



LoRa[®] CERTIFICATION FAQ

1. What is the benefit and aim of LoRaWAN[®] certified product?

LoRaWAN certification ensures the basic interoperability between customer application-specific end devices and any LoRaWAN network. It also entitles a product to use the LoRa Alliance Certified Logo.

2. Are there any LoRaWAN network providers requiring the certification?

Yes, currently there are a lot of LoRaWAN network providers requiring this certification. One of the current key players here are network providers in BeNeLux or France requiring the certification from their customers wanting access to the net.

3. What kind of LoRaWAN devices can be certified at IMST?

The certification program at IMST is for Class A devices in EU region (863-870MHz). Furthermore, we offer certification testing for the regions North America (US902-928MHz), Asia (AS 923MHz) and India (IN865-867MHz).

4. What are the first requirements to initiate the certification process by IMST?

a) You need to be a member in LoRa Alliance. If any assistance is needed by registering, you may contact the Alliance.

Contact details: help@loralliance.org

b) Contact IMST for a quote. Fill in the [questionnaire](#) and send it to contact@loratest.de

5. What is LoRaWAN certification program with IMST?

The LoRaWAN certification program with IMST is as follows:

- a) Prepare your product(s) for certification. We will assist you through these requirements.
- Product(s) must fulfill the referenced [LoRaWAN[®] Specification v1.0.2](#) and the companion.
 - Must fulfill [LoRa Alliance LoRaWAN[®] Regional Parameters v1.0.2rB](#)
 - Product(s) must fulfill relevant regional LoRa Alliance End Device Certification Requirement

Documents listed below are available to all LoRa Alliance Members:

- [LoRa Alliance European EU 863-870MHz Region End Device Certification Requirements documents V1.5](#)
- [LoRa Alliance US902-928MHz Region End Device Certification Requirements document V1.3](#)
- [LoRa Alliance Asia AS923MHz Region End Device Certification Requirements document V1.1](#)
- [LoRa Alliance India IN865-867MHz Region End Device Certification Requirements document 1.1](#)

- b) Deliver your product to us. Either one or both of these activation methods should be ready: „Over The Air Activation (OAA)“ or/and „Activation By Personalization (ABP)“.
Two devices, one for certification testing and another one for spare shall be provided.
A switching between both modes is also provided from IMST.
- c) We will perform the certification tests and provide you or the Alliance with the results, depending on request.
- d) If test passed, the „PASS“ test results will be provided to LoRa Alliance.
- e) In case the node fails certification tests we can help with test diagnostics and guidelines for corrections. The device needs to be retested again.
- f) Alliance reviews the passed test result and announces the LoRaWAN certificate directly to the device manufacturer.
- g) Results and basic product information (based on data from questionnaire) are released on LoRa Alliance website. Release date can be customized to align with product launch date, if requested. Also a picture is required here that can be issued with either the questionnaire, or in parallel.

6. Is there any „Golden Sample Code“ available from GitHub?

Yes, there is a „Golden Sample Code“ available to the public from Semtech GitHub.
GitHub link to reference code <https://github.com/Lora-net>.

7. What is the price of the certification?

The costs for the certification are 2.5k€ per device/region, includes test diagnostics and instructions for corrections in case the node fails certification tests. The test includes also a retest round if the node fails. If you would like to get certified more products than one, we need to know whether the FW stack inside the end node stays the same always. If that is adopted in the layer of the protocol stack, a new LoRa certification would be necessary. If that is not the case, the LoRa Alliance can stick to „Certification by Similarity“ with reduced certification costs. Even though, it is finally up to the Alliance to decide on this.

8. What does „Certification by Similarity“ mean?

Certification by Similarity allows a product that is derived from a previously tested and certified LoRa product to be considered for certification based on its similarity to the tested certified product, depending on the differences between the two. Typically cosmetic differences (see chapter 7) are allowed, but different hardware, firmware or software will require individual (re-) certification testing. When certifying a module, it must be proven that it cannot be used in a way that the product's application software can interfere with the execution of the LoRaWAN protocol stack. If this cannot be proven, the module itself cannot be certified and each product using that module must be certified instead.

9. What is included in the LoRaWAN certification service?

LoRaWAN certification service includes full guidance through the certification process and if requested regulatory approval against RED or FCC/IC guidelines, others on request.

10. What does the LoRaWAN certification test and what does it not test?

The LoRaWAN certification tests for end node functionality, in other words it tests that node's LoRaWAN protocol stack and application are compliant with the LoRaWAN specification. The certification does not cover radio performance (RF Performance) like testing for the radiated power (TRP), radio sensitivity (TIS) etc. These are key parameters for good performance when signal strength is weak. These can be requested additionally, but are not part of the certification testing, as described above, but will be in near future.

11. How long does it take to run the LoRaWAN certification tests?

If you book a timeslot for certification and provide the product to be tested, typically the test results may be delivered within one week from the booked date. The test itself takes about 2-3 hours per module so if you pass the certification in the first run without errors, probably you may get your certification the following day.

12. Is regulatory testing (CE/FCC/IC) required prior to LoRaWAN certification testing?

No, regulatory testing can usually take place in the same slot with the LoRaWAN certification testing (FCC takes longer than one week). If you are also interested in RED/FCC measurements and/or Radiation Performance measurements, IMST is pleased to help also on this. For all of these tests, an additional SW is required on the module.

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