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250 MS/s, 125 MHz, 8-Bit Oscilloscope NI PXIe-5114



- 2 channels simultaneously sampled at 8-bit resolution
- 250 MS/s real-time sampling
- 125 MHz bandwidth
- 700 MB/s data streaming with PXI Express
- 8, 64, or 256 MB of onboard memory per channel
- Edge, window, hysteresis, and digital triggering with 100 ps timestamping
- Video triggering capability for multiple industry standards

Overview

NI PXIe-5114, PXI-5114, and PCI-5114 high-speed oscilloscopes feature two 250 MS/s simultaneously sampled input channels with 8-bit resolution, 125 MHz bandwidth, and up to 256 MB of memory per channel in a compact, 3U PXI or PCI device. With the NI Synchronization and Memory Core (SMC) architecture, you can create mixed-signal systems using signal generators and digital waveform generator/analyzers or build a high-channel-count digitizer with subnanosecond synchronization between channels. These features make the NI 5114 oscilloscope ideal for a wide range of application areas including communications, scientific applications, military/aerospace, and consumer electronics.

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Application and Technology

Superior Analog Performance

- 7.2 Effective Number of Bits
- 5 GS/s random-interleaved sampling

Deep Onboard Memory

- 8, 64, or 256 MB of memory per channel
- Capture more than 1 million triggered waveforms in multiple record mode with hardware trigger rearming
- Stream data continuously from onboard memory to host memory or disk

Triggering, Clocking, and Synchronization

- Edge, window, hysteresis, and digital triggering with 40 ps timestamping
- Pretrigger and posttrigger acquisition in single- and multiple-record mode
- Internal 250 MHz clock or external clock from 50 MHz to 250 MHz
- Phase lock to PXI 10 MHz reference or external reference from 1 MHz to 20 MHz
- Timestamp-triggered events with 100 ps resolution

NI Low-Cost Oscilloscopes

Model Number	Form Factor	Max. Sample Rate	Max. Bandwidth	Resolution	Input Impedance	Signal Coupling	Channel Count
PXIe-5105	PXI Express	60 MS/s	60 MHz	12-bit	50 Ω / 1 MΩ	AC / DC	8
PXIe-5114	PXI Express	250 MS/s	125 MHz	8-bit	50 Ω / 1 MΩ	AC / DC	2
PXIe-5122	PXI Express	100 MS/s	100 MHz	14-bit	50 Ω / 1 MΩ	AC / DC	2

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Support and Services

System Assurance Programs

NI system assurance programs are designed to make it even easier for you to own an NI system. These programs include configuration and deployment services for your NI PXI, CompactRIO, or Compact FieldPoint system. The NI Basic System Assurance Program provides a simple integration test and ensures that your system is delivered completely assembled in one box. When you configure your system with the NI Standard System Assurance Program, you can select from available NI system driver sets and application development environments to create customized, reorderable software configurations. Your system arrives fully assembled and tested in one box with your software preinstalled. When you order your system with the standard program, you also receive system-specific documentation including a bill of materials, an integration test report, a recommended maintenance plan, and frequently asked question documents. Finally, the standard program reduces the total cost of owning an NI system by providing three years of warranty coverage and calibration service. Use the online product advisors at ni.com/advisor to find a system assurance program to meet your needs.

Calibration

NI measurement hardware is calibrated to ensure measurement accuracy and verify that the device meets its published specifications. To ensure the ongoing accuracy of your measurement hardware, NI offers basic or detailed recalibration service that provides ongoing ISO 9001 audit compliance and confidence in your measurements. To learn more about NI calibration services or to locate a qualified service center near you, contact your local sales office or visit ni.com/calibration.

Technical Support

Get answers to your technical questions using the following National Instruments resources.

- **Support** - Visit ni.com/support to access the NI KnowledgeBase, example programs, and tutorials or to contact our applications engineers who are located in NI sales offices around the world and speak the local language.
- **Discussion Forums** - Visit forums.ni.com for a diverse set of discussion boards on topics you care about.
- **Online Community** - Visit community.ni.com to find, contribute, or collaborate on customer-contributed technical content with users like you.

Repair

While you may never need your hardware repaired, NI understands that unexpected events may lead to necessary repairs. NI offers repair services performed by highly trained technicians who quickly return your device with the guarantee that it will perform to factory specifications. For more information, visit ni.com/repair.

Training and Certifications

The NI training and certification program delivers the fastest, most certain route to increased proficiency and productivity using NI software and hardware. Training builds the skills to more efficiently develop robust, maintainable applications, while certification validates your knowledge and ability.

- **Classroom training in cities worldwide** - the most comprehensive hands-on training taught by engineers.
- **On-site training at your facility** - an excellent option to train multiple employees at the same time.
- **Online instructor-led training** - lower-cost, remote training if classroom or on-site courses are not possible.
- **Course kits** - lowest-cost, self-paced training that you can use as reference guides.
- **Training memberships** and training credits - to buy now and schedule training later.

Visit ni.com/training for more information.

Extended Warranty

NI offers options for extending the standard product warranty to meet the life-cycle requirements of your project. In addition, because NI understands that your requirements may change, the extended warranty is flexible in length and easily renewed. For more information, visit ni.com/warranty.

OEM

NI offers design-in consulting and product integration assistance if you need NI products for OEM applications. For information about special pricing and services for OEM customers, visit ni.com/oem.

Alliance

Our Professional Services Team is comprised of NI applications engineers, NI Consulting Services, and a worldwide National Instruments Alliance Partner program of more than 700 independent consultants and integrators. Services range from start-up assistance to turnkey system integration. Visit ni.com/alliance.

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