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Spectrum digitisers, AWGs support NVIDIA Clara for next-gen AI medical instruments

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The NVIDIA Clara AGX kit perform high-speed electronic signal acquisition and generation for analogue and digital signals



Spectrum Instrumentation now offers driver support for the NVIDIA Clara AGX, a universal computing architecture for the next generation of AI medical instruments.

The new drivers enable scientists and developers to choose from 64 different spectrum digitisers, Arbitrary Waveform Generators (AWGs) and Digital I/O cards, letting the NVIDIA Clara AGX kit perform high-speed electronic signal acquisition and generation for analogue and digital signals. With the big variety of cards to choose from, users can exactly match their electronic signal requirements.

The digitiser cards can be used to acquire signals in the DC to GHz frequency ranges by sampling them at rates from 5 MS/s up to a maximum of 5 GS/s. Similarly, the AWG cards can be used to produce signals with almost any wave shape and frequency content, from DC to 400 MHz, by outputting samples at speeds from 40 MS/s up to 1.25 GS/s.

The NVIDIA Clara AGX developer kit provides an easy-to-use platform for developing software-defined, AI-enabled, real-time, point-of-care medical devices. It delivers real-time streaming connectivity and AI inference by combining the flexibility of the NVIDIA Jetson AGX Xavier embedded Arm system on a chip (SoC), the performance of the integrated NVIDIA RTX 6000 GPU, and the 100 GbE connectivity of the NVIDIA ConnectX SmartNIC, Clara AGX. The kit also includes full-stack GPU-accelerated libraries, SDKs, and reference applications for developers, data scientists, and researchers to create real-time, secure, and scalable solutions.

The NVIDIA Clara is already being used in several biomedical research programmes and next generation of medical devices.