

## Go anywhere AWGs deliver 24V output swings on up to 8 channels

*Spectrum adds four new LXI-based AWG instruments for high amplitude signal generation*

**Grosshansdorf, Germany – 12<sup>th</sup> February, 2020.** The ability of Arbitrary Waveform Generators (AWGs) to recreate virtually any waveshape makes them especially useful as signal generators in today's sophisticated electronic systems. Spectrum Instrumentation recently released four new models to their generatorNETBOX family with output swings of up to 24 volts on up to 8 channels, to cover even demanding test applications. The new units use the latest 16-bit Digital-Analog-Converters and offer two different speed ranges: The DN2.657 models output waveforms at rates up to 125 MS/s while the DN2.654 units have a 40 MS/s capability. Both speed ranges are available with either 4 or 8 fully synchronous channels.

### Create test waveforms anywhere

LXI-based instruments, with their simple Ethernet connection to PC's or computer networks, are easy to integrate and operate. Small and compact Spectrum's generatorNETBOX products use Gbit Ethernet and weigh as little as 6.3 Kgs. It means they are portable and can work almost anywhere; freestanding on a test bench, rack-mounted with other equipment, or even mobile (when equipped with an optional 12 or 24 V DC power supply).

For applications where a generatorNETBOX needs to operate remotely Spectrum also offers an embedded server option, DN2.xxx-Emb. The option combines a powerful CPU, a freely accessible SSD, more memory and a remote software development access method. It creates an open platform where you can



run your own software while at the same time still be connected, via LAN, for remote access. The option effectively allows the generatorNETBOX to operate independently or, when connected to a LAN, as part of a larger system.

### Create almost any test waveform

For perfect waveform generation each channel features its own 16-bit DAC and output stage. Channels share a common clock and trigger to guarantee full synchronization and the output stages incorporate four switchable filter paths to help optimize signal quality. The flexible output stages combine with the high-resolution DACs to ensure the generation of signals with very low distortion, wide dynamic range and an exceptional signal-to-noise ratio. All the models feature the ability to output waveforms with amplitude swings of up to  $\pm 12$  V into a 1 M $\Omega$  load or  $\pm 6$  V into 50  $\Omega$ .

Oliver Rovini, CTO at Spectrum, said: "These new AWG products offer a cost-effective solution, in one easy to integrate package, for anybody wanting to generate larger test signals in the DC to 60 MHz range. We've designed them with versatility in mind and incorporated features that allow the creation of an almost limitless range of test and control signals. For example, the units include large on-board memories of up to 2 x 512 MSamples that can be utilized in a number of different operating modes thereby allowing the generation of long and complex waveforms. This includes Single-Shot, Loop, FIFO, Gated and Sequence Replay modes. In FIFO mode the instruments can stream data continuously over the Gbit Ethernet port from PC memory to

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the AWG memory. Signals can even be generated while new waveform data is being loaded to the on-board memory.”

The AWG's flexibility is further enhanced by front-panel multipurpose I/O connectors that give access to additional synchronous digital (marker) outputs, asynchronous digital I/O, the trigger output, the run and arm status and different clocks.

### **Simple control and Signal Generation**

Controlling and generating signals with a generatorNETBOX is straight forward. The instruments come with Spectrums SBench 6 Professional software as standard. SBench 6 enables the user to control all the modes and settings of the AWG via a simple easy-to-use interface. The software supports multi-channel operation and has a host of built-in features for waveform display, signal generation, data analysis and documentation. Basic signals can be created using the software's EasyGenerator function that produces waveforms like sine waves, triangles or rectangles with programmable frequency, amplitude and phase. More complex signals can be created using mathematical equations or by importing data from other programs or devices (such as digitizers or oscilloscopes) in Binary, ASCII, or Wave formats.

The generatorNETBOX units are fully programmable and drivers are provided, free of charge, to support the most popular programming languages (such as C++, VB.NET, C#, J#, Delphi, Java or Python code) as well as third party software tools like LabVIEW and MATLAB.

### **Five Year Warranty**

All Spectrum AWG's carry an industry-leading, five-year warranty. Furthermore, software and firmware updates are free of charge for the lifetime of the product. Support is done directly by a skilled in-house team of engineers – normally within a couple of hours after receiving the request. The new generatorNETBOX products are in full production and available for purchase directly from Spectrum or through the company's worldwide network of representatives.

### **About Spectrum Instrumentation**

Spectrum Instrumentation, founded in 1989, uses a versatile modular design to create a wide range of digitizer and generator products as PC-cards (PCIe and PXIe) and stand-alone Ethernet units (LXI). In 30 years, they have 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 known for the outstanding support that comes directly from their design engineers. More information about Spectrum can be found at [www.spectrum-instrumentation.com](http://www.spectrum-instrumentation.com)

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