



# THE ULTIMATE PC GPU NVIDIA TITAN RTX



## Breakthrough PC Performance for Developers and Creators

NVIDIA TITAN RTX is the ultimate PC GPU for the world's most demanding users—AI researchers, data scientists, and content creators. Powered by NVIDIA Turing™, NVIDIA's next-generation GPU architecture designed for AI and ray tracing, TITAN RTX delivers the best PC performance for training neural networks, processing large datasets, and creating ultra-resolution video and 3D content.

TITAN RTX features 576 multi-precision Turing Tensor Cores that deliver up to 130 teraFLOPS (TFLOPS) for deep learning training; 72 Turing RT Cores that provide up to 11 GigaRays per second for maximum real-time ray tracing performance; and 24 gigabytes (GB) of GDDR6 memory for training with higher batch sizes, processing larger datasets and animation models, and managing the most demanding creative workflows. Pair two TITANs together with NVIDIA NVLink and double your memory and performance.<sup>1</sup>

TITAN RTX is supported by the CUDA-X AI SDK for AI and data science and NVIDIA's Studio Driver program that brings support for creative applications to your PC.

## FEATURES

- > Three DisplayPort 1.4 connectors
- > One HDMI display connector
- > One USB Type-C connector
- > NVIDIA® NVLink™<sup>2</sup>

## SPECIFICATIONS

GPU Memory	24 GB GDDR6
Memory Interface	384-bit
Memory Bandwidth	Up to 672 GB/s
NVIDIA CUDA® Cores	4,608
NVIDIA Tensor Cores	576
NVIDIA RT Cores	72
Single-Precision Performance	16.3 TFLOPS
Tensor Performance	130 TFLOPS
NVIDIA NVLink	Connects 2 TITAN RTX GPUs
NVIDIA NVLink Bandwidth	100 GB/s (bidirectional)
System Interface	PCI Express 3.0 x 16
Power Consumption	280 W
Thermal Solution	Active
Form Factor	4.4" H x 10.5" L, Dual slot, full height
Display Connectors	3x DisplayPort, 1x HDMI, 1x USB Type-C
Max Simultaneous Displays	4x 4096 x 2160 @ 120 Hz, 4x 5120 x 2880 @ 60 Hz, 2x 7680 x 4320 @ 60 Hz
Encode/Decode Engines	1x encode, 1x decode
VR Ready	Yes
Graphics APIs	Microsoft DirectX 12 API <sup>3</sup> , Vulkan API <sup>4</sup> , OpenGL 4.6 <sup>4</sup>
Compute APIs	CUDA, DirectCompute, OpenCL™

To learn more about the TITAN RTX, visit [www.nvidia.com/titan-rtx/](http://www.nvidia.com/titan-rtx/)

<sup>1</sup> Connecting two TITAN RTX cards with NVLink to scale performance and memory capacity to 48 GB is only possible if your application supports NVLink technology. Please contact your application provider to confirm their support for NVLink. | <sup>2</sup> NVIDIA NVLink sold separately. | <sup>3</sup> GPU supports DX 12.0 API, Hardware Feature Level 12.1. | <sup>4</sup> Product is based on a published Khronos specification and is expected to pass the Khronos Conformance Testing Process when available. Current conformance status can be found at [www.khronos.org/conformance](http://www.khronos.org/conformance)

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