



FiRa Consortium Certification Program Manager

FIRAC-CPM v1.0

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Editor

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Revision History

Revision	Description	Date
0.1	Initial Draft.	30-Sept-2019
0.2	Change "Certification Authority" to "Certification Program Manager"	02-Oct-2019
0.3	Modifications based on CCWG feedback	02-Oct-2019
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1.1 Document Convention

“Shall” and “shall not” identify requirements to be followed strictly to conform to the standard and from which no deviation is permitted. “Should” and “should not” indicate that one of several possibilities is recommended as particularly suitable, without mentioning or excluding others; that a certain course of action is preferred but not necessarily required; or (in the negative form) that a certain possibility or course of action is discouraged but not prohibited. “May” and “need not” indicate a course of action permissible within the limits of the standard. “Can” and “cannot” are used for statements of possibility and capability, whether material, physical, or causal.

The key words **MUST**, **MUST NOT**, **REQUIRED**, **SHALL**, **SHALL NOT**, **SHOULD**, **SHOULD NOT**, **RECOMMENDED**, **MAY**, and **OPTIONAL** in this document are to be interpreted as described in [N-1].

Normative References

This section provides references to other specifications and standards that are considered of interest with respect to product or system implementations which are implemented based on this document.

Please note the following:

- Specific references will include revision indicator, version number, and publication date where available. In those cases, the reference is to that specific iteration of the document listed.
- Non-specific references will not include revision indicator, version number, or publication date. In those cases, the reference is to the latest published revision and version of the document listed.

The following documents contain provisions which, through reference in this text, are considered to be normative elements of this document. Normative elements are those elements setting out the provisions with which it is necessary to comply to be able to claim conformity with the specification.

- [N-1] S. Bradner, *RFC 2119 Key Words for Use in RFCs to Indicate Requirement Levels*, Internet Engineering Task Force, March 1997.
- [N-2] ISO/IEC, *17025 - General Requirements for the Competence of Testing and Calibration Laboratories*, ISO, 2005.
- [N-3] International Laboratory Accreditation Cooperation, "ILAC Members by Economy," ILAC, [Online]. Available: <http://ilac.org/ilac-membership/members-by-economy/>.
- [N-4] ISO/IEC, *17065 - Conformity Assessment - Requirements for Bodies Certifying Products, Processes and Services*, ISO, 2012.

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- [N-5] List of Specifications for TBD1 Technology.
- [N-6] List of Specifications for TBD2 Technology.
- [N-7] FiRa Consortium Certification Logo Manual.
- [N-8] FiRa Consortium Certification Logo Usage Guidelines.

Terms, Definitions, Symbols and Abbreviations

2.1 Abbreviations

This section intentionally left blank.

2.2 Acronyms

The acronyms used in this document are defined in Table 1.

Table 1 Table of Document Acronyms

Term	Description
AB	Accreditation Body
ACT	Analog Conformance Testing
ATL	Authorized Test Laboratory
BoD	Board of Directors
CPM	Certification Program Manager
CRN	Certification Reference Number
CCWG	Compliance & Certification Working Group
DCT	Digital Conformance Testing
DUT	Device Under Test
ECO	Engineering Change Order
ICS	Information Conformance Statement
ILAC	International Laboratory Accreditation Cooperation
IOT	Interoperability Testing
IUT	Implementation Under Test, synonymous with Equipment Under Test – EUT or System Under Test – SUT
IXIT	Information Extra Information for Testing
NDA	Non-Disclosure Agreement
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
PMD	Program Management Document
SDO	Standards Development Organization
SME	Subject Matter Expert
TEV	Test Equipment Vendors
TRSL	Test Requirements Status List
TWG	Technical Working Group

2.3 Definitions

The terms used in this document are defined in Table 2.

Table 2 Table of Term Definitions

Term	Description
Accreditation Body (AB)	Authoritative bodies that provide official recognition for laboratory organizations seeking to provide conformity assessment services.
Certification	The process by which a product is evaluated and authorized to carry a specific set of credentials that indicate that it is conformant with a set of standards and practices.
Certification Program Manager (CPM)	The entity authorized to act on behalf of the FiRa Consortium to perform and manage the day to day Certification processes.
Certified Product Listing	The list of certified products maintained on the FiRa Consortium website.

Term	Description
Compliance Folder	The set of evidence demonstrating a FiRa Consortium device's compliance to the Certification Criteria, which includes the PICS, test reports, technical documentation, change management documentation and certification information.
Compliant Portion	Only those specific portions of an FiRa Consortium device (hardware, software or the combination of the two) that are certified by the Certification Program and are within the bounds of the Compliant Scope.
Compliant Scope	The protocols, data formats and physical layer parameters needed for FiRa Consortium interoperability as defined in [NX]. The Compliant Scope does not contain enabling technologies or implementation of specifications defined outside of FiRa Consortium.
End Product	A fully integrated finished product that include a compliant portion.
Laboratory Program Manager (LPM)	The entity authorized to act on behalf of the FiRa Consortium to perform and manage the Authorized Test Laboratory Program.
Module	A sub-assembly that implements the FiRa Consortium protocol either in part or whole. The sub-assembly can be utilized in one or many end products.
Parent Product	The initial version of an end product that is presented for FiRa Consortium certification.
Test Plan	A list of test cases that are to be completed as part of the Certification Process.
Variant Product	A version of an end product that is based on a Parent Product which uses, to a great extent, the same hardware, software and firmware of the Parent. The initial certification of a Variant may re-use results from the certified parent product.

2.4 Certification Program Manager

Certification Program Managers (CPM) are directly authorized by the FiRa Consortium Board of Directors. The organizational structure under which the CPMs operates will be reported openly to the FiRa Consortium membership and published.

Upon approval, the candidate entity is granted CPM status for the period of one (1) year. Approved CPMs are listed on the FiRa Consortium website. The CPM status is renewed on a yearly basis. Status is subject to revocation as determined by the FiRa Consortium Board of Directors for cause.

2.4.1 Overview

CPMs are entrusted with the authority to render decisions regarding certification for a candidate product and are responsible for administering the process of FiRa Consortium Certification described in Section 5 of this document. The CPM must be knowledgeable of the technologies, independent, impartial, and competent to evaluate initial and on-going compliance against the FiRa Consortium Certification Requirements. The FiRa Consortium is fully committed to supporting the impartial and equitable judgements of the CPM. If, at any time, the impartiality of the CPM is judged to be in question the processes of Section **Error! Reference source not found.**, Appeals, Complaints and Disputes, should be applied.

The specific processes that the CPM administers include:

- The approval of new End Products.
- The review of changes and approval of changes to already approved certified products.
- The reuse of results from certified products for other certification purposes.
- The termination, reduction, suspension and withdraw of certification.
- The ID number assignment process.
- Any other supporting processes as assigned by the Compliance & Certification Working Group.

The CPM makes their assessment of compliance based on multiple factors. The primary method of assessment and generating a certification verdict is accomplished by reviewing the test results generated by the execution of the test plan as described in Section **Error! Reference source not found.**. There are, however, additional elements that the CPM may consider. These include:

- Issues observed and reported by the ATL in the process of testing.
- Significance of any failure results.
- Errors in the FiRa Consortium Normative Documents – i.e. Baseline Specification(s) and/or Test Specification(s).
- Errors in the FiRa Consortium Conformance Test System that may generate challenges to the validation status of one or more test cases as listed in the TRSL.
- The input of relevant technical experts from FiRa Consortium’s Technical Working Groups and Task Groups (as needed and the identity of the certifying product not revealed in the discussion).

Upon review and acceptance of all supporting information, the CPM is responsible for placing the product on the FiRa Consortium Certified Products List. The CPM will retain a record of the Certification Request, a list of the objective evidence reviewed and their certification verdict. This evidence is to be stored in a secure location within the FiRa Consortium.

All steps should be taken to resolve any disagreements with the judgments and decisions of the CPM in seeking a mutually agreeable solution. When it is not possible to resolve issues in a cooperative manner, the CPM is subject to Section **Error! Reference source not found.** (Appeals, Complaints and Disputes) of this document. These procedures should be used as a last resort in cases where the vendor believes the CPM’s judgments are in error or do not follow the spirit of letter of the processes contained in this Program Management Document.

2.4.2 Certification Program Manager Requirements

Each Certification Program Manager:

- Is an entity which successfully completes the process outlined in this section of the Program Management Document.
- Provides a service to the FiRa Consortium membership and non-member licensees.
- Is independent of any activities which may influence their judgement. If the entity is part of a larger organization, there must be documented separation between their activities and the business goals of the larger organization.
- Must protect the confidential information and proprietary rights of their clients.
- Must be free of undue internal/external pressures (commercial, financial or any other) that adversely impacts the quality of their work.
- Is free from involvement in any activities which might diminish confidence in their impartiality or integrity as a CPM.
- Is responsible for the accuracy of their work and their entries into the Certified Product Listing.
- Works with the LPM on ATL and TEV testing laboratory matters.
- Work closely with the Technical and Certification & Compliance Working Groups on the test specification development process, verify the technical specifications have corresponding test plans, and assist in working through any specification issues.
- Required to participate in FiRa Consortium Technical and Compliance & Certification committee meetings on a regular basis.

2.4.3 Application Process

There are two paths for consideration of potential Certification Program Managers. The first is via identification and recruitment of specific entities by the FiRa Consortium through an RFP process. In this case the FiRa Consortium will notify the applicant(s) and request that that applicant supply all necessary information. The second is an unsolicited application from an interested party.

In both cases, the Candidate entity shall provide a CV or Resume which outlines their personnel qualifications, organizational affiliations, statements regarding objectivity and a letter from the candidate’s employer (if applicable) in support of the application.

Upon receipt of the application(s) the FiRa Consortium Management Working Group will determine how to proceed with the candidate entity’s application(s). If a business need exists and the application is found to have merit, the Management Working Group will determine what steps to follow in processing the

application(s). If the application does not meet the requirements for selection or there is lack of market need the candidate will be notified. Candidates who are rejected at this step shall not re-apply for consideration for the role of CPM for a period of six (6) months unless invited by the FiRa Consortium Management Working Group.

As part of the selection process a personnel interview may be scheduled by the FiRa Consortium Management Working Group. The interview team will be selected based on knowledge of the FiRa Consortium Certification Processes and technical background on the supported technologies. Committee members shall not have any potential conflicts of interest in executing the interview process.

Upon completion of the personnel interview the FiRa Consortium Management Working Group will discuss the candidate's qualifications and make a decision on a recommendation to the FiRa Board of Directors for granting CPM status. The Board of Directors will make the final determination on granting CPM status. The candidate entity will be notified regarding the decision on their application. Successful candidates are authorized for a period of one (1) year which is renewable, see Section 2.4.6.

2.4.4 Qualifications

All personnel acting on behalf of the CPM entity shall meet the following qualifications:

- Seven (7) years relevant professional work experience.
- Relevant technical degree or equivalent.
- Specific experience in product evaluation and testing.
- Specific experience in product certification or type acceptance regimes.
- Specific project management experience.
- Proficient in reading and writing English language documentation.
- Ability to clearly discuss technical issues with clients and other FiRa Consortium stakeholders
- Where the candidate is part of a larger organization, documentation of arrangements of operational integrity and an employer statement of commitment to the principles outlined in this section. The freedom of judgement and organizational commitment must be specifically addressed.
- Capability to maintain confidential information through the availability of isolated and secure workspace and a plan for secure data storage.
- Required to participate in FiRa Consortium Technical and Compliance & Certification committee meetings on a regular basis.

2.4.5 Service Level

The Certification Program Manager (CPM) is expected to provide professional and prompt service to the members of the FiRa Consortium. Acknowledgement of initial certification or ECO requests should be made within seven (7) calendar days of the request. Responses to questions or other communication with the CPM should be made within seven (7) calendar days unless otherwise agreed with the vendor. Concerns with the service level of the CPM should be communicated to the Compliance & Certification Working Group Chair.

2.4.6 Renewal of Certification Program Manager Status

The Board of Directors may, at its discretion, request the active CPMs to submit the following information for each individual acting on behalf of the CPM entity:

- A current CV or Resume.
- A letter, in writing, outlining their continued commitment to the principles outlined in Section 2.4.2.
- A summary of their product certification activities over the previous year.

If requested, the Board of Directors will review the submitted documentation along with any other information provided by member companies which have utilized the services of the CPM in question during the past year.

CPM status is automatically renewed for serving CPMs for a subsequent year unless notification is provided by the Board of Directors that CPM status has been revoked.

About FiRa Consortium

Headquartered in Beaverton, OR, the FiRa Consortium is a member-driven organization dedicated to the development and widespread adoption of seamless user experiences using the secured fine ranging and positioning capabilities of Ultra-Wideband (UWB) technologies.