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E-Mail: [info@datatec.eu](mailto:info@datatec.eu)  
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PRODUCT BROCHURE

# PXI Controllers

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# NI PXI Controllers



## NI PXI controllers offer:

The latest high-performance Intel® processors, with up to 18 cores available

OS options: Windows 11, Windows 10, Linux® Desktop (RHEL, OpenSUSE, Ubuntu), NI Linux Real-Time

Up to 64 GB of DDR4 RAM and storage options from 512 GB to 960 GB (upgradable)

Solid-state drives, Thunderbolt™ 3, USB 3.0, gigabit Ethernet, and other peripheral ports

## Key Features

**High performance and scalability**—NI PXI controllers leverage the latest Intel® Core™ and Xeon® processors (up to 18 cores) for high-throughput data processing and parallel test execution. Standardized I/O and modular design enable straightforward, drop-in controller upgrades as processing demands increase over time.

**Industrial-grade durability**—Designed for mission-critical applications, NI PXI controllers operate reliably in challenging conditions and offer real-time OS choices for enhanced system stability and longevity.

**Comprehensive security**—Design for security at every layer including hardware encryption, secure boot, and regular software updates. Removable drives on select models simplify data protection and declassification for sensitive or regulated deployments.

## NI PXI: Built for Automated Test and Measurement

PXI offers engineers high performance while reducing test time and cost compared to traditional box instruments. The combination of modularity and software connectivity is ideal for advanced test applications that require precise, large-channel count, mixed-measurement solutions.

Best for:

High-channel, high-speed test applications

Combining instruments, sensors, and electrical measurements

Automated validation test

Production test systems for electronic devices

# NI PXI Controllers Portfolio

## PXI Embedded Controller Modules

Selection Guide	Model	Part Number	Controller OS	Processors and Cores	Max Controller Bandwidth	Hard Drive Memory Size	HDD Removable	TPM Version*		
Good, Intel Core i3	NI PXIe-8822	787881-00	No OS	11th Gen Intel Core i3-11100HE, 4 Core	4 GB/s	512 GB	—	—		
		787881-01	Windows 10 64-bit					2.0 (Infineon/ST, Global Market)		
		787881-0118						2.0 (Nations Tech, China Market)		
		787881-33	NI LabVIEW Real-Time (NI Linux Real-Time)					—		
		788815-01	Windows 11					2.0 (Infineon/ST, Global Market)		
		788815-0118						2.0 (Nations Tech, China Market)		
Better, Intel Core i5	NI PXIe-8842	787882-00	No OS	11th Gen Intel Core i5-11500HE, 6 Core	8 GB/s	512 GB	—	2.0 (Infineon/ST, Global Market)		
		790657-01**	Windows 10 64-bit					2.0 (Infineon/ST, Global Market)		
		787882-01						2.0 (Infineon/ST, Global Market)		
		790657-0118**						2.0 (Nations Tech, China Market)		
		787882-0118	LabVIEW Real-Time (NI Linux Real-Time)					2.0 (Nations Tech, China Market)		
		790657-33**						—		
		787882-33	Windows 11					—		
		790658-01**						2.0 (Infineon/ST, Global Market)		
		788816-01						2.0 (Infineon/ST, Global Market)		
		790658-0118**						2.0 (Nations Tech, China Market)		
		788816-0118						2.0 (Nations Tech, China Market)		
Best, Intel Core i7	NI PXIe-8862	787987-00	No OS	11th Gen Intel Core i7-11850HE, 8 Core	16 GB/s	512 GB	—	2.0 (Infineon/ST, Global Market)		
		790662-01**	Windows 10 64-bit					2.0 (Infineon/ST, Global Market)		
		787987-01						2.0 (Infineon/ST, Global Market)		
		790663-0118**						2.0 (Infineon/ST, China Market)		
		787987-0118						2.0 (Nations Tech, China Market)		
		789857-01						2.0 (Infineon/ST, Global Market)		
		788167-01						960 GB, U.2, Removable	2.0 (Infineon/ST, Global Market)	
		789546-01	LabVIEW Real-Time (NI Linux Real-Time)					512 GB	—	
		790659-33**						512 GB	—	
		787987-33						512 GB	—	
		788167-33	960 GB, U.2, Removable					—		
		790660-01**	Windows 11					512 GB	—	2.0 (Infineon/ST, Global Market)
		788817-01						512 GB	—	2.0 (Infineon/ST, Global Market)
		790660-0118**						512 GB	—	2.0 (Nations Tech, China Market)
		788817-0118						512 GB	—	2.0 (Nations Tech, China Market)
		790661-01**						960 GB, U.2, Removable	2.0 (Infineon/ST, Global Market)	
		788818-01						960 GB, U.2, Removable	2.0 (Infineon/ST, Global Market)	

(continued on next page)



## PXI Embedded Controller Modules (continued)

Selection Guide	Model	Part Number	Controller OS	Processors and Cores	Max Controller Bandwidth	Hard Drive Memory Size	HDD Removable	TPM Version*
Extreme, Server-Grade	NI PXIe-8881	787807-01	Windows 10 64-bit	Intel Xeon W-2225, Xeon Quad-Core	24 GB/s	512 GB	—	2.0 (Infineon/ST, Global Market)
		787807-0118						—
		786636-01						2.0 (Infineon/ST, Global Market)
		786636-0118						—
		787805-01						—
		786636-00	No OS	Intel Xeon W-2245, Xeon 8-Core				2.0 (Infineon/ST, Global Market)
		787805-33	LabVIEW Real-Time (NI Linux Real-Time)					—
		789431-01	Windows 11					2.0 (Infineon/ST, Global Market)
		789431-0118		2.0 (Nations Tech, China Market)				
		787806-01	Windows 10 64-bit	Intel Xeon W-2295, Xeon 18-Core				2.0 (Infineon/ST, Global Market)
		787806-0118						—

\* TPM Versions: In order to run Windows 11 on your PC, it must be installed with Trusted Platform Module (TPM) 2.0. The latest NI controllers offer TPM support. Refer to this table for regional TPM types and restrictions; currently, Global Market and China Market. Contact NI support with questions.

\*\*NI Controllers I/O: This part number does not include a GPIB port. Check the model page for full I/O specs. NI controllers typically offer RS-232 Serial, DisplayPort™ 1.4, Ethernet, Thunderbolt 4, USB 2.0, USB 3.2, Trigger, Reset Button, and LEDs. GPIB ports are not included on all part numbers.

## PXI Rack-Mount Controller Modules

Model	Part Number	Processor	Controller OS	RAM	Storage	PCI Express	Video	Ports
NI RMC-8356 for PXI Express Control (Windows)	785321-01	Intel Xeon E5620 (2.4 GHz Quad Core)	Windows 10 64-bit	16 GB–64 GB DDR4	1 TB HDD + 3 Additional Bays	3.0 x 16, 1 Slot (for Remote Control)	2 DisplayPort, 1 DVI, 1 VGA	2 USB 3.0, 4 USB 2.0, 2 Gigabit Ethernet RJ-45
NI RMC-8354 1U Controller, Core i7-860, 1X 500 GB, Real-Time Software	781650-33	Intel Core i7-860 (2.8 GHz)	LabVIEW Real-Time OS	1 GB (Included)	500 GB	Gen 1 MXI	—	—

## Controller Accessories

### Hard Drives

Model	1 TB NVMe Solid-State Drive Upgrade for NI PXIe-8822/8842/8862, M.2, 80 mm	Spare 512 GB NVMe Solid-State Drive for PXIe-8822/8842/8862, M.2, 80 mm	Spare 512 GB NVMe Solid-State Drive, M.2, 80 mm
Part Number	788898-01	788897-01	786775-01
NI PXIe-8822	✓	✓	—
NI PXIe-8842	✓	✓	—
NI PXIe-8862	✓	✓	—
NI PXIe-8881	—	—	✓

## RAM

RAM	16 GB DDR4 3200 SO-DIMM RAM for PXIe-8822/8842/8862	16 GB DDR4 2666 SO-DIMM RAM, ECC for PXIe-8881
Part Number	788899-01	787659-01
PXIe-8822 [787881-01]	✓	—
PXIe-8822 [787881-0118]	✓	—
PXIe-8822 [787881-33]	✓	—
PXIe-8822 [788815-01]	✓	—
PXIe-8822 [788815-0118]	✓	—
PXIe-8842 [790657-01]	✓	—
PXIe-8842 [787882-01]	✓	—
PXIe-8842 [790657-0118]	✓	—
PXIe-8842 [787882-0118]	✓	—
PXIe-8842 [790657-33]	✓	—
PXIe-8842 [787882-33]	✓	—
PXIe-8842 [790658-01]	✓	—
PXIe-8842 [788816-01]	✓	—
PXIe-8842 [790658-0118]	✓	—
PXIe-8842 [788816-0118]	✓	—
PXIe-8862 [790662-01]	✓	—
PXIe-8862 [787987-01]	✓	—
PXIe-8862 [790663-0118]	✓	—
PXIe-8862 [787987-0118]	✓	—
PXIe-8862 [790659-33]	✓	—
PXIe-8862 [787987-33]	✓	—
PXIe-8862 [790660-01]	✓	—
PXIe-8862 [788817-01]	✓	—
PXIe-8862 [790660-0118]	✓	—
PXIe-8862 [788817-0118]	✓	—
PXIe-8862 [790661-01]	✓	—
PXIe-8862 [788818-01]	✓	—
PXIe-8862 [789546-01]	✓	—
PXIe-8881 [786636-01]	—	✓
PXIe-8881 [786636-0118]	—	✓
PXIe-8881 [787805-01]	—	✓
PXIe-8881 [787805-33]	—	✓
PXIe-8881 [787807-01]	—	✓
PXIe-8881 [787807-0118]	—	✓
PXIe-8881 [789431-01]	—	✓
PXIe-8881 [789431-0118]	—	✓

# Detailed View

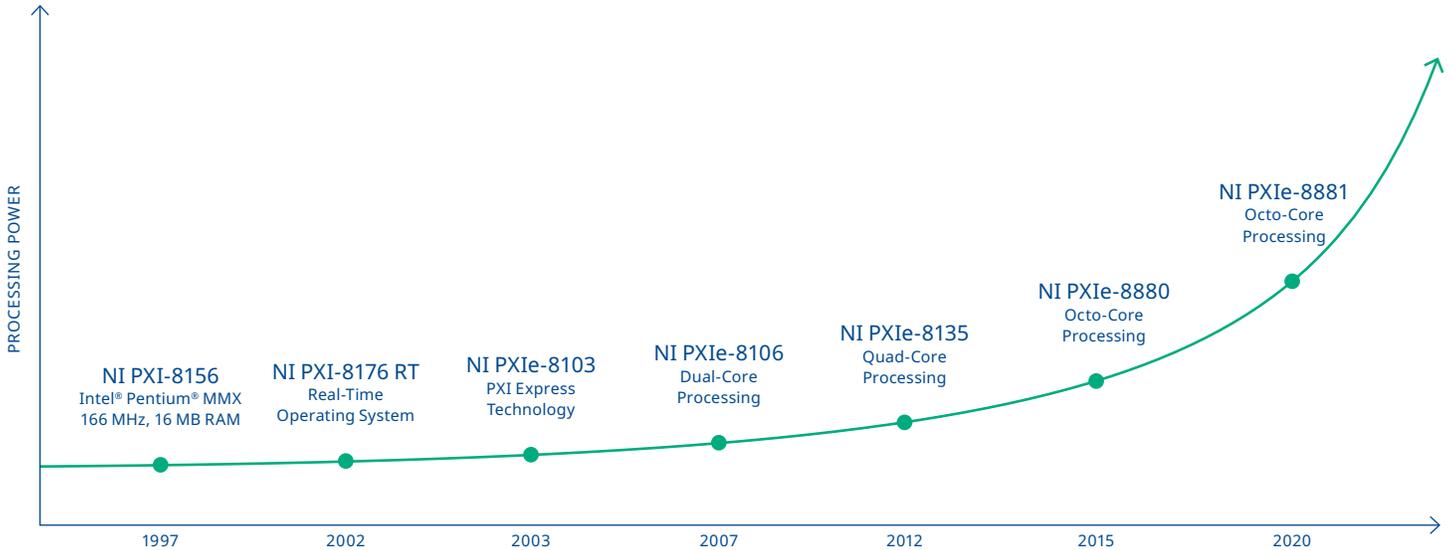


Figure 2. Detailed View of a PXIe Controller PXIe-8862 with Removable Hard Drive

## Key Features

### High Performance and Scalability

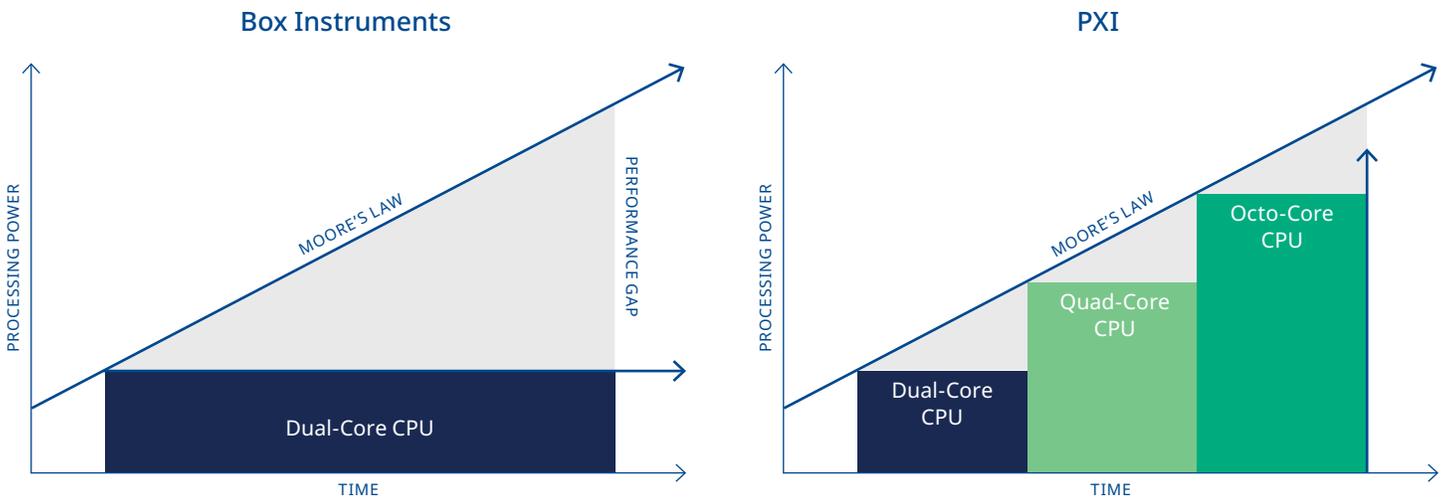
As a founding member of the PXI Alliance, we continue to set the standard for modular test systems by delivering PXI embedded controllers with cutting-edge processor technology. Through close partnerships, we integrate the latest high-performance Intel processors including Intel Core i3, i5, i7, or Xeon with up to 18 cores available to ensure engineers have access to industry-leading performance for demanding test and measurement applications. Our partnerships with CPU providers such as Intel enable us to integrate the latest and greatest processing power into our controllers with each release, as shown in Figure 3.



**Figure 3.** The progression of processing power in NI controllers over time.

Signal processing makes up around 80 percent of the measurement time for computationally intensive measurements. The modular NI PXI design allows you to upgrade your controllers as new technology is available without changing the chassis or modules within your test systems. Each controller generation is designed for compatibility, allowing you to replace controllers and enhance system performance as technology evolves.

In contrast, traditional instruments feature fixed CPUs, necessitating the purchase of entirely new systems to access the latest processing capabilities which can be extremely costly over time, as depicted in Figure 4.



**Figure 4.** The Processing Power Evolution of Box Instruments versus PXI Systems

## Flexible OS Choices

The OS determines which development tools, drivers, and automation frameworks are available for your application. NI PXI embedded controllers support multiple OS options—choose Windows for a familiar, industry-standard workspace, NI Linux Real-Time for reliable, deterministic performance, or purchase without an OS for full customization of your embedded system.

### Microsoft Windows

Windows is the most widely used OS for PXI systems, offering compatibility with a broad range of test and measurement software, including NI LabVIEW, NI TestStand, and third-party tools. Its graphical user interface (GUI) simplifies development, debugging, and integration with enterprise IT infrastructure.

The Long-Term Servicing Channel (LTSC) version is a specialized edition of Windows designed for enterprise and mission-critical environments where stability, security, and long lifecycle are essential. The IoT Enterprise LTSC lifecycle has 10 years of support. NI PXI controllers come with Windows 10 LTSC or Windows 11 LTSC.

### NI Linux Real-Time

NI Linux Real-Time is designed for applications demanding deterministic, low-latency performance. The real-time kernel ensures predictable response times, while the headless (no GUI) operation enhances reliability in embedded and industrial environments. NI Linux Real-Time is also less susceptible to unexpected updates or background processes that can disrupt test execution. The NI Linux Real-Time OS is fully supported by the LabVIEW Real-Time Module.

NI Linux Real-Time OS provides:

- Guaranteed worst-case execution time
- Prioritize program sections for optimal performance
- Consistent loop timing (microsecond precision)

Learn more:

- [NI Linux Technology](#)
- [What Is a Real-Time OS?](#)
- [Do I Need a Real-Time System?](#)

### No OS (Custom Install)

NI PXI controllers support custom OS deployment through “No OS” controller variants, giving organizations the flexibility to install their own operating systems. This option is ideal for teams with proprietary requirements, unique security policies, or specialized integration needs.

While this approach offers maximum customization, it requires advanced expertise in OS deployment and driver integration. For example, NI provides hardware drivers only for select Linux distributions—so to ensure PXI module functionality, it is recommended to use supported distributions such as RHEL, Ubuntu, or OpenSUSE.

You can also use the online [NI OS Compatibility Checker](#) which shows operating system compatibility for NI hardware and software. You can reference this information to ensure your selected hardware/driver/software combination is supported on your desired operating system.

## Industrial-Grade Durability

It is critical to ensure that modern instrumentation systems are highly reliable under demanding operating conditions. For this reason, we offer extended-temperature and 24/7 operation versions of our PXI embedded controllers. These embedded controllers use a more rugged hard drive designed for reliability in low- and high-temperature extremes, with a 100 percent duty cycle and 24/7 operation. The hard drives used in standard versions of these embedded controllers work in an operating range of 5 °C to 50 °C and can operate at 20 percent duty cycle for eight hours a day, five days a week—similar to desktop PCs and laptops.

The extended-temperature and 24/7 operation versions can operate in temperature ranges of 0 °C to 55 °C and can be used for applications that require continuous operation, with up to 100 percent duty cycle, for 24 hours a day, seven days a week. You can also choose a solid-state hard drive instead of a rotating hard drive to further improve the reliability of the entire system, particularly in harsh environments. Because of this unique NI design consideration, you can deploy PXI-based instruments in more challenging applications.

## Comprehensive Security

NI hardware and software are designed with security in mind. Specific security features for NI PXI controllers include Trusted Platform Module (TPM) 2.0 and removable hard drives. To learn more about the NI comprehensive approach to product security, visit the [NI Product Security](#) and the [PXI Product Security](#) resources.

[Learn more about Windows 11 Security and the Advantages for Test Applications](#)

## Trusted Platform Module (TPM) 2.0

NI PXI embedded controllers feature TPM 2.0, a dedicated crypto processor that elevates platform security beyond software alone. TPM provides a protected space for key operations, safeguarding encryption and signature keys during critical moments when they are most vulnerable.

- Shields unencrypted keys and authentication data from software-based attacks
- Ensures secure platform authentication and data integrity
- Available on NI PXIe-8881, NI PXIe-8862, NI PXIe-8842, and NI PXIe-8822 models

## Removable Hard Drives for Enhanced Security

Additionally, the PXIe-8862 features removable hard drives for use in even the most security-sensitive locations. The hard drive retains all user and system information—even after powering down—thanks to its nonvolatile memory. A removable hard drive makes the declassification process straightforward when the setup is deployed in a classified area. When you have finished testing, you can remove the hard drive and store it in a secure environment.



**Figure 5.** The PXIe-8862 with a removable hard disk drive.

## I/O

PXI embedded controllers serve as the central interface between your test system and the outside world. While the PXI backplane delivers high-speed communication to modular instruments, the controller's front-panel I/O enables essential connectivity for system integration, debugging, and peripheral support. NI controllers commonly feature RS-232 serial, DisplayPort 1.4, Ethernet, Thunderbolt 4, USB 2.0 and 3.2, trigger inputs, reset buttons, and status LEDs. Many engineers no longer require GPIB ports, so select part numbers do not include GPIB ports.

I/O connectivity NI PXI Embedded Controllers:

- Ethernet (RJ-45)—Network connectivity, remote control, data transfer
- USB (2.0/3.0/3.2)—Connecting peripherals (keyboards, drives, instruments)
- Thunderbolt 4—High-speed external device connectivity
- DisplayPort—Connecting monitors for GUI and debugging
- Serial (RS-232/RS-485)—Legacy instrument control, industrial devices
- GPIB—Controlling legacy instruments, on select part numbers only
- Trigger—Routing PXI triggers to or from the backplane trigger bus
- Removable storage (U.2 NVMe SSD)—Expand/upgrade storage capacity
- Reset button—Resets the controller
- LEDs—Help with visual feedback on system health and activity

## Software

### PXI Platform Services API for System Health Monitoring

Automatically installed in each PXI system, PXI Platform Services is a software package that enables advanced PXI features such as chassis and module identification, synchronization, and triggering. It also allows you to monitor and manage system health programmatically using the System Configuration API. This API is accessible from LabVIEW as well as C, .NET, and other supported languages, enabling you to:

- Query chassis temperature, fan speed, and power status
- Retrieve module information and operational status
- Automate self-tests and calibration routines
- Log diagnostic data for predictive maintenance

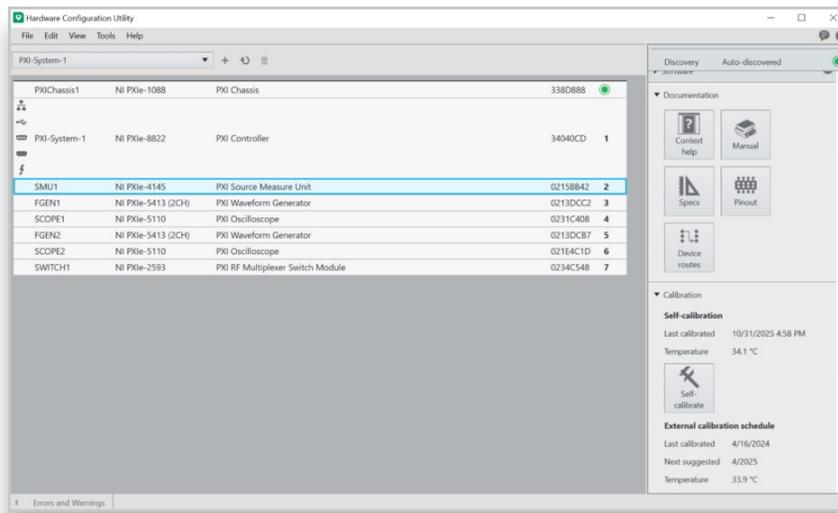
### Hardware Configuration Utility (HWCU)

Automatically installed in each PXI system, Hardware Configuration Utility is the next-generation NI tool for discovering, configuring, and managing test and measurement hardware:

- View local and remote real-time systems
- View hardware configuration information, including required software and drivers
- Perform built-in hardware operations such as resetting, calibrating, and self-testing
- View hardware documentation such as pinouts, user manuals, and specs
- View and manage system software
- Manage base system images on real-time systems
- View hardware soft front panels
- Save and apply system configurations



HWCU is designed to replace NI Measurement & Automation Explorer (NI MAX) with a modern, streamlined interface and improved workflows. Most hardware is supported in Hardware Configuration Utility; however, if you encounter unsupported devices or tasks, you can continue using NI MAX for full functionality.



**Figure 6.** NI Hardware Configuration Utility displaying a PXI system setup. The right panel provides documentation links (manual, specs, pinout) and calibration details, including the last self-calibration date and temperature.

## Measure in Seconds, Automate in Minutes

The NI PXI platform streamlines every stage of automated test, from interactive measurements to full system automation. Application software includes:

- **NI InstrumentStudio™ software**—Simplify setup and control of multiple instruments in a single interface (included in every PXI system).
- **LabVIEW**—Rapidly develop custom measurements with intuitive graphical programming.
- **TestStand**—Orchestrate complex test sequences and reporting.
- **NI Nigel™ AI**—Accelerate your setup and insight with the first AI advisor for test and measurement.

For maximum flexibility, PXI hardware, instrument drivers, and NI software support Python, C, C++, and .NET.

[Learn more about support for NI and Python](#)

## Supporting Documentation

Document Type	Model Number
Getting Started	<a href="#">PXIe-8822</a> , <a href="#">PXIe-8842</a> , <a href="#">PXIe-8862</a> , <a href="#">PXIe-8881</a>
Specifications	<a href="#">PXIe-8822</a> , <a href="#">PXIe-8842</a> , <a href="#">PXIe-8862</a> , <a href="#">PXIe-8881</a>

## Configure a System

The NI online system advisors help you create a custom system based on your specific requirements. Use the advisors to choose compatible hardware, software, accessories, and services—and then save your selections as configurations for easy quoting and purchasing later. Visit [ni.com/advisor](https://ni.com/advisor) to learn more.

# NI PXI: Built for Automated Test and Measurement

NI PXI is a high-performance test and measurement platform that integrates hardware and software—including chassis, controllers, modular instruments, and I/O modules—with advanced synchronization to tackle complex measurement and automation challenges. Renowned for its flexibility and reliability, engineers use PXI to build complex, mixed-measurement systems for applications ranging from research to validation and production test.

Developed in 1997 and launched in 1998, PXI is an open industry standard governed by the PXI Systems Alliance (PXISA), a group of more than 70 companies chartered to promote the PXI standard, ensure interoperability, and maintain the PXI specification.

## Software

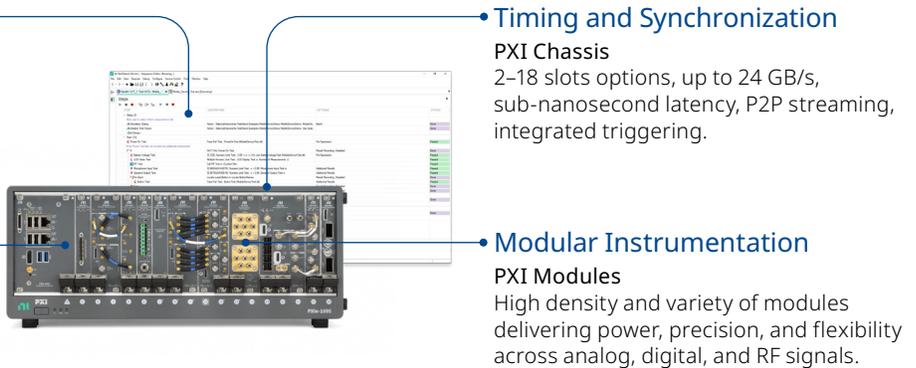
### Test Management and Code

Development from measurement to automation. Manage, control and debug all in one connected workflow.

## Powerful Computer

### PXI Embedded or Remote Controller

Latest Intel® processors, Windows or Real-Time operating systems, up to 24 GB/s bandwidth, and up to 912 GB of storage.



## Integrating the Latest Commercial Technology

By leveraging advanced commercial technologies, we deliver high-performance, high-quality products at a competitive price. Our systems incorporate high-bandwidth interconnects for faster data throughput, powerful multicore processors for efficient parallel testing, FPGAs that accelerate signal processing at the edge, and precision data converters that expand measurement range and enhance instrumentation performance.

# NI PXI Instrumentation



## PXI Oscilloscopes

- Sample at speeds of up to 5 GS/s
- 1.5 GHz of analog bandwidth
- Numerous triggering modes
- Up to 24-bit resolution



## PXI LCR Meters and SMUs

- AC stimulus frequency up to 2 MHz
- AC stimulus amplitude up to 7.07 Vrms
- DC bias up to  $\pm 40$  V
- Basic impedance accuracy of 0.05%



## PXI Digital Multimeters

- Voltage measurements up to 1,000 VDC
- Current measurements up to 3 A
- Resistance measurements up to 5 G $\Omega$
- Isolated digitizer mode up to 1.8 MS/s



## PXI Digital Pattern Instruments

- 32-channel module (up to 512 per chassis)
- 100 MHz vector rate, 39 ps displacement
- Digital voltage of -2 V to 6 V
- Up to 200 Mb/s data rate



## PXI 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  $\pm 12$  V and min  $\pm 7.75$  mV output ranges



## PXI Digital Waveform Instruments

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



## PXI Counter/Timers

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



## PXI Electronic Loads

- Ability to sink up to 300 W of DC power
- Voltage and current measurements with sample rates up to 1.8 MS/s and update rates up to 100 kS/s
- Hardware timing and triggering
- Four-wire remote sense



## PXI Power Supplies

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



## PXI High-Speed Serial

- Up to 48 Xilinx Multigigabit transceivers (MGTs) with line rates up to 28.2 Gb/s
- Various high-speed serial protocols on the user-programmable Xilinx Kintex™ UltraScale+™ or 7 series FPGAs
- High-speed P2P backplane data streaming up to 7 GB/s to host, disk, or other PXI Express modules
- Up to 20 GB onboard DDR3 DRAM



### PXI Switches

- Electromechanical, reed, solid-state, FET
- Up to 150 V or 2 A
- Up to 544 crosspoints in a single PXI slot
- 1- and 2-wire options



### PXI FlexRIO

- Analog I/O up to 6.4 GS/s, digital I/O up to 1.25 Gb/s, RF I/O up to 4.4 GHz
- High-performance Xilinx FPGAs with up to 20 GB of onboard DRAM
- Program with LabVIEW FPGA or Xilinx Vivado™
- Develop application-specific I/O with FlexRIO Module Development Kit



### PXI Source Measure Units (SMUs)

- 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 40 W (500 W pulse)



### PXI Signal Conditioning Modules

- High channel density for conditioned and sensor measurements
- Flexible, synchronized, and accurate measurements
- Isolated measurement options
- Swappable front mount terminal block



### PXI Timing and Synchronization

- Generate high-stability PXI system reference clocks and high-resolution sample clocks
- Achieve synchronization over long distance through GPS, IEEE 1588, IRIG-B, or PPS
- Develop advanced timing and sync applications with NI-Sync and NI-TCIk software
- Import and export system reference clocks for synchronization between multiple chassis or external devices



### PXI Sound and Vibration

- Built-in high-pass filtering
- Reliable dynamic signal characterization
- Per-channel, software-selectable AC input coupling
- Per-channel, software-selectable input gain settings



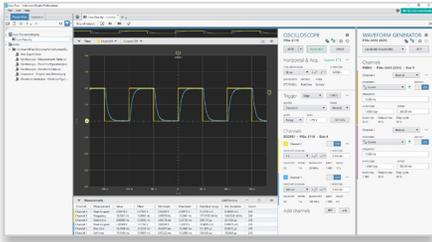
### PXI Reconfigurable I/O (FPGA)

- Variety of onboard FPGA options
- 12-bit to 18-bit analog input resolution
- Up to 16 analog channels and 96 bidirectional channels
- Up to 1 MS/s analog sample rate

# NI Test Software Portfolio Overview

## NI Software: The Right Tools for the Job

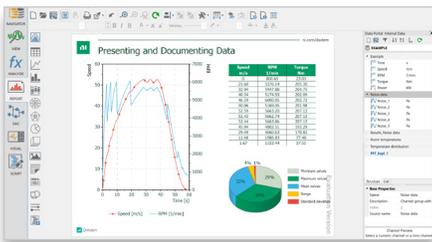
NI has a variety of software for engineers working on research, validation, and production test applications. Learn about our software that helps engineers perform quick ad-hoc tests, build an automated test system, automate data analysis and reporting, develop test sequences, and more.



### NI InstrumentStudio

Interactive, configuration-based software for engineers to control and configure instruments.

- Take multi-instrument measurements within one unified environment
- Capture data and instrument configuration for test reports
- Export instrument configurations to LabVIEW and TestStand to shorten development time
- Monitor and debug instruments while software is running



### NI DIAdem

Data analytics software for measurement data search, inspection, analysis, and automated reporting.

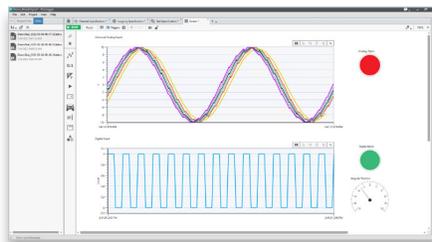
- Display data in multiple 2D-axis systems
- Perform calculations with a simple point-and-click interface
- Automate your measurement data analysis workflow, from import to analysis



### NI LabVIEW

Graphical programming environment that engineers use to develop automated research, validation, and production test systems.

- Acquire data from NI and third-party hardware and communicate using industry protocols
- Use configurable, interactive display elements
- Take advantage of available analysis functions



### NI FlexLogger™

No-code data acquisition software engineers use to build validation and verification test applications.

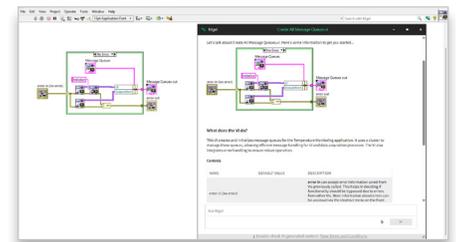
- Interactive visualization tools for monitoring tests with drag-and-drop charts, graphs, and controls
- Ability to set alarms that monitor single channels or groups for unexpected behavior



### NI TestStand

Test executive software that accelerates system development for engineers in validation and production.

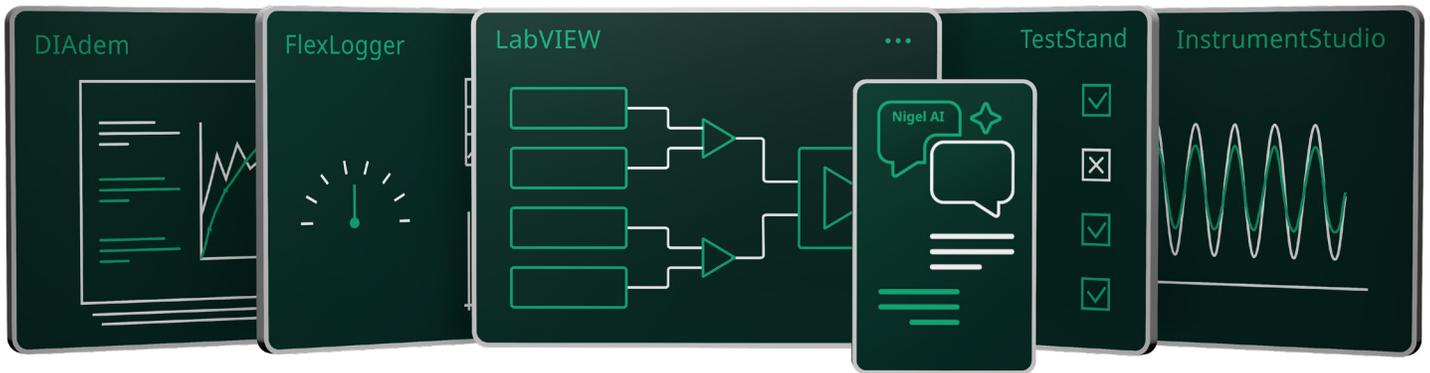
- Call and execute tests in LabVIEW, Python, C/C++, or .NET
- Conduct complex tasks, such as parallel testing
- Create customer operator interfaces and robust tools for deployment and debugging



### NI Nigel™ AI

AI tool that provides contextual guidance and insights, helping engineers to eliminate time-consuming tasks and boost productivity.

- Purpose-built for test and measurement workflows
- Optimized for test applications using NI domain expertise
- Integrated into LabVIEW and TestStand for real-time suggestions without switching tools



## Get Access to All the Software You Need in the LabVIEW+ Suite

It's LabVIEW, plus whole lot more. The LabVIEW+ Suite brings together the best of NI test software that saves engineers time by optimizing every part of their workflow. Each software includes features and capabilities designed to accelerate test:

- LabVIEW is the industry-leading environment for automated test system development.
- TestStand is used in validation labs and on manufacturing floors across the world to automate and sequence tests.
- DIAdem saves engineers hundreds of hours of manual data analysis and report creation with automation.
- FlexLogger and InstrumentStudio software make measurement and instrument configuration a quicker and interactive process

## NI Partner Network

The NI Partner Program offers domain, application, and overall test development expertise to help your team get ahead and stay ahead.

Innovate faster with proven scalable solutions. Reduce development time and cost through Integration and Consulting assistance.

### Types of Partners

#### Solution Partners

Experts in delivering products and solutions to solve your specific automated test or automated measurement application challenges.

#### System Integrators

Specialists in integrating and deploying test and measurement systems, based on your specific requirements and their mature industry capabilities.

#### Consultants

Consultants offer expert project services in areas such as software development, engineering, science, analytics, or regulatory compliance, or other specialized skills to support complex systems.

Connect with our global community of trusted NI Partners ready to give your business a competitive edge.

Find a Partner or Solution at [ni.com/findapartner](https://ni.com/findapartner).

# NI Hardware Services

All NI hardware includes a one-year warranty for basic repair coverage and calibration in adherence to NI specifications prior to shipment. Additional entitlements are available to improve uptime and lower maintenance costs with service programs for hardware. Learn more at [ni.com/services/hardware](https://ni.com/services/hardware).

Benefits	Hardware Warranty	Standard Service Program	Premium Service Program	Description
Duration at Point of Sale	1 year; included	3 years; optional	3 years; optional	We enhance warranty coverage with additional service benefits provided with a hardware service program.
Technical Support Access	✓	✓	✓	We provide access to support resources for your hardware. <a href="#">Learn about support services</a>
Repair Service Coverage*	Factory Defects and Workmanship	Comprehensive and Unlimited	Comprehensive and Unlimited	We restore your device's functionality. Includes firmware updates. <a href="#">Learn more</a>
Adjustments to Factory Specifications with every repair <sup>3*</sup>	✓	✓	✓	We assure that your device will be adjusted to the manufacturer's specifications, ensuring all measurements are within tolerance as part of the repair process.
Repair Service Turnaround Time*	No Commitment	<10 working days <sup>1</sup> + standard shipping	<10 working days <sup>1</sup> + standard shipping	If we miss our committed repair turnaround time targets, you are entitled to a 25% discount on your next service renewal on that asset. <sup>2</sup>
System Configuration, Assembly, and Test	—	✓	✓	NI technicians assemble, install software in, and test your system per your custom configuration prior to shipment. <a href="#">Learn more</a>
System Return Material Authorization (RMA) <sup>4</sup>	—	—	✓	We accept the delivery of fully assembled systems when performing repair services. <a href="#">Learn more</a>
Advanced Replacement <sup>5</sup>	—	—	✓	We stock replacement hardware that can be shipped immediately if a repair is needed, fulfilled in <1 working day + express shipping. <a href="#">Learn more</a>
Calibration Plan* (optional, with purchase)	—	✓	✓	We perform the requested level of calibration at the specified calibration interval for the duration of the service program. <a href="#">Learn more</a>
Calibration Turnaround Time* (optional, with purchase)	—	Standard: <10 working days + standard shipping	Expedited: <3 working days + express shipping <sup>6</sup>	

Note: Updates marked with \* will take effect starting in December 2025.

<sup>1</sup>Does not include shipping times. Some products are not eligible. Standard extended repair turnaround time for RF products is <15 working days + standard shipping.

<sup>2</sup>Discount is applied against the next sequential Service Program renewal period on the same asset. It is applicable only to renewals of same or higher-level service and has no cash value.

<sup>3</sup>Adjustment of Instrument to within tolerable limits as needed. Does not include certificate with as-found or as-left data.

<sup>4</sup>This option is available for PXI, CompactRIO, and CompactDAQ systems.

<sup>5</sup>This option is not available for all NI products in all countries. Contact your local NI sales engineer for more information.

<sup>6</sup>Expedited calibration is only available for the traceable calibration level.

## Premium Plus Service Program

NI can customize the offerings listed on the previous page or offer additional entitlements such as on-site calibration, custom sparing, and lifecycle services through a PremiumPlus Service Program. Contact your NI sales representative to learn more.

## Technical Support

NI hardware service programs and warranty include access to technical support provided by NI support agents during local business hours. Service requests can be managed online. Additionally, take advantage of award-winning NI online resources and communities.



**Ihr Ansprechpartner /  
Your Partner:**

**dataTec AG**  
E-Mail: [info@datatec.eu](mailto:info@datatec.eu)  
[datatec.eu](http://datatec.eu)



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Emerson Test & Measurement  
11500 N Mopac Expwy  
Austin, TX 78759-3504

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