

## Keysight Technologies Introduces 10 PXIe Instruments to Advance Research in 5G, Aerospace & Defense, Quantum Technologies

**New class of PXIe arbitrary waveform generators, digitizers and oscilloscopes provide up to 1 GHz bandwidth for complex baseband IQ signal generation and analysis**

### Highlights:

- Easy-to-use, on-board FPGA allows non-programmers to customize and accelerate test while accessing full performance of the FPGA
- Precise timing and synchronization provide phase coherency for complex, multi-channel configurations
- Up to 1 GHz bandwidth in the first full-featured oscilloscope in PXI

SANTA ROSA, Calif., Feb. 22, 2017 – Keysight Technologies, Inc. (NYSE: KEYS) today announced ten new PXIe instruments, including a new [arbitrary waveform generator \(AWG\)](#) that includes three highly synchronized channels for precise tuning of IQ waveforms and envelope tracking, as well as the industry's first full-featured [PXI oscilloscope](#). The AWG and oscilloscopes provide up to 1 GHz bandwidth to support complex baseband IQ signal generation and analysis for evaluating emerging 5G and aerospace & defense wideband technologies.

The new PXI offering includes [AWGs](#) and [digitizers](#) that allow engineers to build onto the instrument's core capabilities or insert custom algorithms into the on-board FPGAs. A graphical design environment makes it easy to add customization required for emerging technologies, research and design, while accessing the full performance and speed of the FPGA. The M3xxxA AWGs and digitizers use the FPGA and PXI reference clock to provide real-time sequencing and multi-channel/multi-module synchronization to support advanced multi-channel applications like multi-user beamforming technologies and quantum computing.

“Engineers in research are constantly looking for ways to advance technology and achieve new levels of performance,” said Roger Nichols, Keysight's 5G program manager. “Our new class of cost-effective PXIe solutions brings the performance they need to do this, but also the flexibility and new levels of easy customization in how real-time and deterministic signals are created and processed.”

Ideal for creating digitally modulated waveforms for wideband communication systems and high resolution waveforms for radar and satellite test, the [M9336A PXIe AWG](#) includes multiple independent or synchronized signal outputs. The M9336A provides superior performance in a single-slot PXIe module including 16-bit resolution, up to 1 GHz modulation bandwidth, and individual channel control of gain, offset and skew. Engineers can generate industry-standard and custom waveforms for the AWG by using

[Signal Studio](#), [MATLAB](#), [Waveform Creator](#) or other tools and easily integrated into multiple application development environments.

The [M9243A PXIe oscilloscope](#) is built with Keysight's InfiniiVision oscilloscope technology, providing up to 1 GHz bandwidth for quick analysis and troubleshooting of wideband signals. With a 1,000,000 waveforms per second update rate and advanced probing technology, the oscilloscope enables troubleshooting of random and intermittent signals not easily seen with digitizer technology. Powerful features include cursors and markers, advanced triggering, waveform averaging, masks and 31 selectable measurements. When the scope is combined with 89600 VSA software, engineers can demodulate and evaluate complex IQ waveforms with a full 1 GHz bandwidth.

A [webcast](#) covering wideband analysis challenges and the use of oscilloscopes or digitizers is scheduled for March 1.

Keysight's rapid repair turnaround, with industry-leading calibration, core exchange strategy and standard [three-year warranty](#), maximizes system uptime to reduce the total cost of ownership.

Additional information about Keysight's PXIe instruments is available at [www.keysight.com/find/pxi](http://www.keysight.com/find/pxi). Product images are available at [www.keysight.com/find/pxi\\_images](http://www.keysight.com/find/pxi_images).

## U.S. Pricing and Availability

Pricing for the following products, all available today, start at:

- M3100A PXIe FPGA digitizer, 100 MS/s, 4 or 8-channel \$6,200
- M3102A PXIe FPGA digitizer, 500 MS/s, 2 or 4-channel \$7,800
- M3201A PXIe FPGA arbitrary waveform generator, 500 MS/s \$5,700
- M3202A PXIe FPGA arbitrary waveform generator, 1 GS/s \$8,300
- M3300A PXIe FPGA arbitrary waveform generator/digitizer, 500 MS/s. 2-channel \$12,900
- M3302A PXIe FPGA arbitrary waveform generator/digitizer, 500 MS/s. 4-channel \$14,500
- M9336A PXIe IQ arbitrary waveform generator, 1 GHz bandwidth, 3-channel \$22,000
- M9241A PXIe oscilloscope, 200 MHz bandwidth \$5,500
- M9242A PXIe oscilloscope, 500 MHz bandwidth \$8,500
- M9243A PXIe oscilloscope, 1 GHz bandwidth \$12,000

## About Keysight in Modular

Keysight provides unrivaled PXI and AXIe performance built on the industry's most accurate measurement science. Keysight helps engineers get to first measurement faster with common measurement software and Keysight Reference Solutions. Keysight has the industry's largest global network of experienced application engineers and metrology-grade calibration centers. Additional information about Keysight's PXI and AXIe modular test and measurement solutions is available at [www.keysight.com/find/modular](http://www.keysight.com/find/modular).

## About Keysight in 5G

The development of 5G depends on up-to-date tools that let designers easily explore new signals, scenarios and topologies. Keysight's 5G solutions are ready to enable deeper insights as development evolves with the standard. In design and test, Keysight is helping industry leaders innovate across new and existing technologies as they transform ideas into reality. Additional information about Keysight's 5G design, test and measurement solutions is available at [www.keysight.com/find/5G](http://www.keysight.com/find/5G).

## About Keysight Technologies

Keysight Technologies (NYSE: KEYS) helps customers bring breakthrough electronic products and systems to market faster and at a lower cost. Keysight's solutions go where the electronic signal goes, from design simulation, to prototype validation, to manufacturing test, to optimization in the network. Customers span the worldwide communications ecosystem, internet infrastructure, aerospace & defense, automotive, semiconductor and general electronics end markets. Keysight generated revenues of \$2.9B in fiscal year 2016. More information is available at [www.keysight.com](http://www.keysight.com).

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Additional information about Keysight Technologies is available in the newsroom at [www.keysight.com/go/news](http://www.keysight.com/go/news) and on [Facebook](#), [Google+](#), [LinkedIn](#), [Twitter](#) and [YouTube](#).

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