

Ultrafast GHz Digitizers with easy control over Ethernet

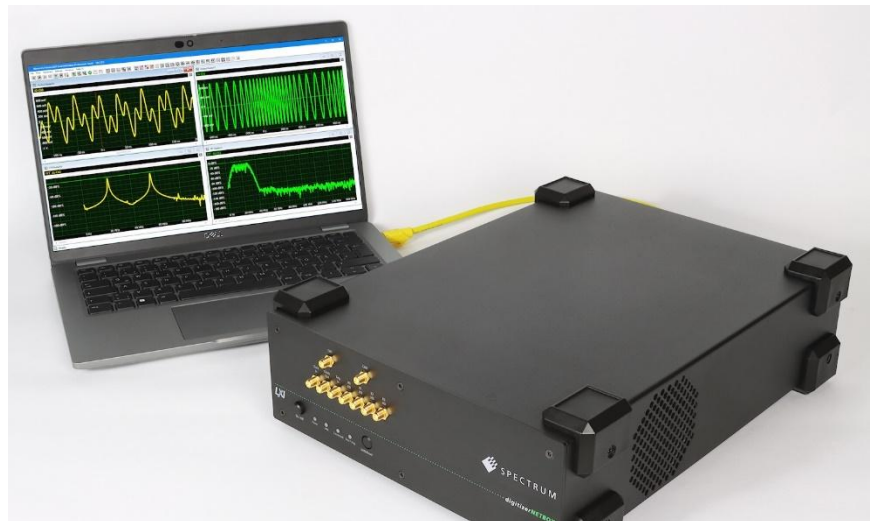
Seven new Digitizers with up to 10 GS/s sampling and 4.7 GHz bandwidth

Grosshansdorf, Germany – 12. March 2025. Spectrum Instrumentation presents seven new digitizers that make automated acquisition and analysis of signals in the GHz range easier than ever before. Using a simple Ethernet/LXI cable, the DN2.33x series products can connect directly to PCs, laptops or even the company network. Additionally, the instruments are compact, lightweight and mobile, allowing them to be taken almost anywhere. Electronic signals are acquired using state-of-the-art ADC technology capable of sampling at rates between 3.2 GS/s and 10 GS/s, with 12-bit vertical resolution and bandwidths between 1 GHz and 4.7 GHz. With seven variants to choose from, scientists and engineers will find the perfect fit solution for their application.

Link to the product video (5 min): https://youtu.be/01gtR_RjBds

The products are designed for R&D and industrial users who are looking for a complete measurement solution. The new digitizers come with all the software tools needed to capture, store and analyse signals. For straight out-of-the-box operation, simply connect the Gbit Ethernet port of the digitizerNETBOX to a computer or company network, run the software and start working. LXI compliance ensures easy integration into almost any automated test system.

The seven models comprise of one or two channel variants offering maximum sampling rates of 3.2, 5 and 10 GS/s, all with 12-bit resolution and bandwidths of 1, 2, 3 and 4.7 GHz. The high performance makes the DN2.33x series the new flagship models in Spectrum's 'Netbox' product range, a lineup that offers over 70 other Netbox models with lower speeds.



Spectrum now offers 79 variants of the digitizerNETBOX, so that no customer has to pay for features he doesn't need. Signal acquisition made easy & cost effective!

High quality inputs

Each channel features its own ADC and independent front-end signal conditioning, together with calibrated gain and offset. Input ranges are fully programmable from ± 200 mV up to ± 2.5 V. The ADCs of dual-channel models are clocked synchronously, ensuring that phase errors are minimized and cross-channel measurements can be made with absolute precision. The products also combine their fast sample rates with large on-board memory for the capture and storage of long or complex signals. Each unit comes with 2 GSamples (4 GB) of acquisition memory as standard or 8 GSamples (16 GB) as an option.

Trigger and acquisition modes

The large memory is further complimented by an array of smart trigger and acquisition modes. This enables problem signals to be acquired and stored, together with their trigger timestamps, in the most memory-efficient way. Transient capture, Multiple Recording, and an optional Block Averaging are all supported.

Software

Instrument control can be managed by simply running SBench 6 Professional, Spectrum's software for acquisition, display, processing, analysis, storage and documentation. This powerful tool is included free of charge with every unit. Alternatively, you can run your own application-specific code. Fully programmable, all digitizerNETBOX products come with software development kits for programming in many different languages, including C++, Python, MATLAB, and LabVIEW.

Multi-purpose lines

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Front panel connectors provide an easy way to integrate units in ATE applications. Dedicated lines are available for external clock and trigger signals, as well as multi-purpose lines for a variety of uses such as Asynchronous Digital Inputs or Outputs, Synchronous Digital Inputs, Trigger, Clock Outputs, or Run and Arm status flags. If needed, there is even a high-speed Digital Pulse Generator option.



The new flagship digitizerNETBOX products provide up to 10 GS/s sampling rate and a variety of connections.

Carry anywhere

Weighing less than 7 kilograms, the instruments are easy to transport and ideal for benchtop or mobile operation. Rackmount kits are available for installation in standard 19-inch racking systems.

Worry-free product lifetime

The ultra-reliable digitizerNETBOX instruments carry a 5-year warranty for your peace of mind. Software and firmware updates are free for each unit's lifetime, along with world-class support directly from the company's hardware and software engineers. Spectrum typically offers service and spare parts for around 15 to 20 years.

About Spectrum Instrumentation

Spectrum Instrumentation, founded in 1989, uses a unique modular concept to design and produce a wide range of more than 200 digitizers and generator products as PC-cards (PCIe and PXIe) and stand-alone Ethernet units (LXI). In over 35 years, Spectrum has gained customers all around the world, including many A-brand industry-leaders and practically all prestigious universities. The company is headquartered near Hamburg, Germany, known for its 5-year warranty and outstanding support that comes directly from the design engineers. More information about Spectrum can be found at www.spectrum-instrumentation.com

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