

Advanced Graphics Display Technology

Datapath VisionRGB-PRO RGB Capture Card

- DMA transfers the data across the PCI bus without using host CPU cycles.
- Hardware up and downscaling for resizing the captured video
- The VisionRGB-PRO has 6MBytes of video capture memory per channel and can capture data at 640 x 480, 800 x 600, 1024 x 768 and 1600 x 1200 resolutions. RGB interlaced modes are also supported as well as many non standard modes.
- Dynamic Input Source Selection
- The VisionRGB-PRO application program is also built into the Datapath Wall Control software for video wall systems
- The VisionRGB-PRO is optimised for operation with the range of iH4 graphics cards for maximum update rates



Traditionally, if you require constant access to standard VGA data from another source, this is transmitted as an analog RGB signal and then displayed on a dedicated screen. This of course means extra monitors and less room in the work environment.

The Datapath VisionRGB-PRO is a stand-alone PCI plug-in card with two VGA compatible inputs for capturing and displaying two data sources simultaneously.

The VisionRGB-PRO captures most analog RGB video sources. The captured video is displayed on your PC windows desktop using Datapath's VisionRGB software application program, or by using our SDK, you can interface to your own application programs.

The VisionRGB-PRO is an ideal solution in many applications where information is distributed as analog RGB, including display/process monitoring in engineering, and for secure data in financial institutions and trading floors.

RGB Streaming

For streaming applications the VisionRGB-PRO can be used with Windows Media Encoder to compress and stream captured video. To replay the video use Windows Media Player.

VisionRGB Software:

The VisionRGB-PRO is supplied with a powerful software application for configuring the timing and format of the input sources and displaying the data. Simply connect your external RGB source into the card, run the VisionRGB application to automatically detect the video source format and display the captured video in a window on your desktop. You can also use the software application to record and capture the RGB data at high frame rates and play it back using the Datapath VisionRecorder and VisionPlayer applications.

Hardware Overview:

The VisionRGB-PRO has two complete capture channels, each supporting up to 1600 x 1200 resolution. Captured video is put into on card frame buffers in real-time. PCI bus mastering, with scatter gather support, is then used to transfer the captured data into either system memory or directly into your VGA card's frame buffer if used with the iH range of graphics cards. The captured video can also be down scaled before transferring over the PCI Bus. The up-date rate to system memory or the VGA frame buffer is dependant on the captured resolution and the level of up or down scaling.

The VisionRGB-PRO can be operated with any standard graphics adapter and is supplied with Windows® 2000, Windows® Server 2003 and Windows® XP. For applications requiring improved update rates and lower system overhead then we recommend using the Datapath iH or Vantage4 range of graphics adapters. The VisionRGB software, when used with the Datapath graphics cards, implements direct DMA to the graphics texture memory. The captured RGB is then rendered to the display using hardware texture mapping to greatly improve performance. This implementation dramatically improves update rates when the image is up-scaled as would be required with **video/data wall** applications. Each part of the up-scaled image is rendered by the associated graphics processor, effectively parallel processing the up-scaling process.

Typical up-date rates with a standard VGA graphics card are:

- 1 channel at 1280 x 1024 - 12Hz.
- 1 channel at 1024 x 768 - 17Hz.

Typical up-date rates with a Datapath iH4 or Vantage4 graphics card are:

- 1 channel at 1280 x 1024 - 35Hz.
- 1 channel at 1024 x 768 - 60Hz.

Typical Capture Modes Supported

Display Mode	Refresh	Capture Mode
640 x 480	85Hz	Real Time
800 x 600	85Hz	Real Time
1024 x 768	85Hz	Real Time
1280 x 1024	85Hz	Real Time
1600 x 1200	85Hz	2 frame times

Specifications:

- Half size PCI adapter, 170mm x 105mm (approx).
- Captures up to 2 channels of RGB video in real time.
- Each channel supports up to 1600 x 1200 x 24bit capture.
- Maximum capture sample rate is 140MHz in real time and 280MHz for capture in 2 frame times.
- PCI bus mastering allows captured video to be transferred to the host memory or graphics display memory.
- Data is transferred at full PCI bus bandwidth of 134MB/s.
- Scatter gather tables are supported for virtual memory operation.
- Each channel can be up or down scaled in real time.
- Automatic sync and video detection provides multi-sync operation.
- Support for separate H and V sync, composite sync or sync on green.
- Multiple cards in a single PC allow multiple channels to be captured and displayed simultaneously.
- Power requirements - VisionRGB-PRO-1 8 watts(max), +5v @ 1.5A, +12v @ 150mA
- VisionRGB-PRO-2 Max current at 12V - 0.20A, Max current at +5V - 1.30A
Max power - 9.40 Watts
- Operating temperature 0 - 35 deg C
- Storage temperature -20 - 70 deg C
- Relative humidity 5% - 90% non-condensing

Models

The VisionRGB-PRO is available in two models:

- VisionRGB-PRO1 - A single channel PCI capture card
- VisionRGB-PRO2 - A dual channel PCI capture card

For details on how to purchase this products contact our sales department

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