With the introduction of the NVIDIA Quadro® Plex visual computing system (VCS), NVIDIA delivers a quantum leap in visual compute density, enabling breakthrough levels of productivity and capability.

Professionals ranging from manufacturing designers and stylists to earth scientists to digital content creators can solve their most complex, graphics-intensive problems using an unconstrained dedicated visual computing system based on proven, industry standard architectures.

### NVIDIA Quadro Plex Technical Specifications

**Supporting Platforms**
- NVIDIA Quadro® Plex officially certified system or platform
- Microsoft® Windows® XP (32-bit and 64-bit)
- NVIDIA Quadro® Plex officially certified Linux® implementation
- NVIDIA Quadro® Plex officially certified Solaris x86™

**NVIDIA Quadro GPU Architecture**
- 128-bit color precision (IEEE fp32-bit per component)
- 3D volumetric texture support
- Shaders (OpenGL 3.0), fully programmable (DirectX 10*)
- Shader Model 4.0*
- C Programming Environment*

**Display Resolution Support**
- Analog displays up to 2560 x 1600 (80 Hz)
- Dual-link DVI-I outputs - drive digital displays at resolutions up to 2560 x 1600 (80 Hz)
- Native support for Sony SXRD™ large venue projector

**Product Details**
- Quadro Plex Deskside VCS (Model II and IV)
  - Quiet operation (40 dB) suitable for office environment
  - Connects to host via cabling to a low power PCI Express x8** or x16 adapter card
  - Quadro Plex Rack Mount Graphics Server (Model S4)
    - Standard 19", 1U rack-mount chassis
    - Connects to host via cabling to a low power PCI Express x8** or x16 adapter card
    - Configuration: 2 PCI Express connectors driving 2 GPUs each (4 GPUs total)

*Available on Model IV
** Available only on Models II and IV

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### Features | Benefits
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Breakthrough Visual Compute Density | Unmatched graphics compute per cubic centimeter provides highest visual compute density enabling breakthrough levels of capability and productivity.
Flexible Deskside or Rackmount Form Factors | Models II and IV: Compact design can be easily deployed in a desktop workspace. Model S4: Can be transformed to fit any standard 19" 3U rack environment.
Frame Synchronization | Allows the display channels from multiple workstations to be synchronized, thus creating one large "virtual display" that can be driven by a multisystem cluster for performance scalability (Available only on Models II and IV).
C Programming Environment | A C language environment and tool suite that unleashes new capabilities to solve complex, visualization challenges such as real-time ray tracing and interactive volume rendering (Available only on Models II and IV).
NVIDIA Unified Architecture | Industry’s first unified architecture designed to dynamically allocate compute, geometry, shading and pixel processing power to deliver optimized GPU performance (Available only on Model IV).
A Quantum Leap In Visual Computing Enabling Breakthrough Levels Of Capability

Configuration To Meet Your Application Needs. Scale To Meet Your Performance Requirements.

Available in desktop or rack-mount optimized models, NVIDIA Quadro Plex is designed to deliver absolute maximum performance, the highest image quality, and ultimate display resolution so professionals can visualize the largest seismic datasets, create photorealistic, interactive designs or natively drive a digital 4K projection system. The revolutionary Quadro FX 5600 unified architecture, featured in Quadro Plex Models IV and S4, is designed to dynamically allocate geometry, shading, pixel, and compute processing power to deliver optimized GPU performance. Combining the industry’s most advanced feature set, including largest and fastest frame buffers, a C programming environment, Quadro Plex Models IV and S4 provide a breakthrough platform to solve the world’s most complex challenges. The reference standard for Shader Model 4.0, Models IV and S4 enables next generation ultra-realistic, real-time visualization applications with unprecedented image quality. For the most demanding clustered large scale display applications, Quadro G-Sync enables frame synchronization, genlock, and frame lock to further scale performance, quality, and resolution to near infinite levels. Professionals can now drive massive clusters of synchronized channel outputs to create truly immersive reality environments, visualize large scale scientific models, and simulate astonishing virtual environments.

Industry-based Standard Architecture

Quadro Plex enables the highest density SLI multi-GPU capability on any PCI Express x16 platform and is built on a foundation of proven NVIDIA Quadro graphics and NVIDIA Unified Driver Architecture (UDA). Compatible with x86 32- and 64-bit Intel and AMD microprocessor architectures and running on Windows and Linux operating systems, the Quadro Plex fits in any environment. In addition, NVIDIA Quadro Plex is certified on all industry-leading applications to ensure the highest levels of stability, reliability, and compatibility.

Massive Levels Of Visual Compute Density

NVIDIA Quadro Plex represents a quantum leap in visual compute density — graphics computation per cubic inch. The compact desktop or rack-optimized form factors can be quickly deployed in any desktop workspace or can be easily fit into any standard 19" rack environment. The latest member of the family, the Quadro Plex Model S4 is a standard 1U form factor integrating four ultra-high and GPUs delivering the industry’s most advanced visualization platform for remote graphics applications. The Quadro Plex desktop Models II and IV can be utilized alternatively as a single VCS node (two Quadro Plex desktop VCsIs connected to a single certified SLI-capable system) providing the power of up to eight GPUs from 3U of rack space to deliver the power and capability required by even the most demanding applications. Visual compute density can further be scaled by clustering multiple Quadro Plex VCsIs together.

<table>
<thead>
<tr>
<th>NVIDIA Quadro Plex</th>
<th>Model II</th>
<th>Model IV</th>
<th>Model S4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Factor</td>
<td>Desktop 1U Rackmount Kit</td>
<td>3U Rackmount Kit</td>
<td>Rack-optimized 1U system</td>
</tr>
<tr>
<td># NVIDIA Quadro GPUs</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Total Frame Buffer</td>
<td>2GB (1536MB/GPU)</td>
<td>3GB (1.5GB/GPU)</td>
<td>6 GB (1.5GB/GPU)</td>
</tr>
<tr>
<td>Option</td>
<td>Quadro G-Sync</td>
<td>Quadro G-Sync II</td>
<td>N/A</td>
</tr>
<tr>
<td>Display Channels</td>
<td>8 dual-link DVI</td>
<td>4 dual-link DVI</td>
<td>N/A -Remote rendering high performance readback to host</td>
</tr>
<tr>
<td>Key Features</td>
<td>Shader Model 3.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>C Programming Environment</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Genlock/frame lock</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Frame Synchronization</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>FSAA (Max per Channel)</td>
<td>32x SLI/FSAA</td>
<td>64x SLI/FSAA</td>
<td>64x SLI/FSAA</td>
</tr>
<tr>
<td>Product Specifications</td>
<td>2 Front</td>
<td>2 Front</td>
<td>N/A</td>
</tr>
<tr>
<td>USB</td>
<td>Front</td>
<td>Front</td>
<td>PCI Express x16 or x8: Small Form Factor, Passive (10W), 3M (8.5 foot)</td>
</tr>
<tr>
<td>Power</td>
<td>480W Max</td>
<td>480W Max</td>
<td>950W Max</td>
</tr>
<tr>
<td>Acoustics</td>
<td>40dB</td>
<td>40dB</td>
<td>70dB</td>
</tr>
<tr>
<td>Form Factor</td>
<td>Tower Desktop (9.49&quot; H x 5.94&quot; W x 20.55&quot; D) (or Rack Mount (SU H x 8.5&quot; W x 20.55&quot; D))</td>
<td>1U Rack Mount</td>
<td>2.75&quot; H x 17.4&quot; W x 31.0&quot; D</td>
</tr>
<tr>
<td>Weight*</td>
<td>18.8lbs</td>
<td>19.8lbs</td>
<td>~40lbs</td>
</tr>
</tbody>
</table>

1 VCS Node is two NVIDIA Quadro Plex VCsIs connected to a single certified SLI-capable system
2 Requires optional x8 interface card

NVIDIA Quadro Plex Interconnect Cable

3U Rackmount Kit

110/240 VAC autosensing worldwide power supply

Quadro Plex enables the highest density SLI multi-GPU capability on any PCI Express x16 platform and is built on a foundation of proven NVIDIA Quadro graphics and NVIDIA Unified Driver Architecture (UDA). Compatible with x86 32- and 64-bit Intel and AMD microprocessor architectures and running on Windows and Linux operating systems, the Quadro Plex fits in any environment. In addition, NVIDIA Quadro Plex is certified on all industry-leading applications to ensure the highest levels of stability, reliability, and compatibility.

To extract insights from terabytes of research data and computations, NVIDIA Quadro Plex drives state-of-the-art powerwall displays. Image courtesy Oak Ridge National Laboratory.

Multi-display mission critical visual simulation solution by Aechelon with NVIDIA Quadro Plex. Image courtesy Aechelon.

Photo-realistic, interactive automotive styling design driven by NVIDIA Quadro Plex. Image courtesy Real Time Technology.

Image courtesy Oak Ridge National Laboratory.

Three projection image display by Landmark. Image courtesy Landmark.

GeoProbe Three projection image display by Landmark

Multi-display mission critical visual simulation solution by Aechelon with NVIDIA Quadro Plex. Image courtesy Aechelon.
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Supporting Platforms
- NVIDIA Quadro® Plex officially certified system or platform
- Microsoft® Windows® XP (32-bit and 64-bit)
- Microsoft Windows 2000 (32-bit)
- Linux® (Hardware OpenGL® implementation)
- NVIDIA and ARB extensions (32-bit and 64-bit)
- Solaris®

NVIDIA Quadro GPU Architecture
- 128-bit color precision (IEEE fp32-bit per component)
- 3D volumetric texture support
- Fully programmable GPU (OpenGL2.1, DirectX 9.0c, DirectX10*)
- Shader Model 4.0*
- C Programming Environment*

Display Resolution Support**
- Analog displays up to 2048 x 1536 @ 60Hz
- Dual-link DVI-I outputs - drive digital displays at resolutions up to 2560 x 1600 @ 60Hz
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Where to Buy | www.nvidia.com/quadroplex
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