AN12234

Bluetooth LE Qualification and Listing Process Guide

Rev. 1 — March 2019 Application note

Document information

Info	Content
Keywords	QN908x, BLE, Qualification, Listing, Declaration
Abstract	This application note describes how to qualify and list an end product using QN908x.

Revision history

Rev	Date	Description
0	09/2018	Initial release
1	03/2019	Changed the Application Note name Qualification and Listing Process to Bluetooth LE Qualification and Listing Process Guide

Contact information

For more information, please visit: http://www.nxp.com

Content

1. Introduction

This document describes how to complete the Bluetooth™ qualification and listing process using Launch Studio. This document only applies to products that use the QN908x chip. Launch Studio is the new test plan generator designed to help you get your product to market faster.

2. Project preparation

2.1 Design and product information

Before starting a project, gather the information shown in Table 1. These information are used in the process.

Table 1. Qualification information

—	**Project name**	**—**
—	Previously qualified design used in this qualification	105465, 102633
Design information	Listing date	—
	Design name	—
	Model number	—
	Design description	—
	Hardware version	—
	Software version	—
Product information	Product full name	—
	Product website	—
	Publish date	—
	Description	—
	Model number	—

- The project name is defined freely and does not require the same product name.
- The “Previously qualified design used in this qualification” field must be 105465 or 102633. 105465 is the declaration ID of the 908x BLE 5.0 host. 102633 is the declaration ID of the 908x BLE 5.0 controller.
- The “Listing date” field must be equal to (or earlier than) the “Publish date” field. The public data are not older than 90 days from the date of submitting the qualification project.
- One design project can list many products, so the “Model number” field in the “Design information” section and the “Model number” field in the “Product information” section can be different.
- Other information are defined by you.

2.2 Hardware requirements for Certification Lab

- Product PCBA with UART.
- Downloaded “hci_black_box” project.

3. Qualification and listing process

There are two types of qualification and listing:

- **Path 1:** Qualification without testing—if your product uses an already qualified chip or design and you do not make any design changes or if you simply resell an already qualified product.
- **Path 2:** Qualification with testing—if you create a new design or make modifications to an already qualified chip or design.

The design with QN908x adopts Path 2, and the process in the Launch Studio is shown in Fig 1.

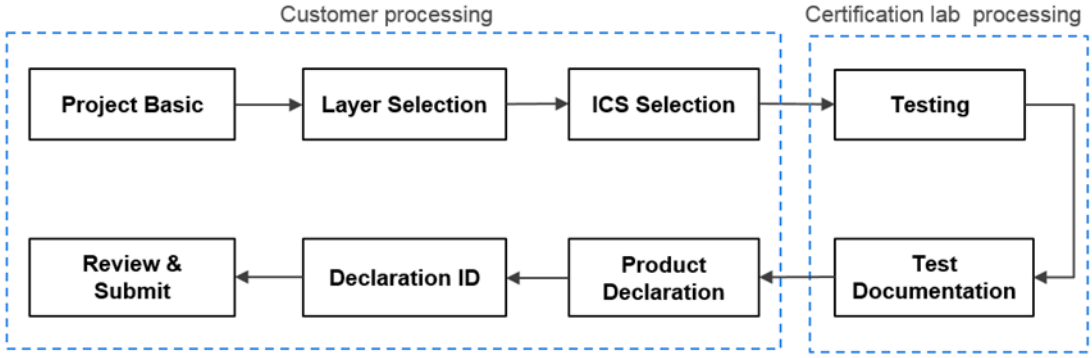

Fig 1. Qualification process

The “Customer processing” box is completed by you. The “Certification lab processing” box is completed by the certification lab and contains the test process and uploads the test evidence.

3.1 Entering Launch Studio

Firstly, register as a SIG member at www.bluetooth.com/develop-with-bluetooth/qualification-listing.

Select Path 2, enter the Launch Studio, and start a project.

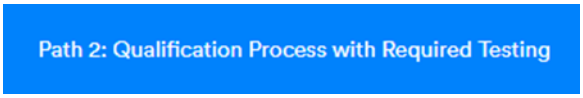

Fig 2. Path 2 button

3.2 “Project Basics” tab

Fill in the information in Fig 3.

- Fill in the project name and reference QDID in fields 1 and 2 according to Table 1. After entering a QDID, wait a moment and a dialog box appears. Select it, to enter more QDIDs.
- Set the boxes in fields 3 to 6 as shown in Fig 3.
- Click the “Save All Changes“ button.

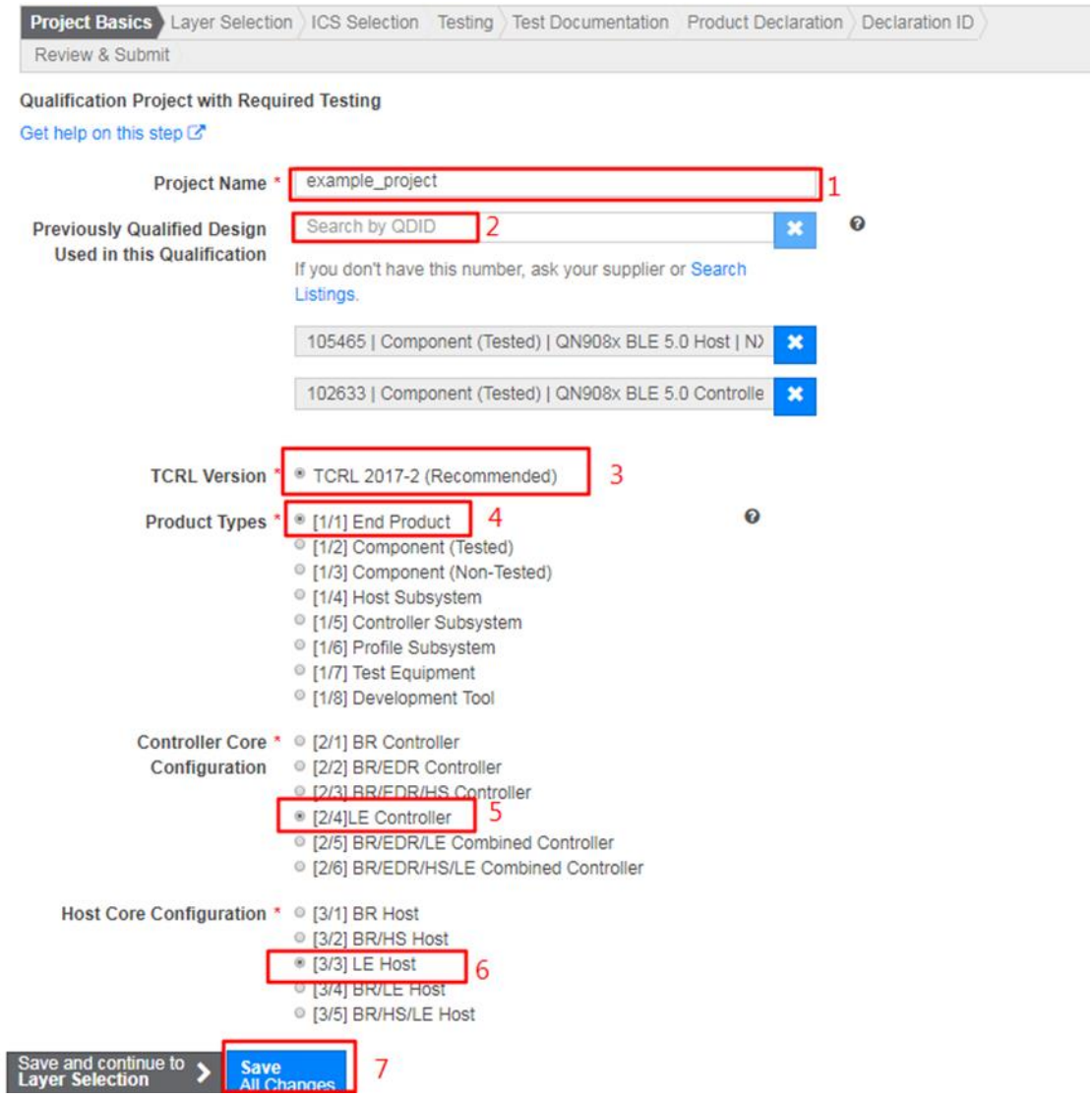

Fig 3.

Configure the red box as shown in Fig 4 and click the ”Save All Changes” button.

Note: The “Use my own selection” option is required only for Low-Energy RF PHY, where the antenna is designed by you. The RF design with QN908x then must pass the certification.

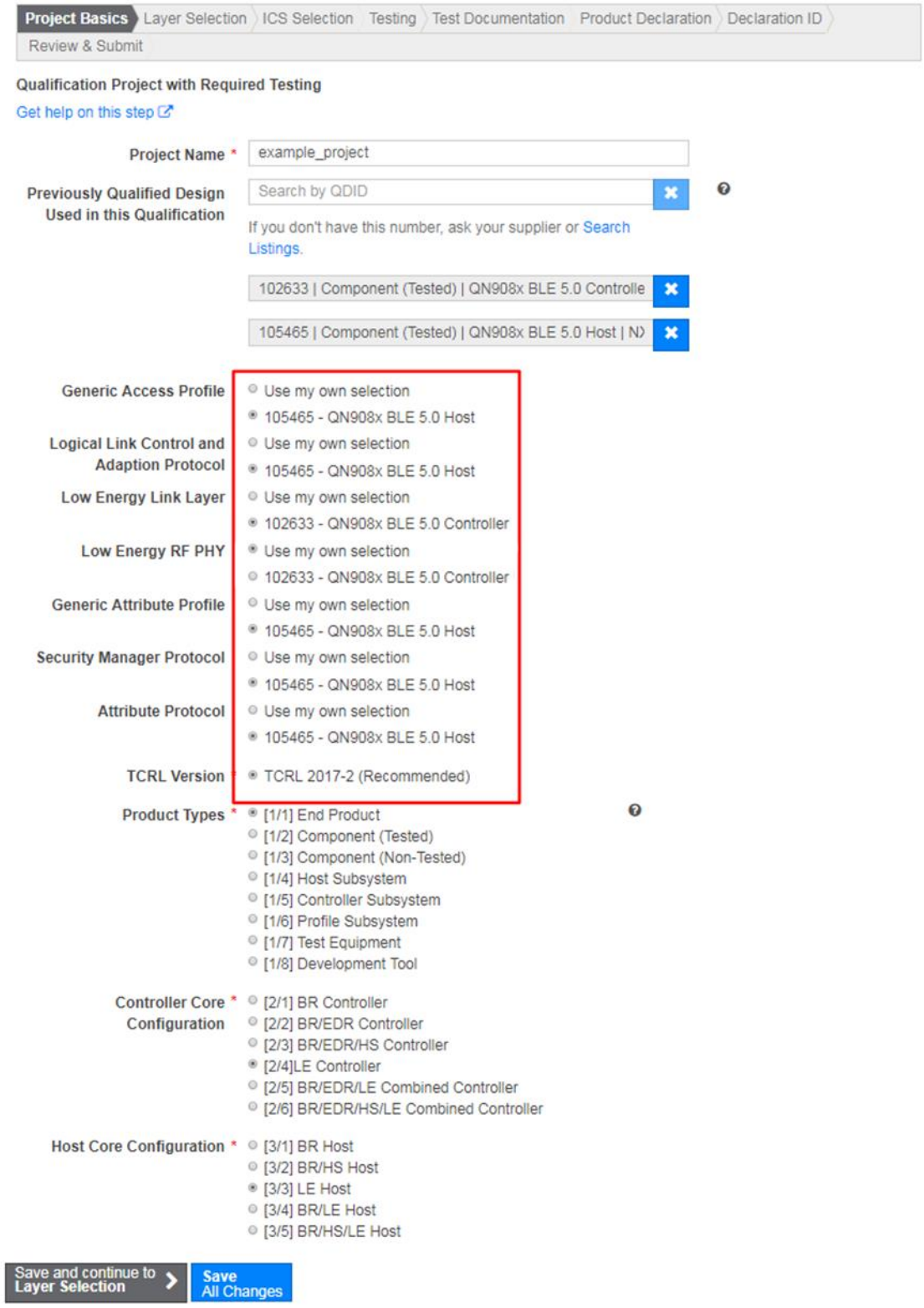

Fig 4.

The properly configured “Project Basics” tab is shown in Fig 5.

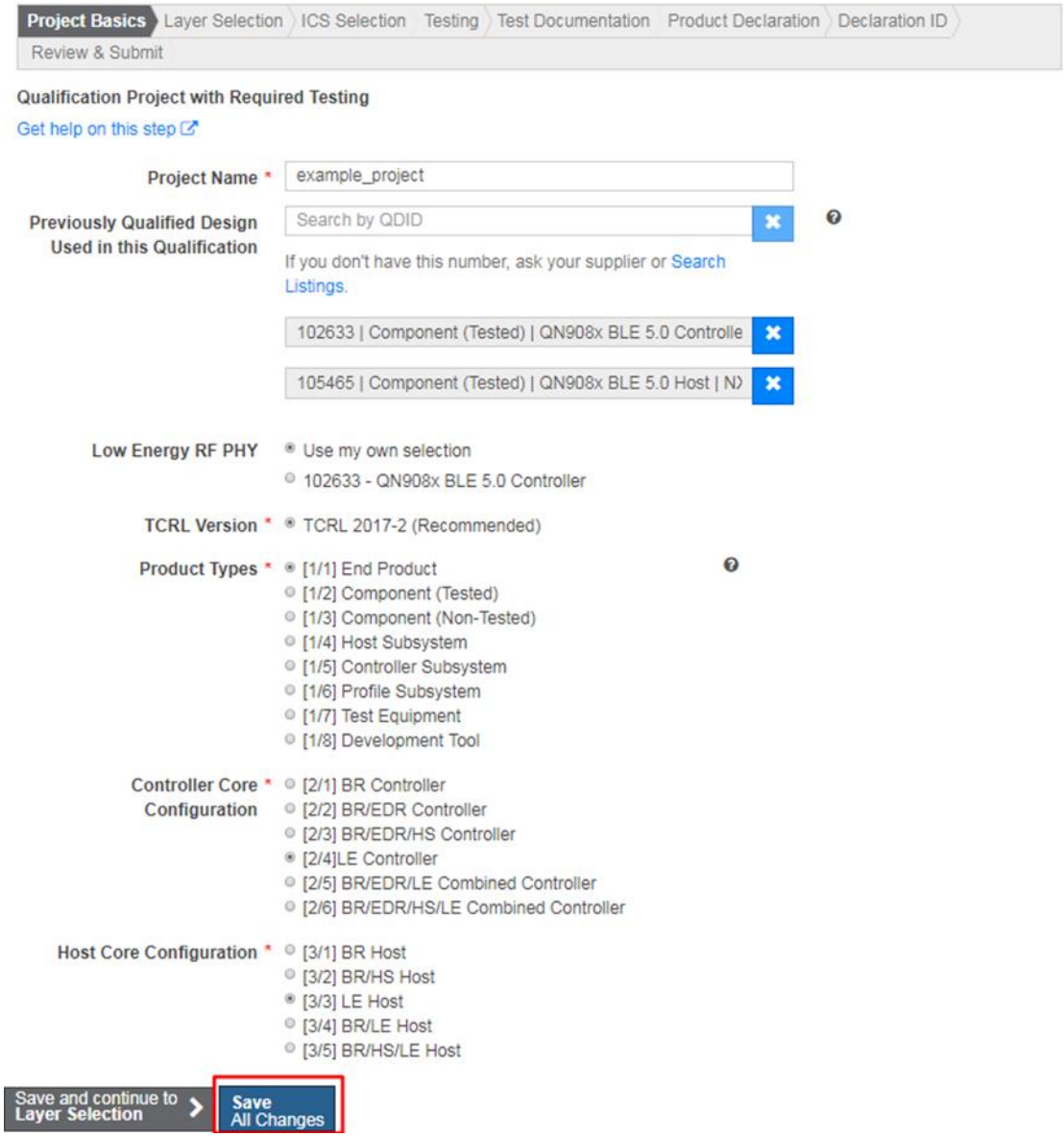

Fig 5.

3.3 “Layer Selection” tab

You do not have to modify the “Layer Selection” tab. Click the “Save All Changes” button.

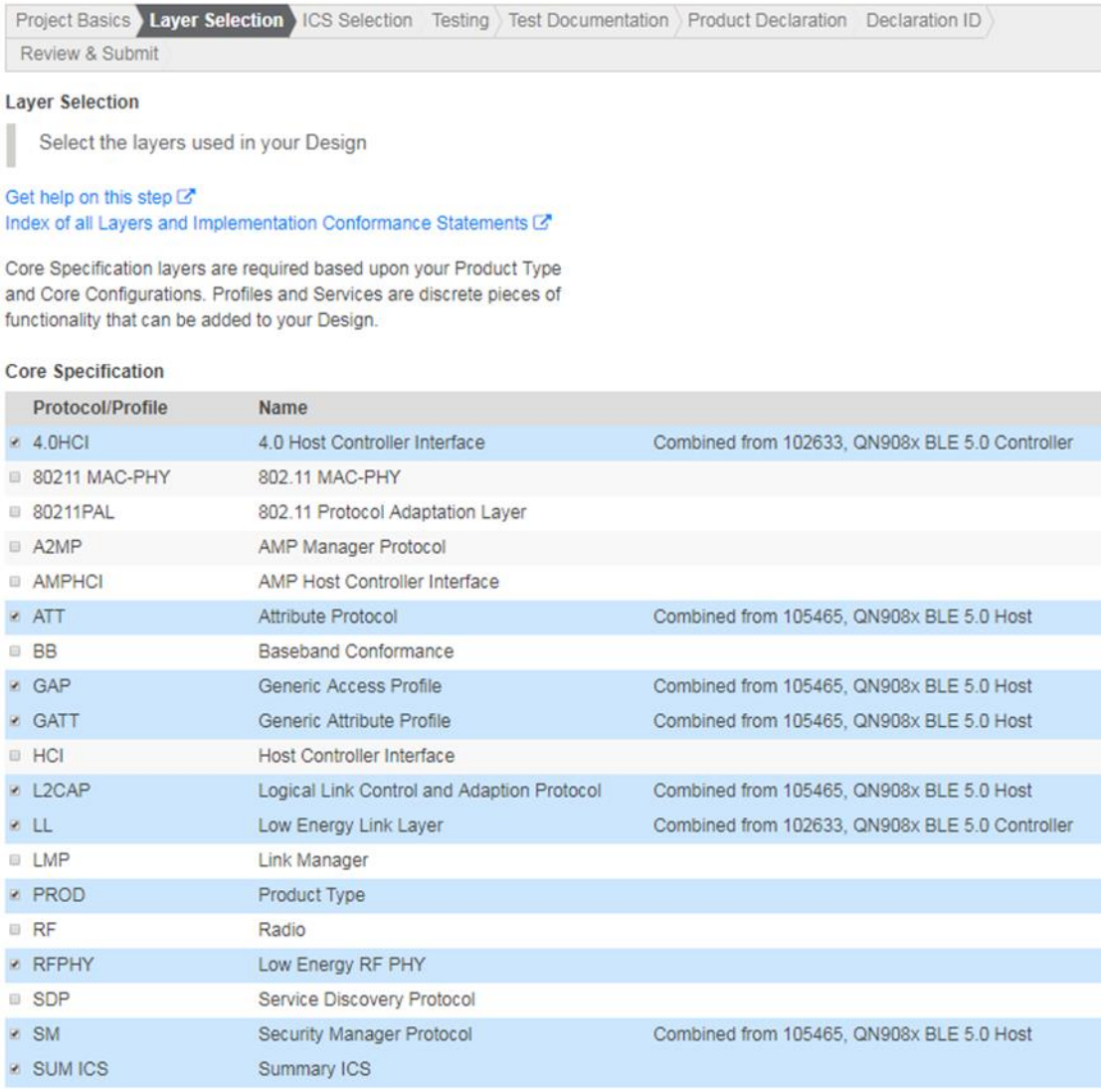

Fig 6.

3.4 “ICS Selection” tab

Select the “ICS Selection” tab, select “RFPHY (Low Energy RF PHY)” in the “Core Protocol Layers” field, and tick the check boxes according to fields 2 and 3. Click the “Consistency Check” button. If the content that appears matches field 5, the ICS selection is set correctly and you can click the “Save All Changes” button.

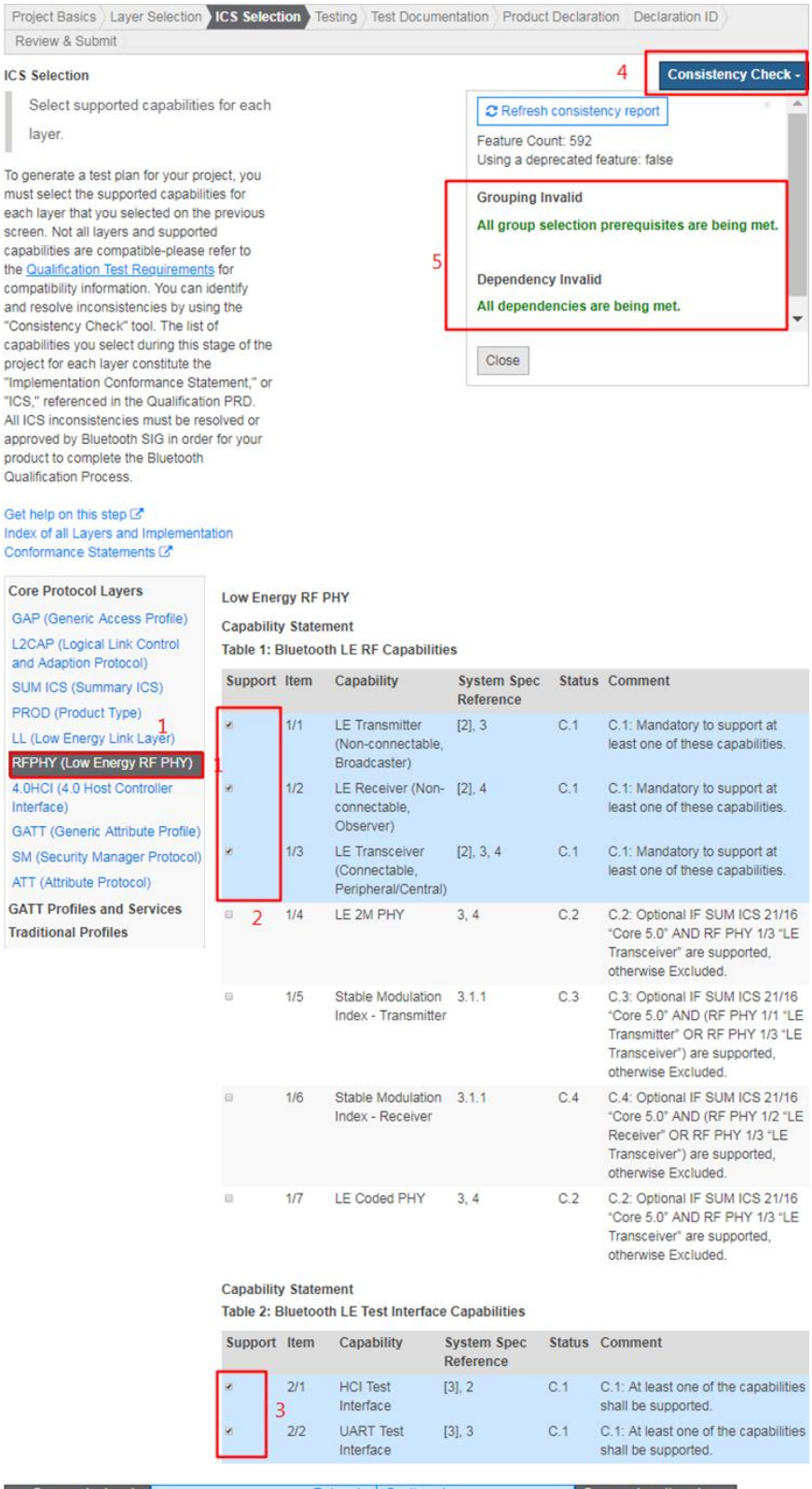

Fig 7.

3.5 “Testing” tab

Select the “Testing” tab. You can download the test plan file or export it to a *.pts* file (field 2). The two files are going to be exported to the cerification lab.

You can also take a simpler way and directly let the certification lab perform the operation on this item.

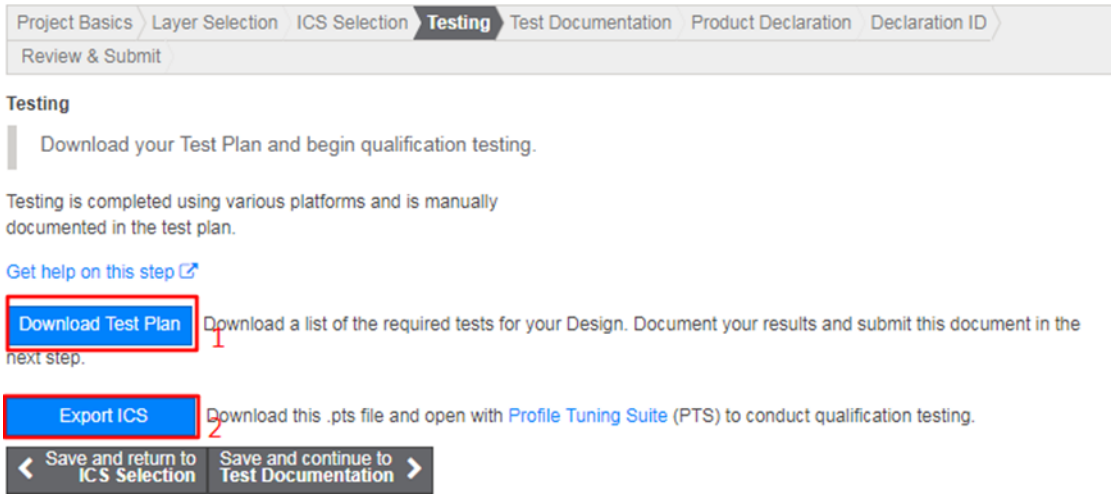

Fig 8.

3.6 “Test Documentation” tab

When the certification lab finishes the certification and passes all tests required by the test plan, select the “Test Documentation” tab and upload all test evidence by clicking the “Add Test Evidence” button.

You can also take a simpler way and directly let the certification lab perform the operation on this item.

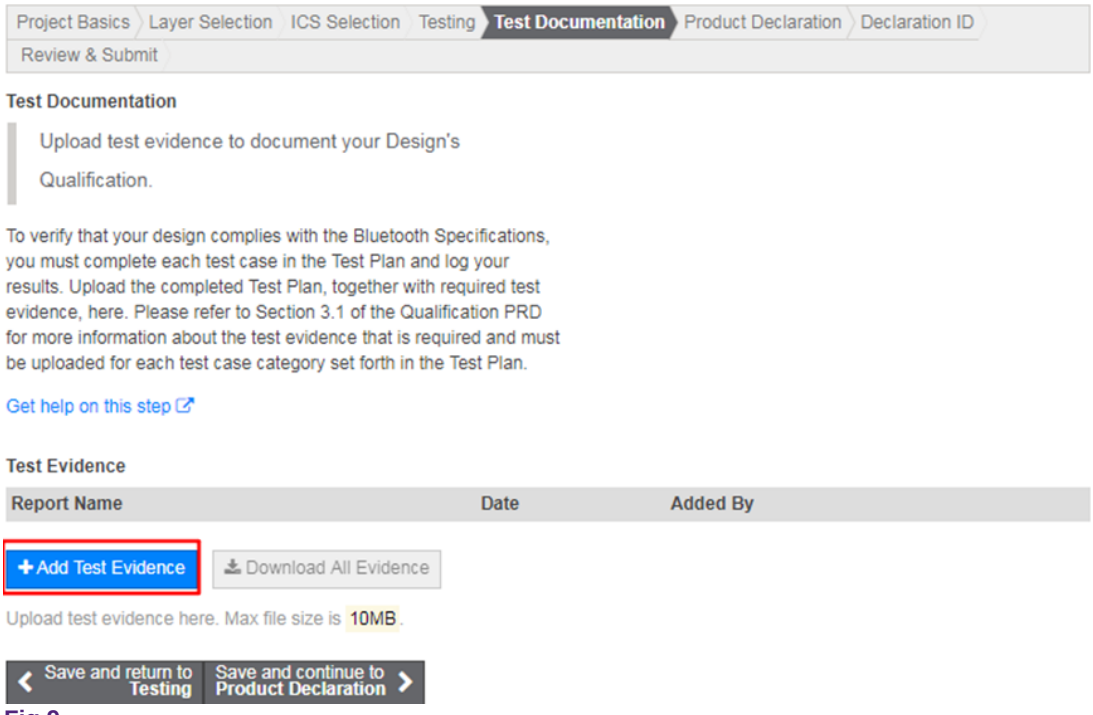

Fig 9.

3.7 Product declaration

The product declaration does not have to wait until the certification completes. In this section, you can fill in the design details and describe your products that implement the Bluetooth technology. The fields marked by an asterisk must be filled with the reference design information listed in Table 1. The other fields are optional.

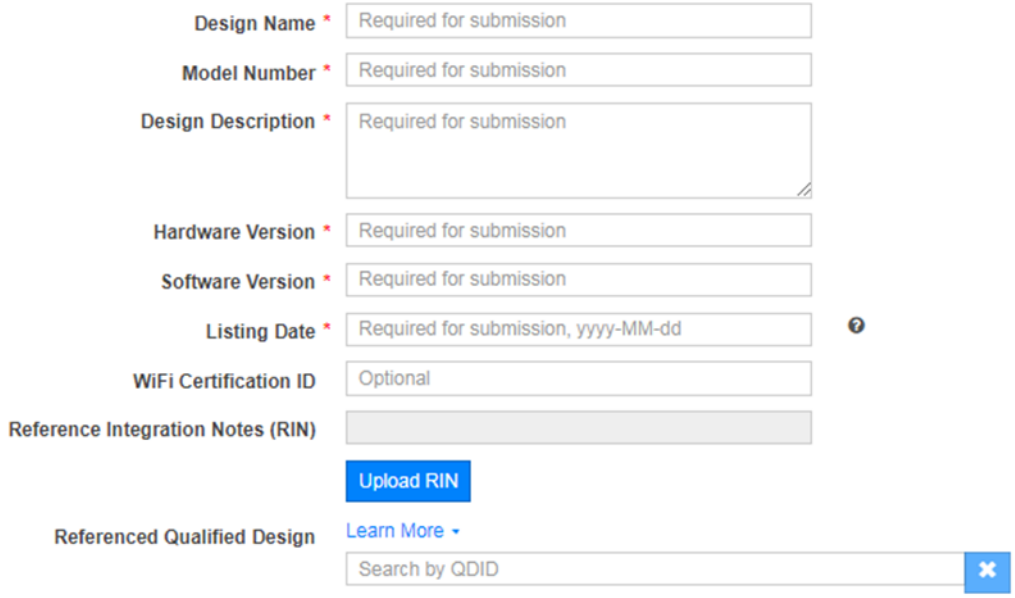

Fig 10.

Click the “Add a Product“ button and the dialog shown in Fig 12 appears. The fields marked by an asterisk must be filled in with the product information listed in Table 1. The “Category” field must be selected according to the product type. If the existing type

is sufficient to describe the product type, select “Unique Products”. Click the “Save All Changes” button.

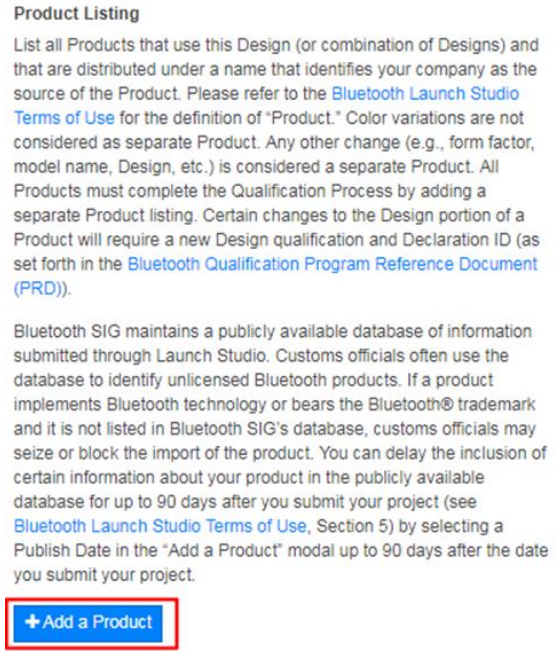

Fig 11.

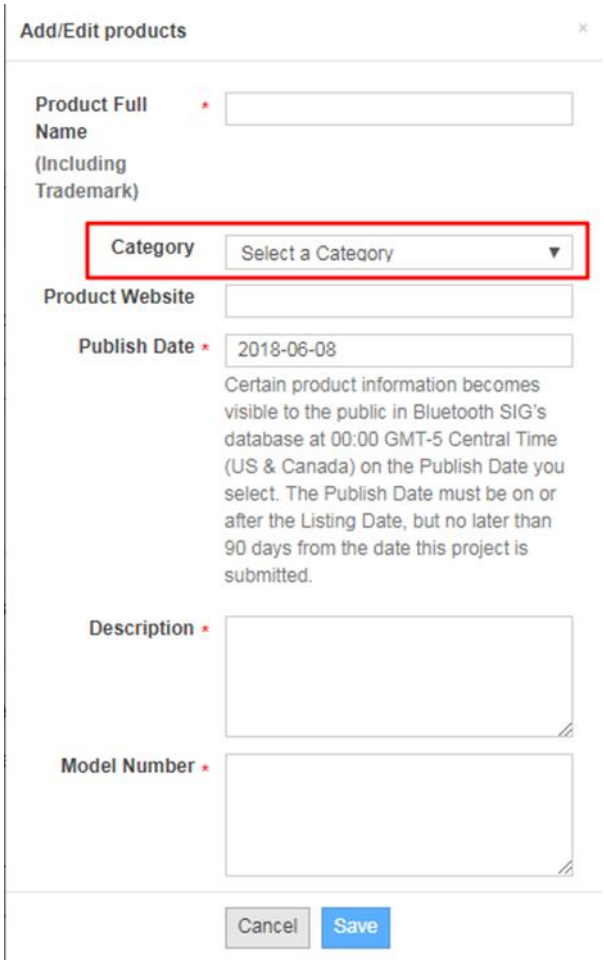

Fig 12.

3.8 Declaration ID

Select the “Declaration ID” field and click the “Purchase a Declaration ID” button, as shown in Fig 13. Fill in the credit card information. The cost of a declaration ID is as follows:

- If you are an associate member, one declaration ID fee costs 4000 USD.
- If you are an adopter member, one declaration ID fee costs 8000 USD.

For detailed cost information, visit https://www.bluetooth.com/develop-with-bluetooth/qualification-listing/qualification-listing-fees.

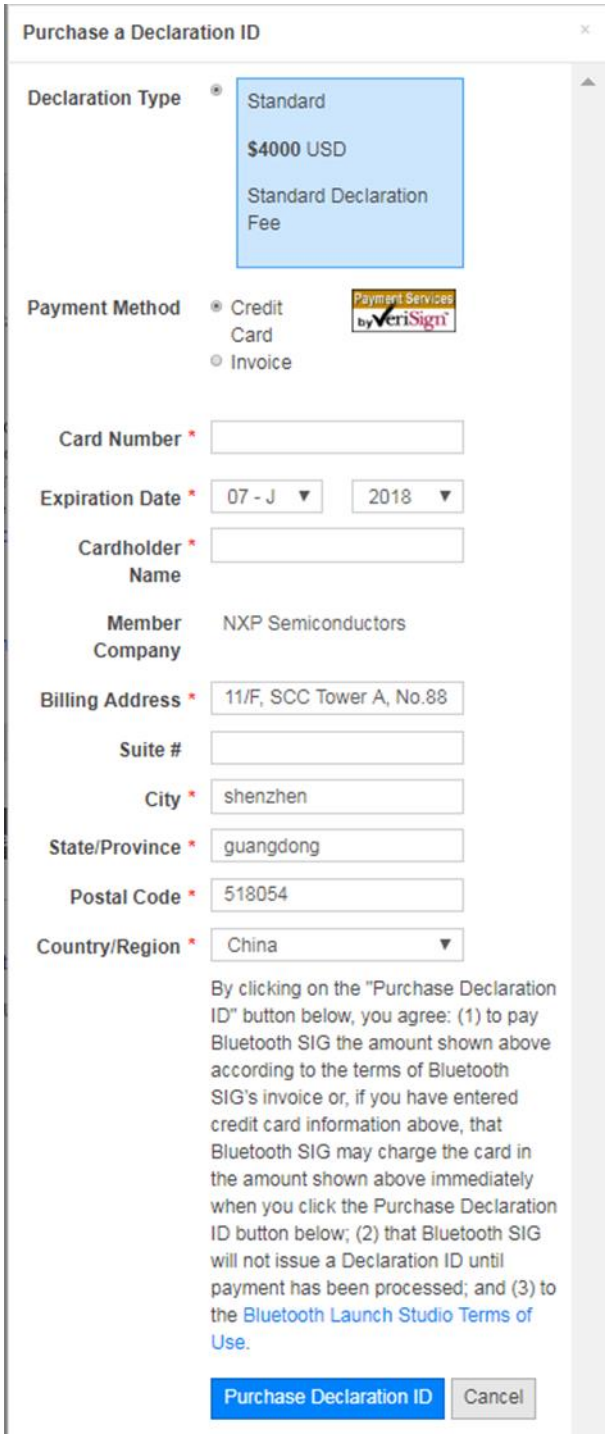

Fig 13.

3.9 Review and submit

After the above items are completed, go to the “Review and Submit” field. Firstly, the Launch Studio automatically checks the status. If the four items shown in Fig 14 pass, proceed to the next step.

Status	Task
✔ ICS Selection	All Layers Consistent
✖ Test Documentation	Upload Test Evidence
✔ Product Declaration	Complete
✖ Declaration ID	Purchase a Declaration ID

Fig 14.

Tick all options in field 1, sign the project leader's name in field 2, and submit the project by clicking the button in field 3. The certification process is completed and waits for an approval from SIG.

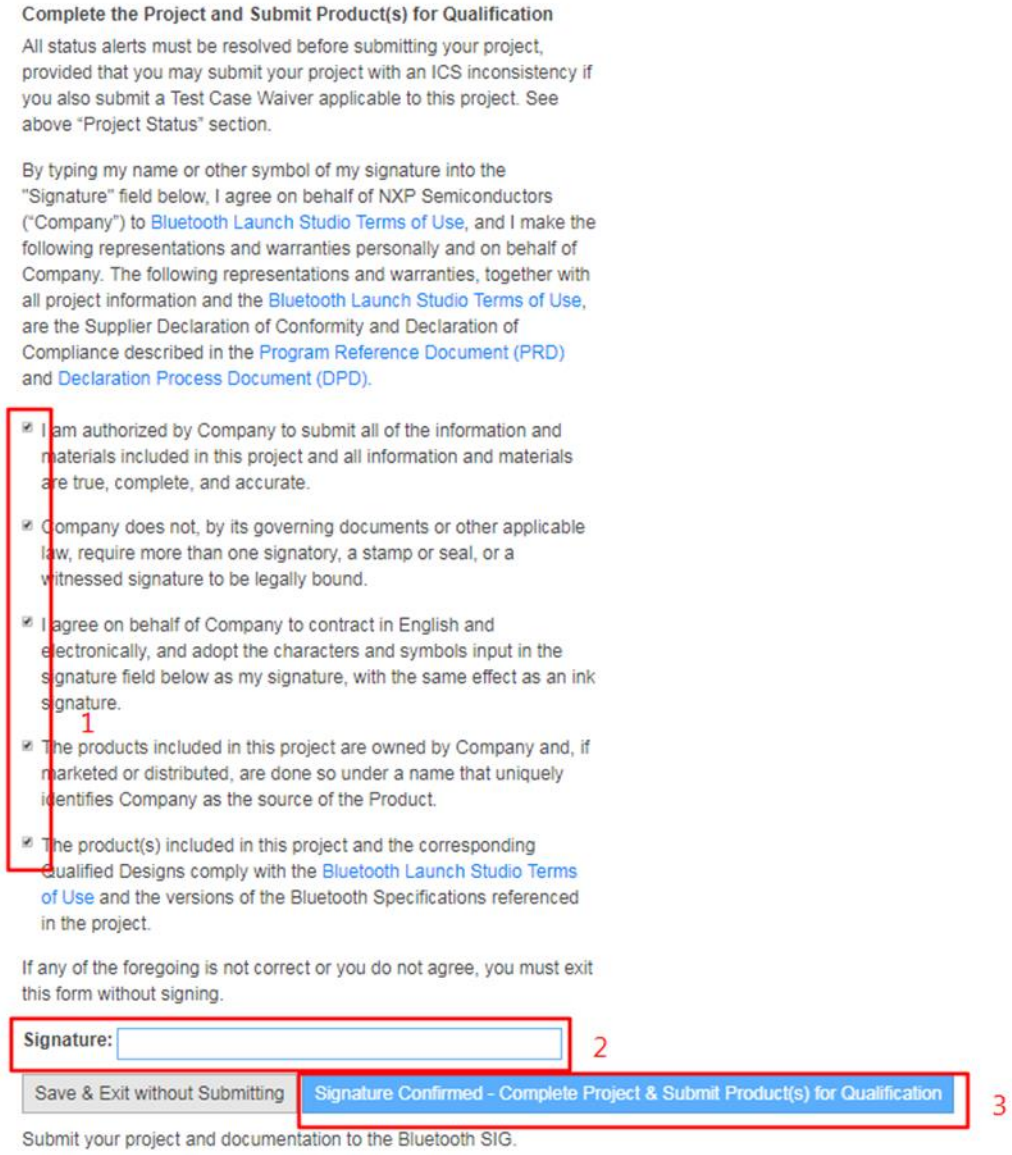

Fig 15.

4. Core specification timelines

To encourage the members to gradually deprecate the old version of the Bluetooth core specification and switch to the new Bluetooth core specification, SIG launched a deprecation and withdrawal plan for the Bluetooth core specification. The section on BLE states the following:

- BT4.1/ 4.0 will be deprecated in 2019.1.1 and withdrawn in 2020.1.1.
- There are no plans for BT4.2/5.0.

For more information, visit www.bluetooth.com/specifications/bluetooth-core-specification/archived-specifications.

If you want to certificate a deprecated version of the Bluetooth core specification, the declaration ID fee is 25000 USD (for each).

5. References

[1] PRD.PROC.2.3.0.pdf

[2] DPD.PROC.1.0.0.pdf

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