

## **LXI Conformance: How to Get a Product Certified**

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Before a product is certified as LXI-conformant, it must be tested by a certified third party (an LXI Test House) to ensure that it conforms to the LXI specification. Test engineers are assured that combinations of LXI products will integrate well together, and that there is a consistent user experience between products. This is a key advantage of the LXI Conformance Specifications, and the LXI conformance process is unique among standards organizations.

The benefits of the LXI conformance process are:

- Maximum reliability of LXI products due to the most rigorous conformance testing in the market
- Assured interoperability between LXI vendors
- Consistent user experience between products

The LXI Conformance Specifications are designed to ensure that the “interoperability” goal of the LXI Consortium is met to the fullest extent possible, while still allowing vendors to bring devices to market with the minimum of overhead in both time and cost.

### **Why is certification necessary?**

Interoperability. Plain and simple. The LXI Consortium was formed in part to drive assurance that all LXI devices could work seamlessly together, creating an open standard environment and driving a consistent user experience.

Certification allows the usage of the LXI Logo on your device and in your promotional material. Certifying a product as LXI-conformant assures your product is interoperable and participates in an open standard environment. Being part of the LXI Consortium opens the door to more information on conformance, the standard, and it allows you to participate and collaborate with more than 50 of the top Test and Measurement industry leaders.

### **Overview**

The following document describes the LXI Consortium policies for certifying conformance:

[LXI Consortium Policy for Certifying to LXI Consortium Standards](#)

No vendor may use the LXI logo or the letters "LXI" on an instrument or in any promotional material or press releases regarding the instrument until the instrument passes all certification tests and is approved by the LXI Conformance Committee as being LXI-conformant. The LXI Consortium will enforce the laws governing the use of the LXI trademark for the benefit of all its members.

### **How to get a product certified?**

The first order of business is to join the LXI Consortium. Information on joining is located at <http://lxistandard.org/Consortium/HowToJoin.aspx>.

There are various classes of membership (University, Informational, Participating, and Strategic), so you can choose which one is right for you. Once you join, you will have access to the conformance information to get started. You will also be able to use the LXI Reference Design software to speed the development of LXI products, and the latest LXI Conformance Test Suite to conduct the basic LXI conformance tests. In addition, you gain insight into the evolving LXI Standard, can contribute to and collaborate with T&M industry leaders, customers and partners, advance your knowledge of new testing approaches and grow marketing leverage for your new LXI-conformant products.

### **LXI Conformance Test Suite**

Once you are a member you can download the LXI Conformance Test Suite, which is available on the website in the Secure Download area.

This software is an automated test bench maintained by the LXI Consortium which covers all the mandatory rules specified in the LXI Standard. This LXI COTS test program is used for the conformance testing during LXI Plug Fests or by the independent test houses (see below). The LXI COTS software is very useful for those who would like to see how their products are doing with the LXI conformance process. It should be treated as a pre-test before submitting the product for compliance testing.

### **Ready to test?**

There are two basic ways for you to test your device:

#### **A. Test at an LXI PlugFest:**

Pre-register your product and sign up to attend the next available LXI PlugFest. Event schedule is on the website under [Upcoming Events](#). An independent LXI Test House hired by the LXI Consortium to provide its services during the PlugFest is available without charge to all LXI Consortium members.

During PlugFests, the LXI Test House and the LXI Consortium plays an advocacy role. Rather than being adversarial, we make every attempt to help LXI instrument vendors understand what is required and give them tips on how to reach these goals.

#### **B. Test using an approved, privately arranged LXI Test House:**

Currently there are four test houses in the US, Europe, and China. You can find the contact details at <http://lxistandard.org/Specifications/Conformance.aspx>

If testing at a LXI PlugFest, the vendor must have a representative familiar with the device present at the conformance testing. If using an LXI Test House, then a product expert needs to be available by phone for questions.

The compiled test results, which are the XML-based output of the LXI Conformance Test Suite, are then forwarded to the Chair of the LXI Conformance Committee.

*Pass or Fail?*

Immediately after testing, you will get an official record of the test results and a statement that your device has passed or failed. If it has failed, you will receive a statement explaining why and what steps to take to pass.

### *Apply for LXI Conformance*

If your device has successfully passed the LXI conformance tests submit your “Application for Certification to LXI Device Specification 2016” with your conformance documentation together with the test results (LXI Conformance Test Suite XML/PDF file) to the Chair of the LXI Conformance Committee. For the conformance application use the 2-page template form:

[Application for Certification to LXI Device Specification 2016](#)

If approved by the LXI Conformance Committee, you will receive the notification to use the LXI trademark and advertise the device as LXI conformant. Also, your product will be included in the official list of LXI conformant devices on the LXI website. If denied, you will get an explanation why and detailed steps to resolve any issue(s).

### *Technical Justification*

Vendors can use LXI legacy to claim conformance of similar products through Technical Justification. For more details on Technical Justification see the following slides:

[LXI Conformance Committee - Technical Justification \(pdf\)](#)

After successfully completed the LXI Conformance Tests with the new (similar) product submit via email to the Chair of the LXI Conformance Committee the following documents:

- Original submission for LXI Conformant Device
- Original test data for LXI Conformant Device
- Test results from running the LXI COTS tests on the new product
- Conformance document form for the new product

### **Summary**

Conformance testing is unique to LXI and a key advantage to ensure interoperability and a consistent user experience when integrating LXI devices in a LXI test system. More than 3650 conformant LXI devices from 41 vendors are a convincing proof for that.