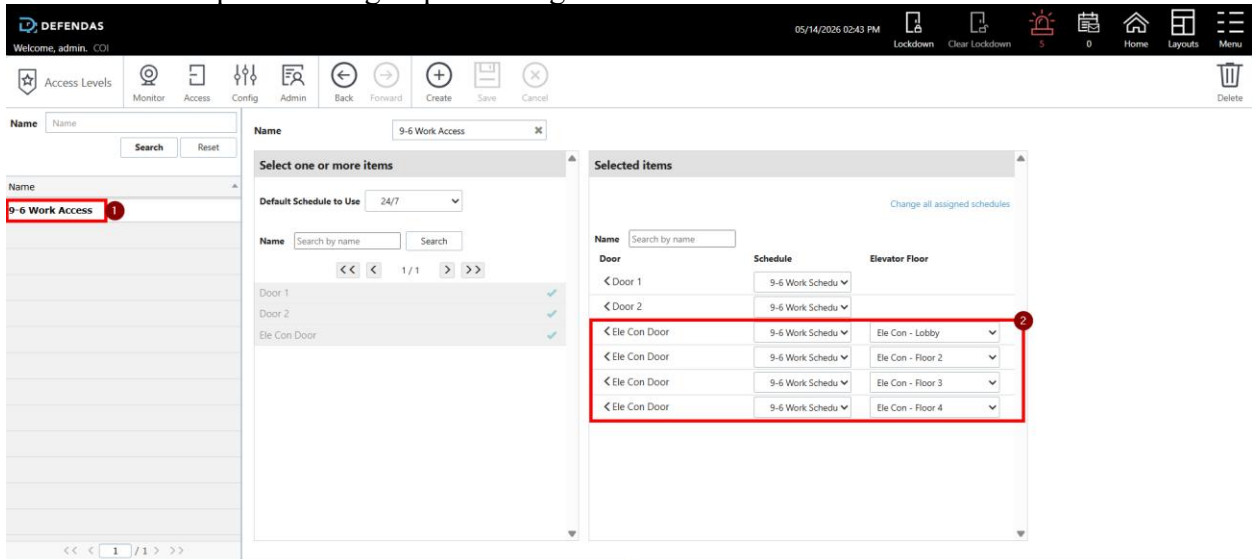
The screenshot displays the DEFENDAS web interface for the 'Elevators' configuration page. The top navigation bar shows 'Welcome, admin. COI' and the date '05/14/2026 02:40 PM'. The main menu shows 'Elevators' selected. The left sidebar has 'Ele Con' listed. The main content area shows the following configuration details:

- Name:** Ele Con
- Access Point:** Ele Con Door
- Number of Floors:** 4
- Sub-Controllers:** Controller, Exp Board
- Outputs:**

L.#	Elevator...	Output name	Controller
0	Ele Con ...	Exp Board Spare Rela...	Exp Board
1	Ele Con ...	Exp Board Spare Rela...	Exp Board
2	Ele Con ...	Exp Board Spare Rela...	Exp Board
3	Ele Con ...	Exp Board Spare Rela...	Exp Board



5. Configure elevator access permissions by floor and assign them to personnel in accordance with existing access control settings. Configure both access control doors and elevator floors within the same permission group and assign them to users.



The screenshot shows the DEFENDAS user configuration interface. The user 'Edward Bang' is selected in the user list. The configuration details for this user are as follows:

- Name:** Edward Bang
- PIN:** [Redacted]
- Duress PIN Type:** None
- Access Levels:**

Name
9-6 Work Access
- Door Access:** [Empty table]
- Options:** Use Extended Door Times

6. Verify the card swipe at the corresponding door reader. Upon successful verification, the door opens and the relay sounds. The elevator control floor relay corresponds to the AUX OUT port of the AHEB-0808 expansion board.

The screenshot shows the DEFENDAS Events page. The event list is filtered to show 'Access Granted (Card)' events. The highlighted event is as follows:

Icon	Occurred	Description	User	Photo	Source	Location
	05/14/2026 02:52:56 PM	Access Granted (Card)	Edward Bang (10017244)		Ele Con Door	

7. Additionally, configure the verification methods supported by the elevator control reader, lock unlock duration, and other settings according to the access control door configuration. The currently configurable options are shown in the figure below:

The screenshot displays the DEFENDAS web interface for door configuration. The top navigation bar includes the logo, user information, date, and various system status icons. Below this is a secondary toolbar with icons for Doors, Monitor, Access, Config, Admin, Back, Forward, Save, Cancel, Manual Commands, and Export PDF. The main content area is divided into a left sidebar and a right main panel. The sidebar contains a search bar and a table of door configurations. The main panel shows the configuration details for a selected door, including a description field and an operation section with several settings.

Name	Controller	Type	Location
Door 1	COI	In	
Door 2	COI	In	
Ele Con ...	COI	Elevator	

The configuration details for the selected door (Elevator) are as follows:

- Description:** (Empty text field)
- Operation:**
 - Default Access Mode:** Card Only
 - Door Mode Schedule:** None
 - Unlock Time (s):** 20
 - Extended Unlock Time (s):** 40
 - Exempt From Global Lockdown
 - Exempt From Global Emergency Unlock