

New flagship Arbitrary Waveform Generators with 3.9 GHz bandwidth and 10 GS/s output rate

Grosshansdorf, Germany – 4. June 2025. Spectrum Instrumentation announces four new high-performance Arbitrary Waveform Generators (AWGs), marking a significant milestone in the company's product portfolio. Designed for demanding applications in radio frequency (RF) and microwave signal generation, the new AWGs deliver output rates up to 10 GS/s with exceptional 16-bit vertical resolution and bandwidths reaching up to 3.9 GHz. The new products are aimed at engineers and scientists working in cutting-edge fields such as wireless communications, radar system development, quantum research, and aerospace testing.

"This launch represents a major leap forward for us," said Oliver Rovini, CTO of Spectrum Instrumentation. "It's the first time we've entered the high-bandwidth space, and we're doing it with a product line that sets new standards in quality and capability. With these new AWGs, we're giving our customers a tool that enables next-generation innovation."

The new flagship AWGs are available as PCIe cards with up to 10 GB/s streaming, as well as stand-alone NETBOX units with easy control via Ethernet, connecting directly to laptops, PCs or company networks. The new instruments are ideal for integration into automated test systems. Key features include:

- Output rates up to 10 GS/s for ultra-fast signal generation
- 16-bit vertical resolution to ensure exceptional signal fidelity
- Analog bandwidths up to 3.9 GHz, enabling true-to-life reproduction of wideband RF & microwave signals
- Single-Ended or Differential outputs with up to 4V output swings
- Multi-channel synchronization for complex signal simulations across multiple outputs
- Up to 8 GSample memory per channel for flexibility in waveform generation

These features make the new AWGs particularly well-suited for applications that demand high signal quality over wide bandwidths, such as testing of communication standards like 5G and 6G, simulating radar echoes, or generating waveforms for experimental physics and quantum systems.

In addition to their powerful hardware, the new AWGs are supported by Spectrum's comprehensive software suite, including drivers for Windows and Linux, as well as programming examples for languages like C/C++, Python, MATLAB, and LabVIEW, plus Spectrum's SBench 6 software for interactive operation. These new flagships include a 5-year warranty, free lifetime software/firmware updates, and support directly from Spectrum's design engineers.

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



offer one or two channels with up to 10 GS/s output rate, 16-bit resolution and 3.9 GHz bandwidth.

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