Troubleshooting Guideline

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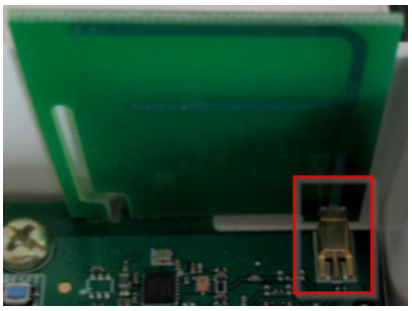
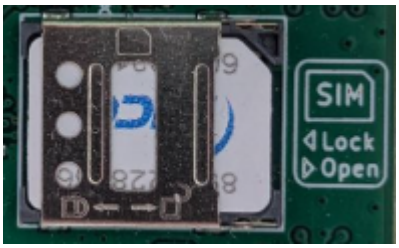
Self Checks

Hardware Checklist

Question	How To	Restriction
Is the antenna connected?	• Visually check the Antenna connection. • Make sure the connector is fixed soldered on the PCB. 	
Is the battery connected?	• Visually check the Battery connection • If in doubt, reconnect the Battery 	
Is the SIM-Card inserted?	• Visually check the SIM Card • Check the orientation of the SIM Card 	Not for LoRaWAN operation

Device not Working

The device is not connecting and no remote error analysis is possible.
Local access to the device is required.

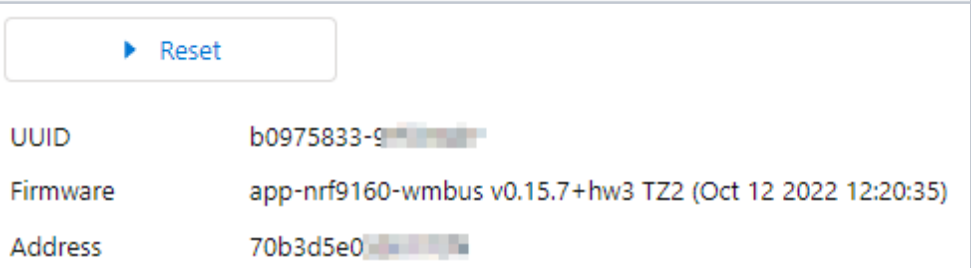
Device	Indication	Meaning / Causes
All	• Green LED Flashes every few seconds	• Indicates a reboot Cycle • SIM Card not connected? • Hardware error? • Local Configuration error (remote updates are validated!) • Local Firmware Update error (remote updates are validated!) • Battery low / brownout
wMbus Gateway	• After Reset the Blue LED does flash for ~3 minutes	• Mobile connection cannot be established
All Battery Devices	• No green LED light after Reset	• Battery empty • Hardware error

⚠ **Further Error Analysis**

Log from device can indicate the cause

Software Checklist

1. Connect the Lobaro Configuration Adapter to the Hardware (see: USB Config Adapter)
2. Install and connect via Lobaro Maintenance Tool

Question		
Check Firmware Version	• Go to Firmware Tab • Reset the device • Wait for Device Info Output • Check Firmware and Address is correct	

Check that Firmware starts up	• Go to Logs Tab • Check that bootloader and firmware is loaded	
Check Configuration	• Go to Configuration tab • Press "Reload Config" • Check the parameters, especially the connectivity parameters ◦ WAN, Host, SIM-Settings like APN, Operator, etc.	
Check Battery Voltage	▪ See logs and search for: e.g. LTE| Voltage: 3629mV ▪ Reset the device to get the value from after reset	

Fix issues

Device does not start

- Update the Firmware to the latest or desired version

Device does not connect to the mobile network

- Check connection with your mobile operator
- Try another SIM Card

Retoure process

- Contact Lobaro with a description of the defects, type and number of devices. We will issue an Retour document and number.
- Ship devices without batteries. Else a fee for shipping dangerous goods must be applied.

LoRaWAN Join fails

To find the reason for a missing / failing Join Request check the following information:

- What LNS is used?
- Is the device registered with the correct LoRaWAN Version (mostly 1.0.2 for Lobaro Devices)
- Is the device configured to use LoRaWAN v1.0 (v1.1 use should be avoided since it's not certified)
- Are all Device parameters correct in the LNS: DevEUI, JoinEUI (aka AppEUI), AppKey
- Is there a possibility to trace the Join request on LoRaWAN Gateway Level?
- Does the Server states any Errors when receiving the Join Request
- Is there any error indication inside the device log?
    - e.g. "hw error for tx data up"