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FOR IMMEDIATE RELEASE

G2CPU Wideband RTSA Software Toolkit Uses RADX NVIDIA-Based PXIe-GPUs to Achieve Over 1-Billion FFTs per Second on PXIe Systems

New G2SPU Toolkit Enables LabVIEW Developers to Use RADX NVIDIA-based PXIe-GPUs to Rapidly Implement Cost-Effective, Software-Defined, Real-Time Signal Analysis, Record & Playback Capabilities in PXIe RF Test Systems with Extreme Performance, Resolution Bandwidth and Low Probability of Intercept Event Detection

G2CPU and RADX Announce New GPU-Accelerated, Wideband RTSA Toolkit 09DEC2025 V1.2.doc

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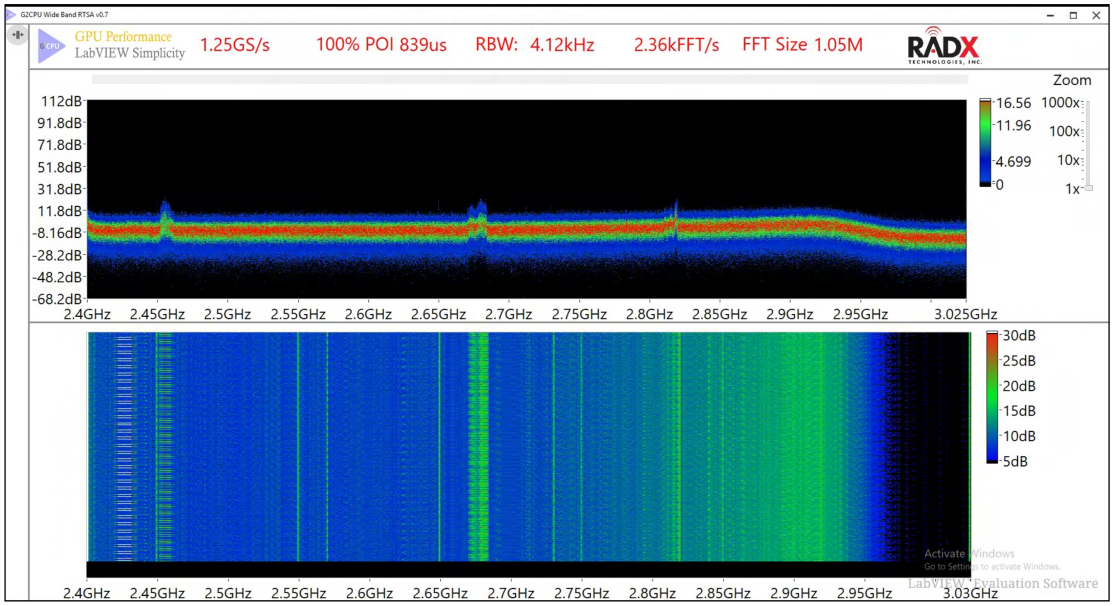
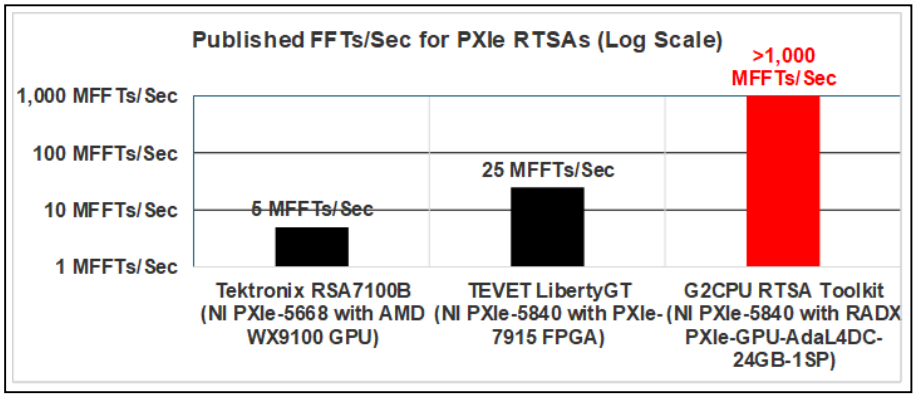
National Harbor, Maryland, USA – December 9, 2025 - G2CPU™ (g2cpu.com) and RADX® Technologies, Inc. ("RADX", radxtech.com) today at **AOC 2025** announced the **G2CPU Wideband RTSA Toolkit**. This new software toolkit enables LabVIEW developers and PXIe system integrators to pair G2CPU's optimized streaming I/O and GPU-accelerated signal processing by employing RADX NVIDIA-based PXIe-GPUs, PXIe-SSDs and PXIe-GbE Modules to rapidly implement low-cost, software-defined, tailored Real-Time Signal Analysis (RTSA), record and playback capabilities on new and existing PXIe systems to deliver unprecedented RTSA performance, features, resolution and low 100% probability-of-intercept (LPI) event detection.



"The G2CPU Wideband RTSA Toolkit enables LabVIEW developers to rapidly add comprehensive, wideband RTSA functionality to NI VST-equipped PXIe Systems by simply adding a RADX PXIe-GPU and integrating the RTSA Toolkit into their LabVIEW application," said Natan Biesmans, G2CPU CEO. "The RTSA Toolkit provides essential RTSA, record and playback functionality and record-breaking performance, allowing LabVIEW developers and system integrators to focus on the needs of their customers and applications."

Record-Setting RTSA Performance

By exploiting G2CPU's optimized Zero Copy streaming I/O technology and GPU-accelerated signal processing capabilities, the G2CPU RTSA Toolkit, when combined with RADX Catalyst-X™ NVIDIA-based PXIe-GPUs and Venturi PXIe-SSDs, enables record-setting RTSA performance when compared to competitive RTSAs.



In Gen 3 (24GB/Sec) PXIe systems equipped with NI PXIe-5840, PXIe-5841 or other National Instruments PXIe Vector Signal Transceivers (VSTs), the G2CPU RTSA Toolkit enables real-time processing of up to 1.25 Gigasamples per second of FP32 I/Q data with up to 1 GHz of real-time bandwidth (RTBW) per channel via RADX PXIe-GPUs that can sustain over 1 Billion FFTs per second- the fastest performance for a COTS RTSA to date, which is approximately 40x the FFT processing rate of 1 GHz bandwidth RTSAs from Tektronix, TEVET, Keysight, Anritsu and Rhode & Schwarz.

At 1.25 Billion FFTs/Sec, using the Toolkit's overlap feature, the resulting 100% Probability of Intercept (POI) Minimum Duration Signal is 1.6 nanoseconds, which is over 100x lower in duration than the 100% POI available from the above mentioned RTSAs. In addition, because the Toolkit employs NVIDIA RTX GPUs, it can support up to 16-million-point FFTs, which enables Resolution Bandwidths (RBWs) that are impossible to achieve on ASIC or FPGA-based RTSAs.

"In 2016, RADX introduced the LibertyGT RTSA, which was acquired by TEVET in 2021. LibertyGT achieved a then-record 25 million FFTs/Sec and 100% POI of 320 nanoseconds, which resulted from many man-years of proprietary firmware development using NI PXIe-7915 FPGAs," said Ross Q. Smith, RADX Co-Founder and CEO. "Today, G2CPU, running on RADX NVIDIA-based PXIe-GPUs, shatters that mark with up to 1.25 billion FFTs/Sec and 100% POI for detecting sub-2 nanosecond duration signals. Moreover, the G2CPU RTSA Toolkit is a low-cost, LabVIEW add-on that lets developers quickly add software-defined RTSA, record & playback to PXIe systems - without the time, hassle and expense that comes from extreme-performance FPGA development and support."

Software-Defined Add-On for Existing and New PXIe Systems - The G2CPU Wideband RTSA Toolkit will be published as a binary executable and as a source-code plug-in to the existing Commercial G2CPU Toolkit for LabVIEW, which is available via the NI Tools Network at https://tinyurl.com/yy3p4be6. The G2CPU Wideband RTSA Toolkit will support Windows, Linux and RT Linux, RADX PXIe-GPUs and PXIe-SSDs and popular NI PXIe VSTs that support RFSA and RFSG. G2CPU intends to publish future version(s) compatible with Python, C, C++, C#, MATLAB, PyTorch & TensorFlow and will support other digitizers / SDRs based on customer needs.

"We see the G2CPU RTSA Toolkit as a major disruptor in our ability to rapidly deliver tailored, GPU-enabled signal-processing and AI solutions for both R&D and production EW, RADAR, and RF test-and-measurement applications across multiple industries," said Jeff Buterbaugh, Ph.D., Account Executive at SPHEREA US. "This new wideband RF capability complements the GPU-accelerated video, image-processing, and AI work we already perform for cameras and EO sensors."

The RTSA Toolkit enables the rapid addition of RTSA capabilities to previously deployed PXIe Systems as well as to new PXIe systems that are equipped with NI VSTs, RADX PXIe-GPUs and optionally, RADX high-performance PXIe-SSDs for data recording. With the Toolkit and a RADX PXIe-GPU, PXIe System Integrators can now implement industry-leading RTSA, RF record and playback performance with frequency mask triggering, extensive pre-trigger circular buffering and other features comparable to those found in expensive proprietary systems while avoiding the time-consuming and expensive efforts associated with FPGA development. Key features of Version 1.x are listed below. Detailed specifications will be available in January 2026.

G2CPU Wideband RTSA Toolkit V1.x Key Features	
• Available as Perpetual Licensed Source Code Plug-in for G2CPU Commercial Toolkit with License to Use, Modify, Create and Distribute Executable Binary Derivatives • Available as Binary Executable • Support for Windows, Linux and RT Linux Operating Systems (Future Release) • Support for Up to 2 Concurrent RFSA and RFSG Devices (VSTs or VSAs) with T-CLK Synchronization (Future Release) • Support for Up to 2 x Concurrent GPUs via CUDA including RADX Catalyst-X PXIe-GPUs based on NVIDIA RTX GPUs • Support for High-Performance PXIe-SSDs including RADX Venturi PXIe-SSDs with 15mm Data Center NVMe U.2 SSDs • Support for FFTs sized from 2 to 16M Samples (Depending on PXIe-GPU) • Support for Popular FFT Windowing Functions • Support for FFT Overlap • Support for Scalable FFT Performance up to 1.25 GFFTs/Sec (depending on PXIe-GPU)	• Support for Scalable 100% POI Minimum Duration Signals down to 1.6 nsec (depending on PXIe-GPU) • Support for Continuous Device Streaming up to Limits of PCIe backplane and/or VST (up to 1.25 GSPS with Gen 3 x8 VSTs) • Support for Trigger-Enabled Recording to High-Performance PXIe-SSD based on Frequency Mask, Software/GUI or External Triggers • Support for Pre-Trigger, Circular Buffering to GPU GDDR or Extended Pre-Trigger, Circular Buffering to High-Performance, Extended-Endurance PXIe-SSDs (e.g., Venturi PXIe-SSD) • Support for Developer Modifiable Spectrogram Window Display with FFT or PSD Display and Zoom, Waterfall Window • Support for Zero Span (Future Release) • Support for Developer Modifiable GUIs including VST Control Panel with RFSA and RFSG Controls • Support for RF Playback of Wideband TDMS Files using RFSG with the addition of optional RADX High-Performance PXIe-SSDs

Because the G2CPU Wideband RTSA Toolkit is a software add-on for PXIe open-architecture systems that only requires the addition of a RADX PXIe-GPU as incremental hardware, it dramatically lowers the cost of adding high-performance, wideband RTSA, record and playback capabilities to a PXIe System, while providing a number of unique PXIe-derived benefits for developers, system integrators and their customers and end-users. The following table summarizes the features and benefits of the G2CPU Wideband RTSA Toolkit as deployed in a typical PXIe-based system equipped with an NI PXIe VST when compared to other COTS PXIe RTSAs:

G2CPU and RADX Announce GPU-Accelerated, Wideband RTSA Toolkit

	COMPARISON OF COTS PXIe RTSAs		
	G2CPU Wideband RTSA Toolkit (www.g2cpu.com)	**Tektronix RSA7100B (https://tinyurl.com/yt4tny9j)**	**TEVET Liberty NP (https://tinyurl.com/4cnmvf5x)**
System Architecture	Modular PXIe / Add-On	Integrated PXIe	Integrated PXIe
Typical System Configuration	• NI PXIe-1092/1095 • NI PXIe-8881 • NI PXIe-5840/41 VST • RADX Catalyst PXIe-GPU with NVIDIA RTX Ada or Blackwell GPU • Optional RADX Venturi PXIe-SSD-1U.2F-XXXTB (up to 60.44TB/Slot)	• NI PXIe-1085 • NI PXIe/PXIe-8398 MXIe • NI PXIe-5668 VSA • External PC with AMD/ATI Radeon WX9100 GPU • Optional PC-Based RAID (up to 32TB)	• NI PXIe-1092/1095 • NI PXIe-8881 • NI PXIe-5840/5841 • NI PXIe-7915 FPGA • Optional PXIe RAID (up to 32TB)
Available as Add-On to Existing PXIe Systems?	Yes	No	No
Operating System Support	Windows, Linux, RT Linux	Windows	Windows
Software Deliverable Format	Binary Executable or LabVIEW Source Code Plug-in (G2CPU RTSA Toolkit)	Binary Executable	Binary Executable
Supports Customer Developed Measurement Science	Yes (with Plugin)	No	No
Digital Signal Processor	RADX PXIe-GPU with NVIDIA Ada or Blackwell RTX GPU	ATI Radeon WX9100 PCIe-GPU	NI PXIe-7915 or Similar FPGA
RTBW / CH	1 GHz / CH (1.25 GSPS 32-bit I/Q with Gen 3 x8)	800 MHz (1 CH)	1 GHz / CH
Max FFTs per Sec	>1 Billion FFTs/Sec with PXIe-GPU-AdaRTX4kSFF or AdaL4DC	~5 Million FFTs/Sec	~25 Million FFTs/Sec
Minimum 100% POI Signal Duration	1.6 nsec	232 nsec	320 nsec
Recording Data Rate	Up to ~6.5 GB/Sec / CH	~4 GB/Sec (1 CH)	~5 GB/Sec / CH
Recording Time	Up to 3.2 Hours / Slot at 5 GB/Sec	Up to 2.1 Hours at 4 GB/Sec	Up to 1.7 Hours / Slot at 5 GB/Sec
RF Playback of Recorded Files?	Yes (TDMS)	No	Yes (TDMS)
Starting MSRP (USD)	~$14k (Add-On): • $5k G2CPU RTSA Binary Executable • $9k RADX Ada RTX PXIe-GPU	> ~$100k (System)	> ~$100k (System)

Pricing and Delivery – The Wideband RTSA Toolkit Plug-in for the G2CPU Commercial Toolkit (see https://tinyurl.com/yy3p4be6) will be available for download in Q1 2026 at g2cpu.com and will be delivered in source code format with the right to modify, create and distribute binary derivatives with a perpetual license fee of $25,000 USD per license. The binary executable version and customer-developed and distributed binary derivatives will feature a perpetual runtime license fee of $5,000 USD per channel. Time-limited binary executable demo versions will also be available later in early January 2026. Contact info@g2cpu.com for more information.

See the G2CPU Wideband RTSA Toolkit at AOC 2025 - At AOC 2025 (https://aoc2025.org, 09-11DEC2025, National Harbor, MD), in RADX Booth #1102, G2CPU and RADX will demonstrate the new G2CPU Wideband RTSA Toolkit running on RADX PXIe-GPUs based on NVIDIA Ada RTX GPUs, the new RADX Venturi PXIe-SSD that features 15mm Data Center SSDs and other RADX COTS PXIe Modules. To arrange a demo, please email info@radxtech.com or info@g2cpu.com.

About RADX Technologies, Inc. - Founded in 2011, RADX Technologies, Inc., is a high-tech small business that develops COTS hardware and software including PXIe and PCIe GPUs, eGPUs, SSD / RAID Subsystems, Network Interface Cards and other I/O Products that enable advanced signal, image, video, data processing, ML/DL/LLM training and inference T&M applications within the EW, Aerospace, Semiconductor and Automotive markets. As an Emerson / NI Alliance Partner, RADX focuses on products and solutions that complement the Emerson / NI PXIe and USRP product lines. RADX products are BAA & TAA compliant and are available on GSA from TestMart at https://tinyurl.com/muk72crx. RADX is headquartered in California with locations in Utah, New Mexico, and Taiwan. For more info on RADX products, please visit www.radxtech.com, email info@radxtech.com or call +1 (619) 677-1849 x1.

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