

YO**SENSI**.IO

## Reference Manual

yosensi-configuration-web-tool ver 1.2.0

## Release notes

Date	Version	Changes
10.01.2023	1.0.0	Initial version
11.10.2023	1.1.0	Added "retrieve logs" option with description and illustrations. Added security option and restart device.
18.10.2023	1.2.0	Updated documentation. Added switch node to helium option.

# Contents

Release notes	2
Contents	3
Reference Manual	4
Applications	5
Node List	5
Switch node to helium	6
Firmware update & configuration	6
Firmware update	6
Configuration	13
Recover device	15
Retrieve logs	17
<b>Security</b>	<b>18</b>
<b>Restart device</b>	<b>18</b>

# Reference Manual

The following reference manual describes how to use the device configuration section from the Yosensi Management Platform to change settings in Yosensi devices via bluetooth communication. To connect with the device you need to use a Bluetooth adapter with your PC or try to connect with your phone. We recommend using bluetooth dongle such as:

- TP-LINK UB400,
- Edimax BT-8500,
- ORICO BTA-508

While configuring the device or uploading firmware make sure you are using a supported web. Compatible browsers are:

- Chrome,
- Edge,
- Opera,
- Samsung internet.

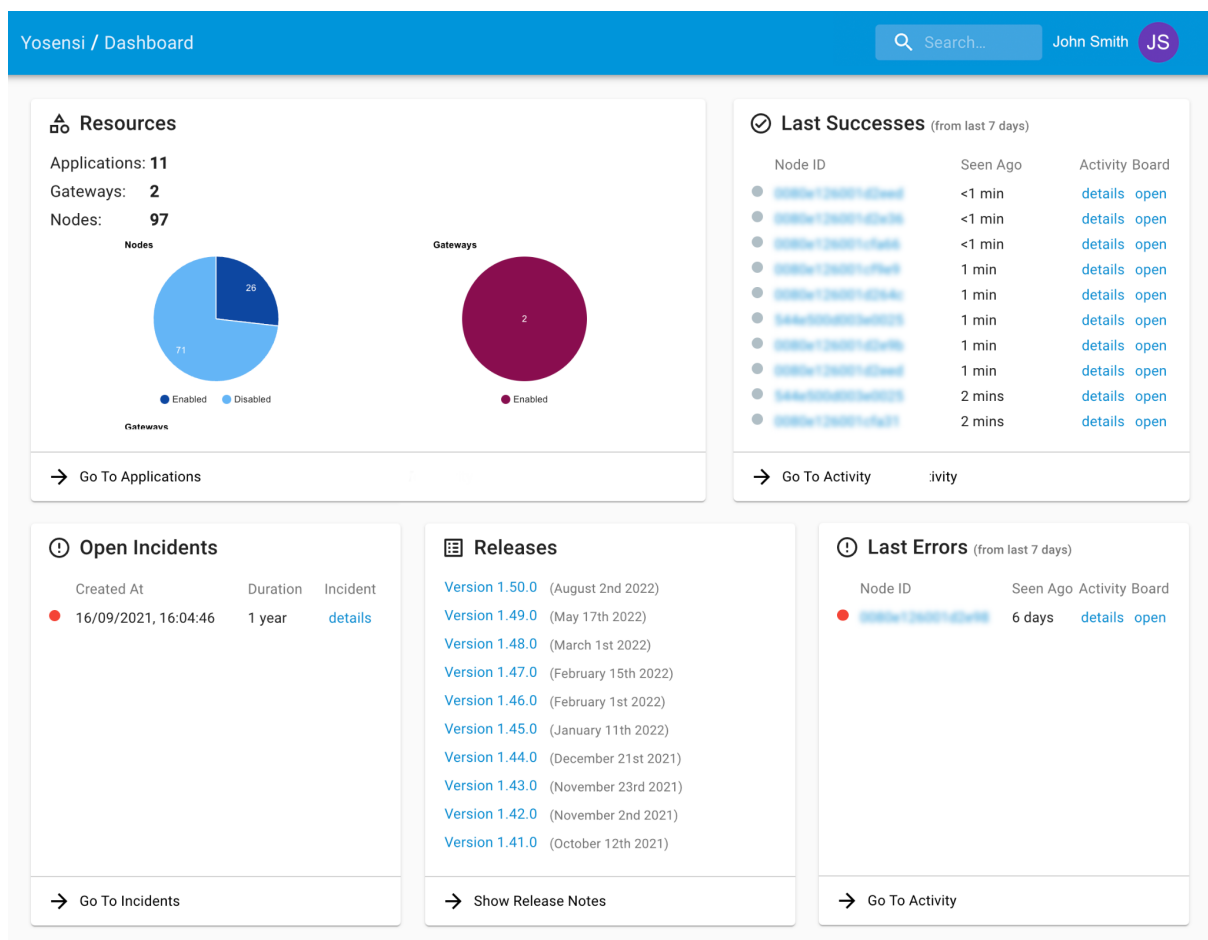
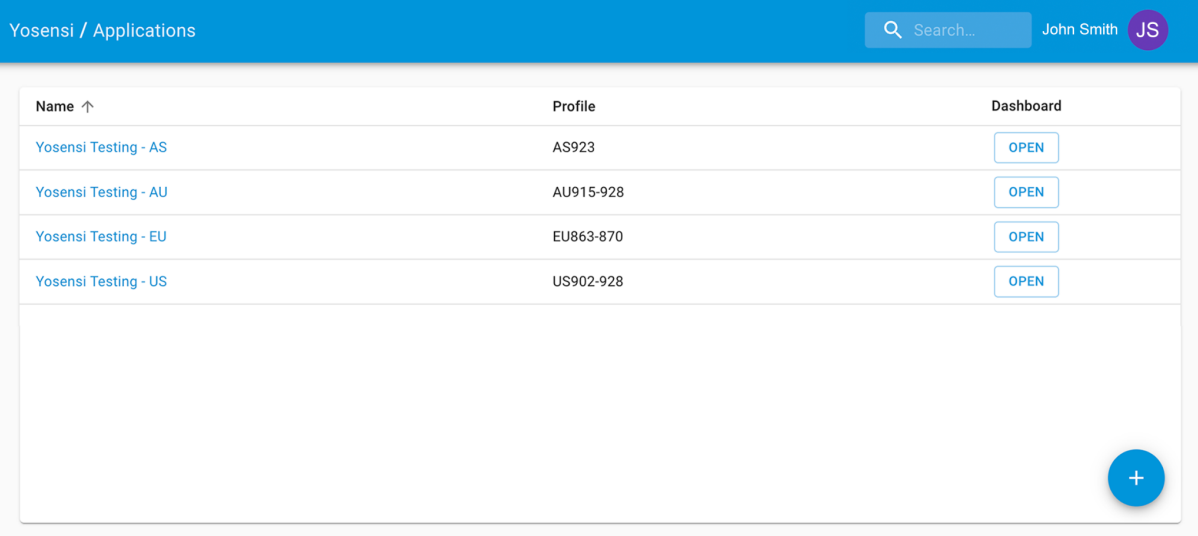


Figure 1 Dashboard view in Yosensi Management Platform.

# Applications

Each customer in the Yosensi Management Platform receives a private organization in which they can create their applications. The applications manage devices clearly and simply. Here you can add and group devices to manage them more easily (e.g., in multiple locations) and check detailed information from the devices (when they last appeared, their application key, DevEUI, name, etc.) It is also possible from here to access the graphs and display the data collected. The data display system in the Yosensi Management Platform is Grafana, an open-source platform with tools to analyze data, extract metrics, monitor through clear, multi-functional dashboards, and trigger notifications for various events.



Name ↑	Profile	Dashboard
Yosensi Testing - AS	AS923	<a href="#">OPEN</a>
Yosensi Testing - AU	AU915-928	<a href="#">OPEN</a>
Yosensi Testing - EU	EU863-870	<a href="#">OPEN</a>
Yosensi Testing - US	US902-928	<a href="#">OPEN</a>

Figure 2 Application view in Yosensi Management Platform.

## Node List

After choosing the application you will see all your devices. Now choose one from the list to make configuration of the firmware or change settings of the device. If you need to add some more devices go to the Yosensi Management Platform documentation, there is a description on how to add new nodes to the list.

NODS LIST						
Node Name ↑	Node ID	Model	Last Seen	Disabled	Dashboard	
YO_360_0000w1200014206f	0000w1200014206f	YO_360	6 minutes ago		<a href="#">OPEN</a>	
YO_Agri_0000w1200014223w	0000w1200014223w	YO_AgriBox	5 minutes ago		<a href="#">OPEN</a>	
YO_Airflow_Pro_0000w12000142dwd	0000w12000142dwd	YO_Airflow_Pro	2 minutes ago		<a href="#">OPEN</a>	
YO_Airflow_Pro_2_0000w12000142u7d	0000w12000142u7d	YO_Airflow_Pro_2x	an hour ago		<a href="#">OPEN</a>	
YO_Analog_0000w1200014277w	0000w1200014277w	YO_Analog	a minute ago		<a href="#">OPEN</a>	
YO_Distance_0000w12000142w9d	0000w12000142w9d	YO_Distance	3 minutes ago		<a href="#">OPEN</a>	
YO_H2O_044w0000004d004d	044w0000004d004d	YO_H2O	5 minutes ago		<a href="#">OPEN</a>	
YO_HIP_0000w12000142a21	0000w12000142a21	HIP	4 minutes ago		<a href="#">OPEN</a>	
YO_Meter_Pulse_0000w12000142b4d	0000w12000142b4d	YO_Meter_Pulse	a minute ago		<a href="#">OPEN</a>	
YO_People_Counter_0000w12000142u81	0000w12000142u81	YO_People_Counter	an hour ago		<a href="#">OPEN</a>	
YO_Power_0000w12000142w3d	0000w12000142w3d	YO_Power	4 minutes ago		<a href="#">OPEN</a>	
YO_Pulse_0000w12000142w0d	0000w12000142w0d	YO_Pulse	3 months ago	✓	<a href="#">OPEN</a>	
YO_PurePro_0000w12000142w9d	0000w12000142w9d	YO_PurePro_3.0	12 minutes ago		<a href="#">OPEN</a>	

Figure 3 Node list view in Yosensi Management Platform.

## Network

There are two options in operating a node network system using Yosensi Management Platform. First one is the local user network. If a user has his own gateway it is necessary to add it to the platform in his application. Go to the Gateways section press ‘+’ button and fill data in blank fields. Second option is to use the Helium network. To obtain this option go to the node details and press the ‘switch to helium’ button and wait a moment. Now devices will send LoRa packets to the closest Helium gateway.

DETAILS
SENSORS
EXTERNAL API
KEYS

CHARTS

⋮

Network: Yosensi SWITCH TO HELIUM

Node ID:

Model: YO People Counter

Last Seen: 7 minutes ago

Status: ● Enabled

Figure 4 Switch to helium button in details of the device.

# Firmware update & configuration

## Firmware update

After choosing the device from the node list, go to the firmware section. It is located on the right side of the navigation tab.

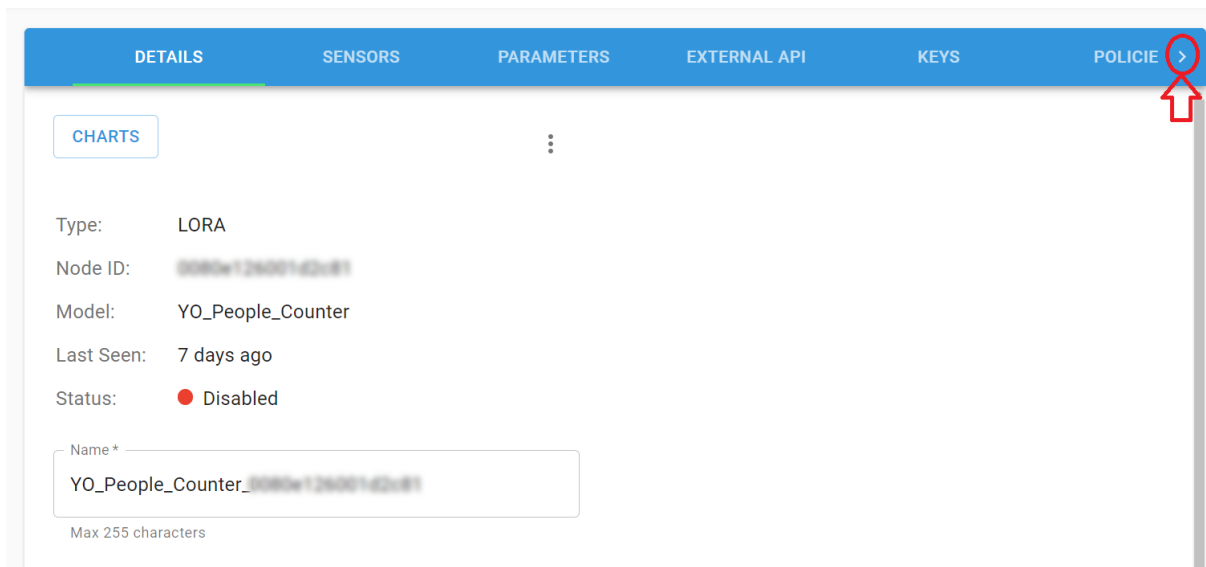


Figure 5 Navigation tab of the device instruction.

Now you can select different options:

- **Verify security status**
- **Recover status**
- **Add security**
- **Configure**
- **Update firmware**
- **Retrieve logs**
- **Restart device**
- **Recover device**

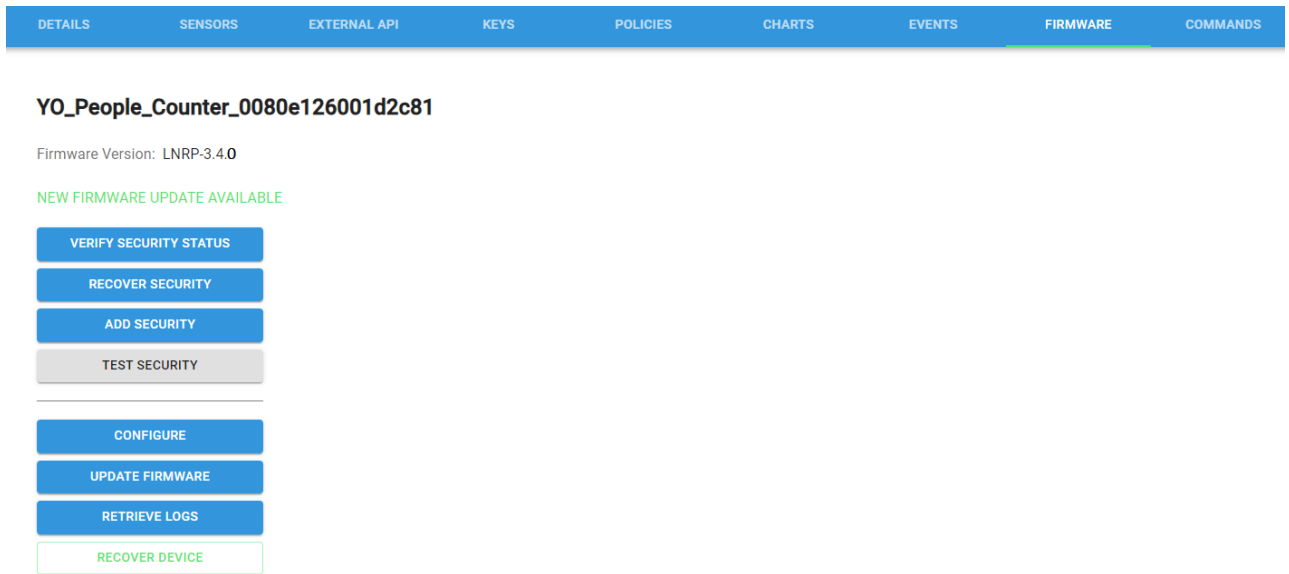


Figure 6 Firmware section view of the device.



Yosensi configuration web tool works with firmware 3.4.0 and the latest. Check installed firmware on your device. If there is new firmware available, update it before configuration. Click **update firmware** button and follow instructions in next steps. **Select device** and follow the instructions shown on the platform.

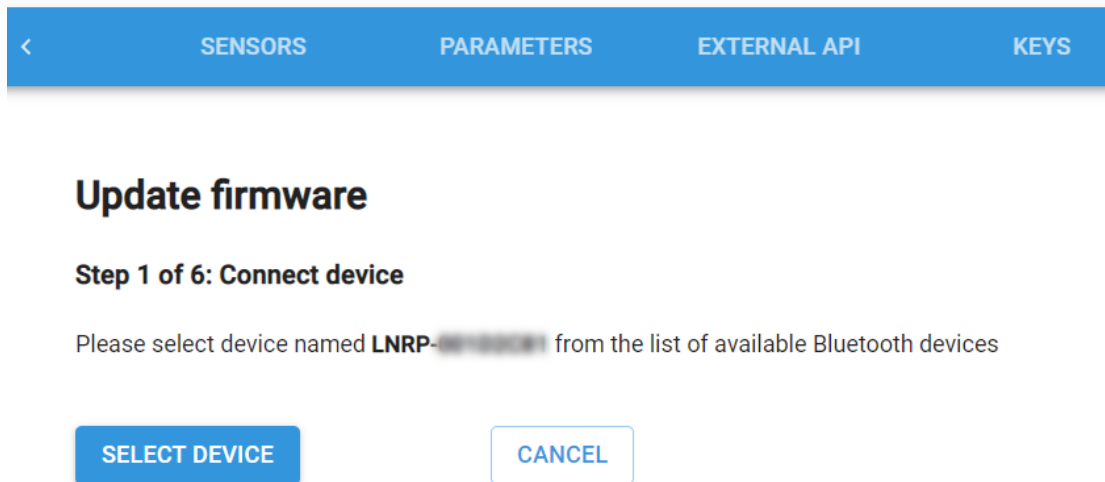


Figure 7 Update firmware and connecting to the device.

Now your system will look for nodes on the list via Bluetooth. You will see the name of the device with last digits of DevEUI on the device sticker. Select and pair it.

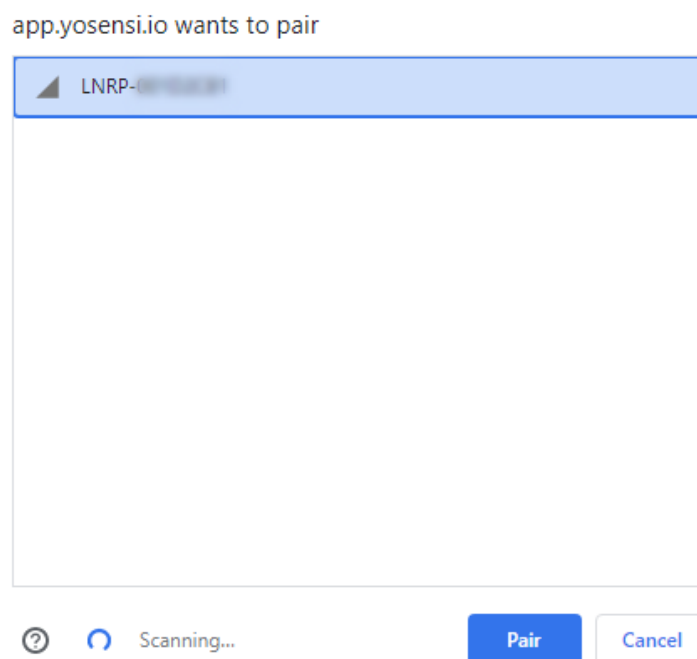


Figure 8 Pairing to the device section view.

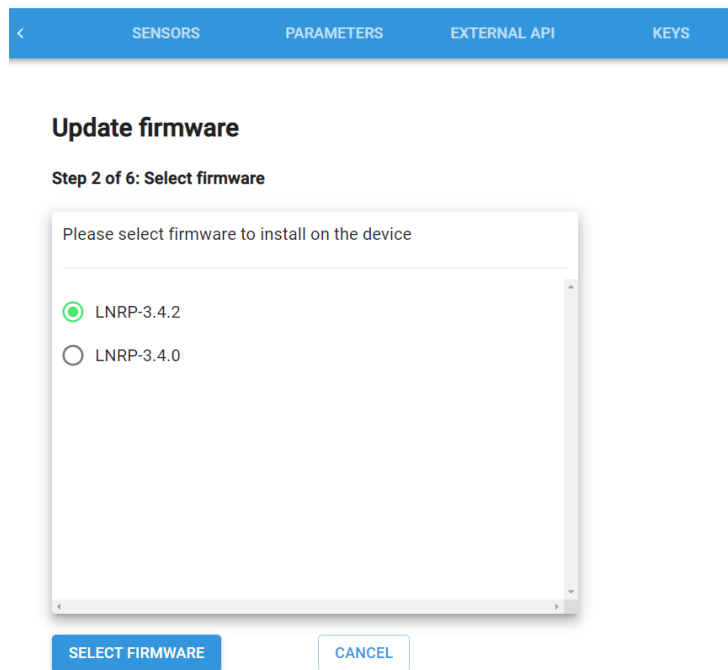


Figure 9 Selecting firmware view in Yosensi Management Platform.

Node is paired, choose a new firmware version to install on the device and press the select button. **Warning**, this step will erase old firmware, process it with caution.

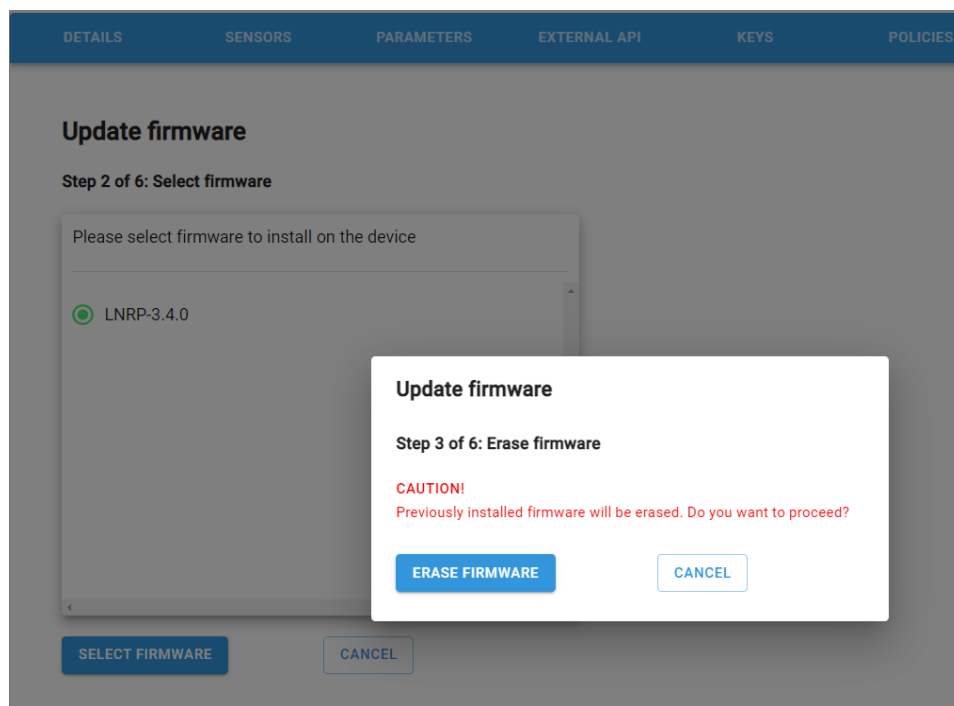


Figure 10 Erasing firmware section view.

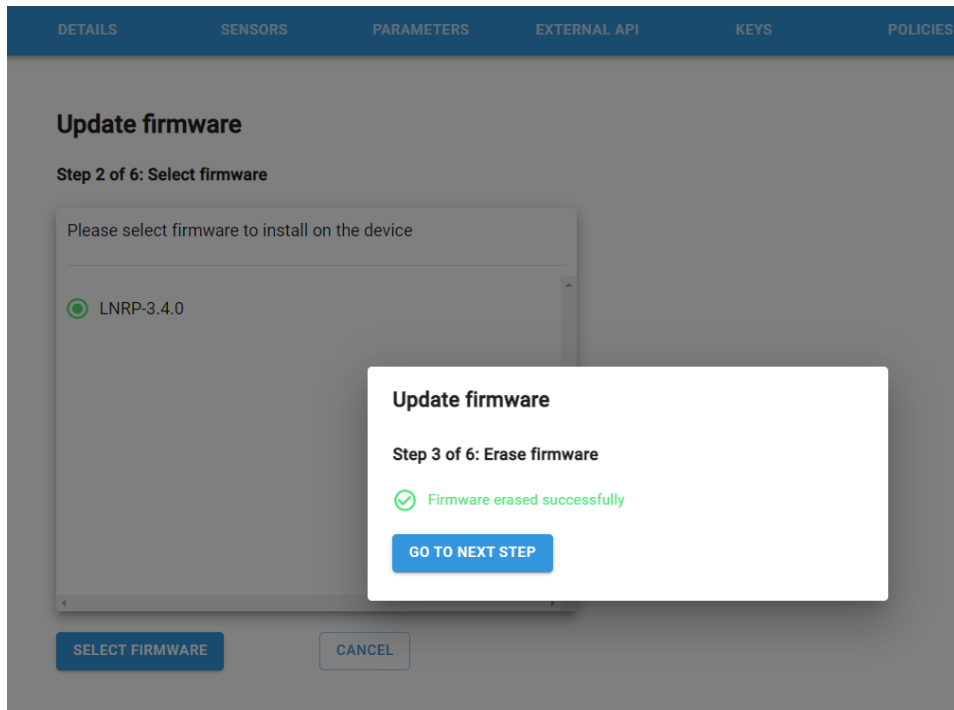


Figure 11 Successful erased firmware section view.

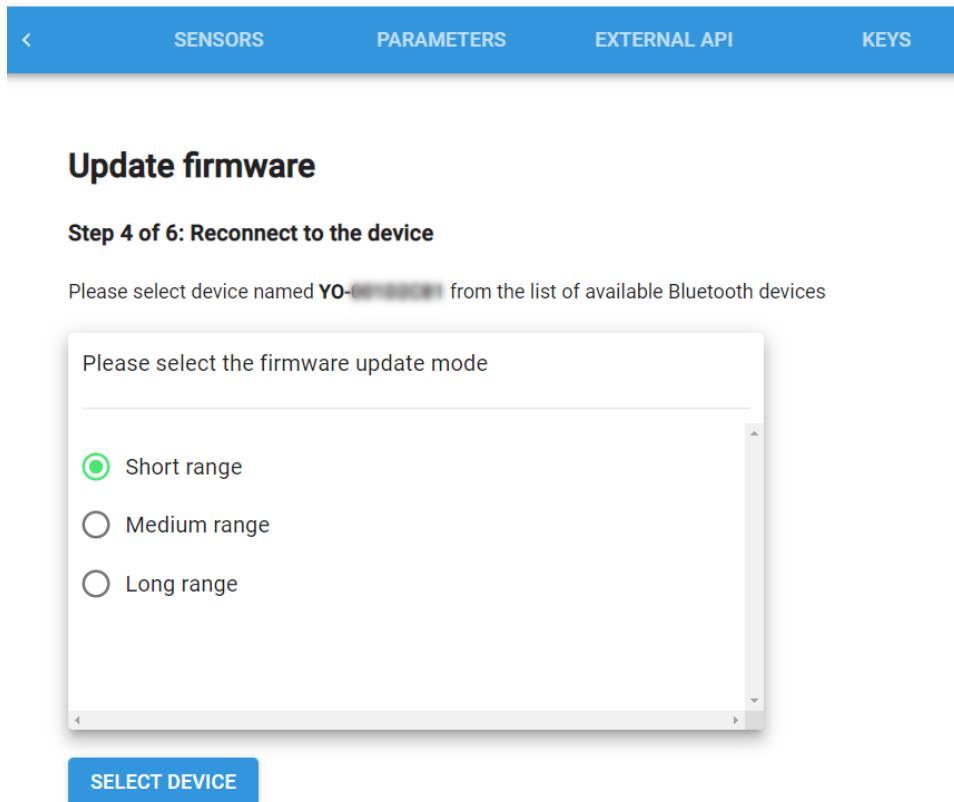


Figure 12 Firmware update mode section view.

To update firmware choose the mode:

- Short range - maximum data sent per packet, the fastest, use with good signal RSSI,
- Medium range - less data sent per packet, takes more time,
- Long range - minimum data sent per packet, the longest time needed.

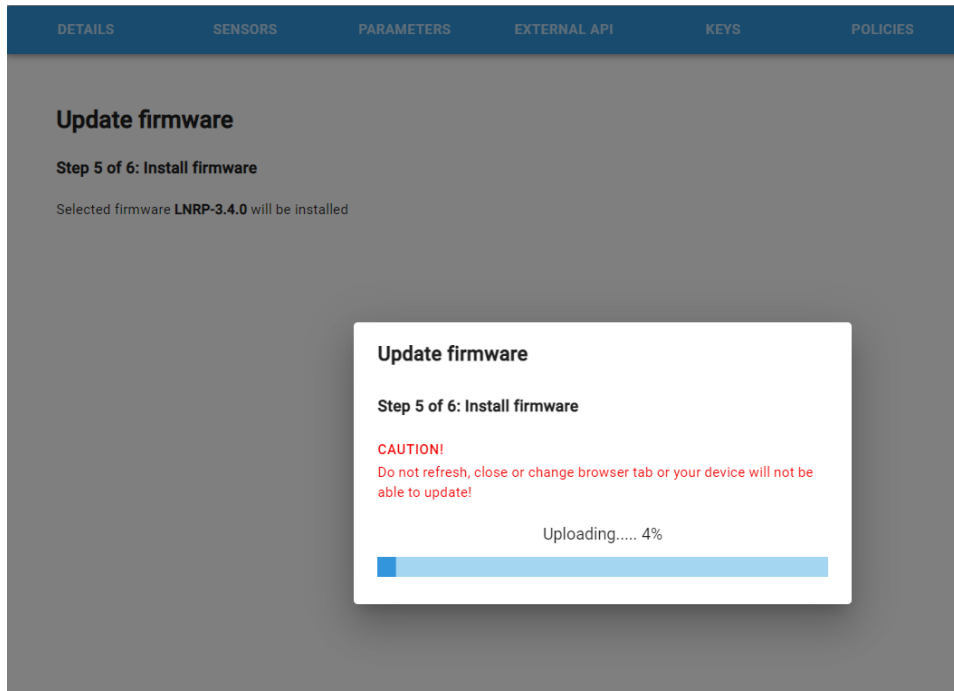


Figure 13 Firmware installation section view.

After successful installation you can connect to the device and check configuration. In case of problems with firmware installation you can press **recover device** button to go back to the previous configuration and firmware version.

## Configuration

In this section the user can learn how to change device settings for his own purpose. In the firmware section tab choose the **configure** button and follow next steps. Select the device and pair it with your system. It can take a while depending on Bluetooth advertising and signal quality.

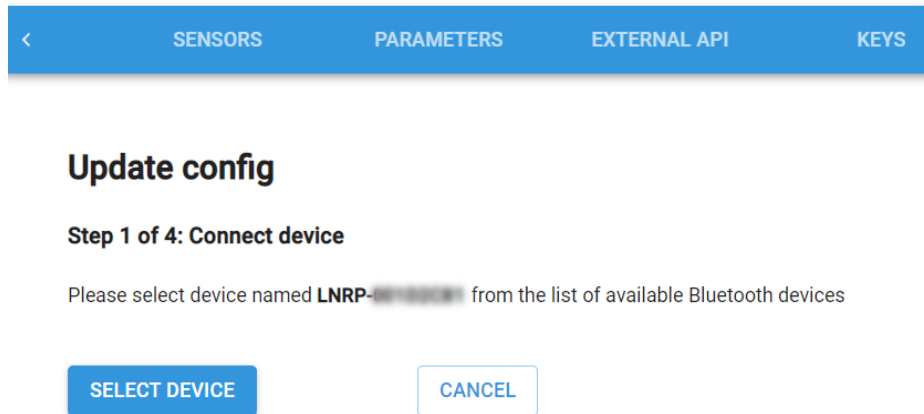


Figure 14 Update config view.

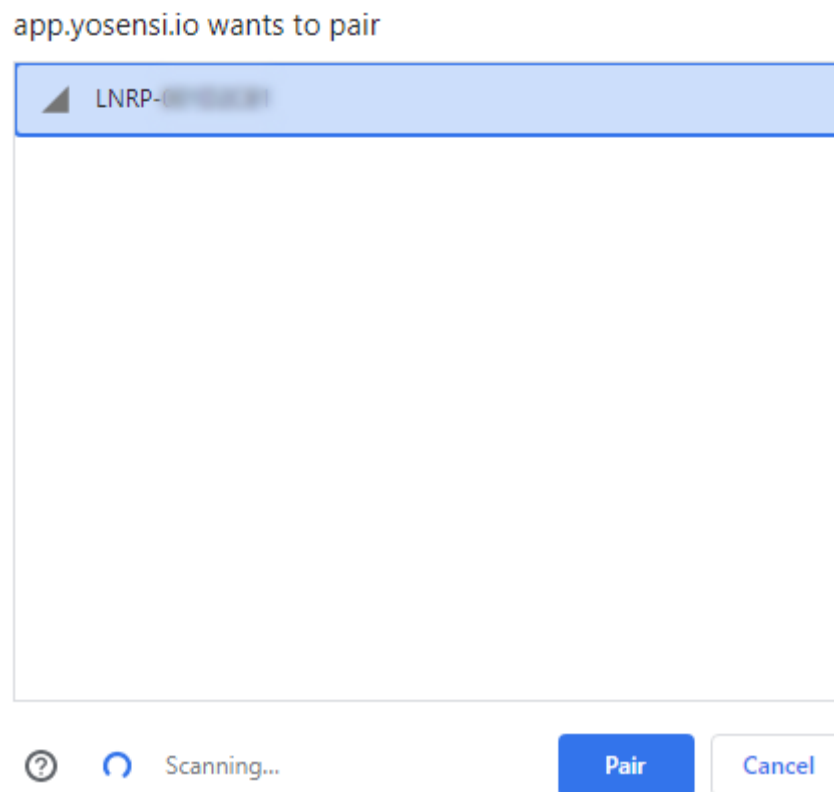


Figure 15 Pairing to the device section view.

After pairing your computer to the node you can see the configuration view tab. Now depending on the device in this section you can change parameters in “device” section or other section that appears below “device”. In this example using YO People Counter you can change parameters in the “detectionarea” as well.

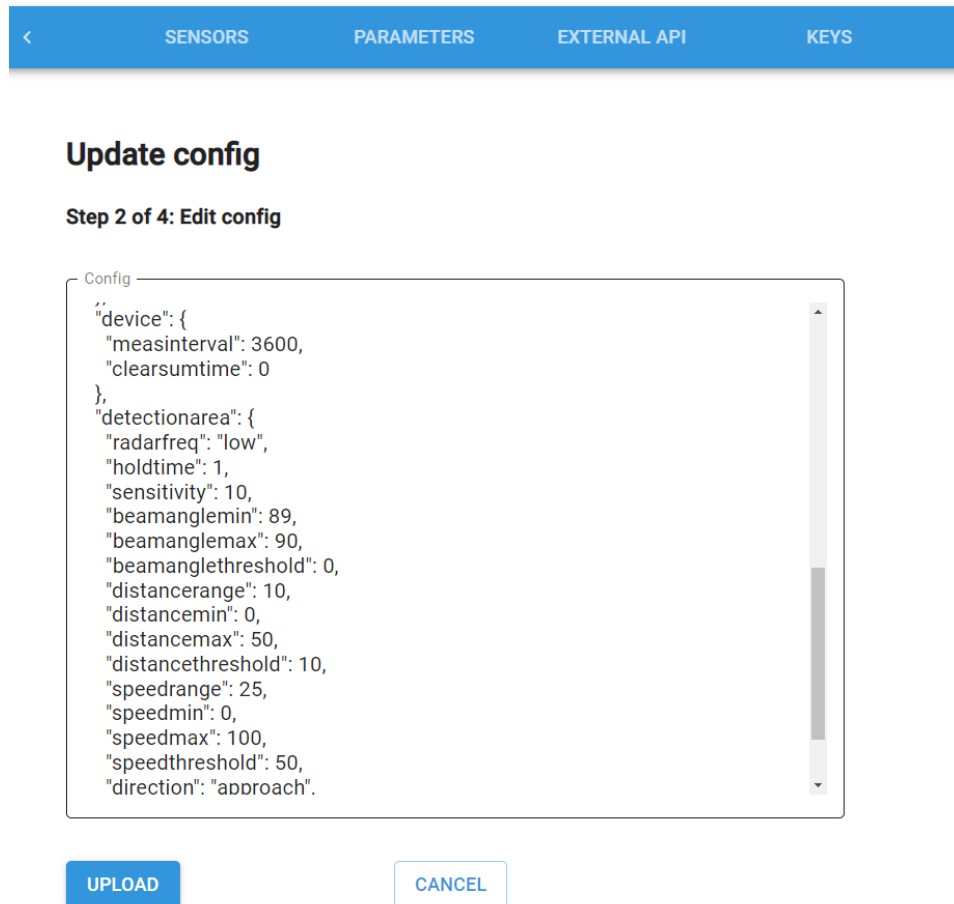


Figure 16 Example YO People Counter configuration.

Press the **Upload** button after making changes in config, then wait a moment. In case of error during uploading parameters check if you uploaded valid values. In other case of any problems you can find us on [support@yosensi.io](mailto:support@yosensi.io).

## Recover device

In case of some problems during updating firmware or disconnection with the device during upload, the user should make a recovery procedure. In the firmware section select the **Recover device** button. Now follow the steps it will take you to the reconnect device section to update firmware with operating mode. This time Bluetooth web tool will look for a Yosensi device with the same DevEUI.

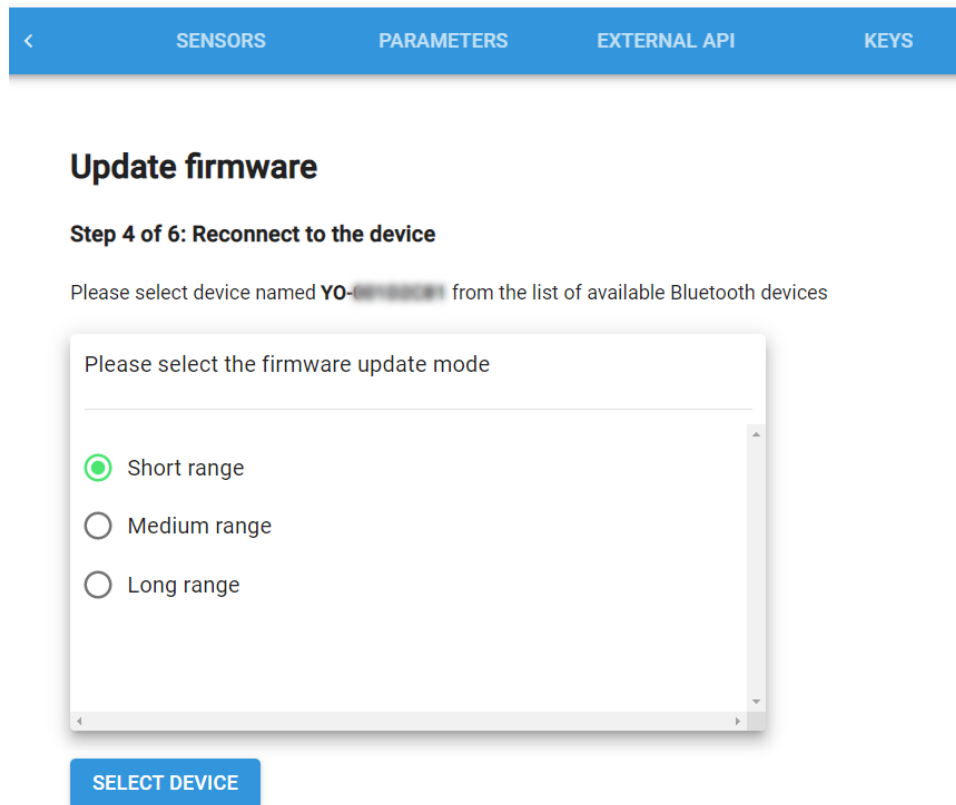


Figure 17 Firmware update mode section view.

Select device and reconnect to the node. After that it will take you to the next step to install firmware you chose with dedicated mode. Wait a moment, it can take a while. Successful installation allows you to connect with the device and check configuration.

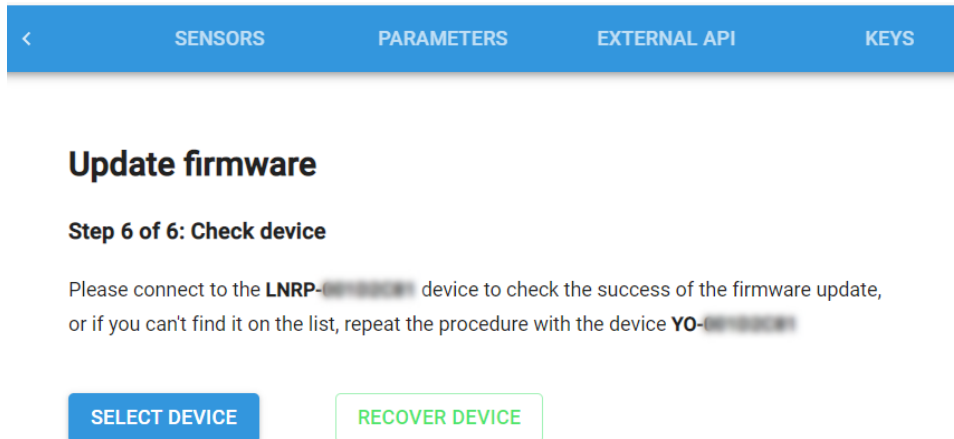


Figure 18 Firmware update check device section view.

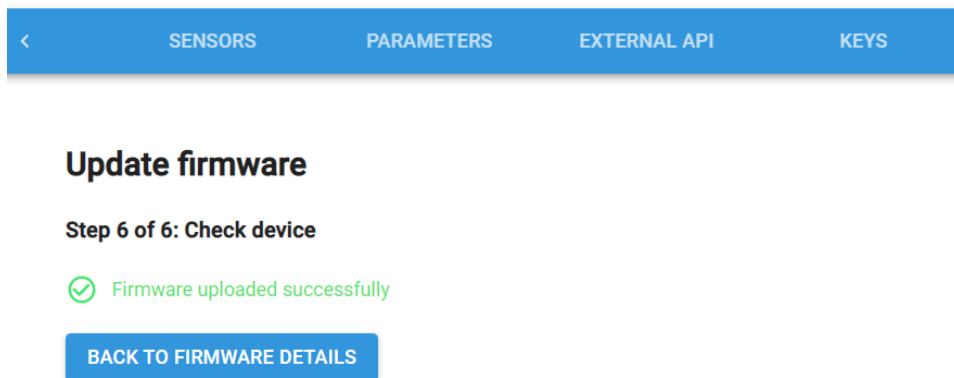


Figure 19 Firmware update success section view.



## Retrieve logs

The retrieve logs function allows you to display the activities and functions of the device from the server side. It can be used to view the status of the device, device performed functions, information about sent frames or to check anomalies in the operation of the device. To proceed this function press "retrieve logs" select device then 'UPLOAD LOGS TO SERVER'. After that logs are sent to the server, the user and support team have access to the historical logs. Information contained in the logs can help the user or support team to identify the status of the device.

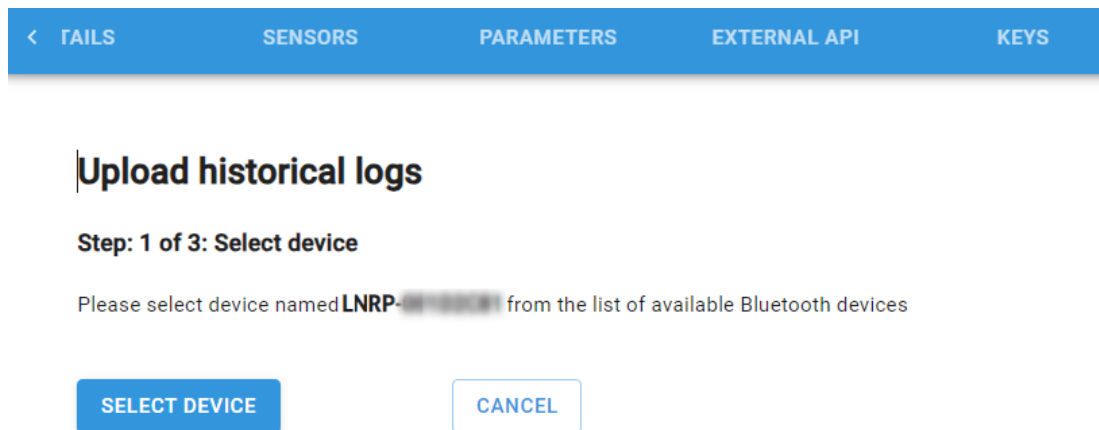


Figure 20 Upload historical logs section view.

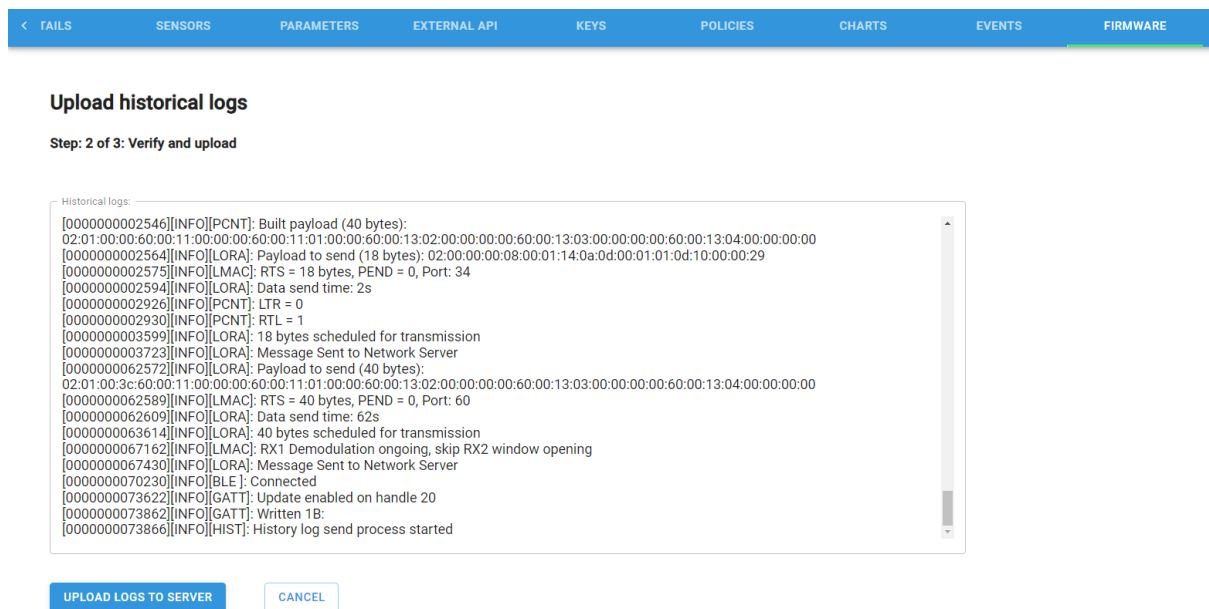


Figure 21 Example historical logs section view.

## Security

There are three different options for Bluetooth device security. First one verify if device after connecting the node to the Yosensi Management Platform has communication security between device and Platform. After selecting node from the list a message will be sent with successful verification. If not, try 'Recover security' option. If the second option fails, that means the device has not applied security while connecting to the platform. Choose the third option for adding security.

## Restart device

This option allows user to restart the device wireless without opening the enclosure. Connect to the device and wait a moment. After that you can see in the node section '**details**', status 'Last Seen' changed to a few seconds ago.