

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

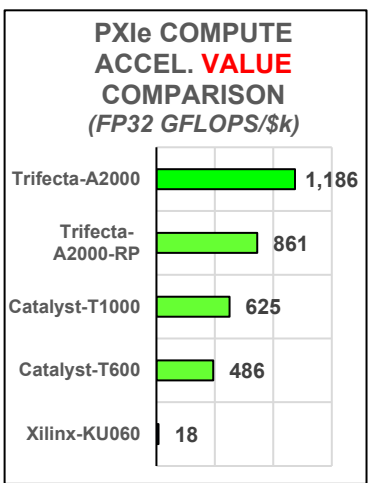
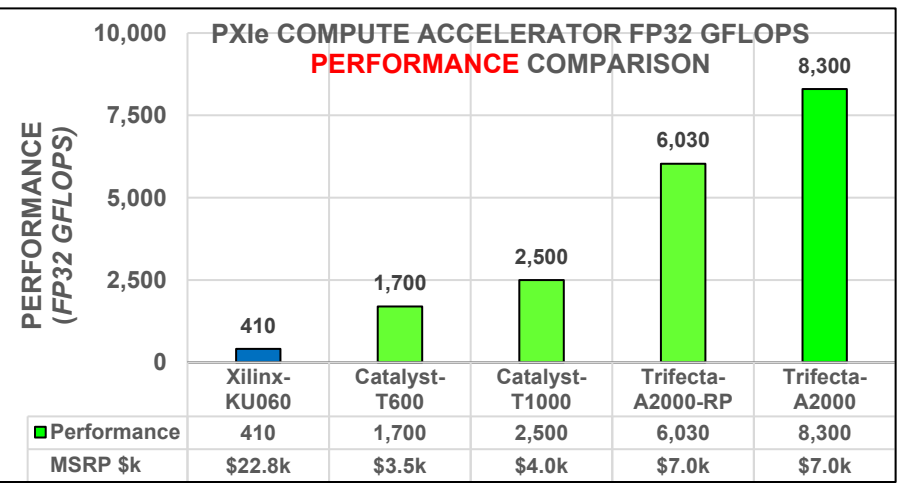
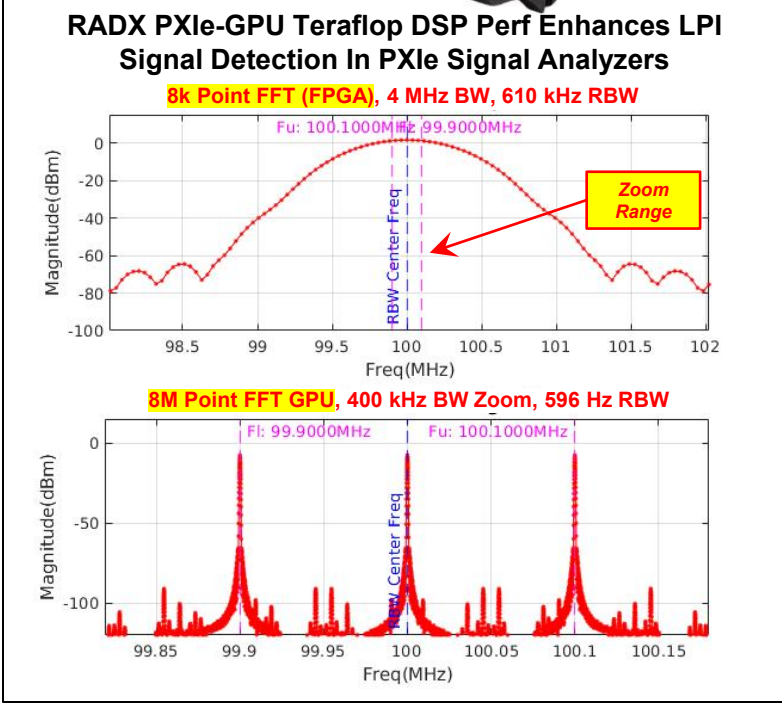
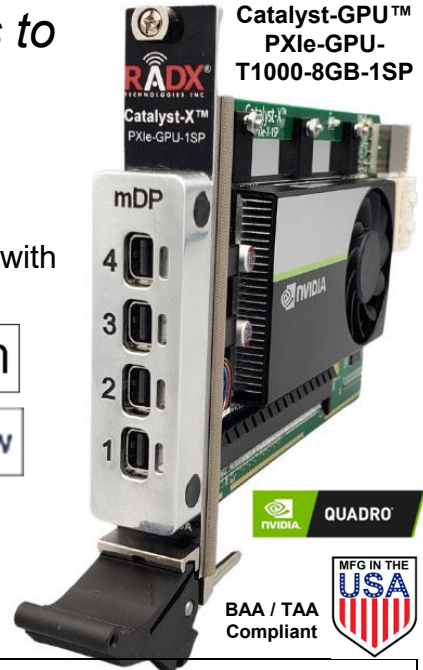
Bring the Power of **Easy-to-Program**, NVIDIA® Quadro® T600 & T1000 GPUs to PXIe/CPCIe T&M Systems - for Advanced GFX and GPU-Accelerated Image, Video & Signal Processing and ML & DL Inference Apps

- **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:



- **Scalable TFLOP Performance - Eliminates the Need for Separate GPU Servers**

- 38W/Slot & 50W/Slot Models with NVIDIA Quadro T600 & T1000 GPUs for NI and 3rd Party PXIe Chassis
- 2D/3D Graphics: Up to ~80x Higher Performance vs. Embedded Controller GPUs
- Accelerated Video, Image & Signal Processing: Up to 2.5 FP32 TFLOPS for Up to ~10x Higher Compute Performance vs. Xilinx KU060 FPGAs (410 FP32 GFLOPS) and Up to 50x Higher Compute Performance vs. CPUs
- ML/DL Inference: ~10x to ~100x Higher than Embedded Controller CPUs via LabVIEW/NGENE, MATLAB, TensorFlow or PyTorch



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RADX® Catalyst-GPU™ COTS PCIe/PXIe GPU Module Specifications

(Subject to Change Without Notice)

#	Parameter	PXIe-GPU-T600-4GB-1SP	PXIe-GPU-T1000-8GB-1SP
1	NVIDIA GPU:	Quadro T600 4GB (Turing Architecture)	Quadro T1000 8GB (Turing Architecture)
2	FP32 Peak Performance:	1.7 FP32 TFLOPS (4.2x Xilinx KU060 FPGA @ 410 GFLOPS)	2.5 FP32 TFLOPS (6.1x Xilinx KU060 FPGA @ 410 GFLOPS)
3	GPU Cores:	640 CUDA	896 CUDA
4	Real-Time Video Encode/Decode:	1 x NVENC (6 th Generation / 3 Streams) and 1 x NVDEC (6 th Generation / Unlimited Streams) See https://tinyurl.com/579y4u69	
5	On-Board Memory:	4 GB GDDR6 with 128-bit I/F (1x KU060 @ 4 GB DDR3)	8 GB GDDR6 with 128-bit I/F (2x KU060 @ 4 GB DDR3)
6	On-Board Memory Bandwidth:	160 GB/Sec (9.4x Xilinx KU060 FPGA @ 17 GB/Sec)	160 GB/Sec (9.4x Xilinx KU060 FPGA @ 17 GB/Sec)
7	Display I/F & Resolution:	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	
8	Total Graphics Power (Watts):	~38W TGP (~38W per Slot)	~50W (~50W per Slot)
9	Supported PXIe Chassis:	All NI & 3 rd Party PXIe Chassis with 38W/Slot Support	NI 58W/Slot or 82W/Slot PXIe Chassis (NI PXIe-1083, -1084, -1088, -1090, -1092, -1095)
10	Thermal Solution:	Fan Sink or Passive Heat Sink ~15 LPM Slot Air Flow Required	
11	Module PCIe I/F:	Module: PCIe Gen 3 x8 / GPU: PCIe Gen 3 x16	
12	Module Form Factor:	Single (4HP), 3U PXIe Peripheral / 3U PCIe Type 2 Slot with XJ3 and XJ4 Connectors	
13	Module Dimensions:	~0.4 kg (0.9 lb) / 100 mm H x 160 mm D x 20.32 mm W (4HP) (3.94 in H x 6.3 in D x 0.8 in W [4HP])	
14	Op & Storage Temps:	Op Temp: 0° to 55° C with Relative Humidity of 10% to 90%, Non-Condensing, Storage Temp: -40° to +85° C	
15	Regulatory Compliance:	PCIe GPU Certified to Meet FCC Part 15-B Class A / CE / RoHS Module Designed to Meet FCC Part 15-B Class A / CE / RoHS / EN55022 Class A / EN55024 / EN300386-2 / MIL-PRF-28800F Class 3. Additional Module Level Certs May be Available – Ask RADX for a Quotation.	
16	Operating System Support:	Microsoft Windows 7, Windows 10, Windows 11 and Linux (64-bit)	
17	Graphics APIs:	DirectX 12.074, Shader Model 5.174, OpenGL 4.685, Vulkan 1.25 (or Later)	
18	Compute APIs:	CUDA, DirectCompute, OpenCL, OpenCV	
19	NVIDIA GPUDirect:	N/A (Other Peer-to-Peer Support May be Available, Consult RADX for Details)	
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	RADX Example Software:	RADX Transform-X Libraries and Examples for Python, MATLAB and C/C++	
22	Standard Warranty:	1 Year Return to Factory Standard (Extended Warranty and Tech Insertion Options Available – Consult RADX for Details)	
23	COO / TAA / BAA / EC Info:	Country of Origin: US / TAA & BAA Compliant / ECCN: EAR99 / HSC: 84733092	
24	Availability:	General Availability as of Q4 2022; Available on GSA via TestMart - Visit https://tinyurl.com/muk72crx	
25	Q223 QTY 1 MSRP:	\$3,499 (GSA Disc. Avail., FOB San Jose / RADX Ts & Cs Apply)	\$3,999 (GSA Disc. Avail., FOB San Jose / RADX Ts & Cs Apply)
26	Value (GFLOPS/\$k):	486 GFLOPS/\$k (~27x Xilinx KU060 FPGA @ 18 GFLOPS/\$k)	625 GFLOPS/\$k (~35x Xilinx KU060 FPGA @ 18 GFLOPS/\$k)
27	Typical Leadtime:	~30 Days ARO for Small Volumes, 10 – 12 Weeks ARO for Larger Volumes.	



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