



Basic dashboard configuration with cloud data

This tutorial presents how to send the telemetry data from the **SIP HTLRBL32L** microcontroller, to a cloud platform, in this case, the platform used will be <u>TagolO</u>.

What is TagolO's platform?

<u>TagolO</u> provides a cloud platform for collecting, processing and sending data, connecting any device over WiFi, **LoRaWAN**, Sigfox, LTE, BLE, Zigbee, satellite and Z-Wave to the IoT ecosystem. The results of the collected data will be displayed in real time through an easy to configure **dashboard**.

Necessary tools:

- □ To have read the text LoRaWan
- Link to the Code that will be executed in the tutorial <u>"LoRaWAN TagolO DashBoard"</u>.

1. Basic setup with TagolO

First, register your account by filling in the required data in the link, and then login to the TagolO platform page.



Image 1: TagolO Platform. Source: Screenshot by the author.

1.1 Creating a device

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In the **TagoIO** platform, click on "**Devices**" as highlighted in image 2.

Image 2: Creating a Device - TagolO platform. Source: Screenshot by the author.

A list of connectors will then automatically appear, select the **LoRaWAN TTI** connector.

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Image 3: LoRaWan Network - TagolO platform. Source: Screenshot by the author.

Select "Custom The Things Industries" as highlighted in image 4.

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Image 4: Connector Selection - TaglO platform. Source: Screenshot by the author.

Add a name for the device and enter the **EUI** information of the device identifier. Remember, this "device EUI" identifier is the same as the "device" that was created in the text LoRaWan. Then click "**Create my Device**".

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Image 5: TagoIO device EUI identifier. Source: Screenshot by the author.

When the device is created, a confirmation window will appear so you can click "Continue".

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Image 6: Device created successfully. Source: Screenshot by the author.

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Once created, the device should appear in the device list, as shown in image 7.

Image 7: TagoIO platform - Microcontroller device. Source: Screenshot by the author.

2.Payload Parser.

Payload Parser is a code that will be executed when your device makes a post request. Once the integration between the backend of **TTN (The Things Network)** and **TagolO** are done, it is necessary to inform the **TagolO** platform about the variables coming from the microcontroller. These variables can be temperature, humidity and pressure sensors, however, these variables usually come in hexadecimal format, and the purpose of the "**Payload Paser**" is to convert the hexadecimal into real units of measurement. In order to create the **Parser** for this project, click on the device created and in the next window select the "**Payload Paser**" option, as shown in image 8.

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Image 8: TagolO platform - creating a parser. Source: Screenshot by the author.

In the next window, enable the option to run a "Run your own parser".

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Image 9: TagoIO platform - running your own parser. Source: Screenshot by the author.

2.1 A sample Parser code for HTLRBL32.

With the **Personal Parser** enabled, the script loader will automatically appear. We need to copy the sample code provided by HT-micron on the <u>github page</u>, include the code in the script loader and click "**save**".



Image 10: TagoIO platform - running your own parser and loading a snippet. Source: Screenshot by the author.

With the **Payload Parser** configured and the **Device** created, we can proceed with the next steps of <u>Setting up the</u> <u>interface between cloud backend and dashboard</u>.

References

TAGOIO. **New tutorial – Building your own Payload Parser.** 2022. Available at: < <u>https://tago.io/blog/create-your-own-parser/</u> >. Accessed on july 08th 2022.

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