



LPWAN (LoRaWAN) Product order details

Pessl Instruments, GmbH

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1. Purpose

To fulfill the order of LPWAN (LoRaWAN) product from Pessl Instruments, read through this document and fill in the necessary information.

Unfulfilled or missing data will be treated as standard settings which are set by default.

2. Client account setup

Company Name: _____

Accounts Contact Person: _____

Email for Accounts contact: _____

Your Delivery Address:

Order date: _____

3. Product configuration

3.1 Select Region

Select LoRaWAN region where you will use your product.

EU863-870

US902-928

AU915-928

AS920-923

AS923-925

In case AS920-923 or A923-925 is selected, select one of the following ISM bands:

ISM Band	Frequency of Operation (Hz)
ISM_AS923_BRUNEI	923000000 to 925000000
ISM_AS923_CAMBODIA	923000000 to 925000000
ISM_AS923_HONG_KONG	920000000 to 925000000
ISM_AS923_INDONESIA	923000000 to 925000000
ISM_AS923_JAPAN	920000000 to 928000000
ISM_AS923_LAOS	923000000 to 925000000
ISM_AS923_NEW_ZEALAN	915000000 to 928000000
D ISM_AS923_SINGAPORE	920000000 to 925000000
ISM_AS923_TAIWAN	922000000 to 928000000
ISM_AS923_THAILAND	920000000 to 925000000
ISM_AS923_VIETNAM	920000000 to 925000000

3.2 Select RN module settings

set up RN module with default settings

set up RN module with TTN settings

set up RN module with custom settings

Custom settings:

Check with your LoRaWAN provider and write all necessary configurations you wish to have configured on the product before it is shipped to you.

Setting parameter	Value
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Client can change these settings later via TeraTerm menu directly on the RN module.

3.3 LoRaWAN join process and keys

Select the type of join process for the LoRaWAN device to join the network:

ABP (Activation by personalization) – currently not supported

OTAA (Over the air activation)

3.3.1 OTAA process

the LoRaWAN product will come configured with default settings:

AppEUI: 70B3D57EF00676D

AppKEY: 4DA44D3AEB585485C374438937F6D540

Custom AppEUI and AppKEYs are possible. Write down the AppEUI and AppKEY you wish to be programmed on the ordered devices:

AppEUI: _____

AppKEY: _____

If different AppKEYs should be used, write down for each product separately, which key should be used and send us the information via email to orders@metos.at with order number and station id, AppEUI. Only values in digital formati (text) are acceptable, screenshots and photos will not be processed.

These values can be changed later via TeraTerm menu on the product directly by the client.

3.4 LoRaWAN network provider

product will use TTN LoRaWAN network for connectivity

product should be preconfigured and provisioned on the Pessl Instruments TTN Application

product will be provisioned on client's own TTN Application

send us your:

TTN Application ID: _____

TTN Application Access Key: _____

TTN Application handler url: _____

we need this info to make bridge integration between your TTN application via MQTT protocol.

product will use other LoRaWAN network for connectivity

LoRaWAN network provider uses Actility

in this case forward the data to this HTTP listener: <http://upload.fieldclimate.com/loT/lora>

network provider uses another system

this needs to be checked with our technical team for the integration. In this case, send us:

network operator name: _____

network operator support person contact: _____

network operator supported transfer protocols:

MQTT

HTTP POST

network operator payload structure:

send along with this document in email to support@metos.at

3.5 Confirmed/Unconfirmed data transmissions

Product can transmit confirmed or unconfirmed messages to the LoRaWAN network. By default, stations are set to send unconfirmed messages. If you want to use confirmed transmissions, tick the box below. Beware, some network operators charge extra for the confirmation packets sent through the network.

I want to use CONFIRMED message transmissions

Custom integrations are addressed individually.

3.6 Measurement and transmission intervals

Default values for the Pessl Instruments LPWAN products:

Sensor measurement interval: 300 seconds (5 minutes)

Transmission interval: 900 seconds (15 minutes)

These values should not be changed. However, you can change them on your own risk via menu option on the product using the TeraTerm app.

4. Agreement

Pessl Instruments:

- is not a network providing company therefore does not take any responsibility for the LoRaWAN network status, availability, signal strength, gateway maintenance and any other related topic
- we use precertified RN modules for LoRaWAN connectivity,
RN2483: <https://www.microchip.com/wwwproducts/en/RN2483>
RN2903: <https://www.microchip.com/wwwproducts/en/RN2903>
All necessary documentation for communication equipment import etc. can be found on the manufacturers website and if needed, the client needs to get necessary documents from Microchip website. We do not support unofficial firmware code on the mentioned RN modules.
- client order is checked before it goes into production, if this document is not fulfilled, Pessl Instruments can reject the order
- when product order details are not delivered with the order, Pessl Instruments can set up the station to be used by default with the TTN network
- all support is charged extra unless agreed otherwise on project's basis

Limitations:

- our LoRaWAN products cannot retransmit old data. When a data transfer fails, the data for that transmission interval is lost and cannot be retrieved. In case this is an issue, think about using GSM based stations.
- additional settings for the LoRaWAN connectivity can be done via bridge mode using the RN AT commands. If this is necessary, users can do this by themselves or with our help on a project basis.

Data payload structure:

- is a closed source and not publicly open. It can be negotiated on case by case situation
- when parsing is done on client's side, Pessl Instruments does not take any responsibility for data
- payload structures can be changed in future firmware versions without any prior or post notification

[] I agree with the stated facts

Name and surname: _____

Contact: _____

Date: _____

Signature: _____