



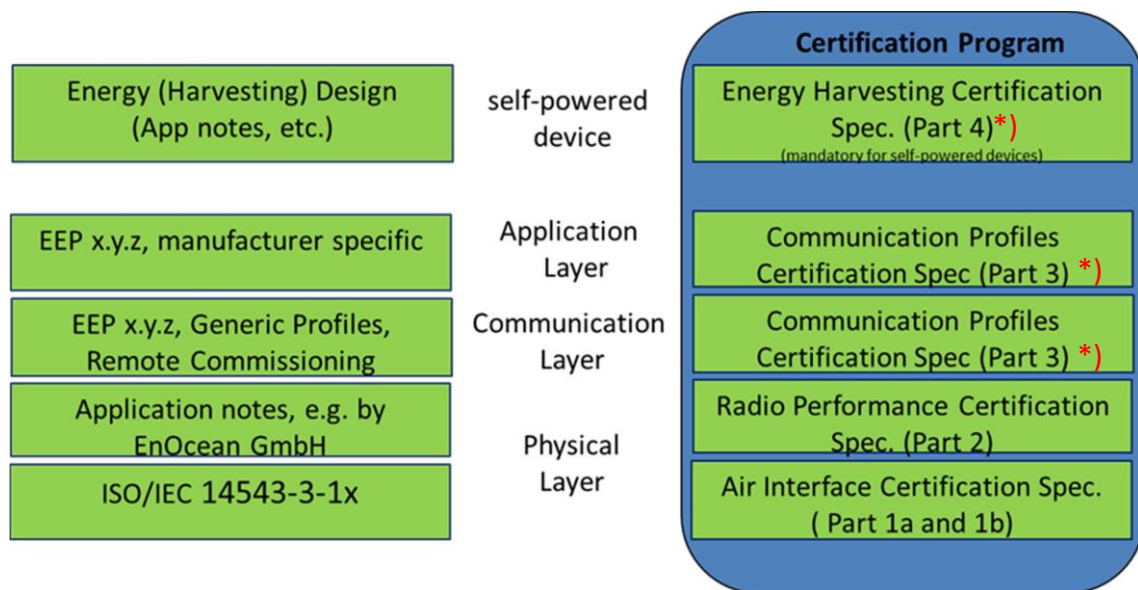
Fact Sheet Certification Program

What is it about?

The Certification Program is the EnOcean Alliance' tool to

- secure seamless interworking of ISO/IEC 14543-3-10 or -11 based products,
- support achieving interoperability for your devices,
- achieve reliable result of the product development process,
- provide a range of transparent and pragmatic test scenarios and test cases,
- focus product development on straight forward development,
- secures the EnOcean Alliance Technology Logo for your product,

designed as **self-certification process** supported by tools free-of-charge for its Promoter and Participant members.



*) part 3 and 4 only required for „Alliance-Verified“ and „Alliance-Verified for IoT“ certification levels

EnOcean Certification Specifications mapped on the System Specifications

How do I benefit from it?

- Offer interoperable products and solutions compatible with the EnOcean ecosystem and ready for integration into IoT systems.
- By a straight forward delivery of your product, from design to ramp-up
- By a straight forward development process
- By producing reliable data about your product's performance
- A certified product is entitled to bear the *EnOcean Alliance Certified logo* and can be listed in the [Certified Product Database](#) on the EnOcean Alliance website.



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How does it look like?

- It is a comprehensive program covering all layers (see graphic above) and a governing document, our [Certification Handbook](#)
- The Certification Handbook presents the Certification Process and explains the philosophy and approach
- Each layer of system specifications is matched by a corresponding certification specification
- The certification specification delivers the test approach and the test cases
- Testing data and product data are summarized and promoted via the certified product database
- The test program is supervised by our *Certification Manager*

Where do I find the latest release?

You will find its latest releases at
<https://www.enocean-alliance.org/specifications/>

A high-level introduction “**how to certify a product**” at
<https://www.enocean-alliance.org/products/how-to-certify-a-product/>

Which information will I find there?

- [Certification Handbook](#): provides an insight into the philosophy of the Certification Program, details the Certification Process, outlines the Certification Rules including the definition and conditions of the EnOcean Alliance Technology Logo.
- Air Interface Certification specifications ([ASK](#), [FSK](#)): defines the minimum set of test cases that have to be executed to assess radio interoperability. Typically this set of test cases are performed by the chip / module supplier and a certification statement is provided.
- [Radio Performance Certification specification](#): Optional for Certification levels „Alliance-Verified“ and „Alliance-Verified for IoT“ only. Describes how to perform a qualitative radio range testing to evaluate the quality of the transmission, reception or both. It describes the test method and the general test setup with the relevant parameters of the test equipment to be used. Test cases for receiver and transmitter performance tests as well as the categorization of the test results are provided.
- [Communication Profiles Certification specification](#): provides a blueprint for creating the test cases needed to certify EnOcean-based products. Based on the functions that a device is able to perform, this document provides a method to isolate and test individual features of the application protocol as well as the guidelines for embedding these steps within an XML structure.



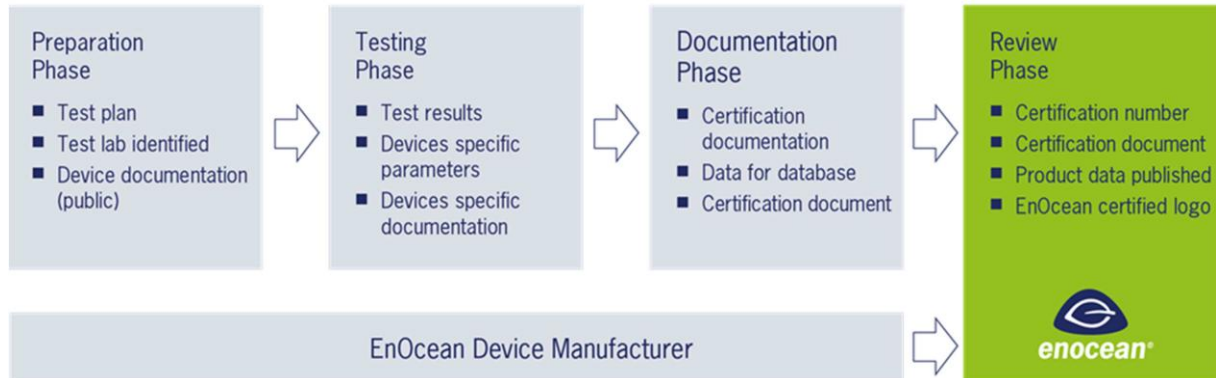
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- [Energy Harvesting Certification specification](#): Optional for Certification levels „Alliance-Verified“ and „Alliance-Verified for IoT“ only and only for products powered by energy harvesting. Provides clear, standardized definitions and validation procedures for key parameters related to energy harvesting applications in general and self-powered devices in particular. The energy harvesting certification will be based on the specific use case addressed by the product that will be certified.

Does the Certification Program imply additional workload?

- NO, it does not as it can be performed as self-certification.
- Self-certification has to confirm a positive pass of the test-cases declared to be mandatory for the corresponding certification level. Usually such tests have to be performed anyway during the development process.
- Alternatively, certification by an accredited test laboratory can be envisaged providing an official certificate amended by test documentation.

Overview of EnOcean Alliance Certification Process



Which steps are to be performed to achieve certification?

- **Preparation Phase** – select the test cases, define the test plane
- **Testing Phase** – perform the test cases defined and document results
- **Documentation Phase** - Enter product data into the product database on the EnOcean Alliance web site, upload all test documentation and submit certification request
- **Review Phase** - The Certification manager will check your submission. If all documentation is complete a certification number for the product is issued which marks the product as “certified” in the data base.



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What is a Certification Level?

- The *Certification Levels* are detailed in the [Certification Handbook](#).
- **Self-Certified:** “Interoperability and Standard Security”:
Confirms the potential interoperability of the product or device within the EnOcean eco-system. The compliance of a device is declared via the template [Certification Application Template](#). The certification manager verifies the declaration and issues a Certificate.
- **Self-Certified for IoT:** “Interoperability and Enhanced Security”:
Same as “**Self-Certified**”, but additionally with declaration that the products support the latest [EnOcean Alliance enhanced security](#) (encryption and authentication) specification. The certification manager verifies the declaration and issues a Certificate.
- **Alliance-Verified:** “Interoperability and Quality”:
Confirms the potential interoperability of the product or device within the EnOcean eco-system AND confirms an acceptable radio range performance quality and energy harvesting quality. The certification manager verifies all test results and issues a Certificate.
- **Alliance-Verified for IoT:** “Interoperability, Quality and Enhanced Security”:
Same as “**Alliance-Verified**”, but additionally with declaration that the products support the latest [EnOcean Alliance enhanced security](#) (encryption and authentication) specification.

Who can help?

- You need further guidance on the Certification Program or have dedicated questions? As a Promotor or Participant member you will receive support from the Certification Manager. Contact him at certification@enocean-alliance.org.
- As a Promotor or Participant member you will find a free-of-charge tool supporting the certification of the Communication Profiles and Enhanced Security at <https://www.enocean-alliance.org/pct/>. It verifies the correct design and implementation of the communication protocols at the data link and the network layer.
- Support for air interface certification is provided by your chip / module supplier.