Bustec and LXI technology

A strong expertise in data acquisition systems

With hundreds of systems deployed in critical applications, for instance military/aeronautical test applications as well as nuclear power plant monitoring & control systems, Bustec continues to invest in R&D to develop new technologies that lower costs and increase performance. This is how we started using LXI technology in our data acquisition systems.

For flexibility, Bustec offers data acquisition solutions for LXI and VXI using the same function card modules in carriers for both platforms.

With Bustec LXI data acquisition systems, DUT signals | 1 | enter and exit the module from its front panel while connectors for Gigabit Ethernet | 2 |, power | 3 | and additional trigger cables | 4 | are found on the back of the module.

Discover Bustec LXI products

The ProDAQ 6100 LXI Function Card Carrier

provides access to up to four ProDAQ function cards through a standard Gigabit LAN port.

The ProDAQ 6100 is compatible with all ProDAQ function cards.

ProDAQ 3400	Analog to Digital Converter Function Cards
ProDAQ 3500	Digital to Analog Converter Function Cards
ProDAQ 3600	Digital I/O Function Cards
ProDAQ 3800	Counter/Timer Function Cards
ProDAQ 3900	Input / Switching / Synchronization Miscellaneous Function Cards

The ProDAQ 6140 LXI Matrix Switching Unit

provides a relay matrix which can be fitted between the sensors and actuators on a device under test and the data acquisition and control system.

Bustec also offers a flexible range of signal conditioning products based on the ProDAQ 6100.

bustec

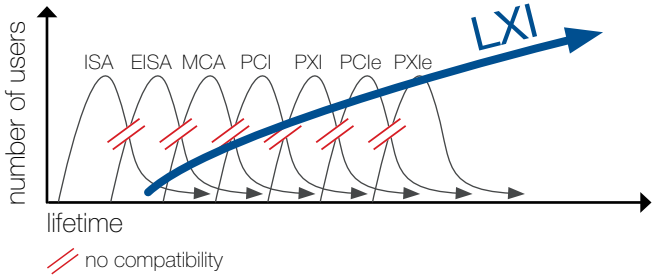
When Data Acquisition meets LXI

Longevity

Protect investments for the future

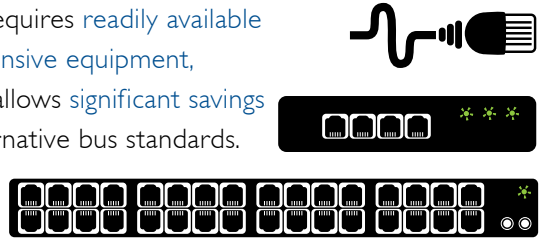
Computer bus technologies constantly emerge and subsequently become obsolete without maintaining compatibility with each other, making long-term or lifetime support for existing systems extremely difficult.

LXI is based on standard TCP/IP Ethernet, a network bus with long-lasting adoption, millions of users and performance improvements that preserve backward compatibility.



Cost-saving solution

LXI only requires readily available and inexpensive equipment, therefore allows significant savings unlike alternative bus standards.



Standalone systems

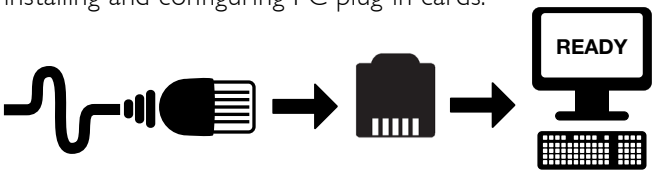
Without the need for mainframes and controllers, LXI systems can provide considerable cost savings.

LXI modules feature self-contained power supplies to improve reliability, lower costs and provide widely distributed system architectures.

Flexibility

Ease of Use

Ethernet data acquisition reduces configuration and integration time by omitting the traditional need for installing and configuring PC plug-in cards.



Flexibility in size and power

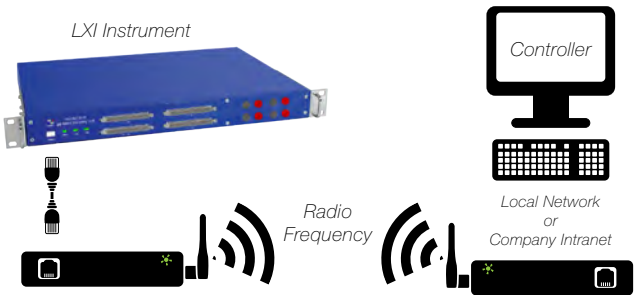
Enjoy custom form factors and higher I/O density.

As they include an Ethernet port, LXI instruments have much flexibility in physical size and shape whereas PCI and PXI boards must fit into standard-sized slots and chassis.

LXI offers numerous benefits as an emerging technology, and will continue to play a role in data acquisition applications where flexibility and seamless integration are critical application needs.

Access Over Long Distances

With the use of built-in web interfaces, an unlimited number of measurement nodes can be accessed and controlled from virtually anywhere in the world.



Synchronization

Accurate synchronization and triggering

The LXI platform offers automatic synchronization of devices with only 20 ns FWHM jitter using the IEEE 1588 Precision Time Protocol over standard Ethernet cables.

Traditional LXI instruments have additional transparent clocks to enable synchronization and triggering, but with Bustec LXI products, engineers can reap the benefits of synchronization and triggering using standard switches.

LXI data acquisition performance metrics

With Gigabit Ethernet connectivity a standard feature of PCs, Ethernet-based data acquisition systems now can deliver sustained throughput of over 1 Gb/s, and this will continue to increase as 10 GB Ethernet and future generations of Ethernet become the norm.

LXI adds benefits to Ethernet, such as triggering and synchronization as precise as 20 ns FWHM over standard Ethernet cables.

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