100 MHz Logic Analyzer/Digital Pattern Generators

Overview

National Instruments logic analyzer and pattern generator bundles give you the ability to meet the analysis and generation needs of designing, testing, and debugging digital ICs and electronics. The bundles combine National Instruments SignalExpress, interactive software that aids in building programming-free applications, with NI 6542 or NI 6552 100 MHz digital waveform generator/analyzers. The high-quality flying-lead cable provides a 50 Ω signal and ground connection all the way to your device under test (DUT). Each signal and ground pair connects to standard 0.1 in. headers and the included grabber clips. At a considerable discount, these bundles provide flexible, powerful hardware and software features ideal for design and test engineers searching for a low-profile instrument for complex pattern generation, analysis of timing and state behavior, and report generation.

Choose Your Logic Analyzer Bundle

There are two different bundles to choose from, with each available for both PCI and PXI. The NI 6542 bundles, which provide 32 channels compatible with 5.0, 3.3, 2.5, and 1.8 V logic, are designed to drive inputs or acquire outputs from a circuit or system. If you need flexible voltage levels (-2.0 to 5.5 V in 10 mV steps), per-cycle control over the direction of a line for stimulus-response applications, and the ability to passively probe a circuit with low loading, choose the NI 6552 bundles.

Features

Logic Analyzer

NI 6542 and NI 6552 bundles provide 100 MHz clock rates for analyzing the timing and state information of a wide range of digital electronics. The diverse triggering options coupled with the deep memory of the digital instrument means that you can be certain to capture enough data to thoroughly analyze and debug your device. With the multirecord triggering, you can capture data around recurring events without developing complex sequential triggering or rearming the logic analyzer. NI 6552 bundles offer programmable voltage levels in 10 mV steps, making them ideal for analyzing a wide range of logic families and for using the device with the supplied 10:1 passive attenuators.
Pattern Generator
On a per-channel basis, you can programmatically configure channels to drive data to your DUT through the same flying-lead cable. You can use any set of channels for pattern generation at the same time you use another set of channels to acquire data. NI 6552 bundles are capable of switching between generation and analysis on a per-cycle basis. The digital instruments have 32 MB of onboard memory for the acquired data and a separate 32 MB of memory to store complex patterns for generation. The NI Digital Waveform Editor provides an interactive tool for creating, editing, and importing digital patterns. Once created, a pattern can be configured to be output to your DUT with a single step in NI SignalExpress.

External Control
The digital waveform generator/analyzers included in the NI 6542 and NI 6552 bundles offer a number of options for controlling the generation and acquisition capabilities with external signals. Along with the ability to import a sample clock or export the internal clock, four general-purpose I/O lines are available for receiving external triggers or for generating events, such as the Data Active Event, for handshaking with the DUT. Using triggers and the linking and looping (scripting) features of the board, you can dynamically control the waveforms generated and the length of generation.

Mixed-Signal System in SignalExpress
SignalExpress not only includes digital analysis, acquisition, and generation capabilities, but it also provides a range of instrument control options for integrating other PCI, PXI, or stand-alone instruments into a single system. You can program the complete system using the interactive steps in SignalExpress. The shared architecture between the digital instruments and many of the NI digitizers and arbitrary waveform generators makes it easy to create a synchronized mixed-signal system.
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.

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.

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.

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.

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.