PXI LCR Bundle

Expandable PXI Bundle with LCR Meter

Use PXI LCR Bundle for

- Combining measurements from different instruments in one system
- CV/IV testing with high channel density and no connection changes at the device under test (DUT)
- MEMS Structure Electrical Test
- Wafer Parametric Test
- Multilayer Ceramic Capacitor (MLCC) Validation & Test

Popular Features

2-in-1

SMU and LCR meter combined in single instrument for an elegant bench solution

Scalability

Combine with other types of instruments to build tightly integrated mixed signal test systems
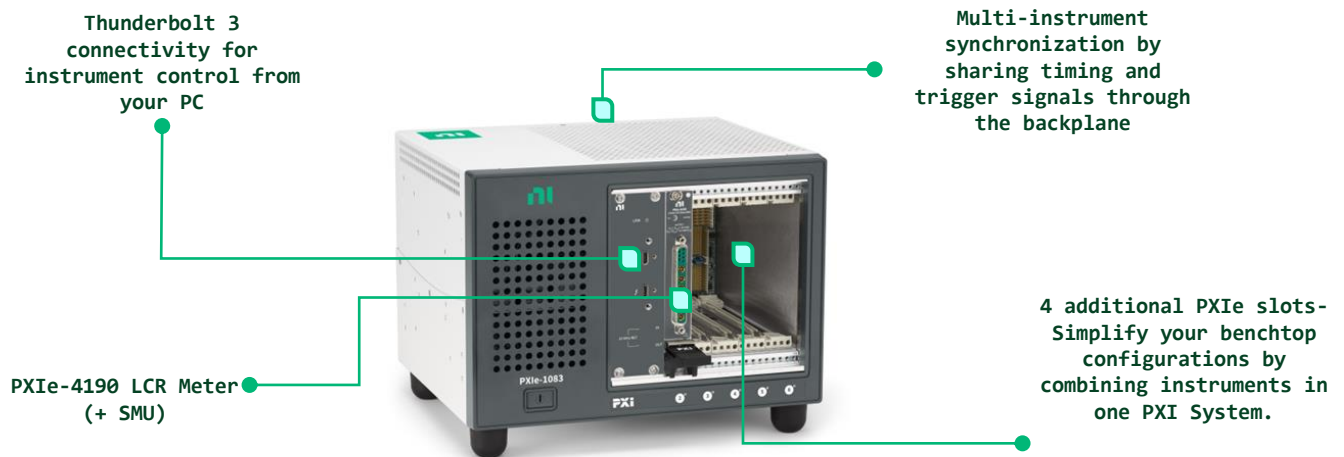
Precision

Femtofarad-class capacitance measurements and femtoampere-class current measurements

Do more in one box with NI PXI

The NI PXI LCR Bundle includes a PXIe-4190 LCR Meter in a 5-slot PXI Express based measurement system that is controlled through your laptop's Thunderbolt™ USB-C port.

Achieve high accuracy, high productivity, and higher speeds with the standard for automated test and automated measurement: NI PXI (PCI eXtensions for Instrumentation).

Thunderbolt 3 connectivity for instrument control from your PC

Multi-instrument synchronization by sharing timing and trigger signals through the backplane

PXIe-4190 LCR Meter (+ SMU)

4 additional PXIe slots- Simplify your benchtop configurations by combining instruments in one PXI System.

Make DC and impedance measurements in a seamless fashion with NI's PXIe-4190 - the world's first LCR Meter and SMU in a single instrument. This instrument provides femto-farad (10-15) class capacitance measurements and femto-amp current measurements in a single-slot PXI form factor. The new PXIe-4190 also removes the need for an additional switch to multiplex between the LCR Meter and SMU, allowing for a simplified test experience with higher throughput and lower capital cost.

PXIe-LCR5100 P/N: 867113-01	
What is Included	
Chassis	PXIe-1083
Module	PXIe-4190
Accessories	Thunderbolt cable Power cable, US DSub-to-BNC cable for I/O connectivity
Key Specifications	
Bandwidth	2 Mhz
Voltage Range	± 40 V DC Bias
Max Current	100 mA
Current Ranges	100 mA, 10 mA, 1 mA 100 µA, 10 µA, 1uA, 10nA, 1nA

Upgrade and do more with your system!

Use the remaining 4 slots to build on top of your system and manage change. Add measurements, more channels, or new analysis routines without having to purchase a whole new instrument. Don't be limited by vendor-defined configurations; explore over 600 different PXI modules ranging from DC to mmWave.

Oscilloscopes
- Sample at speeds up to 12.5 GS/s
- 6 GHz of analog bandwidth
- Numerous triggering modes
- Up to 24-bit resolution

Start with PXIe-5160

Digital Multimeters
- Voltage measurements up to 1,000 VDC
- Current measurements up to 3 A
- Resistance measurements up to 5 GΩ
- Isolated Digitizer mode - Up to 1.8 MS/s

Start with PXIe-4080

Digital Instruments
- 32-channel module (up to 512 per chassis)
- 100 MHz vector rate, 39 ps displacement
- Digital voltage -2 V to 6 V,
- PPMU force voltage -2 V to 7 V

Start with PXIe-6570

Waveform Generators
- Up to two 16-bit channels per module
- 800 MS/s with 20, 40, and 80 MHz bandwidth
- Up to 34 channels to build parallel
- Max ±12 V and min ± 7.75 mV output ranges

Start with PXIe-5413

Counters/Timer
- Up to eight 32-bit counter/timers
- TTL/CMOS-compatible digital I/O
- Up to 80 MHz measure frequency
- Onboard high-precision oscillators

Start with PXIe-6612

Source Measure Units (SMU)
- Up to 24 channels (408 per chassis)
- Up to 200 V and 3 A (10 A pulse)
- Current sensitivity down to 10 fA
- Max power per channel of 40W (500W pulse)

Start with PXIe-4139

Power Supplies
- Two isolated, 60W channels per module
- Hardware timing and triggering
- Output disconnect relays
- Four-wire remote sense

Start with PXI-4110

Reconfigurable IO (FPGA)
- Variety of on-board FPGA options
- 12-bit to 18-bit analog input resolution
- Up to 16 analog channels and 126 bidirectional channels
- Up to 1 MS/s analog sample rate

Start with PXIe-7856

Switches
- Electromechanical, Reed, solid state, FET
- Up to 150 V or 2 A
- Up to 544 cross points in a single PXI slot
- 1- and 2-wire options

Start with PXIe-2527

Digital Waveform Instrument
- Standard TTL/CMOS interface voltages and programmable voltage levels
- 32 bidirectional digital channels
- Advanced waveform sequencing and streaming features

Start with PXIe-6548

Multifunction IO
- Voltage measurements up to 10 MS/s/ch
- Analog I/O, Digital I/O, and Counters in a single device
- High speed simultaneous sampling up to 14MS/s/ch
- Up to 836 AI single ended channels in 4U of rack space

Start with PXIe-6363

Contact your NI product expert to get help solving your test challenges.

Choose how you like to work with flexible NI Software

Interactive- skip programming and control your instruments with InstrumentStudio
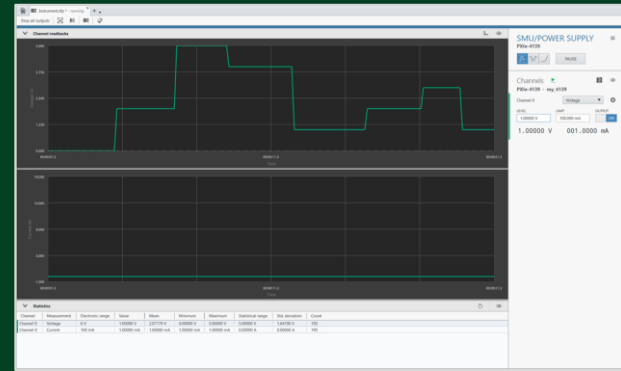
- **Control** all your instruments in a single, intuitive no-code application software.

- **Capture** screenshots, **export** data, and **share** projects with colleagues and between systems.

- **Monitor and debug** automated test systems

With InstrumentStudio, view data from all your instruments unified on high-resolution monitors rather than small, integrated displays.

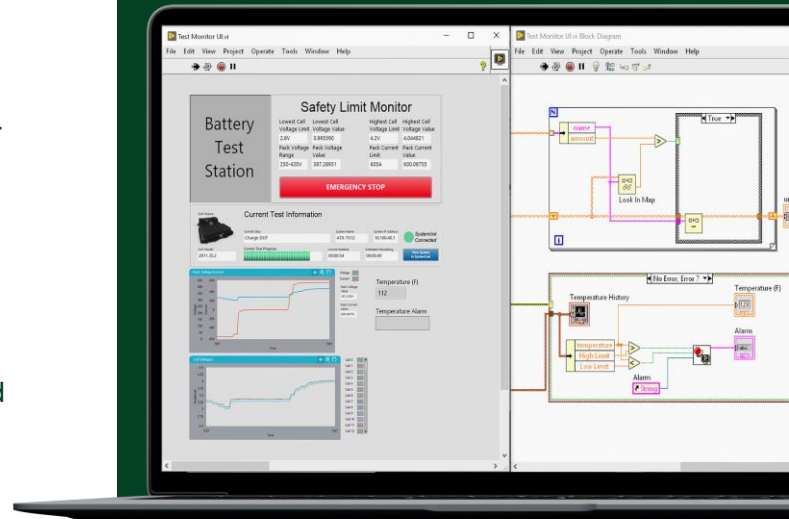## Programming- Build an Automated Test System with LabVIEW

- **Acquire, process and analyze data** from NI hardware, 3rd party instruments, and many industry-standard protocols

- **Create interactive UIs** for test monitoring and control.

- **Save data** to .csv, .tdms, or any custom-defined binary file.

- **Integrate code** written in Python, C/C++, .NET, and MathWorks MATLAB® software.

Why choose? Program or don't based on your task with a Test Workflow Bundle

- **Create** automated test sequences with TestStand

- **Perform** data acquisition and logging with FlexLogger™ software

- **Build** web applications for test with G Web Development Software

- **Interactively analyze** your data with Diadem

"The move to a COTS approach using PXI and LabVIEW was critical to this production-test success at Philips. The combination of best-in-class modular hardware along with industry-standard software was pivotal to the millions of dollars and hundreds of hours saved in production test engineering"

-Neil Evans
Senior Manager, Philips

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