Digitizers and AWGs by Spectrum now support ARM-based NVIDIA Jetson

Customer demand spurs development of small and powerful systems

Grosshansdorf, Germany - March 17th, 2021. **Following a number of requests from its customers, Spectrum Instrumentation now offers driver support for the NVIDIA Jetson, a series of embedded computing boards from NVIDIA. The new driver package means that any of Spectrum's high-performance Digitizers, AWGs or Digital I/O products with PCIe interface, currently 65 different cards, can be used with this small but powerful platform.**

The NVIDIA Jetson consists of an ARM CPU and a CUDA-based GPU for high-performance parallel processing. In addition, it has one PCIe slot that can accommodate any Spectrum PCIe card. The high-speed parallel processing of the GPU makes it a perfect platform for handling the large volumes of data that can be acquired and generated by the Spectrum products. As Spectrum already offers SCAPP (Spectrum's CUDA Access for Parallel Processing), the NVIDIA Jetson is a perfect fit!

Widely deployed, the NVIDIA Jetson can already be found in in a host of onboard mobile platforms such as autonomous robots, drones, handheld medical devices, intelligent vehicles and smart appliances. In many of these applications, fast analogue and digital signals also need to be acquired, generated and analysed. That is where the Spectrum products come into their own.

NVIDIA Jetson with a M2p.5968 digitizer card from Spectrum: This small but powerful combination is able to sample eight signals in parallel with 125 MS/s.

The company currently offers 65 different PCIe cards that can be used directly with the NVIDIA Jetson. For example, Digitizers are available that can acquire electronic signals that may come from sensors or components in a system. Sampling, from 1 to 8 channels on a single card, is possible at rates from 5 MS/s up to 5 GS/s and with resolutions as high as 16-bit. This allows analogue signals in the DC to GHz frequency range to be digitized, turned into digital data with exceptional accuracy and precision. The resulting data can then be rapidly transferred to the NVIDIA Jetson platform where it can be processed and analysed, delivering answers and information with unprecedented speed.

Similarly, Spectrum has a wide range of PCIe Arbitrary Waveform Generators (AWGs) that can be used as signal sources for controlling or stimulating other devices. Plug an AWG card into an NVIDIA Jetson and it can produce analogue waveforms of almost any shape and form. Models are available, with 1 to 8 channels per single card, that can produce signals with 16-bit resolution and output rates that go from 40 MS/s up to 1.25 GS/s.

The Spectrum product range also includes fast Digital I/O products. These cards are used exclusively for the

Headquarters

Spectrum Instrumentation GmbH, Germany
Phone: +49 4102-6956-0
Email: Info@spec.de

US Office

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

https://www.spectrum-instrumentation.com

acquisition and generation of fast digital signals. For example, a single Digital Acquisition card can be used to simultaneously acquire 32 digital signals at clocking speeds over 700 MHz!

Oliver Rovini, Chief Technical Officer at Spectrum Instrumentation, said: "It's always exciting when you can provide solutions that come directly as a result of requests from our customers. The idea of combining an NVIDIA Jetson with a Spectrum PCIe card is very clever. It allows the creation of very small, low power systems which I'm sure will find their way into a host of portable and mobile applications in the very near future."

With over 30 years of knowledge in designing and building fast Digitizers, AWGs and Digital I/O products, Spectrum Instrumentation offers an industry-leading 5-year warranty for customer's peace of mind. This includes free software and firmware updates for each unit's lifetime. Additionally, customers get support directly from Spectrum's hardware and software engineers. The new drivers for the NVIDIA Jetson are available for immediate delivery. Further information can be found on the Spectrum Instrumentation website at www.spectrum-instrumentation.com

About Spectrum Instrumentation

Spectrum Instrumentation, founded in 1989, uses modular design to create a wide range of digitizers and generator products as PC-cards (PCIe and PXIe) and stand-alone Ethernet units (LXI). In 30 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 known for its 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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https://www.spectrum-instrumentation.com