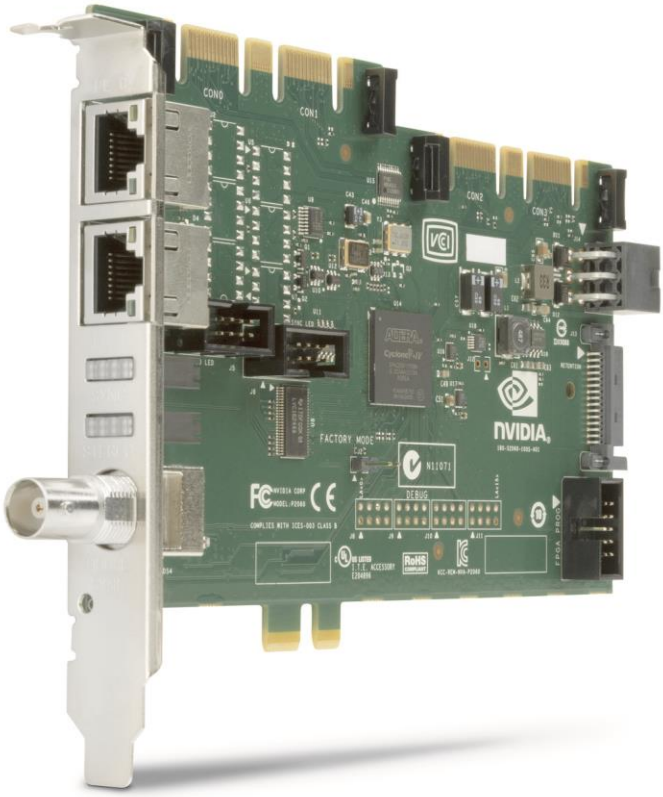
Technical Specifications

NVIDIA Quadro Sync



Models

NVIDIA Quadro Sync	G5K57AA

INTRODUCTION

The NVIDIA Quadro® Sync board is an accessory board to the NVIDIA® Quadro® Kepler™ graphics processing units (GPUs) used to synchronize multiple displays and applications in one system and within a visualization cluster.

Whether working with a single node or visualization cluster the Quadro Sync board provides multiple forms of display synchronization:

1. Multi-GPU Mosaic.
Mosaic is a software technology that abstracts multiple physical displays into a larger virtual display. When the virtual display spans across multiple GPUs, the Quadro Sync board synchronizes the GPUs to ensure all the displays stay aligned.

2. Frame Lock:

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Synchronize multiple displays, in one machine or spread across multiple machines in a cluster. For Frame Lock a single display is chosen as the timing master and all other displays in the cluster align to it. Frame Lock can be used with individual physical displays and single or multi-GPU Mosaic displays.

3. Sync to an External Timing Source:
Aligns a selected display to an external timing generator. The selected display can be a Mosaic or physical and can be used as the Frame Lock master if desired.

The Quadro Sync board supports mixing and matching the different synchronization options to build the correct configuration your installation needs. Installations with Quadro Sync can become complex and architecture decisions can impact performance and reliability, for questions on how to architect systems with Quadro Sync or Mosaic contact QuadroSVS@nvidia.com.

KEY BENEFITS

GPU Compatibility:

- Kepler and newer GPUs with connector and driver support
- Supports NVIDIA Quadro K5000 and K6000 graphics cards
- Synchronization of 4 GPU's and up to 16 display channels per board. Note for HP Z820, maximum number of GPU's is 3 and up to 12 displays per system
- Enable and synchronize single or multi-GPU NVIDIA® Mosaic
- The timing master can drive two chains so a cluster of 50 nodes and up to 200 GPUs should operate without issues
- Synchronize devices with ± .50 ppm difference between timings
- Plugs into a free PCIe slot

COMPATIBILITY

The NVIDIA Quadro Sync card is compatible with the Z420, Z620 and Z820 Workstations.

Number of maximum GPU's per system:

- Z420: one K5000
- Z620: two K5000 or one K6000
- Z820: three K5000 or two K6000

SERVICE AND SUPPORT

The NVIDIA Quadro Sync card has a one-year Limited Warranty or the remainder of the warranty of the HP supported product in which it is installed. Technical support is available seven days a week, 24 hours a day, by phone, as well as online support forums. Certain restrictions and exclusions apply.

Dimensions: 6.15 in x 4.37 in (156.2 mm x 110.9 mm)

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Devices Supported	NVIDIA Quadro K5000 NVIDIA Quadro K6000
Bus Type	Requires one free mechanical PCIe bus slot. No electrical bus connection required.
Ports	2 RJ45 connectors for carrying frame lock signals over CAT5 cables. BNC Connector for external house synchronization.
Internal Connectors	4 NVIDIA SLI® style edge fingers for connection to compatible GPUs • Included with the board are 4 10 inches (25.4 cm) cables to connect to GPU's
System Requirements	Requires one free mechanical PCIe bus slot. Must be used with NVIDIA Quadro K5000 or K6000 graphics cards. Requires Quadro driver version R313 or later.
Temperature - Operating	0° to 55° C
Temperature - Storage	-40° to 60° C
Relative Humidity - Operating	10% to 80%
Power Requirements	Board power dissipation: 12 W
Operating Systems Supported	Windows 7 Professional 64-bit Windows 8.1 64-bit Linux
Kit Contents	Contains: • 1 Quadro Sync board • 1 Quadro Sync Quick Start Guide • 4 10 inch ribbon cables to connect the Quadro Sync board to Quadro boards • 6 cable retention clips
Power Connectors	Choice of: • 6-pin PCI • SATA power connector