RADX® Catalyst, Trifecta & Orca-C2X COTS PXIe-GPUs

RADX PXIe-GPUs Bring the Easy-to-Program Power of NVIDIA® Professional GPUs to PXIe for Accelerated Graphics, Video, Image, Signal & Data Processing and ML / DL / LLM Training & Inference Apps

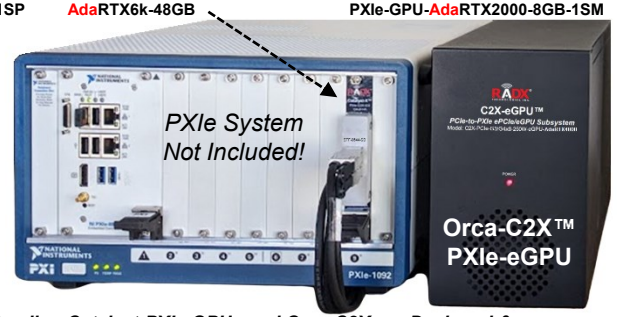
Catalyst-GPUs™ (Patent-Pending)

PXIe-GPU-T600-4GB-1SP
PXIe-GPU-T1000-8GB-1SP
PXIe-GPU-AmpereRTXA1k-8GB-1SP
PXIe-GPU-AdaRTX2k-16GB-1SP
PXIe-GPU-AdaRTX4kSFF-20GB-1SP
PXIe-GPU-AdaL4DC-24GB-1SP
Orca-C2X PXIe-C2X-G4x8-eGPU-AdaRTX6k-48GB

Trifecta-GPUs™

PXIe-GPU-A2000-8GB-1SM
PXIe-GPU-A2000RP-8GB-1SM
PXIe-GPU-A2000-8GB-2SM (2-Slot)
PXIe-GPU-AdaRTX2000-8GB-1SM

- **Easy-to-Program via LabVIEW, MATLAB, Python & C/C++** with CUDA®, OpenCL® & Tensor Core Acceleration for Signal, Image & Video Processing and ML/DL/LLM Training & Inference Apps in PXIe Systems and Optimized Support for Popular Libraries & Frameworks:

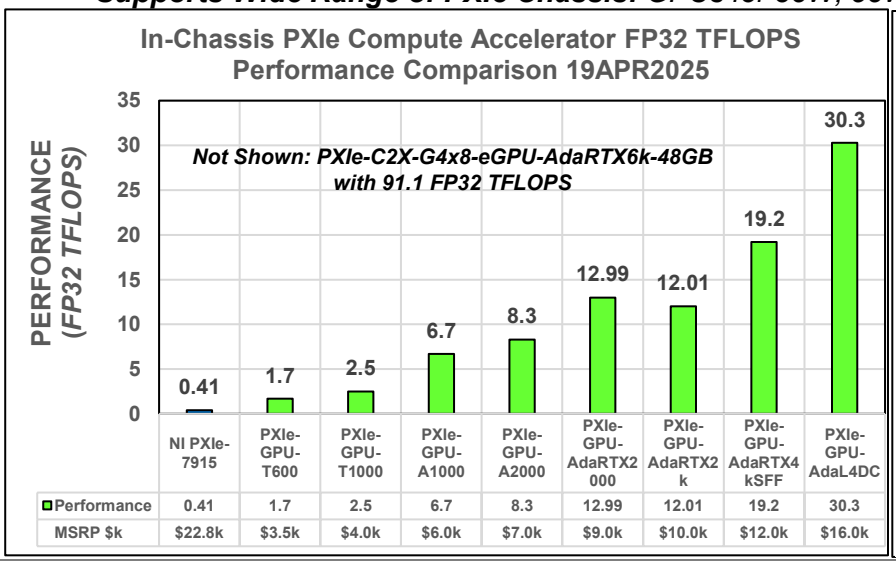


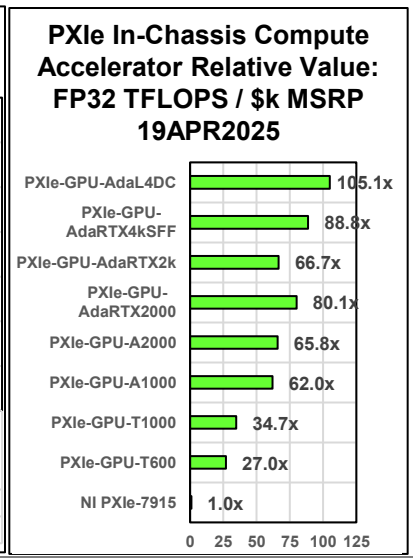
NVIDIA CUDA · OpenCV · CuPy · OpenCL · OpenGL · Microsoft DirectX · NI LabVIEW · Ngene · PyTorch · RTX CHAT · MathWorks · C/C++ · python · RAPIDS AI · GPU · FFMPEG · TensorFlow · Ansys

RADX Patent Pending Catalyst PXIe-GPUs and Orca-C2X are Designed & Assembled in the USA

USA · NVIDIA QUADRO · NVIDIA RTX · BAA / TAA Compliant

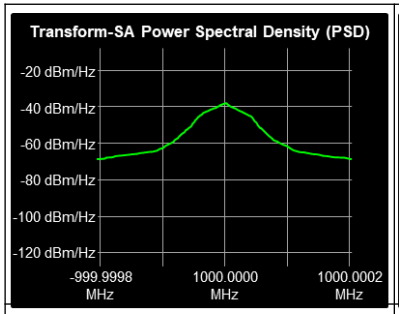
- **Eliminates the Need for Separate GPU Servers**
  - ***Accelerated Image, Video & Signal Processing:*** *1.7 to 91.1 FP32 TFLOPS for up to 100x to 200x Higher Compute Performance vs. Xilinx KU060 FPGAs and popular PXIe ECs*
  - ***NVENC / NVDEC*** *HW Accelerated Video Encoding / Decoding Engines for Real-Time 2k/4k/8k Video Compression & Decompression at up to 100x CPU CODEC Perf Levels*
  - ***2D/3D Graphics****: Up to ~200x Higher Performance vs. Embedded Controller GPUs*
  - ***AI ML / DL / LLM Inference & Training****: Up to ~200x versus Embedded Controller CPUs)*
  - ***Supports Wide Range of PXIe Chassis:*** *GPUs for 38W, 58W and 82W/Slot PXIe Chassis*

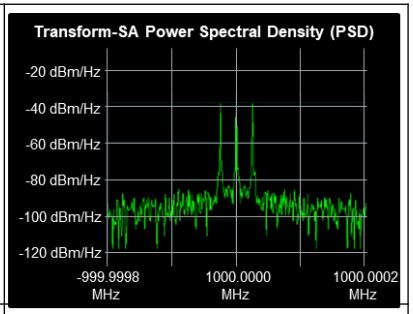




- **Enhance LPI Signal Detection**
  - ***RADX PXIe-GPUs Support Real-Time 1MS+ FFTs*** *to Dramatically Reduce Resolution Bandwidth and Average Noise Floor to Improve LPI Signal Detection & Classification in PXIe Signal Analyzers*

RADX PXIe-GPUs Support 1 to 16 Megasample FFTs in Real-Time to Enhance LPI Signal Detection in PXIe Signal Analyzers





32 kilosample (kS) FFT	1 Megasample (MS) FFT
1.25 MHz BW TDMS Signal	
87.74 Hz RBW	2.74 Hz RBW (32x Gain)
-80 dBm / Hz Avg. Noise Floor	-100 dBm / Hz Avg. Noise Floor
~0.25 msec FFT Time (CPU) (on NI PXIe-8881 Intel Xeon W-2245 - $15k)	~0.25 msec FFT Time (GPU) (on RADX Catalyst PXIe-GPU-AdaRTX2k-16GB-1SP - $9k)

RADX TECHNOLOGIES, INC.

NI Partner — APPLICATION SOLUTION & PRODUCT

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Available on GSA via: gsamart testmart

https://tinyurl.com/muk72crx

RADX® Catalyst and Trifecta COTS PXIe-GPU Module Specifications

(As of 24APR2025 - Subject to Change Without Notice)

1. PXIe-GPU MODEL (P/N):	**PXIe-GPU-T600-4GB-1SP** *(Low Power)*	**PXIe-GPU-T1000-8GB-1SP**	***** NEW! *** PXIe-GPU-RTXA1k-8GB-1SP**	**PXIe-GPU-A2000RP-8GB-1SM** *(Low Power) Extended Life Cycle*	**PXIe-GPU-A2000-8GB-1SM** *Extended Life Cycle*	**PXIe-GPU-A2000-8GB-2SM** *(Low Power) Extended Life Cycle*	**PXIe-GPU-AdaRTX2000-8GB-1SM** *Extended Life Cycle*	***** NEW! *** PXIe-GPU-AdaRTX2k-16GB-1SP**	***** NEW! *** PXIe-GPU-AdaRTX4kSFF-20GB-1SP**	***** NEW! *** PXIe-GPU-AdaL4-24GB-1SP** *(Compute Only)*	**PXIe-C2X-G4x8-eGPU-AdaRTX6k-48GB** *(External PCIe GPU)*
2. PXIe-GPU FAMILY:	**Catalyst-GPU™**	**Catalyst-GPU™**	**Catalyst-GPU™**	**Trifecta-GPU™**	**Trifecta-GPU™**	**Trifecta-GPU™**	**Trifecta-GPU™**	**Catalyst-GPU™**	**Catalyst-GPU™**	**Catalyst-GPU™**	**Orca-CTX™ eGPU**
3. PXIe-GPU TYPE / LIFE CYCLE:	In-Chassis PXIe-GPU / Standard Life Cycle			In-Chassis PXIe-GPU / Extended Life Cycle				In-Chassis / Standard Life Cycle			External / eGPU / Std Life Cycle
4. INTEGRATED NVIDIA GPU:	Turing T600 4GB PCIe	Turing T1000 8GB PCIe	Ampere RTX A1000 8GB PCIe	Ampere RTX A2000 8GB MXM 3.1 Type-A	Ampere RTX A2000 8GB MXM 3.1 Type-A	Ampere RTX A2000 8GB MXM 3.1 Type-A	Ada RTX 2000 8GB MXM 3.1 Type A	Ada RTX 2000 16GB PCIe	Ada RTX 4000 SFF 20 GB PCIe	Ada L4 Data Center 24GB PCIe	Ada RTX 6000 PCIe 48GB PCIe
5. NVIDIA GPU DATASHEET:	https://tinyurl.com/5n7ayb7w	https://tinyurl.com/bdhrab25	https://tinyurl.com/mvk3fs94	https://tinyurl.com/2u3svxpx	https://tinyurl.com/2u3svxpx	https://tinyurl.com/2u3svxpx	https://tinyurl.com/2u3svxpx	https://tinyurl.com/65kznnfk	https://tinyurl.com/4duye53u	https://tinyurl.com/3jr3fm85	https://tinyurl.com/dtcb33ec
6. GPU MEMORY (GDDR6):	4GB / 128-bit / 160 GB/Sec	8GB / 128-bit / 160 GB/Sec	8GB / 128-bit / 192 GB/Sec	8GB / 224-bit / 115 GB/Sec	8GB / 224-bit / 224 GB/Sec	8GB / 224-bit / 224 GB/Sec	8GB / 128-bit / 256 GB/Sec	**16GB** / 128-bit / 224 GB/Sec	**20GB** / 160-bit / 280 GB/Sec	**24GB** / 256-bit / 300 GB/Sec	**48GB** / 384-bit / 960 GB/Sec
7. GPU CORES:	640xCUDA	896xCUDA	2,304xCUDA / 18xRT / 72xTensor	2,560xCUDA / 20xRT / 80xTensor	2,560xCUDA / 20xRT / 80xTensor	2,560xCUDA / 20xRT / 80xTensor	3,072xCUDA / 24xRT / 96xTensor	2,816xCUDA / 22xRT / 88xTensor	6,144xCUDA / 48xRT / 192xTensor	7,424xCUDA / 60xRT / 240xTensor	18,176xCUDA / 142xRT / 568xTensor
8. FP32 TFLOPS (PEAK):	**1.7**	**2.5**	**6.7**	**6.1**	**8.3**	**8.3**	**13.0**	**12.0**	**19.2**	**30.3**	**91.1**
9. NVENC / NVDEC CODECS: *(See https://tinyurl.com/579y4u69)*	G6x1 / G4x1	G6x1 / G4x1	G7x1 / G5x1	G7x1 / G5x1	G7x1 / G5x2	G7x1 / G5x2	G8x1 / G5x2	G8x1 / G5x1	G8x2 / G5x2	G8x2 / G5x4	G8x3 / G5x3
10. DISPLAY PORT / MINI DP 1.4a I/Fs: *(4k+ Res @ 120Hz or 8K Res @ 60Hz with 10-bpp)*	4 x Mini DP1.4a I/Fs (HDMI 2.1)						3 x Mini DP1.4a I/Fs (HDMI 2.1)	4 x Mini DP1.4a I/Fs (HDMI 2.1)		N/A (Compute Only)	4 x DP1.4a I/Fs (HDMI 2.1)
11. PXIe MODULE / GPU PCIe I/F:	PCIe G3 x8 / PCIe G3 x16		G4 x8 / G4 x8	G4 x8 / G4 x16							
12. PXIe MODULE FORM FACTOR: *(3U PXIe Peripheral / 3U CPCIe Type 2 with XJ3 & XJ4)*	1-Slot (4HP)					2-Slots (8HP)	1-Slot (4HP)				1-Slot (4HP) + eGPU Chassis
13. PXIe MODULE DIMENSIONS:	~0.4 kg (0.9 lbs) / 100 mm H x 160 mm D x 20.32 mm W					0.5 kg (1.1 lbs) / 100 mm H x 160 mm D x 40.64 mm W	~0.4 kg (0.9 lbs) / 100 mm H x 160 mm D x 20.32 mm W			~0.5 kg (1.1 lbs) / 100 mm H x 160 mm D x 20.32 mm W	~0.4 kg (0.9 lbs) / 100 mm H x 160 mm D x 20.32 mm W
14. REQUIRED PXIe SLOTS & POWER:	**1 Slot(s) @ 38W/Slot**	1 Slot(s) @ 50W/Slot	1 Slot(s) @ 50W/Slot	**1 Slot(s) @ 35W/Slot**	1 Slot(s) @ 58W/Slot	**2 Slot(s) @ 29W/Slot (58W)**	1 Slot(s) @ 58W/Slot	1 Slot(s) @ 70W/Slot	1 Slot(s) @ 70W/Slot	1 Slot(s) @ 72W/Slot	1 Slot(s) @ 15W/Slot + 350W
15. PXIe MODULE THERMAL SOLUTION:	NVIDIA Fan or RADX Passive Heat Sink with ~15 LFM Air Flow	RADX Passive Aluminum Heat Sink with ~15 LFM Air Flow									
16. SUPPORTED PXIe CHASSIS: *(RADX Recommends NI PXIe-1092/1095)*	**38W / Slot PXIe Chassis**	58W / Slot PXIe Chassis		**38W / Slot PXIe Chassis**	58W / Slot PXIe Chassis	**NI & 3rd Party 38W / Slot PXIe Chassis**	58W / Slot PXIe Chassis	NI PXIe 58W / 82W Slot Chassis			**38W / Slot PXIe Chassis**
17. OS SUPPORT:	Win 10, Win 11, Desktop Linux (64-bit, Popular Distributions) and NI RT Linux via G2CPU										
18. GRAPHICS & COMPUTE APIs:	DirectX 12, Shader Model 5.1, OpenGL 4.6, Vulkan 1.2 (or Later), CUDA Toolkit 8.0+, CUDA Compute V8+, OpenCL™ 1.2+, OpenCV 3.x, DirectCompute & CUDA-X AI										
19. RDMA / P2P SUPPORT:	NVIDIA RDMA, GPUDirect (incl. Teledyne SP Devices ADCs) and GPUDirect Storage Support Under Linux. Support for Other 3rd Party PXIe Modules with Mfg. Support										
20. PROGRAMMING FRAMEWORKS:	NI LabVIEW via G2CPU, NGENE CuLAB & DeepLTK Toolkits, Python, C/C++ or MATLAB (with Toolkits), PyTorch, LibTorch, TensorFlow, FFmpeg, Ansys and others										
21. PROGRAMMING EXAMPLES:	Programming Examples for LabVIEW, MATLAB and Python/PyTorch Available from RADX, MathWorks, ADS, G2CPU, NGENE and others upon Request										
22. OP & STORAGE TEMPS:	Operating Temp: 0° to 55° C with 10% to 90% Humidity (NC) with Active Thermal Mgmt.; Storage Temp: -40° to +85° C										
23. CERTIFICATIONS & DESIGNED-TO-MEET SPECS	GPUs Certified for FCC Part 15-B Class A, CE and RoHS. Module Certified to Meet RoHS and Designed to Meet CE and FCC Part 15-B Class A / EN55022 Class A / ENS55024 / EN300386-2 / MIL-PRF-28800G Class 3 *(Class 2 Optional). Module Level Certs Available – Ask RADX for a Quotation.*										
24. PXIe MODULE EXPORT COMPLIANCE:	COO: US / BAA-TAA / ECCN: 4A994.L / HSC: 84733092			COO: TW / BAA-TAA / ECCN: 4A994.L / HSC: 84733092				COO: US / BAA-TAA / ECCN: 4A994.L / HSC: 84733092		COO: US / BAA-TAA / **ECCN: 4A090.A** / HSC: 84733092	
25. STANDARD WARRANTY:	1 Year Return-to-Factory Standard Warranty (From Date of Shipment) - *Extended Warranty and Technology Insertion Options Available.*										
26. Q225 MSRP - FOB SJC: *(Excluding US GPU Import Tariffs)*	**$3,499**	**$3,999**	**$5,999**	**$6,999**	**$6,999**	**$7,999**	**$8,999**	**$9,999**	**$11,999**	**$15,999**	**$24,999**
27. LEADTIME (ARO / ARFP)	**≤ 30 Days**			**30 to 60 Days**							**30 to 45 Days**
28. VALUE: FP32 TFLOPS / $k MSRP (NI PXIe-7915 = 0.02)	**0.49**	**0.63**	**1.12**	**0.87**	**1.19**	**1.04**	**1.44**	**1.2**	**1.75**	**1.89**	**3.64**

RADX® TECHNOLOGIES, INC.

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