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TECHNOLOGY GROUP

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Full-service, independent repair center
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We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

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- In stock / Ready-to-ship
- Leasing / Rentals / Demos
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Expert team | Trust guarantee | 100% satisfaction

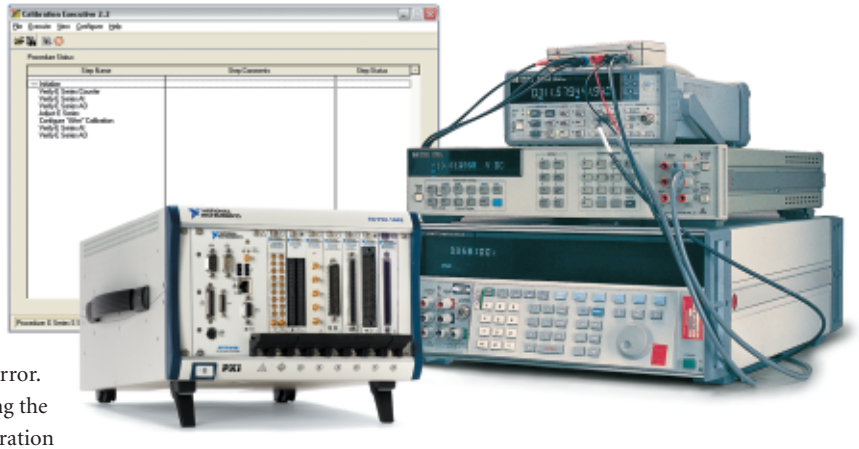
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Find the *National Instruments FP-TB-CAL* at our website: ***Click HERE***

Calibration Services

Overview

With National Instruments Calibration Services, you can have confidence in your measurements and keep your measurement devices operating in peak precision. NI recommends that you externally calibrate most of your measurement hardware annually, or at intervals recommended in the product's specification.



What Is Calibration?

Calibration determines the error associated with a measurement, and, if possible, reduces that error. This means that calibration is more than just adjusting the measurement capability of a device. Instead, the calibration process includes three parts:

- Verifying that the measurement capability of the measurement device is within specification
- Adjusting the device to reduce its measurement error
- Verifying the new measurement capability of the device to ensure that it is operating within specifications

International committees have created calibration guidelines to ensure procedural consistency and calibration acceptance among companies and countries.

Benefits of Calibration

Calibration improves your measurement accuracy and ensures that your product meets its required specifications. Calibration also provides a number of other benefits, such as:

- Increased production yields
- Overall measurement consistency
- Standardization of quality

To maintain your measurement accuracy, you must calibrate your measurement device at set intervals.

External Calibration and Self-Calibration

You can externally calibrate all National Instruments measurement products and self-calibrate many of them. With external calibration, you can ensure that measurement accuracy is traceable to a known standard. External calibration requires the use of high-precision calibration standards. Metrology laboratories or other facilities maintain traceable standards for this type of calibration. Through self-calibration, you adjust the measurement device for use in environments other than those in which it was externally calibrated. In essence, self-calibration acts as the autocalibration or autozero found on benchtop instruments.

System Calibration

Even if all of your measurement components are properly calibrated, your system still can have uncertainties associated with cabling and transducers. You can reduce these uncertainties by performing a system calibration. Also known as end-to-end calibration, system calibration is a software compensation method to remove system errors from measurements. By applying a known source to the input of your measurement system and taking readings, you can quickly determine the correction factor to apply to future measurements. System calibration does not replace the need to externally calibrate each component of your system according to the recommended calibration time interval of each component. You can perform a system calibration on any computer-based system you have. For more information on how to perform a system calibration, visit ni.com/calibration.

Calibration Certificates

National Instruments ships all hardware products with a Certificate of Conformance. This certificate states that the product has been tested and meets all of its performance standards. In addition, for many products NI provides an online Basic Calibration Certificate. The Basic Calibration Certificate provides NIST-traceable documentation and states that the calibration process conforms to relevant ISO 9002 clauses. You can view your Basic Calibration Certificate at ni.com/calibration. If you need a higher level of certification or detailed calibration data, NI can supply ANSI/NCSL Z540-1-compliant certificates for selected products.

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Calibration Services

National Instruments and Calibration Services

NI offers two levels of calibration services – Basic Calibration Service and Detailed Calibration Service. Both are traceable to national and international standards. For situations requiring ANSI Z540 compliance, or detailed calibration data, you can purchase Detailed Calibration Service. Simply return your measurement device to National Instruments and order the service as needed or on a regularly scheduled basis.

Basic Calibration Service

Depending on your calibration requirements, you can return your measurement product for basic, traceable recalibration. NI provides an online Basic Calibration Certificate stating that the calibration process conforms to relevant ISO 9002 clauses.

Detailed Calibration Service

International committees have created calibration guidelines, such as ANSI/NCSL Z540-1, to ensure acceptable calibration verification and adjustment between companies and countries. For situations requiring ANSI Z540 compliance or detailed calibration data, you can purchase Detailed Calibration service.

Manual Calibration Procedures

For metrology laboratories and companies that maintain calibration facilities, NI offers manual calibration procedures for selected products. These procedures eliminate the need to send your product to National Instruments or a metrology laboratory for calibration. However, to use these procedures, you must have a good working knowledge of metrology and access to traceable calibration standards. You can access NI manual calibration procedures at **ni.com/calibration**.



Figure 1. To view your basic certificate, visit **ni.com/calibration**.

Automated Calibration

Manual calibration can be time-consuming and costly. The National Instruments Calibration Executive, developed primarily for metrology laboratories, automates the verification and adjustment of your NI products. By using NI Calibration Executive, you easily can automate your calibration operations and benefit from NI technology such as National Instruments LabVIEW, NI-VISA, Interchangeable Virtual Instruments (IVI), and National Instruments TestStand.

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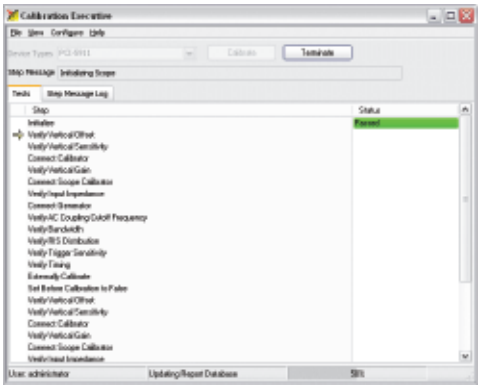
Calibration Services

NI Calibration Executive

- Externally calibrates most NI measurement devices
- Operates in automatic or manual mode through an intuitive user interface
- Automatically controls calibration instruments
- Stores calibration reports in ODBC-compliant database
- Provides convenient connectivity through hardware calibration fixtures

System Requirements

- Windows 2000/XP
- Pentium 600 MHz processor or better
- 256 MB of RAM
- 1 GB of available hard drive space
- VGA monitor capable of 800 x 600 resolution, 256 colors



NI Calibration Executive

National Instruments Calibration Executive provides an integrated software environment for verifying and adjusting NI measurement devices. Calibration Executive is designed using NI LabVIEW, NI-VISA, IVI, and NI TestStand.

Additional Hardware

Calibration Executive includes all of the software you need for calibrating your NI measurement device. In addition to your calibration instruments, you also need hardware such as adapters, cables, and chassis. Order the appropriate calibration-specific hardware for your measurement device. For a complete list of required NI hardware and recommended calibration instruments, visit ni.com/calibration.

Contacting NI for Calibration Services

To return your product to NI for calibration services, please contact us to obtain pricing, terms of service, and a return material authorization (RMA) for recalibration. If you require calibration services in your local area, NI also offers calibration through metrology laboratories in selected countries.

Visit ni.com/calibration for a list of applicable products and calibration service providers in your local area.

Ordering Information

Calibration Services
Basic Certificate of Calibration
Detailed Certificate of Calibration for
high-speed digitizers, DSA, DMMs, signal generators, loggers, or analog output products
E Series, M Series, and S Series devices
SCXI products
NI FieldPoint

Calibration Executive Software
NI Calibration Executive 777608-02

Calibration-Specific Hardware
Calibration Executive hardware adapter
for E Series, M Series, and S Series devices 778056-03
Calibration Executive hardware adapter
for NI 435x devices 778031-03
FieldPoint FP-TB-CAL calibration base 777519-90

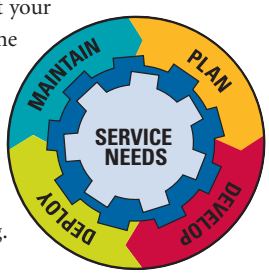
BUY NOW!

For complete product specifications, pricing, and accessory information, call (800) 813 3693 (U.S. only) or go to ni.com/calibration.

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NI Services and Support

NI has the services and support to meet your needs around the globe and through the application life cycle – from planning and development through deployment and ongoing maintenance. We offer services and service levels to meet customer requirements in research, design, validation, and manufacturing. Visit ni.com/services.



Training and Certification

NI training is the fastest, most certain route to productivity with our products. NI training can shorten your learning curve, save development time, and reduce maintenance costs over the application life cycle. We schedule instructor-led courses in cities worldwide, or we can hold a course at your facility. We also offer a professional certification program that identifies individuals who have high levels of skill and knowledge on using NI products. Visit ni.com/training.

Professional Services

Our Professional Services Team is comprised of NI applications engineers, NI Consulting Services, and a worldwide National Instruments Alliance Partner program of more than 600 independent consultants and integrators. Services range from start-up assistance to turnkey system integration. Visit ni.com/alliance.

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OEM Support

We offer design-in consulting and product integration assistance if you want to use our products for OEM applications. For information about special pricing and services for OEM customers, visit ni.com/oem.

Local Sales and Technical Support

In offices worldwide, our staff is local to the country, giving you access to engineers who speak your language. NI delivers industry-leading technical support through online knowledge bases, our applications engineers, and access to 14,000 measurement and automation professionals within NI Developer Exchange forums. Find immediate answers to your questions at ni.com/support.

We also offer service programs that provide automatic upgrades to your application development environment and higher levels of technical support. Visit ni.com/ssp.

Hardware Services

NI Factory Installation Services

NI Factory Installation Services (FIS) is the fastest and easiest way to use your PXI or PXI/SCXI combination systems right out of the box. Trained NI technicians install the software and hardware and configure the system to your specifications. NI extends the standard warranty by one year on hardware components (controllers, chassis, modules) purchased with FIS. To use FIS, simply configure your system online with ni.com/pxiadvisor.

Calibration Services

NI recognizes the need to maintain properly calibrated devices for high-accuracy measurements. We provide manual calibration procedures, services to recalibrate your products, and automated calibration software specifically designed for use by metrology laboratories. Visit ni.com/calibration.

Repair and Extended Warranty

NI provides complete repair services for our products. Express repair and advance replacement services are also available. We offer extended warranties to help you meet project life-cycle requirements. Visit ni.com/services.

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We buy equipment

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