LoRaWAN® End-Device and Network Server Interoperability Test Report Template

Project Information

Batch End Device: **Unimet Lite**

Date of Report: **May 20, 2026**

Test Engineer: **Zvonimir Baće**

Organization: **UniMetric d.o.o.**

Interoperability Test Plan Version: **1.1.1**

LoRaWAN Version Tested (e.g. 1.0.2, 1.0.4): **1.0.4**

Frequency Plan ID (e.g. EU868, US915, AS923, etc.) : **EU868**

Network Server Make/Model: **Actility ThingPark 8.1**

Gateway Make/Model: **Tektelic Kona Micro**

Application Server Make/Model: **UniMetric TIA Core**

Join Server Make/Model: **Actility ThingPark 8.1**

Device Under Test (DUT) Summary

DUT ID	DUT Make/Model	Act Modes (OTAA/ABP)	DUT Configuration Notes	Comments
1	Unimet Lite LITE-WMC-LW-NFC-I-I4-IP68-I	OTAA	Off-the-shelf device running the default configuration	Device debugger connected

Summary of Test Results

DUT ID	Test Case	Test Description	Result (Pass/Fail/Partial)	Observed Events	Comments
DUT-1	3.2.1	Activation by Personalization (ABP) Test	N/A	N/A	DUT ships OTAA-only
DUT-1	3.2.2	Over The Air Activation - Join/Rejoin Process	Pass	1. Verify Join Procedure – Pass 2. Verify Re-join Process – Pass 3. Verify different RxDrOffset, Rx2Datarate, RxDelay – Pass	All three OTAA Join/Re-join related scenarios were successfully executed and verified.
DUT-1	3.2.3	Uplink Transmission	Pass	1. Verify Unconfirmed Uplink transmission – Pass 2. Verify Confirmed Uplink transmission – Pass 3. Verify correct ADR fallback behavior when uplinks receive no downlink responses – Pass 4. Handling missing or malformed MAC command replies – N/A	Scenario 4 requires the DUT to intentionally suppress a required MAC command reply or generate a malformed MAC command answer. The tested device is an off-the-shelf LoRaWAN Certified end-device and does not provide a test mode for intentionally violating MAC-layer behavior. Executing this scenario would require modified test firmware, a MAC-command injection/fault-injection setup, or a dedicated conformance test tool.

DUT-1	3.2.4	Downlink Transmission	Pass	1. Verify Unconfirmed Downlink transmission – Pass 2. Verify Confirmed Downlink transmission – Pass 3. Verify atomic handling of multiple contiguous LinkADRReq MAC commands – Pass 4. Verify LinkADRReq TxPower index handling for requested transmit power – Pass 5. Verify NewChannelReq handling when optional data rates are not supported by the end-device in dynamic channel-plan regions – N/A 6. Verify LinkADRReq handling when optional channels or data rates are not supported by the end-device in fixed channel-plan regions – N/A	Scenario 5 is not applicable because the DUT supports all applicable EU868 data rates, including DR0-DR5 and DR6/DR7. Scenario 6 is not applicable because the DUT is EU868-only, while the test targets fixed channel-plan regions such as US915/AU915.
DUT-1	3.2.5	Class B Tests	N/A	N/A	DUT is Class A only
DUT-1	3.2.6	Class C Tests	N/A	N/A	DUT is Class A only

Test Engineer Summary and Notes (Batch Level)

Overall Interoperability Evaluation:

The DUT successfully completed the applicable interoperability scenarios and demonstrated correct OTAA join/re-join, uplink/downlink, ADR, LinkADRReq, and NewChannelReq behavior on EU868.

Any Issues Encountered Across DUTs:

No blocking DUT issues were observed. Some scenarios were not applicable or not fully reproducible due to the DUT being EU868-only and the tested platforms not exposing arbitrary MAC-command injection.

General Recommendations:

None.

Additional Comments:

The DUT was tested as an off-the-shelf device using its default configuration. Where a scenario was not applicable, the limitation was documented in the test notes.

Test Sign-Off

Test Engineer Name: Zvonimir Baće

Signature:

Date: May 20, 2026