TN00066

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

Rev. 13.0 — 16 September 2025

Technical note

Document information

| Information | Content |
|-------------|--|
| Keywords | Wi-Fi Alliance (WFA), certificate qualification, certification process, derivative |
| Abstract | Overview of Wi-Fi Alliance certification program, the roles and responsibilities of various stakeholders, and the step-by-step procedure of the Wi-Fi derivative certification process |



Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

1 About this document

The document presents the Wi-Fi Alliance derivative certification process.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

2 Wi-Fi certification program

The Wi-Fi CERTIFIED[™] logo on a product certifies the compliance with the industry agreed standard for interoperability, security, quality and a range of application specific protocols.

The Wi-Fi certification program guarantees tested and proven interoperability among Wi-Fi devices.

The Wi-Fi certification is an important milestone before the product launch. You can complete this last milestone at an authorized test laboratory (ATL) or at a solution test laboratory (STL).

For more information, visit ref.[1].

2.1 Certificate qualification

IW416 (AW-AM457-uSD, AW-AM510-uSD, EAR00385 M.2 + LBEE0ZZ1WE-uSD-M2), 88W8987 (AW-CM358-uSD, EAR00364 M.2 + LBEE0ZZ1WE-uSD-M2), IW612 (EAR00409 M.2 + LBEE0ZZ2WE-uSD-M2), IW611 (EAR00422 M.2 + LBEE5PL2DL-uSD-M2), AW611 (JODY-W5 M.2), IW610 (EAR00500+ LBES0ZZ2LL-M2)

- STA | 802.11n
- STA | PMF
- STA | 802.11ac
- STA | FFD
- STA | SVD
- STA | WPA3 SAE (R3)¹
- STA | 802.11ax STA | MBO

2.2 Roles and responsibilities

Wi-Fi Alliance (WFA)

- · Owns the certification program.
- · Maintains the policies and requirements.
- · Reviews the ATL results.
- · Owns the final approvral of Wi-Fi CERTIFIED products.

Authorized Test Laboratories (ATL)

- · Operate as independent testing facilities.
- · Submit the results to the Wi-Fi Alliance.
- Provide support for the ASD approval.
- · Certify Wi-Fi products from any vendor.

Solution Test Laboratories (STL)

- The Wi-Fi Alliance (WFA) grants the STL accreditation for Wi-Fi products.
- NXP is a Wi-Fi Alliance STL.
- · The STLs:
 - Test and validate the compliance of Wi-Fi products with IEEE 802.11 standards.
 - Only certify the Wi-Fi products from the solution provider.

TN00066

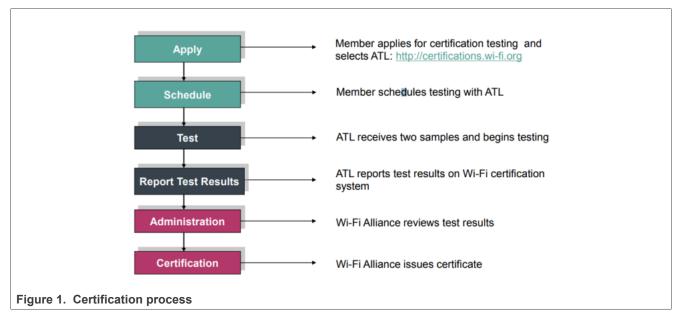
¹ Includes forward compatibility.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

WFA members

- Acquire a membership (pre-requisite to obtain certification).
- · Select a laboratory.
- Deliver the products to the laboratory.

2.3 Certification process



Note: Some steps of the certification process are skipped for a derivative certification. The process is explained in the following section.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

3 Derivative certification

A derivative certification is a cost-effective way to utilize test results of a Wi-Fi CERTIFIED source product.

Multiple derivative certifications can be submitted from the same source product.

The new product must have the same silicon, operating system, and firmware as the Wi-Fi CERTIFIED source product.

The new product must operate in the same manner as the Wi-Fi CERTIFIED source product.

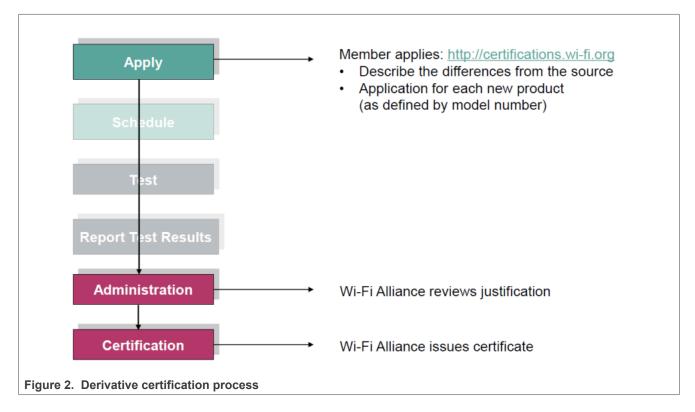
Any change in the new product MUST NOT affect the wireless functionality.

A derivative certification cannot be designated as a source.

A derivative certification cannot be used to seek another derivative certification.

3.1 Derivative certification process

Figure 2 illustrates the derivative certification process. Refer to Section 4 for details on each step of the process.

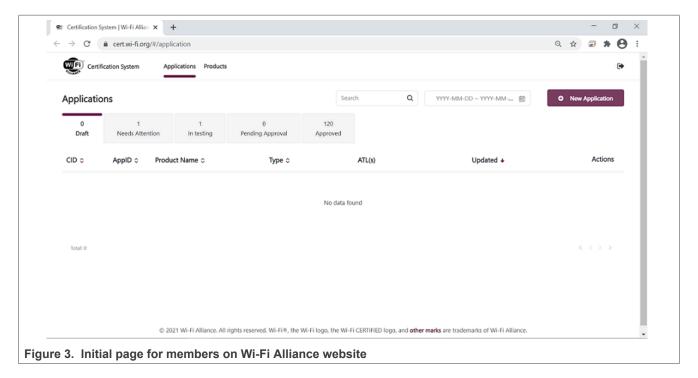


Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

4 Step by step procedure

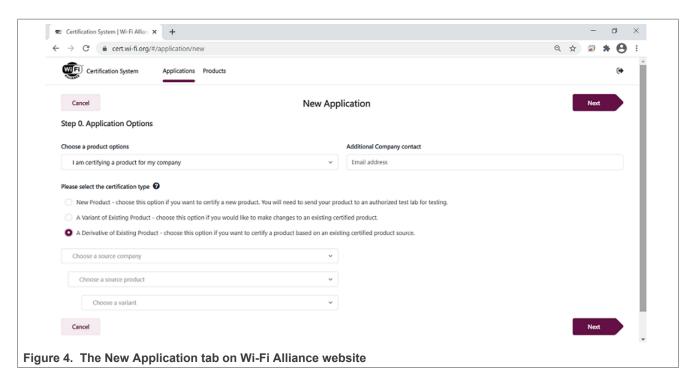
4.1 Sign in on Wi-Fi Alliance website and start a new application

- Open Wi-Fi Alliance website (link)
- Sign in as member
- Select the New Application tab. See Figure 3.

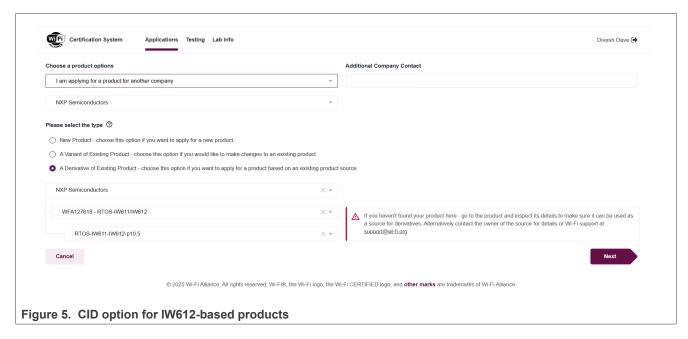


• On the New application page, select the certification type A Derivative of Existing Product. See Figure 4.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS



- In the drop-down list, select NXP as the Source Company
- In the second drop-down list, select the CID for a product based on a Wi-Fi component. Figure 5 shows the list of CIDs based on IW612 product.



Click Next to open the Product Information page

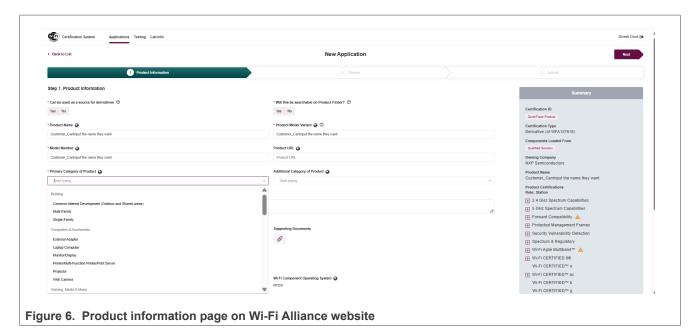
Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

4.2 Fill in the product information

When the **Product Information** page opens:

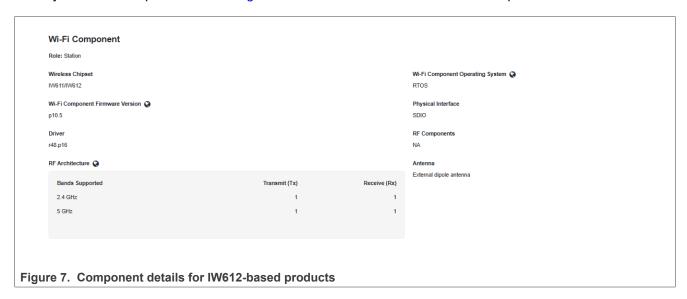
- Enter the Product name and Variant name
- Enter the Module number and provide the Product URL
- Select the Primary Category of Product in the drop-down list

Note: Wi-Fi components cannot be modified. The list of Wi-Fi components shows for the CID option you have selected.



Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

• Verify the Wi-Fi component details. Figure 7 shows the details for a IW612-based product.

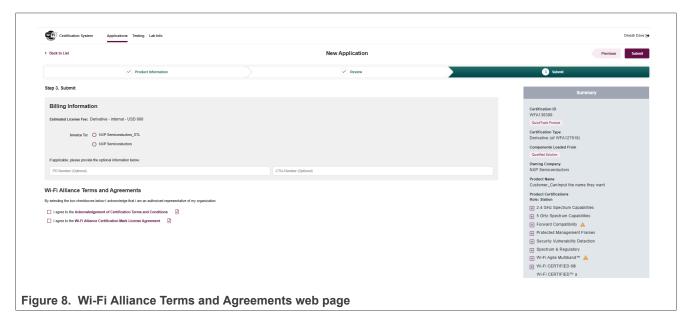


• Click Next to open the page with Wi-Fi Alliance Terms and Agreements

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

4.3 Submit the application

- Tick the two check boxes to accept Wi-Fi Alliance terms and agreements as authorized member and representative of your organization. See <u>Figure 8</u>.
- Click Submit Application



Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

5 Obligations and outcomes for derivative certifications

- A member holding the source certification shall be informed of all approved derivative certifications.
- The member holding the source certification and the member holding the derivative certification shall both be accountable for addressing interoperability concerns.
- If interoperability concerns are found with a Derivative Certification and/or Source Certification then both certifications shall be subject to additional verification.
- · If identified interoperability concern has not been resolved, the associated certifications shall be revoked.
- If information provided in the certification application(s) is found to be inaccurate, the associated certifications shall be revoked.
- If a Source Certification is revoked, all Derivative Certifications based on that Source Certification shall be revoked.
- A Member holding a Source Certification or a Derivative Certification shall be responsible for responding to Wi-Fi Alliance requests for information in support of these activities.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

6 Abbreviations

Table 1. Abbreviations

| Abbreviation | Definition |
|--------------|-------------------------------------|
| ATL | Authorized test labs |
| CID | Certification identification number |

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

7 References

[1] Website – Wi-Fi Alliance (link)

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

8 Revision history

Revision history

| Document ID | Date | Description |
|----------------|-------------------|--|
| TN00066 v.13.0 | 16 September 2025 | <u>Section 1 "About this document"</u>: updated. <u>Section 2 "Wi-Fi certification program"</u>: updated the introduction. <u>Section 2.1 "Certificate qualification"</u>: added IW610 and a footnote. <u>Section 2.2 "Roles and responsibilities"</u>: updated. <u>Section 2.3 "Certification process"</u>: updated the note. <u>Section 3 "Derivative certification"</u>: updated the introduction. |
| TN00066 v.12.0 | 9 June 2025 | Section 2.1 "Certificate qualification": removed the reference to 88W8801. Section 4.1 "Sign in on Wi-Fi Alliance website and start a new application": replaced the references to 88W8801. Section 4.2 "Fill in the product information": replaced the references to 88 W8801. Section 4.3 "Submit the application": replaced the figure. |
| TN00066 v.11.0 | 24 March 2025 | Section 2.1 "Certificate qualification": updated. |
| TN00066 v.10.0 | 24 September 2024 | <u>Section 2.1 "Certificate qualification"</u> : removed the note about AW611 module support. |
| TN00066 v.9.0 | 26 June 2024 | Section 2.1 "Certificate qualification": added IW611 and AW611. Section 7 "References": updated. |
| TN00066 v.8.0 | 9 January 2024 | <u>Section 2.1 "Certificate qualification"</u> : removed the footnote about IW612 module support. |
| TN00066 v.7.0 | 13 October 2023 | Section 2.1 "Certificate qualification": added STA 802.11ax. |
| TN00066 v.6.0 | 29 June 2023 | Section 2.1 "Certificate qualification": added IW612, STA FFD, STA SVD, and STA WPA3 SAE (R3) |
| TN00066 v.5.0 | 15 September 2022 | Section 2.1 "Certificate qualification": Removed the reference to 88W8977 module Added module references for IW416 and 88W8987 Added two test plans Section 4.1 "Sign in on Wi-Fi Alliance website and start a new application": removed the figure about 88W8977 Section 4.2 "Fill in the product information": removed the figure showing component details for 88W8977-based products |
| TN00066 v.4.0 | 10 January 2022 | Ported the content to NXP format. No changes in the content. |
| TN00066 v.3.0 | 3 September 2021 | Certificate Qualification: added EAR00386 M.2 + LBEE0ZZ1WE-uSD-M2 the list of certified modules |
| TN00066 v.2.0 | 13 January 2021 | Step by Step Procedure: updated the section as per new certification system from Wi-Fi Alliance |
| TN00066 v.1.0 | 30 September 2020 | Initial version |

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

Legal information

Definitions

Draft — A draft status on a document indicates that the content is still under internal review and subject to formal approval, which may result in modifications or additions. NXP Semiconductors does not give any representations or warranties as to the accuracy or completeness of information included in a draft version of a document and shall have no liability for the consequences of use of such information.

Disclaimers

Limited warranty and liability — Information in this document is believed to be accurate and reliable. However, NXP Semiconductors does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information. NXP Semiconductors takes no responsibility for the content in this document if provided by an information source outside of NXP Semiconductors.

In no event shall NXP Semiconductors be liable for any indirect, incidental, punitive, special or consequential damages (including - without limitation - lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort (including negligence), warranty, breach of contract or any other legal theory.

Notwithstanding any damages that customer might incur for any reason whatsoever, NXP Semiconductors' aggregate and cumulative liability towards customer for the products described herein shall be limited in accordance with the Terms and conditions of commercial sale of NXP Semiconductors.

Right to make changes — NXP Semiconductors reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.

Applications — Applications that are described herein for any of these products are for illustrative purposes only. NXP Semiconductors makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.

Customers are responsible for the design and operation of their applications and products using NXP Semiconductors products, and NXP Semiconductors accepts no liability for any assistance with applications or customer product design. It is customer's sole responsibility to determine whether the NXP Semiconductors product is suitable and fit for the customer's applications and products planned, as well as for the planned application and use of customer's third party customer(s). Customers should provide appropriate design and operating safeguards to minimize the risks associated with their applications and products.

NXP Semiconductors does not accept any liability related to any default, damage, costs or problem which is based on any weakness or default in the customer's applications or products, or the application or use by customer's third party customer(s). Customer is responsible for doing all necessary testing for the customer's applications and products using NXP Semiconductors products in order to avoid a default of the applications and the products or of the application or use by customer's third party customer(s). NXP does not accept any liability in this respect.

Terms and conditions of commercial sale — NXP Semiconductors products are sold subject to the general terms and conditions of commercial sale, as published at https://www.nxp.com/profile/terms, unless otherwise agreed in a valid written individual agreement. In case an individual agreement is concluded only the terms and conditions of the respective agreement shall apply. NXP Semiconductors hereby expressly objects to applying the customer's general terms and conditions with regard to the purchase of NXP Semiconductors products by customer.

Suitability for use in automotive applications — This NXP product has been qualified for use in automotive applications. If this product is used by customer in the development of, or for incorporation into, products or services (a) used in safety critical applications or (b) in which failure could lead to death, personal injury, or severe physical or environmental damage (such products and services hereinafter referred to as "Critical Applications"), then customer makes the ultimate design decisions regarding its products and is solely responsible for compliance with all legal, regulatory, safety, and security related requirements concerning its products, regardless of any information or support that may be provided by NXP. As such, customer assumes all risk related to use of any products in Critical Applications and NXP and its suppliers shall not be liable for any such use by customer. Accordingly, customer will indemnify and hold NXP harmless from any claims, liabilities, damages and associated costs and expenses (including attorneys' fees) that NXP may incur related to customer's incorporation of any product in a Critical Application.

Export control — This document as well as the item(s) described herein may be subject to export control regulations. Export might require a prior authorization from competent authorities.

HTML publications — An HTML version, if available, of this document is provided as a courtesy. Definitive information is contained in the applicable document in PDF format. If there is a discrepancy between the HTML document and the PDF document, the PDF document has priority.

Translations — A non-English (translated) version of a document, including the legal information in that document, is for reference only. The English version shall prevail in case of any discrepancy between the translated and English versions.

Security — Customer understands that all NXP products may be subject to unidentified vulnerabilities or may support established security standards or specifications with known limitations. Customer is responsible for the design and operation of its applications and products throughout their lifecycles to reduce the effect of these vulnerabilities on customer's applications and products. Customer's responsibility also extends to other open and/or proprietary technologies supported by NXP products for use in customer's applications. NXP accepts no liability for any vulnerability. Customer should regularly check security updates from NXP and follow up appropriately. Customer shall select products with security features that best meet rules, regulations, and standards of the intended application and make the ultimate design decisions regarding its products and is solely responsible for compliance with all legal, regulatory, and security related requirements concerning its products, regardless of any information or support that may be provided by NXP.

NXP has a Product Security Incident Response Team (PSIRT) (reachable at PSIRT@nxp.com) that manages the investigation, reporting, and solution release to security vulnerabilities of NXP products.

 $\ensuremath{\mathsf{NXP}}\xspace \ensuremath{\mathsf{B.V.}}\xspace - \ensuremath{\mathsf{NXP}}\xspace \ensuremath{\mathsf{B.V.}}\xspace$ is not an operating company and it does not distribute or sell products.

Trademarks

Notice: All referenced brands, product names, service names, and trademarks are the property of their respective owners.

NXP — wordmark and logo are trademarks of NXP B.V.

Amazon Web Services, AWS, the Powered by AWS logo, and FreeRTOS—are trademarks of Amazon.com, Inc. or its affiliates.

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

| IGNICO | Т | a | b | | e | S | |
|--------|---|---|---|--|---|---|--|
|--------|---|---|---|--|---|---|--|

| T-1- 4 | A I. I | | ٠ |
|---------|---------------|--------|---|
| Tab. 1. | Appreviations | 12 | / |

Figures

| Fig. 1. | Certification process | | Fig. 6. | Product information page on Wi-Fi Alliance | |
|---------|--|-----|---------|--|----|
| Fig. 2. | Derivative certification process | 5 | | website | 8 |
| Fig. 3. | Initial page for members on Wi-Fi Alliance | | Fig. 7. | Component details for IW612-based | |
| - | website | . 6 | | products | 9 |
| Fig. 4. | The New Application tab on Wi-Fi Alliance | | Fig. 8. | Wi-Fi Alliance Terms and Agreements web | |
| • | website | . 7 | · · | page | 10 |
| Fig. 5. | CID option for IW612-based products | | | . • | |

Wi-Fi Alliance Derivative Certification Process for i.MX Platforms Running FreeRTOS

Contents

| 1 | About this document | 2 |
|-----|---|----|
| 2 | Wi-Fi certification program | 3 |
| 2.1 | Certificate qualification | |
| 2.2 | Roles and responsibilities | 3 |
| 2.3 | Certification process | 4 |
| 3 | Derivative certification | |
| 3.1 | Derivative certification process | |
| 4 | Step by step procedure | 6 |
| 4.1 | Sign in on Wi-Fi Alliance website and start | |
| | a new application | 6 |
| 4.2 | Fill in the product information | 8 |
| 4.3 | Submit the application | 10 |
| 5 | Obligations and outcomes for derivative | |
| | certifications | 11 |
| 6 | Abbreviations | |
| 7 | References | 13 |
| 8 | Revision history | 14 |
| | Legal information | |

Please be aware that important notices concerning this document and the product(s) described herein, have been included in section 'Legal information'.