

Quadro SDI Capture Key Features	
Capture Uncompressed 8-, 10-, or 12-Bit SDI Formats	Enables professionals to capture live, uncompressed 8-,10-,12-bit SDI video directly to graphics memory in SD-, HD-, 2K-, 3G-resolutions.
Capture up to 4 SDI Sources Directly to GPU Memory	The only SDI capture solution that enables transfer of video directly to GPU memory for Open GL, Direct 3D or CUDA processing.

Quadro SDI Output Features	
Uncompressed 8-, 10-, or 12-Bit SDI Output	Enables professionals to composite and output live video and graphics to true, uncompressed 12-bit SDI in 2K, SD, or HD resolutions and allows direct connection to a broadcast monitor, switcher, tape deck, or SDI projector.
Output up to 2-SDI Video Feeds from GPU Memory	Connects directly to supported Quadro graphics cards to output video directly from GPU memory.
Genlock (House Synchronization)	One genlock (Standard BNC) connector (digital or analog) provides connectivity to a video sync source for SMPTE standard (digital, black burst, tri-level) synchronization. Expanded cross sync functionality permits an incoming house signal to synchronize to a much larger number of video output signal formats.

## TECHNICAL SPECIFICATIONS

### SUPPORTED OPERATING SYSTEMS

- > Microsoft® Windows® XP (64-bit and 32-bit)
- > Linux® (64-bit and 32-bit)

### QUADRO SDI CAPTURE – PROGRAMMING MODES

- > Up to 4 Channel Fill or 2 channel Fill + 2 channel Key
- > 8-, 10-, 12-bit
  - > RGB 4:4:4
  - > YCrCb 4:2:2 or 4:4:4
  - > 2x YCrCb 4:2:2 + 4:2:2
  - > YCrCbA 4:2:2:4
  - > RGBA 4:4:4:4 (8-bit only)

### QUADRO SDI CAPTURE PROVIDES FULL SUPPORT FOR THE FOLLOWING SD-,HD-,2K-,3G-SDI FORMATS:

- |                                 |                               |
|---------------------------------|-------------------------------|
| > 480i 59.94 Hz [SMPTE259] NTSC | > 1080p 23.976 Hz [SMPTE274]  |
| > 576i 50.00 Hz [SMPTE259] PAL  | > 1080p 24.00 Hz [SMPTE274]   |
| > 720p 23.98 Hz [SMPTE296]      | > 1080p 25.00 Hz [SMPTE274]   |
| > 720p 24.00 Hz [SMPTE296]      | > 1080p 29.97 Hz [SMPTE274]   |
| > 720p 25.00 Hz [SMPTE296]      | > 1080p 30.00 Hz [SMPTE274]   |
| > 720p 29.97 Hz [SMPTE296]      | > 1080p 23.976 Hz [SMPTE372]  |
| > 720p 30.00 Hz [SMPTE296]      | > 1080p 24.00 Hz [SMPTE372]   |
| > 720p 50.00 Hz [SMPTE296]      | > 1080p 25.00 Hz [SMPTE372]   |
| > 720p 59.94 Hz [SMPTE296]      | > 1080p 29.97 Hz [SMPTE372]   |
| > 720p 60.00 Hz [SMPTE296]      | > 1080p 30.00 Hz [SMPTE372]   |
| > 1035i 59.94 Hz [SMPTE260]     | > 1080i 47.96 Hz [SMPTE372]   |
| > 1035i 60.00 Hz [SMPTE260]     | > 1080i 48.00 Hz [SMPTE372]   |
| > 1080i 47.96 Hz [SMPTE274]     | > 1080i 50.00 Hz [SMPTE372]   |
| > 1080i 48.00 Hz [SMPTE274]     | > 1080i 59.94 Hz [SMPTE372]   |
| > 1080i 50.00 Hz [SMPTE274]     | > 1080i 60.00 Hz [SMPTE372]   |
| > 1080i 59.94 Hz [SMPTE274]     | > 1080p 50.00 Hz [SMPTE 424M] |
| > 1080i 60.00 Hz [SMPTE274]     | > 1080p 59.64 Hz [SMPTE 424M] |
| > 1080PsF 23.976 Hz [SMPTE274]  | > 1080p 60.00 Hz [SMPTE 424M] |
| > 1080PsF 24.00 Hz [SMPTE274]   |                               |
| > 1080PsF 25.00 Hz [SMPTE274]   |                               |
| > 1080PsF 29.97 Hz [SMPTE274]   |                               |
| > 1080PsF 30.00 Hz [SMPTE274]   |                               |

### QUADRO SDI OUTPUT – PROGRAMMING MODES

- > 2 channel fill or
- > 1 channel fill + 1 channel key
- > 8-, 10-, 12-bit
  - > RGB 4:4:4
  - > YCrCb 4:2:2 or 4:4:4
  - > 2x YCrCb 4:2:2 + 4:2:2
  - > YCrCbA 4:2:2:4
  - > RGBA 4:4:4:4 (8-bit only)

### QUADRO SDI OUTPUT - CONTROL PANEL MODES

- > Clone and Dualview Modes work on top of existing applications
- > 1 channel fill
- > 8-bit
  - > RGB 4:4:4
  - > YCrCb 4:2:2 or 4:4:4

### QUADRO SDI OUTPUT PROVIDES FULL SUPPORT FOR THE FOLLOWING SD-, HD-,2K-SDI FORMATS:

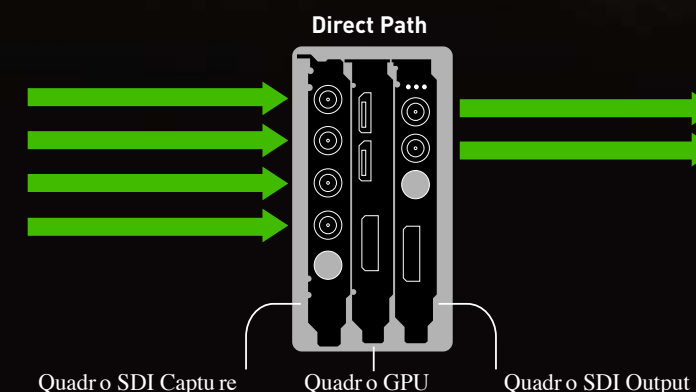
- |                                 |                               |
|---------------------------------|-------------------------------|
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To learn more about NVIDIA Quadro, go to [www.nvidia.com/quadro/dvp](http://www.nvidia.com/quadro/dvp)

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# NVIDIA QUADRO DIGITAL VIDEO PIPELINE UNMATCHED, REAL-TIME VIDEO PROCESSING

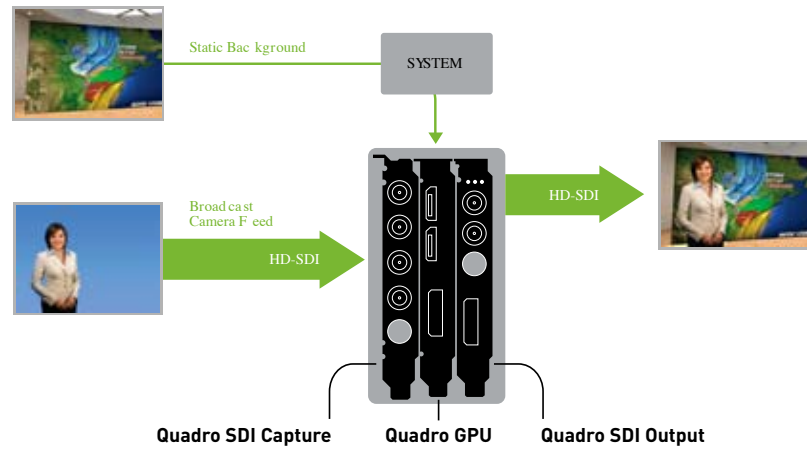


The NVIDIA® Quadro® Digital Video Pipeline delivers the industry's first fully integrated GPU-based solution for acquisition, processing, and delivery of high resolution video providing the lowest system latency for real-time compositing. Leveraging the NVIDIA® CUDA™ parallel computing architecture, the Quadro Digital Video Pipeline provides unmatched, real-time video processing.

Image Courtesy is presented in order of appearance: Brainstorm America and Accu Weather; Sportvision, NBC Universal, and NBC Olympics; and UVPFACTORY.

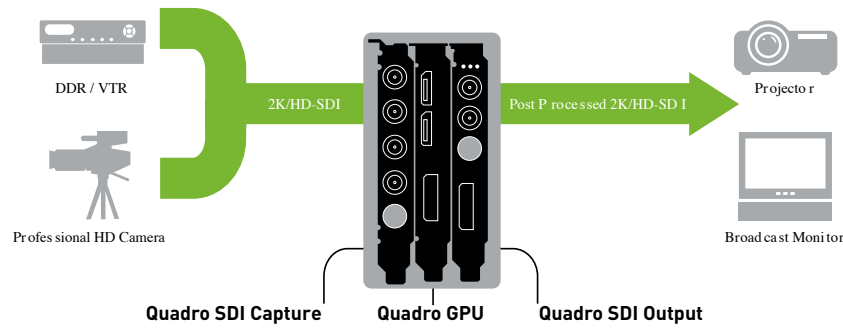
QUADRO DIGITAL VIDEO PIPELINE | PRODUCT OVERVIEW | APR09 | FINAL

The Quadro Digital Video Pipeline enables advanced capabilities for rich media production and delivery of video for broadcast, post production, film and new media.



### DIGITAL BROADCAST AND VIDEO

The Quadro Digital Video Pipeline is leveraged by video professionals who work on programs that feature virtual sets or effects, sportscasts, weather, and news. The integrated Quadro Digital Video Pipeline enables capture of SD-, HD-, 2K-, 3G-SDI video footage, in real time, directly to the GPU, composite virtual effects or video processing using the NVIDIA® CUDA™ parallel computing architecture, and then send the final result to live TV.

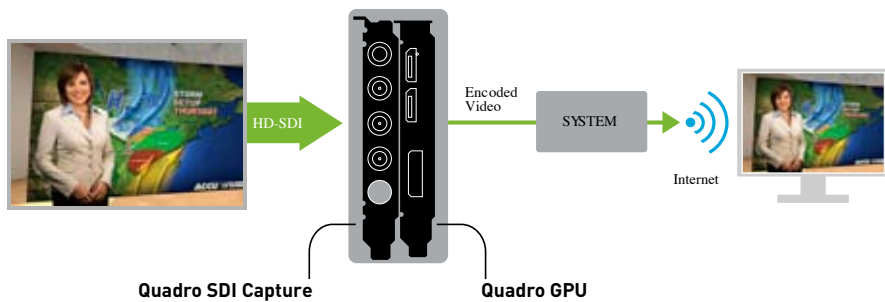


### FILM PRODUCTION, POST-PRODUCTION, AND FINISHING

Quadro SDI Capture enables SDI video capture in up to 12-bit color directly to the GPU for capture of source content from camera, film scanners, digital data recorders (DDRs), video tape recorders (VTRs). In addition, the Quadro SDI Output solution enables accurate real-time preview on SDI monitors or projectors.

### NEW MEDIA MARKETS

Offering the fastest path for capturing and encoding broadcast quality video, the Quadro Digital Video Pipeline delivers the ideal platform for new media markets, such as GPU-based encoding for internet video streaming.



### DIGITAL VIDEO PIPELINE SOLUTIONS



The **NVIDIA® Quadro® SDI Capture** card delivers the industry's first fully integrated GPU-based solution for capture of SD-, HD-, 2K-, 3G-SDI video footage, in real time, directly to the GPU memory. Enabling professionals to capture up to 4 HD-SDI single link sources simultaneously and supports all SMPTE standard formats. Quadro SDI Capture is the ideal solution for video, film, broadcast, and new media markets.



The **NVIDIA Quadro® SDI Output** card is the ideal solution for digital broadcast, film, and video professionals, who use various applications such as virtual-sets, sports, and weather/news systems to composite live video footage onto virtual backgrounds and send the result to live video for TV broadcast and streaming. Quadro SDI Output card also allows film production, post-production, and finishing professionals to preview and record the results of 3D compositing, editing, and color grading in real time on high definition (HD) broadcast monitors. This graphics-to-video-out solution delivers uncompressed 8-, 10-, or 12-bit SDI from programmable graphics, enabling a direct connection to broadcast monitors, switchers, tape decks, or SDI projectors.



The **NVIDIA Quadro SDI SDK** provides ease of programmability and control of the entire SDI pipeline for acquisition, processing, and final delivery.



The **Quadro FX SDI**-enabled graphics solutions, with up to 4 GB of graphics memory and single or dual slot form factors, provide a range of capabilities which allowing professionals to build the right video pipeline. Featuring NVIDIA® SLI® technology and the NVIDIA® CUDA™ parallel computing architecture, Quadro FX solutions delivers a power efficient, full featured, ultimate performance experience.

Quadro Solution	Quadro FX 5800	Quadro FX 4800	Quadro FX 3800
Graphics Memory	4 GB	1.5 GB	1 GB
Memory Bandwidth	102 GB/s	77 GB/s	51 GB/s
CUDA Parallel Processing Cores	240	192	192
# of Slots	Dual	Dual	Single
Power	189 W	150 W	110 W