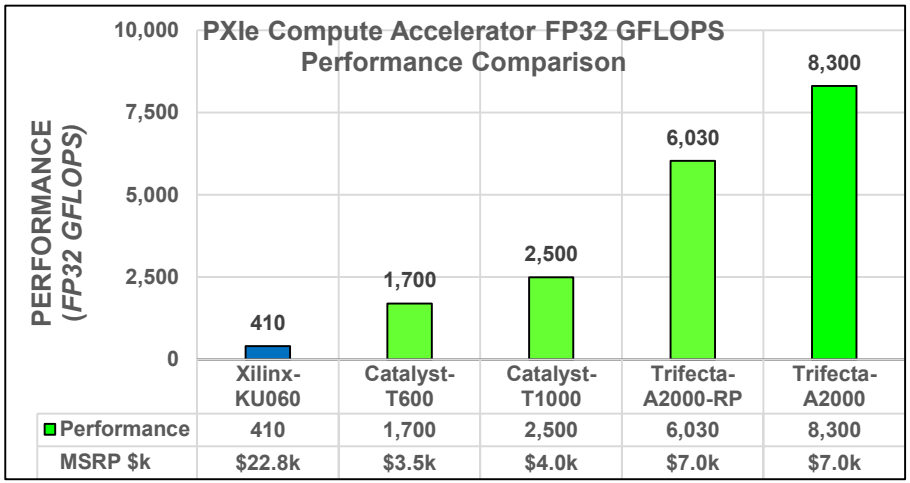
RADX® Trifecta-GPU™ COTS PXIe/CPCIe GPU Modules

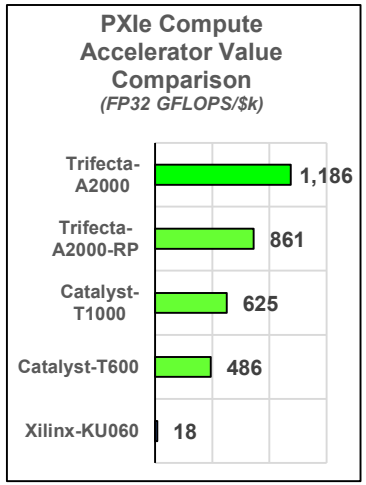
*Bring the Power of **Easy-to-Program**, NVIDIA® RTX A2000 GPUs to PXIe/CPCIe T&M Systems - for Advanced GFX and GPU-Accelerated Video, Image & Signal Processing and ML & DL Inference Apps*

- **Easy-to-Program via LabVIEW, MATLAB, Python, C/C++** for NVIDIA CUDA and OpenCL® Accelerated Signal, Image & Video Processing, and Machine and Deep Learning Inference Apps in PXIe Systems, with Optimized Support for Virtually All Popular Libraries and Frameworks:

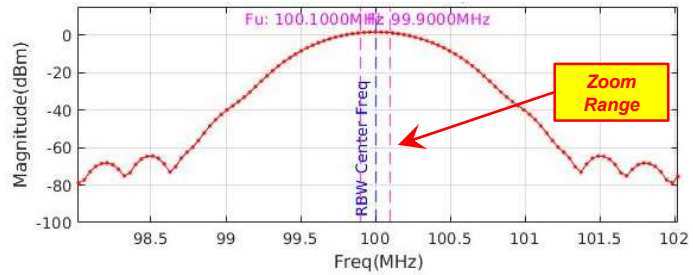
NVIDIA CUDA · OpenCV · OpenCL · OpenGL · Microsoft DirectX · LabVIEW · NIgene engineering in our genes · PyTorch · MathWorks · C/C++ · python · RAPIDS AI & cuSignal · FFMPEG · TensorFlow

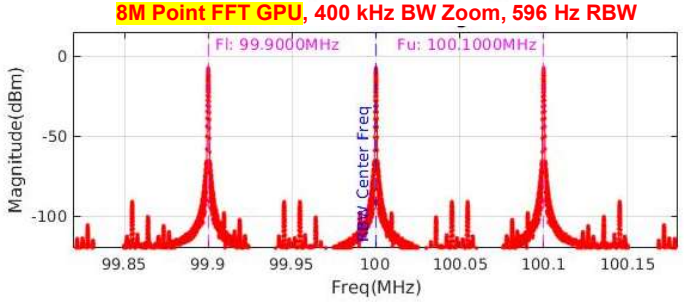
- **Scalable TFLOP Performance - *Eliminates the Need for Separate GPU Servers***
  - ***Single- and Dual-Slot Models*** *with NVIDIA RTX A2000 GPUs for 38W/Slot and 58W/Slot PXIe Chassis*
  - ***2D/3D Graphics****: Up to ~100x Higher Performance vs. Embedded Controller GPUs*
  - ***Accelerated Image, Video & Signal Processing:*** *Up to 8.3 FP32 TFLOPS for ~20x Higher Compute Performance vs. Xilinx KU060 FPGAs (410 FP32 GFLOPS) and Up to 100x Higher Compute Performance vs. CPUs*
  - ***ML/DL Inference****: ~20x to ~200x Higher than Embedded Controller CPUs via LabVIEW/NGENE, MATLAB, TensorFlow or PyTorch*





RADX PXIe-GPU Teraflop DSP Perf Enhances LPI Signal Detection In PXIe Signal Analyzers





RADX TECHNOLOGIES, INC.

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Available on GSA via: gsamart testmart

https://tinyurl.com/muk72crx

RADX® Trifecta-GPU COTS PXIe/CPCIe GPU Module Specifications

(Subject to Change Without Notice)

#	Parameter	PXIe-GPU-A2000-8GB-1SM-RP (1-Slot, 35W, 4HP, Reduced Power)	PXIe-GPU-A2000-8GB-1SM (1-Slot, 58W, 4HP)	PXIe-GPU-A2000-8GB-2SM (2-Slot, 29W/Slot, 8HP)
1	NVIDIA Ampere GPU:	RTX-A2000 MXM 3.1 Type A		
2	FP32 Peak Performance:	6.03 FP32 TFLOPS *(14.7x PXIe-7915)*	8.3 FP32 TFLOPS *(22.7x PXIe-7915 @ 410 GFLOPS)*	
3	CUDA & Other Cores:	2,560 CUDA / 20 RT / 80 TENSOR		
4	Real-Time Video Enc/Dec:	1 x NVENC (7th Generation / Unlimited Streams) and 2 x NVDEC (7th Generation / Unlimited Streams) See https://tinyurl.com/579y4u69		
5	On-Board Memory:	8 GB GDDR6 with 192-bit I/F *(2x PXIe-7915 @ 4 GB DDR3)*		
6	On-Board Memory Bandwidth:	~115 GB/Sec *(6.8x PXIe-7915 @ 17 GB/Sec)*	192 GB/Sec *(11.3x PXIe-7915 @ 17 GB/Sec)*	
7	Total Graphics Power (Watts):	~35W / Slot *(~35W Total)*	~58W / Slot *(~58W Total)*	~29W / Slot *(~58W Total)*
8	Supported PXIe Chassis:	All 38W / Slot NI & 3rd Party PXIe Chassis	NI PXIe 58W / Slot Chassis *(e.g., PXIe-1092, -1095, -1084, etc.)*	All 38W / Slot NI & 3rd Party PXIe Chassis
9	Display I/F & Res:	4 x Mini Display Port 1.4a I/Fs (HDMI 2.1) with 4k+ Resolution @ 120Hz or 8K Resolution at 60Hz with 10-bit Color		
10	Thermal Solution:	Passive Aluminum Heat Sink (1- or 2-Slot) / ~15 LFM Air Flow		
11	GPU / Module PCIe I/F:	GPU: PCIe Gen 4 x16 / Module: PCIe Gen 4 x8 *(Backplane Limit for Most Chassis is PCIe G3 x8 or x4)*		
12	Module Form Factor:	Single (4HP), 3U PXIe Peripheral / 3U CPCIe Type 2 Slot with XJ3 and XJ4 Connectors		Dual (8HP), 3U PXIe Peripheral / 3U CPCIe Type 2 Slot with XJ3 & XJ4
13	Module Dimensions:	~0.4 kg (0.8 lbs) / 100 mm H x 160 mm D x 20.32 mm W (4HP) *(3.94" H x 6.3" D x 0.8 " W [4HP])*		0.5 kg (1.1 lbs) / 100 mm H x 160 mm D x 40.64 mm W (8HP) *(3.94" H x 6.3" D x 1.6" W [8HP])*
14	Op & Storage Temps:	Op Temp: 0° to 55° C, 10% to 90%, Non-Condensing, Storage Temp: -40° to +85° C		
15	Certifications and Designed to Meet Specifications:	GPU MXM Certified for FCC Part 15-B Class A, CE and RoHS. Module Certified for CE & RoHS and Designed to Meet FCC Part 15-B Class A / EN55022 Class A / ENS55024 / EN300386-2 / MIL-PRF-28800G Class 3 *(Class 2 Optional).* *Additional Module Level Certs May be Available – Ask RADX for a Quotation.*		
16	Operating System Support:	Windows 10, Windows 11 and Linux (64-bit, Popular Distributions)		
17	Graphics APIs:	DirectX 12, Shader Model 5.1, OpenGL 4.6, Vulkan 1.2 (or Later)		
18	Compute APIs:	CUDA Toolkit 8.0+, CUDA Compute V8+, OpenCL™ 1.2+, OpenCV 3.4+ & CUDA-X AI		
19	RDMA / Peer-to-Peer Support:	NVIDIA GPUDirect Support for Teledyne SP Devices Digitizers. Availability for Trifecta, Catalyst and Other 3rd Party PXIe Modules TBD.		
20	Programming & Framework Support:	NI LabVIEW, Python, C/C++ or MATLAB; MathWorks MATLAB, Simulink, ML, DL and Parallel Toolboxes; RAPIDS cuSignal & AI, NGENE cuLAB and DeepLTK, PyTorch, TensorFlow, FFmpeg and others.		
21	Programming Examples:	RADX Transform-X Libraries and Examples for Python, MATLAB and C/C++		
22	Standard Warranty:	1 Year Return to Factory Standard *(Extended Warranty and Technology Insertion Options Available)*		
23	Export Control Related Info:	ECCN: EAR99 / HSC: 84733092		
24	COO / TAA / BAA:	Country of Origin: TW / TAA & BAA Compliant		
25	QTY 1 MSRP:	$6,999	$6,999	$7,999
26	Leadtime / Availability:	~30 Day Leadtime for Small Orders after General Availability (Expected in Early Q323)		
27	Value (GFLOPS / $k MSRP):	861 GFLOPS/$k *(~48x NI PXIe-7915 @ 18 GFLOPS / $k)*	1,186 GFLOPS/$k *(~66x NI PXIe-7915 @ 18 GFLOPS / $k)*	1,038 GFLOPS/$k *(~58x NI PXIe-7915 @ 18 GFLOPS / $k)*

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