

## New AWG function accelerates automated testing processes

**Grosshansdorf, Germany – 06. May 2026.** Arbitrary Waveform Generators (AWGs) are essential tools to generate nearly any possible waveform. Spectrum Instrumentation, a leading provider of more than 70 high-performance AWG products for all kinds of industries, now presents an additional AWG mode for automated testing environments. The new "Sequence Restart Mode" expands the long list of functions, firmware options and software tools to make the AWGs even more versatile. Driven by direct customer demand, Spectrum quickly developed and delivered the new feature as a support task, and provides it now to all customers free of charge.

The already existing "Sequence Mode" provides a straightforward method for generating long-duration signals by looping and linking waveform segments of varying lengths. This capability allows complex waveform chains to be connected seamlessly, creating an almost unlimited stream of test signals. With the addition of the new "Sequence Restart Mode", Spectrum Instrumentation AWGs deliver even greater flexibility. The new mode allows an automatic and ultra-precise restart of the full sequence of looped and linked waveforms upon receiving a trigger event. The trigger-to-output time is always fixed, thus allowing automated test processes to begin anew whenever conditions require, reducing test times and improving overall measurement efficiency.

### Driven by customer demand

The new "Sequence Restart Mode" is a great example of how Spectrum Instrumentation reacts quickly to customers' requests. The original demand for this mode came from Dr. Johannes Rahm, scientist at the PTB in Germany (Physikalisch-Technische Bundesanstalt = Metrology Institute of the Federal Republic of Germany). His team is responsible for maintaining the legal time in Germany using atomic clocks (cesium fountain clocks). Commenting on the new Sequence Restart mode, Dr. Rahm said:

"For the AWG cards from Spectrum that I use, I needed a special version of the sequence mode to generate RF frequencies. These frequencies are used to manipulate the laser frequencies employed for cooling the atoms and for fluorescence spectroscopy. Spectrum's engineers responded quickly to my request, my tests were successful, and the new mode works exactly as I envisioned."

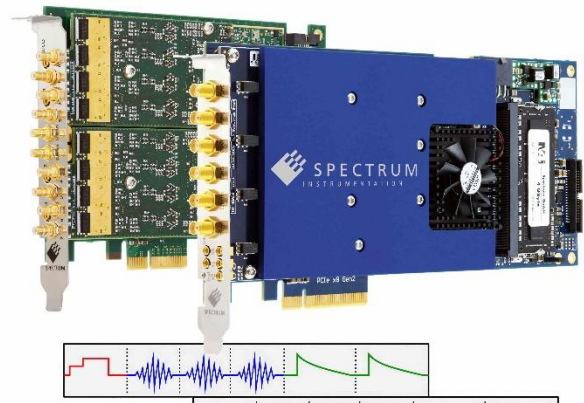
These situations benefit everyone: while the customer receives a tailored solution for his needs through the Spectrum support, all other users of these instruments gain from an expanding pool of modes and functions.

### Free and available immediately

The new feature is available free of charge for all Spectrum Instrumentation AWGs of the 65xx and 66xx series just through the installation of the latest drivers. Designed for computer-controlled operation, these instruments utilize a unified software toolkit that simplifies system integration and future upgrades. Software support is available for Windows and Linux, with programming examples provided for Python, MATLAB, C++, and LabVIEW, as well as a high-level Python API. All Spectrum products are supported by lifetime technical assistance, delivered directly by Spectrum Instrumentation's engineering team, along with free software and firmware updates.

### About Spectrum Instrumentation

Spectrum Instrumentation, founded in 1989, uses a unique modular concept to design and produce a wide range of more than 250 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](http://www.spectrum-instrumentation.com)



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### Headquarters

Spectrum Instrumentation GmbH, Germany  
Phone: +49 4102-6956-0  
Email: [marketing@spec.de](mailto:marketing@spec.de)  
<https://www.spectrum-instrumentation.com>

### US Office

Spectrum Instrumentation Corp., USA  
Phone: (201) 562-1999  
Email: [Sales@spectrum-instrumentation.com](mailto:Sales@spectrum-instrumentation.com)