

New multichannel GHz Digitizers with up to 12 channels

Grosshansdorf, Germany – 10. September 2025. Spectrum Instrumentation presents new flagship digitizers with 12-bit resolution and a maximum of 6 channels at 10 GS/s or 12 channels at 5 GS/s acquisition speed. The new DN6.33x digitizers belong to the company's Netbox series, an easy-to-use instrument line that requires only an Ethernet cable to be controlled from any PC, laptop, or network. A comprehensive software package and a number of hardware features make them ideal for automated testing applications, capturing signals on multiple, perfectly synchronized inputs. With 15 new variants, Spectrum now offers a total of 94 different digitizer Netboxes, ranging from 5 MS/s to an ultrafast 10 GS/s sampling speed.

Link to the product video (4 min): https://youtu.be/01gtR_RjBds

Each channel of the new DN6.33x digitizers features a 12-bit ADC with sampling rates of 3.2, 6.4, or 10 GS/s, and related analog bandwidths of 1, 2, or 3 GHz. Models are available with 4, 6, 8, 10, or 12 channels, giving users flexibility without overspending on unneeded performance. If only 1 or 2 channels are required, the smaller DN2.33x series is available.

Key hardware features:

- Perfect synchronous sampling across all channels
- Four independent programmable input ranges (± 200 mV to ± 2.5 V) per channel with programmable offset, on-board calibration, and precise timing alignment
- The standard memory allows 200 ms capture duration at full speed, expandable to 800 ms
- Front panel connectors for external clocks, triggers, and digital I/O are standard



The new DN6.33x Digitizers with 12-bit offer up to 6 channels with 10 GS/s or up to 12 channels with 5 GS/s.

Flexible acquisition modes - like transient, multiple, and optional block averaging – combine with advanced trigger capabilities to allow the precise capture of rare or complex events. Each trigger has its own timestamp, making it possible to time between acquisitions that may be separated by hours, or just fractions of a microsecond.

All units ship together with the powerful SBench 6 Professional software for acquisition, display, analysis and documentation. SBench 6 handles large data files with ease, offers a wide choice of time and frequency display modes and provides an easy way to control Netbox instruments. When embedding a unit into automated testing systems, developers can create their own programs using the free SDKs, compatible with C++, Python, MATLAB, LabVIEW, and more. Optional accessories include a high-speed pulse generator with four programmable outputs, and 19" rack mounting kits.

Oliver Rovini, CTO at Spectrum Instrumentation for 25 years, reports: "The DN6.33x series combines speed, resolution, and ease of integration. These digitizers are ideal for MIMO, in communications or radar, or anywhere that time-correlated measurements may be needed, e.g. in aerospace, scientific research, photo-voltaic analysis and semiconductors. Each unit comes with a 5-year warranty, lifetime software/firmware updates, and support directly from our design engineers. For long-term test platforms, our 15 years of committed service and parts availability offer peace of mind".

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, and is 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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