NVIDIA GeForce RTX 4080 – Product Datasheet

The NVIDIA GeForce RTX 4080 is a high-performance graphics card powered by the Ada Lovelace architecture, designed for demanding 4K gaming, advanced content creation, and AI-accelerated workloads. Featuring 9,728 CUDA cores, 4th-generation Tensor Cores, and 3rd-generation RT Cores, it delivers exceptional ray-traced visuals, fast rendering, and highly efficient GPU computing. With 16GB of GDDR6X memory and a 256-bit interface, the RTX 4080 provides massive memory bandwidth for large 3D environments, high-resolution textures, and complex simulation tasks. DLSS 3.5 with Ray Reconstruction boosts frame rates while improving image quality. Ideal for gaming PCs, workstations, and GPU-accelerated development, the RTX 4080 offers industry-leading performance, stability, and power efficiency.

Technical Specifications

Architecture	NVIDIA Ada Lovelace
CUDA Cores	9,728
Tensor Cores	4th Generation
RT Cores	3rd Generation
Base Clock	2.21 GHz
Boost Clock	Up to 2.51 GHz
Memory	16GB GDDR6X
Memory Interface	256-bit
Memory Bandwidth	716.8 GB/s
PCI Express	PCIe 4.0 x16
TDP	320W
Recommended PSU	750W
Power Connector	12VHPWR
Display Outputs	HDMI 2.1a + 3× DisplayPort 1.4a
Video Encoder	Dual AV1
Max Resolution	Up to 8K (7680×4320)
Cooling	Triple-fan recommended
Form Factor	2–3 slot, varies by AIB
APIs	DirectX 12 Ultimate, Vulkan, OpenGL 4.6
Applications	4K Gaming, Rendering, Simulation, AI, VR