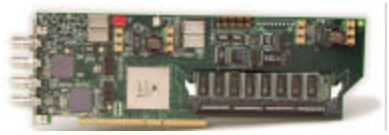
VideoPump HD I/O Boards



Features

Real-Time Digital Video
- Real-time access to uncompressed high definition serial digital video (SMPTE 292M)
- Recording and play-back of HD/SDI streams
- Eight or ten bits of precision

Multichannel Digital Audio
- Sixteen channels of embedded audio conforming to SMPTE 299M
- Direct 299M audio packets or encode/decode four channels of PCM audio

Open Systems for Video Production
- Seamlessly integrated with the Windows operating system
- All video I/O is performed to and from standard files
- 100% QuickTime compatibility
- A VideoPump equipped server allows for direct network access to captured video files
- Works with many third party software applications including editing and special effects

Companion Software Applications from Viewgraphics
- DTV:Deck: sophisticated features often found on stand-alone digital video disk recorders (DDRs) including RS-422 remote slave mode control
- Clipper: frame accurate clip list capture and lay-down to tape

VideoPump Software Development Kit for OEMs
- Easily integrate uncompressed video into existing and new applications
- Leverage rapid product development based on standard system calls and programming resources
- Eliminate complex private video data storage management by using standard storage solutions
- Produce frame accurate editing using an RS-422 controller
- Directly reference comprehensive HTML-based hypertext documentation

DTV:Deck

Clipper

VideoPump HD gives computer systems reliable, real-time access to uncompressed high definition video (SMPTE 292M) using a single PCI interface board. Each VideoPump HD is capable of recording and playing back continuous serial streams at eight or ten bits of precision. VideoPump HD streams full-rate video into and out of main memory, and supports a range of applications from video editing and effects to software based digital disk recorders.

VideoPump HD embraces open systems solutions through seamless integration into the Windows operating system and reliance on open standards. All video input/output is performed to and from standard files within the standard NTFS file system.

VideoPump HD offers 100% QuickTime compatibility. As a result, files captured through the VideoPump HD interface can be immediately accessed by any open systems applications that can import QuickTime files. A VideoPump equipped server can even be used to serve captured video files to any network attached system. Further, a growing line of third party non-linear editing and special effects applications that utilize the QuickTime application programming interface simply work with VideoPump. VideoPump brings uncompressed video post production to the open systems PC desktop. It's as simple as plug and produce!

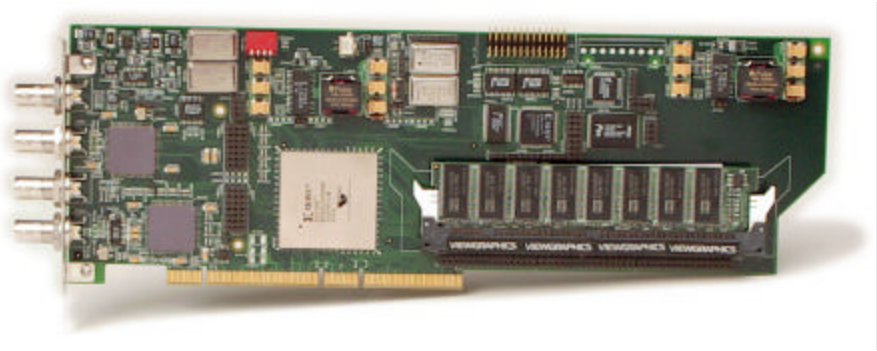
Sixteen channels of embedded audio conforming to SMPTE 299M can be acquired, de-multiplexed from the input serial digital signal and stored in main memory. The VideoPump HD can transfer 299M audio (AES) packets or encode/decode four channels of PCM audio. Output audio data is synchronized with the video and multiplexed into the serial digital data stream.

VideoPump HD is available with an end-user DDR software application from Viewgraphics called DTV:Deck. DTV:Deck provides sophisticated features often found on stand-alone digital video disk recorders such as nonlinear access with time code, slow or fast motion playback, ten bit digital recording, and selectable formats. A VideoPump DTV:Deck equipped workstation can be operated via standard RS-422 interface to accept remote commands from all types of simple machine controllers, sophisticated edit controllers or other remote workstations. You can move digital video on and off your computer system with precise frame accuracy and no dropped frames.

Another VideoPump HD application option is Clipper, a frame accurate clip list capture and lay-down application. Viewgraphics Clipper is a powerful, user-friendly application which can be used to record QuickTime movie files in real-time from the computer hard disk to a video tape recorder (VTR), and to capture video frames in real-time from the VTR and save them as standard files on the computer.

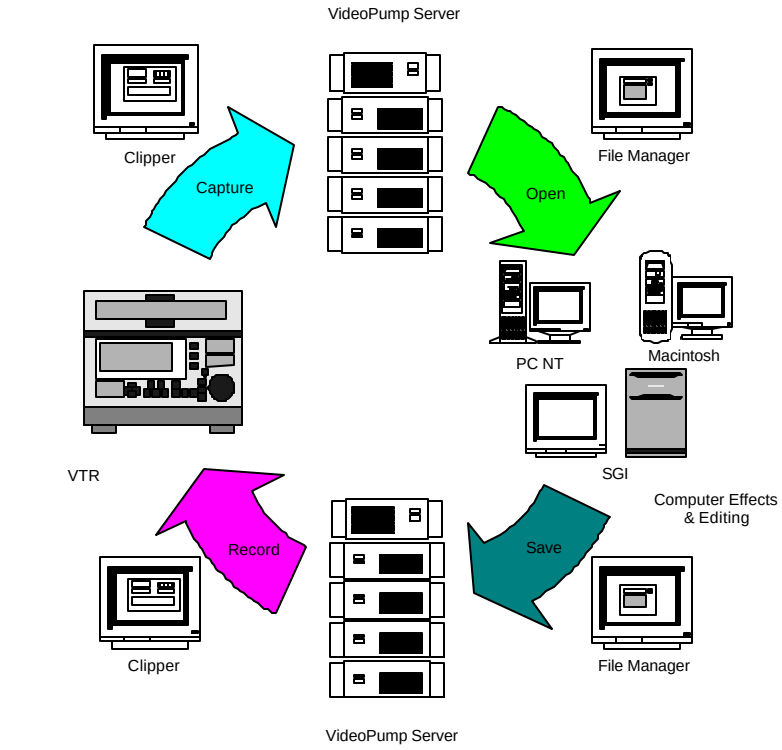
VideoPump HD is available with a software development kit (SDK) for OEM applications to enable the transfer of video data to or from memory using any specified pixel format, image size, and field layout. No other video application program interface makes it so simple to integrate uncompressed video into existing and new applications. The VideoPump SDK enables rapid product development based on standard Windows system calls and programming resources. By facilitating video I/O directly with the Windows file system, VideoPump leverages a mature robust storage facility, eliminating the need for complex private video data storage management solutions. Sophisticated video timing mechanisms are made available for the construction of frame accurate editing solutions. No other video product makes it so simple to integrate uncompressed HD video into existing and new applications.

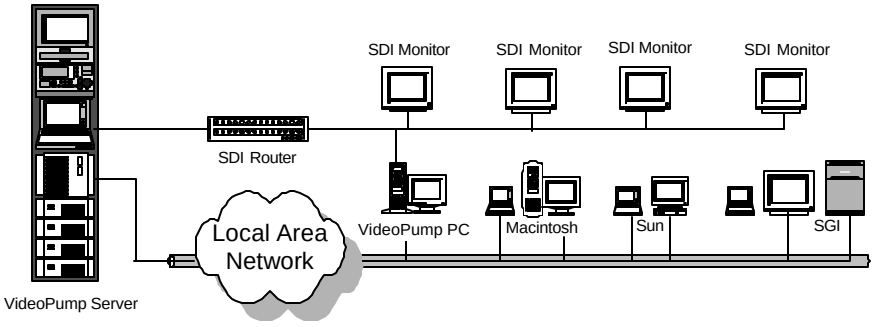
VideoPump HD I/O Board



VideoPump HD Open Systems

Workflow and Architecture





Ordering Information

VideoPump HD

VPHD-801	VideoPump HD
VP-SDK	VideoPump Software Development Kit
VP-SDK-S	VideoPump SDK Annual Support Renewal

Software Applications

DTV:D	DTV:Deck Software
DTV:D-S	DTV:Deck Software Annual Support Renewal
CLP	Clipper Software
CLP-S	Clipper Software Annual Support Renewal
PRE	Adobe Premiere
AFX	Adobe After Effects

Specifications

Supported Operating Systems
- Windows

Supported Video Formats
- 1080i/60, 1080i/59.94, 1080i/50, 1080SF/24, 1080SF/23.98
- 1080p/30, 1080p/29.97, 1080p/25, 1080p/24, 1080p/23.98
- 720p/60, 720p/59.94
- 1035i/60, 1035i/59.94

Processing Modes
- Mux/De-mux any SMPTE 291M ancillary packet
- Encode/Decode SMPTE 299M embedded audio
- Read/Write VITC (drop/non-drop frame)

Host Connection
- PCI

Digital Input / Output
- VideoPump HD: Serial digital conforms to SMPTE 292M

Analog Reference
- HDTV Tri-level sync

External Control Interface
- RS-422

In-Memory Data Formats
- 8/10-bit 4:2:2 YCrCb video data
- Selectable component ordering and video crop
- Images in video or picture line order
- Audio is 299M AES audio packets or PCM audio frames
- PCM codec conforms to SMPTE 299M-AES

On-Disk File Formats
- QuickTime or Raw YUV

VIEWGRAPHICS INCORPORATED

1340 Space Park Way Mountain View, CA 94043
Tel. 650-903-4900, Fax 650-969-6388
www.viewgraphics.com
info@viewgraphics.com

Viewgraphics Incorporated produces a line of open systems hardware and software products for digital media transmission and content creation. Viewgraphics' VID*IO technology solutions combine general-purpose PC-based servers with the company's state-of-the-art digital media input/output adapter boards and sophisticated software applications. The company provides HDTV and D1 serial digital video and MPEG-2 interface boards and systems to leaders in the technology and entertainment industries.