

Expanding LXI With the Reference Design

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Of all the newer (beyond GPIB) test and measurement (T&M) control standards, LXI is the most widely adopted. No one vendor dominates the market place. Some are large vendors, but many are small, and none has market dominance. It is a highly competitive environment for all products.

Even so, the LXI Consortium wants to expand the number of vendors, which will increase the competition in the market. Competition is healthy; it drives innovation and creates opportunities. However, all standards create entry barriers to the market, since those vendors already there have a recipe for creating compliant products. The instrument vendors that have no presence have to cross that barrier to entry.

It is one of the reasons that the LXI Consortium is creating a “Reference Design,” a commitment to supporting competition in a standard to an extent that has never before been taken on by a T&M standard-setting organization. The Reference Design provides a solution for implementing the LXI (Ethernet) interface for a new product and is capable of running on many different hardware platforms. It has a wide breadth of possible applications for LXI vendors. As part of the process we are even creating “virtual” instruments, including instruments based on commonly available hardware platforms running Linux variants. It is the only way we can prove the Reference Design works.

The Reference Design is now nearing completion; we will shortly release Version 0.9 which requires just “bug fixes” to be implemented as they arise. We are setting up a secure location to host the Reference Design source files. The Reference Design is a valuable piece of Intellectual Property, which needs to be well protected for exclusive use by LXI Consortium members. For the vendors interested in using the LXI Reference Design we are planning the introduction of a Vendor Forum, where companies supporting the design can get assistance on anything LXI. In the future we hope to introduce a User Forum where users can also get assistance from others, much as the [IVI Foundation](#) has achieved with its IVI Web Forum.

At the next meeting of the LXI Consortium in Denver we will have a workshop for a full day (May 5th), where representatives of the vendors will attend and be able to “play” with the Reference Design, build software and learn to manage the connections between the Reference Design and their products. We will repeat this at our Chicago meeting on October 22nd. The event will be informal and have experts in attendance to help. Attendees will also have the opportunity to talk to the designers and the managers of the Reference Design.

LXI has managed the perceived complexities of Ethernet-based control by documenting how LXI products (and the controllers of other T&M control standards) should be connected to the network (or even not connected to the network) through publication of a series of information guides. Through future forums we want to increase the amount of user interaction with the LXI standard, making the standard increasingly familiar to both vendors and users. We want to be more responsive to user demand for new features, features that can be included in the LXI Reference Design, to make the vendors task of implementing them simpler with high levels of vendor compatibility.

The LXI Consortium is committed to supporting its standard to a degree not previously seen in test and measurement, the Reference Design is a key part of that. The Consortium has an objective of increasing competition within its market and responding to its user base. Through that the market drives product innovation and the best value for its users.