The LXI Standard: A few key facts

Three classes
The LXI standard defines three classes that provide different levels of functionality.

Class A
- Requires a LAN
- Full LXI-compliant device
- Ethernet standard
- LAN messaging (peer-to-peer, multicast)
- IEEE-1588 time synchronization
- Time stamp data
- Add/Less to classes B and C

Hardware trigger bus (class A)
A hardware trigger bus provides precise synchronization and triggering of inter-connected instruments.

Class B
- Add to class A
- LAN messaging
- Instrument Web pages
- LXI Protocol (IVI)
- LXI-compliant instruments
- Instrument Web pages for easy setup and configuration
- LXI-compliant instruments

Hardware trigger bus (class B)
Add to classes A and C

Class C
- LXI-compliant devices
- LAN messaging
- Instrument Web pages
- LXI Protocol (IVI)
- LXI-compliant instruments
- Instrument Web pages for easy setup and configuration
- LXI-compliant instruments

The LXI Consortium
Agilent is a co-founder of the LXI Consortium, a not-for-profit organization that includes more than 85 leading companies in test and measurement. The 1.2 of the LXI specification was finished in Sep. 2008. Work has been proceeding on enhancements and Rev 1.3 was approved in Oct. 2007. More than 500 products in more than 75 families (late 2005 to mid 2008)

For more information on the LXI Consortium, please visit: www.lxistandard.org

Creating and Modify Test Systems Quickly and Efficiently with LXI

Defining LXI
LAN Alliances for Instrumentation (LXI) is the power of Ethernet and the Web applied to test and measurement. Based on proven, widely used standards, the LXI architecture enables fast, efficient and cost-effective creation and execution of virtual networks. By standardizing and reusing LAN, LXI offers new possibilities in test systems—local, remote, distributed and on-demand.

LXI provides triggers beyond those available in GPIB, VXI, or PXI.

LAN trigger (class B)
For faster test execution, price-performance, and cost-effectiveness, LXI triggers allow instrument-to-instrument communication.

IEEE-1588 time-based triggers (class B)
The combination of time synchronization and time stamping aligns events across instruments during operation. It also helps simplify debugging and vastly improve system development.

LXI advanced capabilities
Agilent offers LXI advanced capabilities to expand your test suite and increase your system’s performance.

The benefits: How LXI enables better systems
This open architecture helps you get your system up and running sooner—and in less space. In fact, LXI is easier for you to integrate a scalable, fast test system today and reuse it in the future.

Build versatile systems that accommodate future needs
The LXI architecture allows designers to integrate existing, emerging and new technology into a scalable system.

- Retrofits and easy to move to different environments
- Allows flexibility and freedom to change in future systems
- Downloads new capabilities or personalities into intelligent instruments

Improve system throughput
- Use GigE LAN to elimination more than 100 times the throughput of GPIB
- Reduces power and cost issues when moving power to communication between LXI devices (class C)

Leveraging hardware and software from R&D to manufacturing
- Reduce hardware costs and increase system performance by using LXI-enabled applications
- Lower the costs of LXI-enabled applications across your organization—proprietary and open source alike

Why LXI?