

NI TestStand – Automating Thousands of Test Systems Worldwide

NI TestStand

Modular Test Architecture

- Graphical sequence editor environment
- Interfaces for calling tests written in any programming language
- Multithreaded sequence execution engine
- ASCII, HTML/Web, XML, ATML report generation
- Access, Oracle, SQL Server database connectivity

Interactive Test Development

- Ability to create, edit, execute, and debug sequences
- More than 30 built-in step types
- Customizable test steps for unique requirements
- Advanced sequencing, branching, and flow control
- Source code control system integration

Deployment Tools and Options

- Convenient deployment options
- Customizable operator interfaces for deployment
- Deployment utility generates Windows Installer

Operating Systems

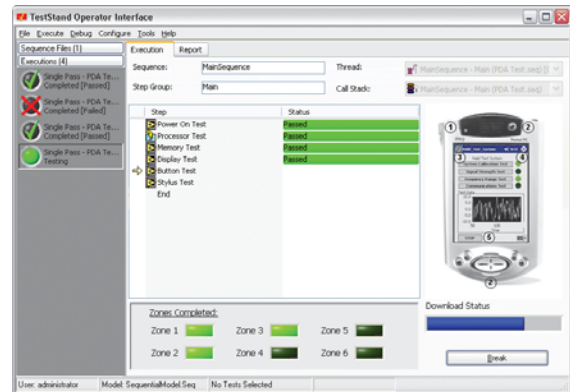
- Windows XP/2000

Recommended Software

- LabVIEW
- LabWindows™/CVI
- Measurement Studio
- NI Switch Executive
- NI Requirements Gateway

Other Compatible Software

- C/C++
- Visual Basic .NET
- C#



Overview

NI TestStand is a ready-to-run test management environment for organizing, controlling, and executing your automated prototype, validation, and manufacturing test systems. Quickly build your test sequences with NI TestStand by incorporating tests written in NI LabVIEW, NI LabWindows/CVI, Visual C/C++, Visual Basic .NET, and C#. Built on a high-speed, multithreaded execution engine, NI TestStand delivers the performance to meet your most rigorous test throughput requirements. NI TestStand is also completely customizable, so you can modify it to match your specific needs, including customizing the operator interface, generating custom reports, and modifying sequence execution requirements. Using NI TestStand, you can focus your engineering efforts on unique test requirements, while NI TestStand manages the common sequencing, execution, and reporting tasks for you.

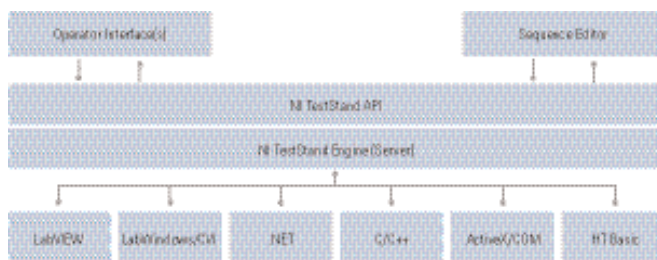


Figure 1. Modular NI TestStand architecture provides off-the-shelf, customizable test management software.

Modular NI TestStand Architecture

- Sequence Editor – Develop test sequences using graphical sequence editing environment
- Operator Interface – Execute and debug tests on deployed systems
- Engine – Achieve high-speed, multithreaded execution performance
- Process Models – Control system-level flow and processes
- Adapters – Call tests written in any programming language

Automate Tests Written in Any Language

NI TestStand offers built-in flexible module adapters for automating all leading test programming environments, such as LabVIEW, LabWindows/CVI, Visual C/C++, Visual Basic .NET, and C#. NI TestStand also can automate any tests in the form of compiled C DLLs, .NET assemblies, ActiveX automation servers, executables, JAVA classes, and legacy applications built with HTBasic, HP-VEE, TCL, and PERL. With this extensive open language interface, you can easily standardize legacy and modern test programs in a common, test management architecture to provide increased reusability of your programming investments. See Figure 2 for an example screenshot of the NI TestStand adapters.

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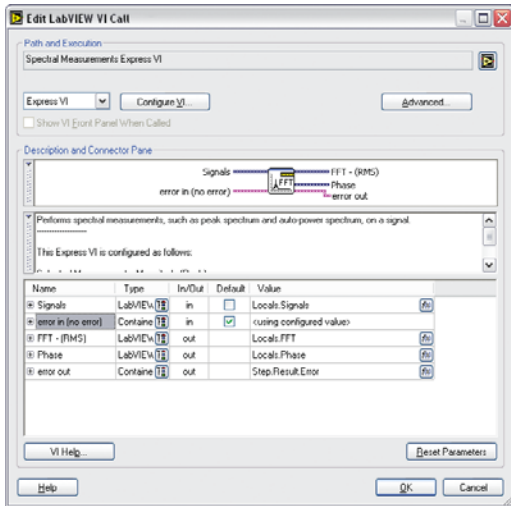


Figure 2. NI TestStand adapters automate tests written in LabVIEW, LabWindows/CVI, Visual Studio C/C++, and Visual Studio .NET.

Automatic Test Code Generation Tools

You can use NI TestStand as a tool to help guide your test developers in creating test programs. NI TestStand is integrated with the LabVIEW, LabWindows/CVI, and Microsoft Visual Studio .NET programming environments to assist in test code generation. From NI TestStand, you can automatically create test code in your LabVIEW, LabWindows/CVI, or Microsoft Visual Studio .NET¹ development environment using customizable test code template files. If you have your own standards for error handling, test initialization, or general code structure, these customizable template files can help you enforce your standards and automate the development process for your engineers.

¹Requires Measurement Studio 7.0 or later Enterprise Edition.

NI TestStand Enterprise Connectivity

The modular NI TestStand architecture provides the necessary functionality to interface with your enterprise database, reporting, and automation systems. NI TestStand includes a built-in interface to any ADO or ODBC-compliant database so you can easily store results or load parameters without doing any low-level database programming. The NI TestStand database components include a configuration-based utility for setting up the format and type of results to store, a database parameter loader, and an application for customizing and viewing database tables directly from NI TestStand. Using built-in report generation features, NI TestStand can automatically collect your test results during execution and generate comprehensive reports in a variety of formats, including ATML, XML, HTML/Web, and ASCII. You also can integrate NI TestStand with your manufacturing execution systems (MES) and enterprise resource planning (ERP) systems by using the configurable NI TestStand database layer.

Simplify Switch Programming

You can configure every test step in NI TestStand to automate the control of your switching operations through NI Switch Executive. This feature eliminates the need to program switching operations within your test programs, saving a significant amount of time. You can use the auto-routing features within NI Switch Executive to configure your desired routes and simply specify in NI TestStand which routes or route groups you need to connect for each test. This integration also permits dynamic routing for determining switch routes on the fly, based simply on supplying endpoints to be connected.

NI TestStand System Deployment Tools

NI TestStand is designed for use in prototype, validation, and manufacturing test applications. For applications that require deploying to multiple test stations, NI TestStand offers a variety of tools and licensing options to maximize the cost-effectiveness of your systems. NI TestStand provides run-time operator interfaces and specialized tools for creating custom operator interfaces used on a deployed test station. A robust deployment utility also ensures that all of your required files are packaged in a Windows Installer that you can easily distribute for deployment. Lastly, NI TestStand provides three licensing options to meet your specific needs – Development System, Debug Deployment Environment, and Base Deployment Engine.

Ordering Information

NI TestStand	
Development System with SSP	777777-09
Debug Deployment Environment	779851F-01
Base Deployment Engine	777774F-03
Custom Sequence Editor License.....	777775-01

Training and Services

NI TestStand Fundamentals Course Kits	
Introduction	777873-01
Customization.....	778429-01

BUY NOW!

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

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Basic Service Level

- Upgrades purchased separately
- Support by NI applications engineers, R&D engineers, partners, and community members through online Developer Exchange
- Access to Knowledgebase, example code, troubleshooting wizards, solutions, and white papers

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- Exclusive access to on-demand training through the Services Resource Center

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