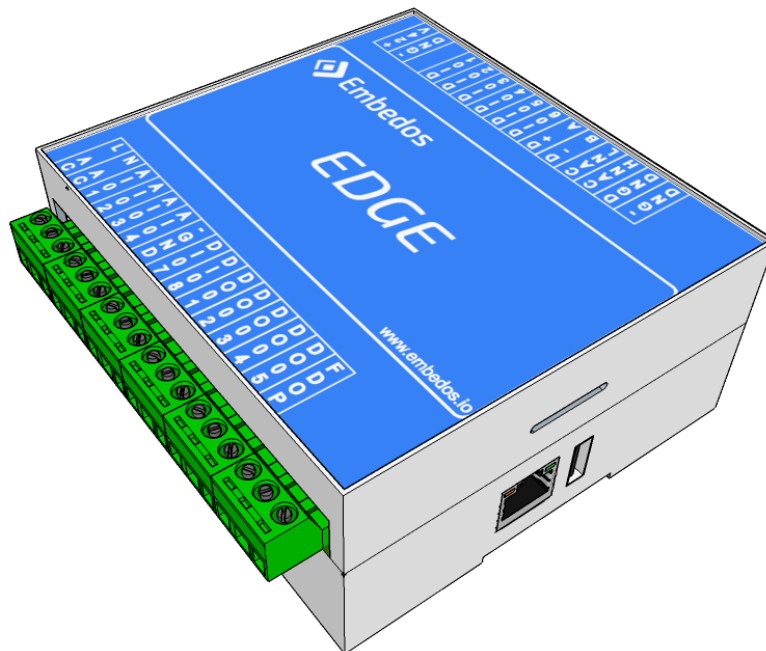


# Embedos

ENGINEERING LLP

## User Manual



### Connecting the Edge controller to a network

1. The Edge controller will first have to be configured to connect to a Wi-Fi or Ethernet connection. Download and install the Embedos 'EmEdge Configurator' app from Google Play S on an android smartphone.
2. Connect the smartphone USB port to the Edge controller USB port.

3. Open 'EmEdge Configurator' and choose 'Yes' and the prompt to enable USB tethering.

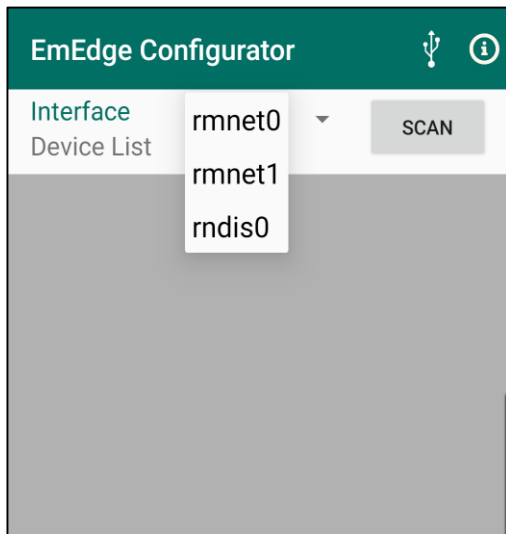


Figure 1: Select 'rndis0' as the interface when connected via USB

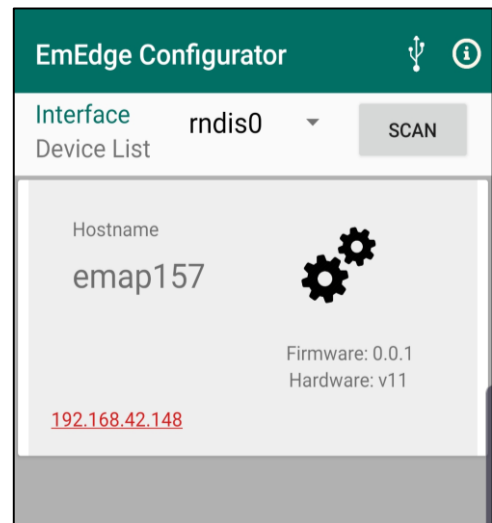


Figure 2: The device listed after scan. Tap the 'gears' to setup the unit

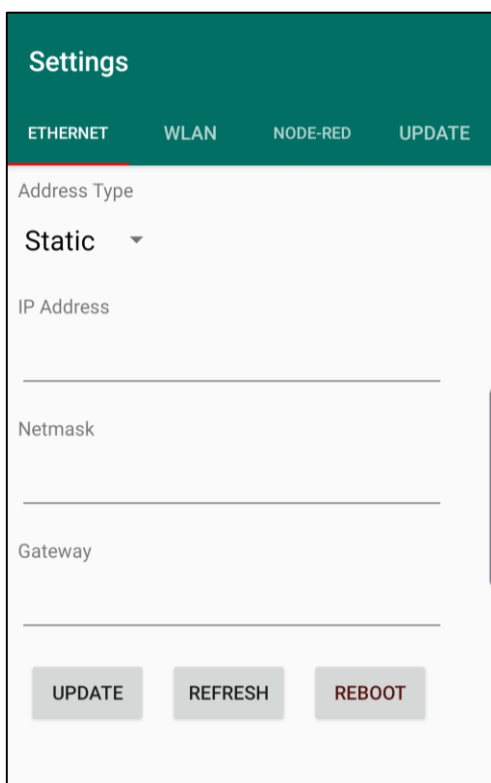


Figure 3: Choose if device IP is to be static or taken using DHCP

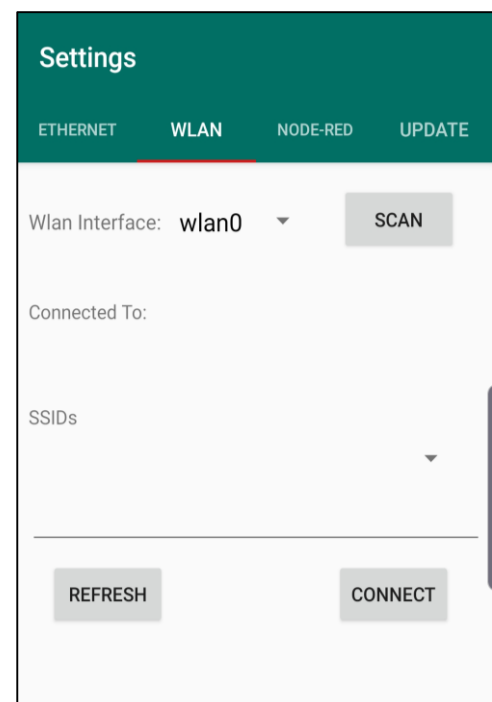


Figure 4: Scan and select the WiFi AP to connect to

- Once the device is connected, and if using DHCP or WiFi, the IP given to the device can be found by checking the connected client list in the router settings. Or use a network scanning application as shown below.

IP Range - Angry IP Scanner

Scan Go to Commands Favorites Tools Help

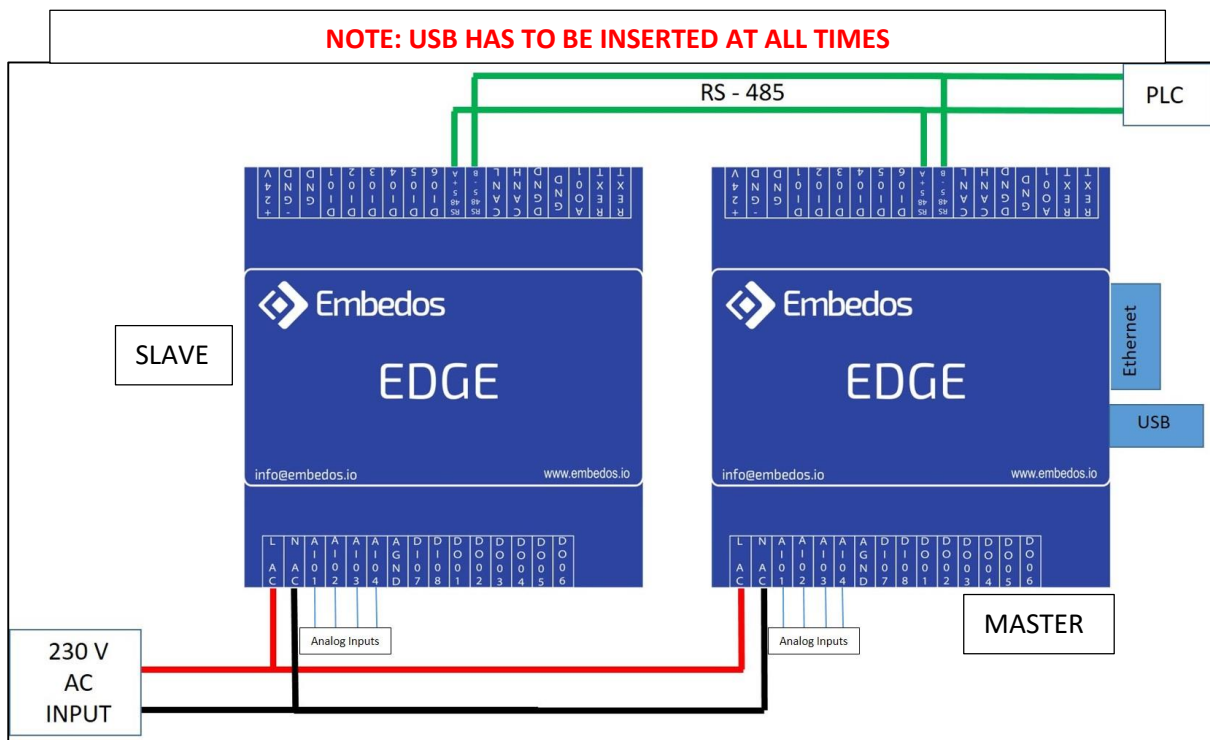
IP Range: 192.168.100.0 to 192.168.101.255 IP Range [v] [g]

Hostname: LAPTOP-AHHVP4GC IP↑ Netmask [v] [h] Start [h]

IP	Ping	Hostname	Ports [↑+]
192.168.100.53	2 ms	[n/a]	22
192.168.100.54	1 ms	[n/a]	22
192.168.100.55	4 ms	[n/a]	22
192.168.100.56	4 ms	[n/a]	22
192.168.101.100	3 ms	[n/a]	22
192.168.100.1	4 ms	[n/a]	[n/a]
192.168.100.2	7 ms	[n/a]	[n/a]
192.168.100.11	4 ms	[n/a]	[n/a]
192.168.100.12	6 ms	[n/a]	[n/a]

Figure 5: Angry IP Scanner used to find Edge controllers with port 22 Open

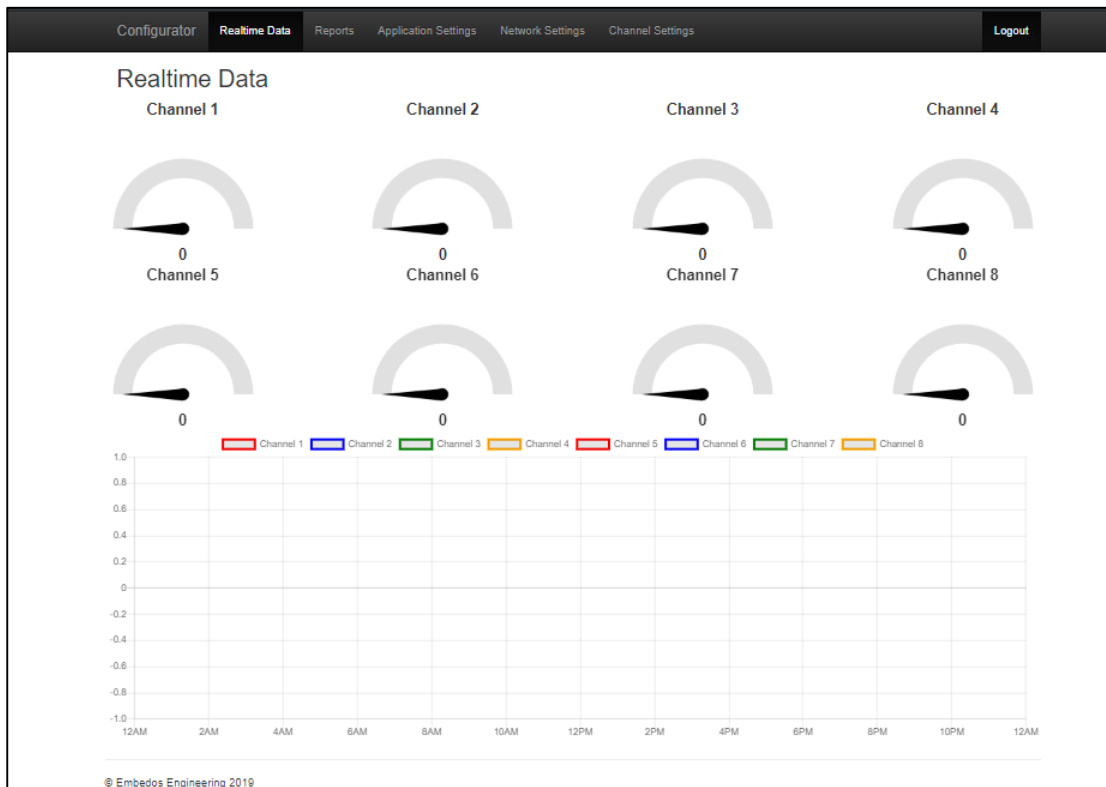
## Connection Diagram



- Master Unit gets connected to Ethernet.
- Slave is connected to Master using RS-485
- PLC will also be connected on RS-485

## Embedos Dashboard Manual

Page 1



### Real Time Data

#### **Description:**

- Displays Gauges for 8 analog channels.
- Similarly displays a graph of the last 100 values of the corresponding channels.

Configurator Realtime Data **Reports** Application Settings Network Settings Channel Settings Logout

## Reports

### Historical

October 23, 2019 - October 23, 2019

Show 10 entries

Search:

time	analog_ch1	analog_ch2	analog_ch3	analog_ch4	Input_1	analog_ch5	analog_ch6	analog_ch7	analog_ch8
No data available in table									

Showing 0 to 0 of 0 entries

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## Reports:

### Description:

- Select the time duration or set a custom range for reports using the convenient drop down selector.
- The table that will be populated accordingly and can be navigated through the page buttons below.
- Download the data shown on the table using the convenient buttons in Excel, CSV or PDF formats directly.
- Or print data directly using the print button.
- The copy button copies the data to the clipboard for pasting as text.

Configurator
Logout
Realtime Data
Reports
Application Settings
Network Settings
Channel Settings

### General Settings

Interface Type:       Baud:       Slave ID:

Slave IP:       Slave Port:

SMS Mode:       Poll Interval:

### Trigger Settings

Show  entries

Search:

Name	Address	Modbus Type	Datatype	Trigger Type	Low Threshold	High Threshold	Number	Message
Input_1	10	holding register	u_int	match			8828385089	(name) has changed to (data)

Showing 1 to 1 of 1 entries

### Channel Configuration

Show  entries

Search:

channel_number	sensor_max	sensor_min	scale_factor	offset
1	1000	0	0	1000
2	10000000	0	352	-1533984
3	1000	0	0	1000
6	1000	0	0	1000
7	1000	0	0	1000

Showing 1 to 5 of 5 entries

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## Application Settings

### General Settings

1. **Interface Type:**
  - a. RTU: Modbus RS485 Protocol
  - b. TCP: Modbus TCP Protocol
2. **SMS Mode:**
  - a. Sim: SMS sent through a sim card.
  - b. Gateway: SMS sent through internet connection.
3. **Slave IP:**
  - a. Enter your Modbus TCP IP address. (In case of Interface Type as RTU, Slave IP option will be greyed out)

4. **Baud:**
  - a. Enter Baud Rate of Device (In case of Interface Type as TCP, Baud Option will be greyed out)
5. **Slave Port:**
  - a. Enter your Modbus TCP port. (In case of Interface Type as RTU, Slave port Option will be greyed out)
6. **Poll Interval:**
  - a. Set the data logging rate. (seconds)
7. **Slave ID:**
  - a. Set the Modbus RTU slave ID. (In case of Interface Type as TCP, Slave ID will be greyed out)

The screenshot displays the 'Application Settings' page in a web interface. The top navigation bar includes 'Configurator', 'Realtime Data', 'Reports', 'Application Settings' (active), 'Network Settings', and 'Channel Settings'. The main content is divided into three sections:

### General Settings

Interface Type: RTU (dropdown)      Baud: 9600 (dropdown)      Slave ID: 1 (input field)

Slave IP: 192.168.101.212 (input field)      Slave Port: 502 (input field)

SMS Mode: gateway (dropdown)      Poll Interval: 1 (input field)

**Save** (button)

### Trigger Settings

Buttons: Add, Edit, Delete

Show: 10 entries (dropdown)      Search: (input field)

Name	Address	Modbus Type	Datatype	Trigger Type	Low Threshold	High Threshold	Number
1	1	1	17	1	1	1	1
Input_1	10	holding register	u_int	match			8828385089

Showing 1 to 2 of 2 entries      1 row selected

Previous 1 Next (pagination buttons)

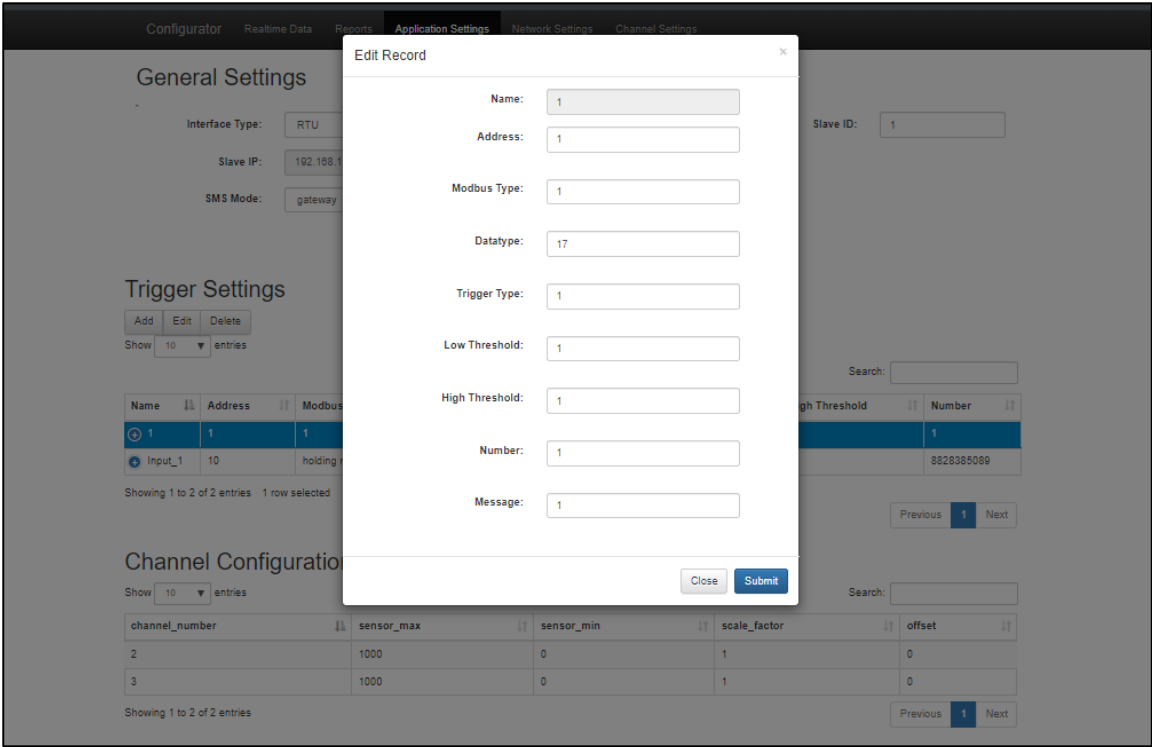
### Channel Configuration

Show: 10 entries (dropdown)      Search: (input field)

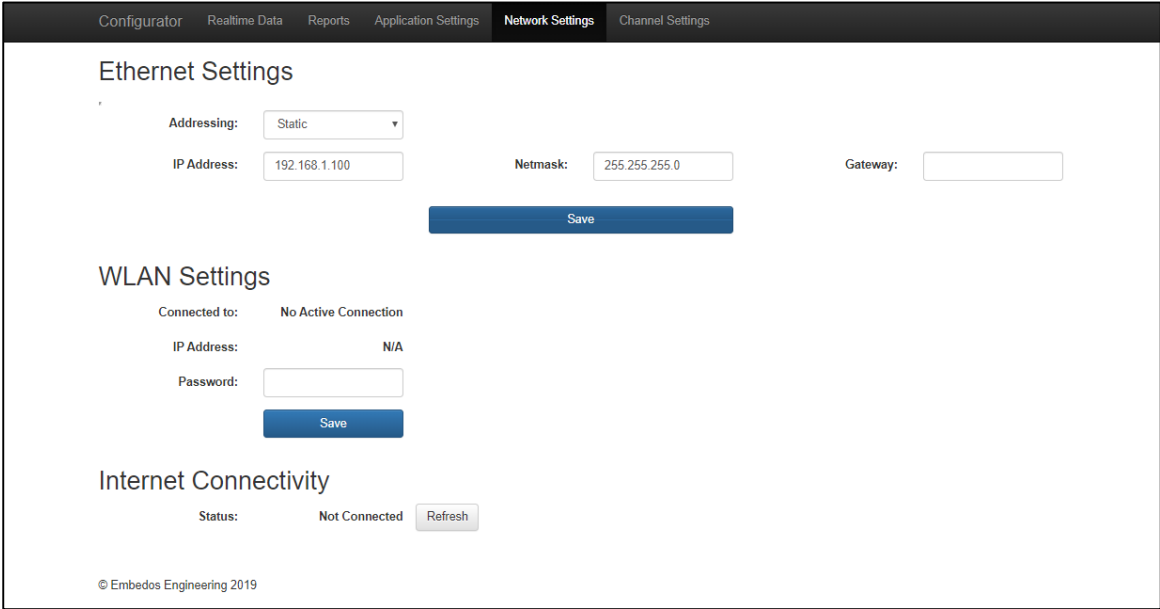
channel_number	sensor_max	sensor_min	scale_factor	offset
2	1000	0	1	0
3	1000	0	1	0

Showing 1 to 2 of 2 entries

Previous 1 Next (pagination buttons)



Page 4





## Network Settings

### Ethernet Settings:

For setting up Ethernet port

1. Addressing:
  - a. Static
  - b. DHCP
2. IP Address:
3. Netmask:
4. Gateway:

### WLAN Settings

1. Connected To:
2. IP Address:
3. Password:

### Internet Connectivity

1. Status:

Configurator Realtime Data Reports Application Settings Network Settings **Channel Settings**

### Gauge Settings

Add Edit Delete

Show 10 entries

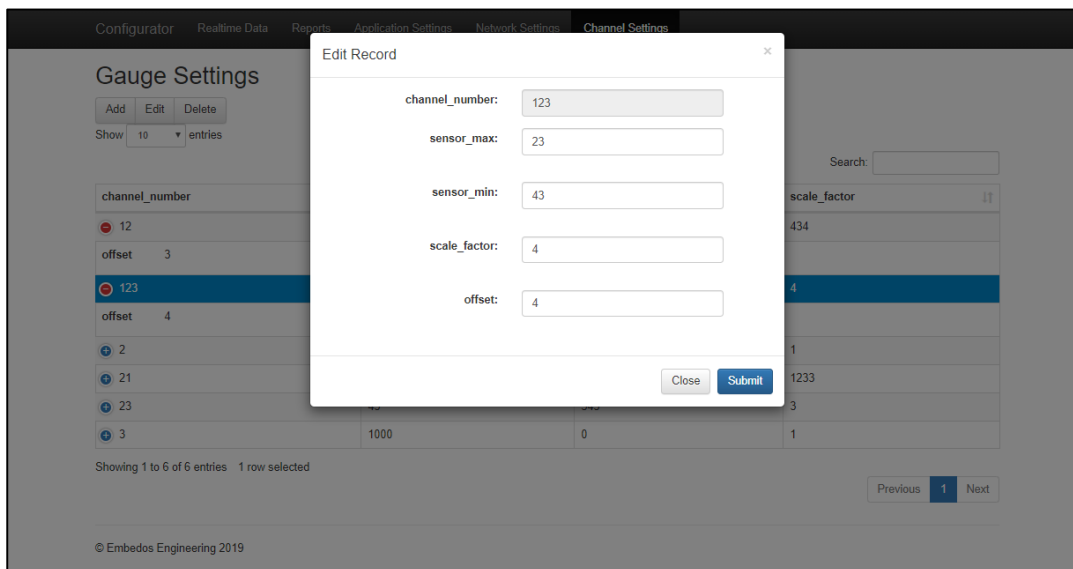
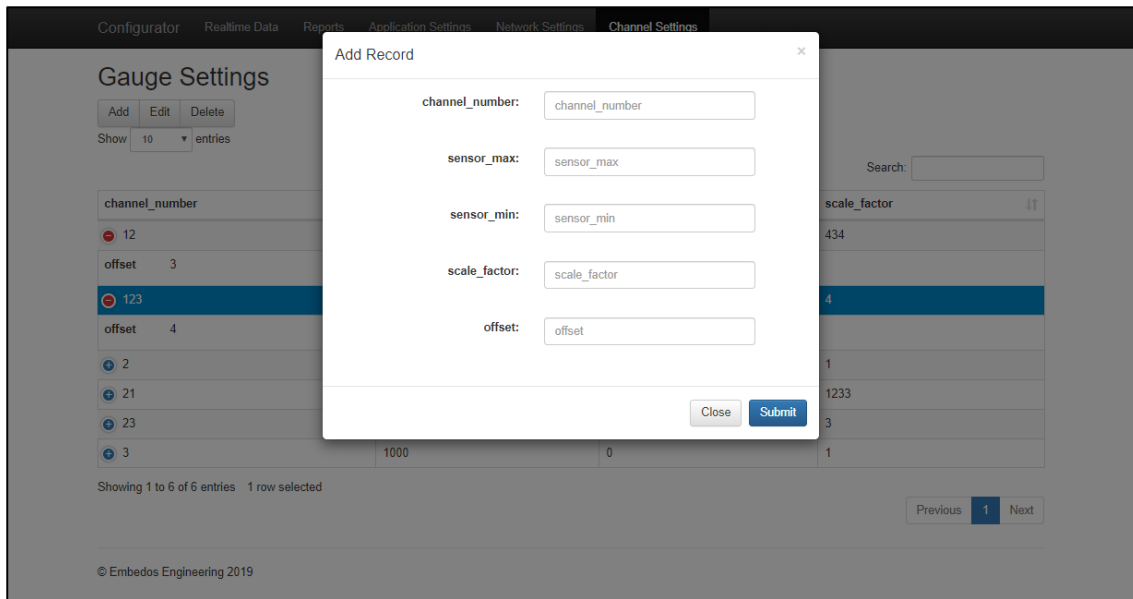
Search:

channel_number	sensor_max	sensor_min	scale_factor
12	123	324	434
offset 3			
123	23	43	4
offset 4			
2	1000	0	1
21	123	123	1233
23	43	543	3
3	1000	0	1

Showing 1 to 6 of 6 entries 1 row selected

Previous 1 Next

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## Channel Settings

- **Up to 8 channels supported.** Add, edit and delete channels.
- Delete and edit individual channels by selecting them.
- Scale Factor and Offsets are automatically set.

**NOTE: USB HAS TO BE INSERTED AT ALL TIMES**

For any more information, kindly contact: