

Spectrum launches ultra-high precision, self-contained digitizer range

Flexible data gathering with go anywhere, standalone design

Grosshansdorf, Germany - 17. May 2018. For complete flexibility of application, Spectrum Instrumentation has announced stand-alone versions of its recently launched, ultra-high precision, PCIe digitizer card. The new DN2.59x digitizerNETBOX series has state-of-the-art, 16-bit ADC technology to deliver 256 times more resolution than the usual 8-bit technology. The range includes models that offer 4, 8 and 16 channels and a choice of sampling rates up to 125 MegaSamples per second on each channel. This provides a wide range of configurations to ensure a perfect fit for customers' needs in demanding applications such as automated testing, communications, science and ultrasound.

More accuracy and resolution

"These new digitizerNETBOX products open a simple path for anyone who needs precision multi-channel signal acquisition in one small Ethernet/LXI controlled box," explained Oliver Rovini, Technical Director of Spectrum. "The units deliver a total measurement solution with exceptional resolution and accuracy. For example, most conventional test instruments, such as digital oscilloscopes, use 8-bit ADC's with 256 levels of resolution. In contrast, these new DN2.59x units all use 16-bit ADC's that provide more than 65,000 levels. This higher resolution delivers greater dynamic range and improved dynamic performance so that users can make better, more precise, measurements. Furthermore, the digitizerNETBOX products are easily integrated with any PC, or even the company network, as they come complete with software to capture, store and analyze signals virtually straight out of the box. If you're working with signals anywhere in the DC to 60 MHz frequency range and need measurements with high SNR, good SFDR and low distortion, then the DN2.59x series is your perfect solution."

Easy remote control

Controlling and accessing the data collected by the digitizerNETBOX is done by simply connecting it with GBit Ethernet to a host computer (e.g. laptop or workstation) or anywhere on the corporate network. The platform is fully LXI compliant (following Core 2011 Specifications) and offers an IVI compatible interface for the IVI Scope and Digitizer classes. Users can write their own control program using almost any popular language including, C++, VB.NET, C#, J#, Delphi, Java and Python code. Alternatively, they can simply run Spectrum's own software, SBench 6 Professional.



SBench 6 comes as standard with the products. It lets users control all the modes and settings of the hardware via a simple, easy-to-use, interface. The software also has a host of built-in features for data analysis and documentation. These include FFT analysis, XY display, a function interpreter, parameter

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measurements, export into ASCII, Wave, MATLAB, comment functions (for annotating signals or displays) and even a simple report and printout function.

Flexible signal conditioning and triggering

The DN2.59x series products also provide software selectable, single-ended and differential input modes. Each channel has its own ADC and an independent amplifier. The amplifiers have selectable input impedance (50 Ω and 1 M Ω) and calibrated gain with ranges from ± 200 mV to ± 10 V full scale. Variable gain allows input signals to be scaled so that they cover the full dynamic range of the ADC and therefore maintain the best possible measurement accuracy. All the channels are synchronously clocked so that phase error is minimized and inter-channel measurements can be made with absolute precision. Large on-board memories also make it possible to acquire and store the longest and most complex of waveforms.

The units include an array of smart triggering capabilities and acquisition modes. Triggering on problem signals like glitches, spikes, bursts, or even when specific patterns occur, allows storing the recorded waveforms in the most memory efficient way possible. Transient capture, Multiple (burst) Recording, Gated Sampling, ABA sampling and data streaming (FIFO) modes are all supported.

The DN2.59x series digitizerNETBOX products are available immediately and come with a full 5 years product warranty as standard.

About Spectrum Instrumentation

Founded in 1989 as Spectrum Systementwicklung Microelectronic GmbH and renamed to Spectrum Instrumentation GmbH in 2017, the company is a pioneer in using modular design to create over 500 digitizer and generator products in the most popular industry standards; PCIe, LXI and PXIe. These high-performance PC-based test and measurement designs are used for electronic signal capture, generation and analysis. The company is headquartered in Grosshansdorf, Germany and sells its products worldwide via an extensive sales network offering outstanding support directly from the design engineers. More information about Spectrum can be found at <https://spectrum-instrumentation.com>

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