

RADX[®] Catalyst and 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

- **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:



Catalyst & Orca Single-Slot PXIe-GPUs[™] (US Patent No. 12,284,547)
 PXIe-GPU-T400-2GB
 PXIe-GPU-T600-4GB
 PXIe-GPU-T1000-8GB
 PXIe-GPU-AmpereRTXA1k-8GB
 PXIe-GPU-AdaRTX2k-16GB
 PXIe-GPU-AdaRTX4kSFF-20GB
 PXIe-GPU-BWRTXPro2k-16GB
 PXIe-GPU-BWRTXPro2kSFF-24GB
 PXIe-GPU-AdaL4DC-24GB
 Orca-C2X PXIe-C2X-G4x8-eGPU-AdaRTX6k-48GB

RADX Patented (US Patent No. 12,284,547) Catalyst PXIe-GPUs and Orca-C2X are Designed & Assembled in the USA

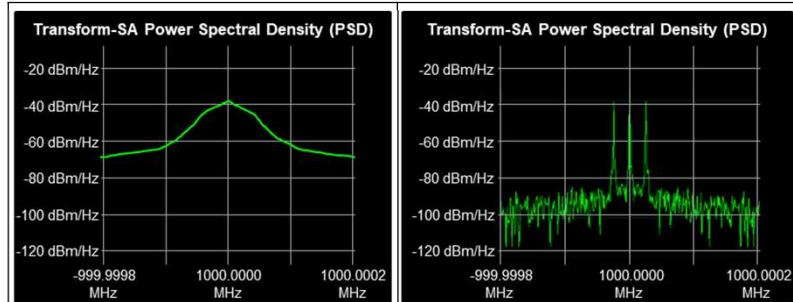
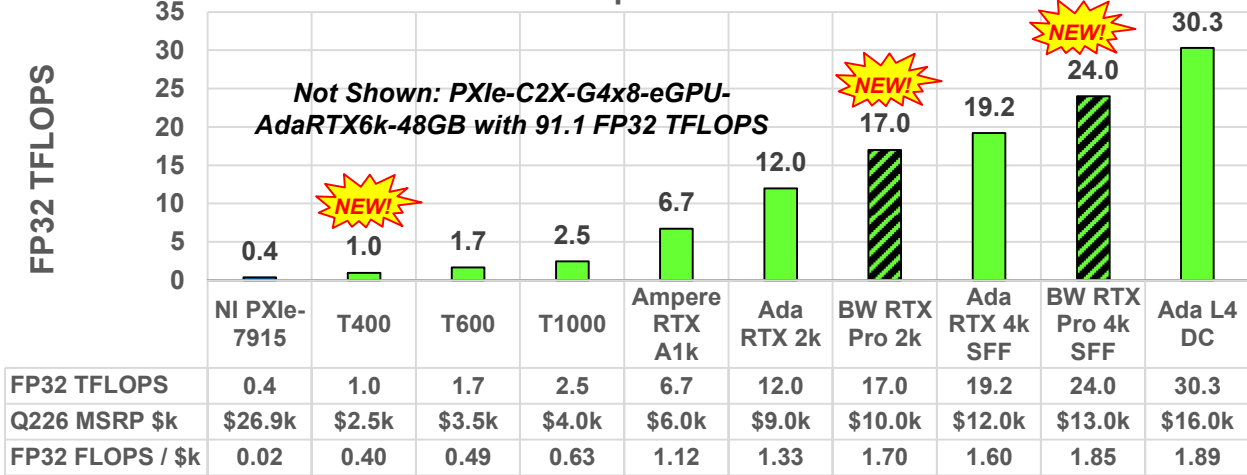
- **Eliminates the Need for Separate GPU Servers**

- **Accelerated Image, Video & Signal Processing:** 1.0 to 91.1 FP32 TFLOPS for up to 200x Higher Compute Performance vs. Xilinx KU060 FPGAs and PXIe Embedded Controllers
- **NVENC / NVDEC HW Accelerated Video Encoding / Decoding Engines** for Real-Time Video Compression & Decompression at up to 100x CPU CODEC Performance 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:** Software Programmable from 38W/Slot - 72W/Slot

- **Eliminates Win 11 Security Gaps from EOL/EOS IGPUs in Embedded Controllers**

- **Enhances LPI Signal Detection**
RADX PXIe-GPUs Support Real-Time 1MS+ FFTs to Dramatically Reduce RBW and Average Noise Floor and Improve LPI Signal Detection & Classification
RADX PXIe-GPUs Support 1 to 16 Megasample FFTs in Real-Time to Enhance LPI Signal Detection in PXIe Signal Analyzers

RADX In-Chassis PXIe Compute Accelerator FP32 TFLOPS Performance Comparison 04MAY2026



1.25 MHz BW TDMS Signal	
32 kilosample (kS) FFT	1 Megasample (MS) FFT
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)



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RADX® Catalyst and Orca-C2X COTS PXIe-GPU™ Module Specifications (Q226)

NEW!

(As of 03MAY2026 - Subject to Change Without Notice)

NEW!

NEW!

1. PXIe-GPU MODEL (P/N): <i>RADX Catalyst and Orca-C2X PXIe-GPUs are Covered by US Patent No. 12,284,547</i>	PXIe-GPU-T400-2GB	PXIe-GPU-T600-4GB	PXIe-GPU-T1000-8GB	PXIe-GPU-RTXA1k-8GB	PXIe-GPU-AdaRTX2k-16GB	PXIe-GPU-AdaRTX4kSFF-20GB	PXIe-GPU-BWRTXPro2K-16GB	PXIe-GPU-BWRTXPro4kSFF-24GB	PXIe-GPU-AdaL4-24GB (Compute Only)	Orca PXIe-C2X-G4x8-eGPU-AdaRTX6k-48GB
2. INTEGRATED NVIDIA PCIe PROFESSIONAL GPU:	Turing T400 2GB	Turing T600 4GB	Turing T1000 8GB	Ampere RTX A1000 8GB	Ada RTX 2000 16GB	Ada RTX 4000 SFF 20GB	Blackwell RTX Pro 2000 16GB	Blackwell RTX Pro 4000 SFF 24GB	Ada L4 Data Center 24GB	Ada RTX 6000 48GB
3. NVIDIA PCIe GPU DATASHEET:	https://tinyurl.com/zp5ufvkm	https://tinyurl.com/2fw677m	https://tinyurl.com/37cwzms4	https://tinyurl.com/tmesy9	https://tinyurl.com/2z3e74xn	https://tinyurl.com/2w544pua	https://tinyurl.com/yrapn8hv	https://tinyurl.com/39hu8e9d	https://tinyurl.com/5n7y58j8	https://tinyurl.com/bdeyuapz
4. GPU GDDR6 / GDDR: (≥16GB ideal for AI Training)	2GB GDDR6 / 64-bit / 80 GB/Sec	4GB GDDR6 / 128-bit / 160 GB/Sec	8GB GDDR6 / 128-bit / 160 GB/Sec	8GB GDDR6 / 128-bit / 192 GB/Sec	16GB GDDR6 / 128-bit / 224 GB/Sec	20GB GDDR6 / 160-bit / 280 GB/Sec	16GB GDDR7 / 128-bit / 288 GB/Sec	24GB GDDR7 / 192-bit / 432 GB/Sec	24GB GDDR6 / 192-bit / 300 GB/Sec	48GB GDDR6 / 384-bit / 960 GB/Sec
5. GPU CORES:	320 x CUDA	640 x CUDA	896 x CUDA	2,304 x CUDA 18 x G2 RT 72 x G3 Tensor	2,816 x CUDA 22 x G3 RT 88 x G4 Tensor	6,144 x CUDA 48 x G3 RT 192 x G4 Tensor	4,352 x CUDA 34 x G4 RT 136 x G5 Tensor	8,960 x CUDA 70 x G4 RT 280 x G5 Tensor	7,424 x CUDA 60 x G3 RT 240 x G4 Tensor	18,176 x CUDA 142 x G3 RT 568 x G4 Tensor
6. FP32 TFLOPS (CUDA Cores):	1.0	1.7	2.5	6.7	12.0	19.2	17.0	24.0	30.3	91.1
7. TF32 TFLOPS (Tensor Cores):	N/A	N/A	N/A	13.5	47.9	76.7	110.0	155.0	121.0	364.4
8. NVENC / NVDEC CODECS: (https://tinyurl.com/579y4u69)	1 x G6 / 1 x G4	1 x G6 / 1 x G4	1 x G6 / 1 x G4	1 x G7 / 1 x G5	1 x G8 / 1 x G5	2 x G8 / 2 x G5	1 x G9 / 1 x G6	2 x G9 / 2 x G6	2 x G8 / 4 x G5	3 x G8 / 3 x G5
9. DISPLAY PORT / MINI DP I/Fs: (4k+ Res @ 120Hz or 8K Res @ 60Hz+ with 10-bpp)	3 x Mini DP1.4a I/Fs (HDMI 2.1)	4 x Mini DP1.4a I/Fs (HDMI 2.1)			4 x Mini DP1.4a I/Fs (HDMI 2.1)		4 x Min DP2.1b	4 x Min DP2.1b	N/A (Compute Only)	4 x Mini DP1.4a I/Fs (HDMI 2.1)
10. PXIe MODULE / GPU PCIe I/F:	PXIe G3 x8 / PCIe G3 x16			PXIe G4 x8 / PCIe G4 x8		PXIe G4 x8 / PCIe G4 x16	PXIe G4 x8 / PCIe G5 x16		G4 x8 / G4 x16	
11. PXIe MODULE FORM FACTOR:	1-Slot (4HP) 3U PXIe Peripheral / 3U PCIe Type 2 with XJ3 & XJ4									1-Slot (4HP) + eGPU
12. PXIe MODULE DIMENSIONS:	~0.4 kg (0.7 lbs) / 100 mm H x 160 mm D x 20.32 mm W									
13. REQUIRED PXIe SLOTS & POWER:	1 Slot(s) @ 38W/Slot	1 Slot(s) @ ~50W/Slot (Software Programmable to ~40W)			1 Slot(s) @ 70W/Slot (Software Programmable to ~40W)			1 Slot(s) @ 72W/Slot	1 Slot(s) @ 15W/Slot + 500W External	
14. PXIe MODULE THERMAL SOLUTION:	NVIDIA Fan Sink with ~152 LFM Air Flow	RADX Passive Aluminum Heat Sink with ~152 LFM Air Flow								
15. PXIe CHASSIS SUPPORT:	38W / Slot PXIe Chassis	58W / 82W Slot PXIe Chassis Recommended (Lower Power Chassis Supported with Software Programmed TDP Derating)								38W / Slot PXIe
16. OS SUPPORT:	Win 10, Win 11, Desktop Linux (64-bit, Popular Distributions) and NI RT Linux via G2CPU									
17. SOLVES IGPU WIN 11 SEC	Yes – Enables Full Compliance with Windows 11 Security for Replacing EOL/EOS Integrated GPUs in Embedded Controllers							N/A - Headless	Yes	
18. KEY 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 3 rd Party PXIe Modules with Mfg. Support									
20. SW FRAMEWORKS:	NI LabVIEW-RT via G2CPU; NI LabVIEW via G2CPU, NGENE CuLAB & DeepLTK, Graiphic; Python, C/C++ or MATLAB (with Toolkits), PyTorch, LibTorch, TensorFlow, FFmpeg, Ansys									
21. 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									
21. 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 / EN55024 / EN300386-2 / MIL-PRF-28800G Class 3 (Class 2 Optional). Module Level Certs Available – Ask RADX for a Quotation.									
22. MODULE EXPORT COMPLIANCE:	COO: US / BAA-TAA / ECCN: 4A994.L / HSC: 84733092							COO: US / BAA-TAA / ECCN: 4A090.A / HSC: 84733092		
23. STANDARD WARRANTY:	1 Year Return-to-Factory Standard Warranty (From Date of Shipment) - <i>Extended Warranty and Technology Insertion Options Available.</i>									
24. LEADTIME (ARO / ARFP):	~30 to ~45 Days									~60 Days
25. Q226 MSRP - FOB SJC: (Excl. US GPU Import Tariffs)	\$2,499	\$3,999	\$4,999	\$5,999	\$8,999	\$11,999	\$9,999	\$12,999	\$15,999	\$24,999
26. VALUE: FP32 TFLOPS / \$k MSRP: (NI PXIe-7915 = 0.02)	0.44	0.43	0.50	1.12	1.33	1.60	1.70	1.85	1.89	3.64



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<https://tinyurl.com/muk72cix>