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HP Z1100A
RasterOps VideoLive Card

Displays full-motion video in photo-realistic color on Hewlett-Packard Series 720, 730 and 750 workstations.

Digitizes and captures images to main memory on demand. Saves images to TIFF files.

On the cover: The Ferrari F40 being videographed live, and captured in real-time on screen via the RasterOps VideoLive Card. The camera is cabled directly into the S-Video mini-DIN port on the EISA card. The live screen image is upper right. A TIFF file has been saved, and imported into an electronic publishing document.

Financial Analysis: This image shows an HP 9000 Series 720 workstation screen. The left window shows a financial news broadcast running in real-time. Notice the blurred motion of the ticker tape. The live broadcast was made possible by connecting the video-out cable from a TV tuner to the back of the RasterOps VideoLive card. The other windows show financial analysis being done using Lotus. Users can make decisions faster and more accurately using the VideoLive card.

Capabilities

The RasterOps VideoLive card is the first economical, full-motion, 24 bit color, video product for the Hewlett-Packard 9000 Series 700 workstations. Used alone or with other hardware and software,, the VideoLive card brings the potency of live video to the workstation and provides a gateway to its imaging capabilities. Applications such as broadcast, process and closed-circuit monitoring, computer based training, and electronic publishing can benefit from the VideoLive card. Taking up one EISA slot, the card can be used to display live video in a window, in crisp photo-realistic color on Series 720, 730 or 750 workstations. Used with HP-UX version 8.07, the VideoLive card can digitize a video image for inclusion in electronic publishing documents, network distribution and hard copy output.

Features

The card can accept Composite, S-Video or RGB cables enabling it to show video from a variety of sources such as camcorders, VCRs, laser discs, RGB cameras, still video, and medical scanners. Multiple sources can be attached to the card simultaneously and the user can switch between sources through software. Specific images can be captured while the video is running. The images can be played back in sequence or individually saved to a TIFF file. The card supports NTSC, PAL and SECAM video formats enabling it to conform to all international video standards. The video image runs in a window that can be sized and placed anywhere on the screen. In addition to photo realistic color, the card can display a full-motion gray-scale video window when used with black and white graphics systems. Finally, the display capabilities operate independently of the workstation graphics subsystem. This means that viewing live video has absolutely no impact on graphics performance.

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Applications

The VideoLive Card can be used in numerous ways. Government agencies and financial traders can use the card to monitor news and financial broadcasts by simply feeding the signal from any TV tuner (available on most VCRs) to the card. Insurance agencies and magazine/newspaper editors can capture the best frames from a camcorder video clip for inclusion in electronic publishing documents. Scientists who view satellite and/or aerial video images can view them on their HP workstations and capture specific frames for image analysis. Manufacturing engineers can visually monitor a process from anywhere in the plant simply by sending live images of an operation directly to a workstation. Images of out-of-control operations or defects can be captured real-time, saved to a file, printed, or sent over the network, to enhance communication and corrective action. Doctors can display the results of medical devices such as MRI scanners, sonograms, and electron microscopes on their workstations with a high degree of detail and color.

Collaboration: Here is an HP 9000 Series 720 workstation with a VCR and speakers. The upper right window on the screen shows one of several images, previously captured from a live news broadcast, via the VCR tuner. The lower right window shows another image which was captured from the same broadcast and saved as a TIFF file. The user is sharing this second image with another user at a remote workstation shown below by using a real-time collaboration product called HP SharedX.

Collaboration: This is an HP workstation connected via Ethernet to a similar system shown in the top picture above. This workstation is sharing the remote system's TIFF image in real-time, which was initially captured using the VideoLive card. Remote users can collaborate quickly and intuitively on information available from live broadcasts, and other video sources, by using the VideoLive Card and HP SharedX.

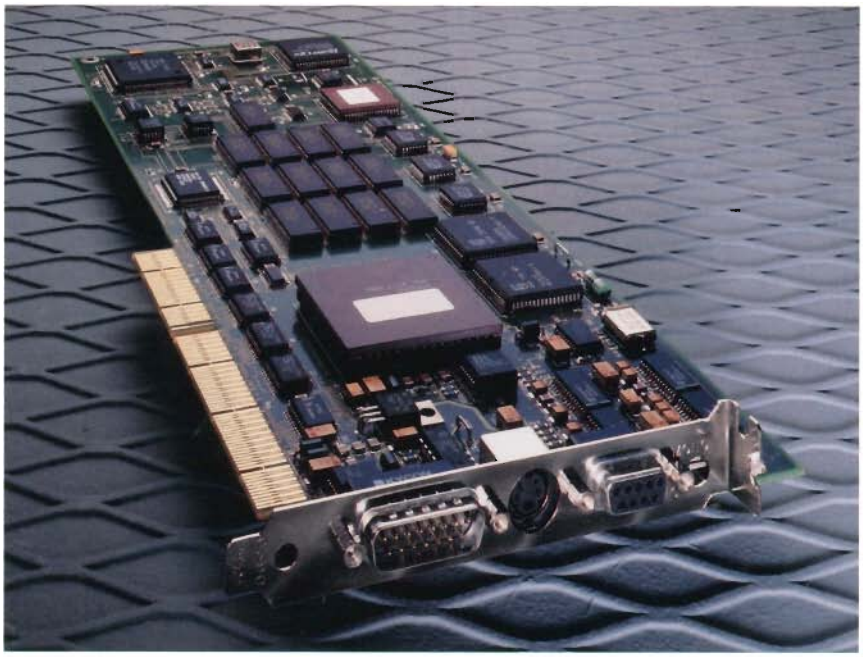
Image Analysis: an HP 9000 Series 720 workstation screen. The top left window shows an image of fish in an aquarium captured from videotape. The bottom two windows show TIFF images of previously captured frames. Users can take video tape of an event in the field, and capture the ideal frames for subsequent image analysis.

Warranty
12 months

Support
Support for the HP Z1100A is available through your local Hewlett-Packard Sales Office.

Ordering Information
RasterOps VideoLive Card
Part Number: HP Z1100A
Includes software on DDS format tape.

For more information, call your local Hewlett-Packard Sales Office or the Customer Information Center at 1-800-752-0900.



The Backplane: There are three connectors at the back of the card. From left to right: a 15 pin D-sub accepts the video signal from the workstation graphics subsystem; a mini-DIN accepts S-Video signals; a 9 pin D-sub accepts composite and RGB signals. All custom cables are included.

FUNCTIONAL SPECIFICATIONS

- Analog video-in-a-window EISA card, 24 bit, 30 frames/second, full motion.
- Maximum window resolution
  - 640 x 480 pixels for NTSC
  - 768 x 576 pixels for PAL/SECAM
- Simultaneous video connections
  - 1 S-Video and 1 RGB source, or
  - 1 S-Video and 2 Composite sources
  - Software controllable switching between sources.
- Supports NTSC, PAL, and SECAM video formats.
- Frame capture/view/save - single or sequential (a full-sized window can be captured at 1 - 2 frames/second depending on available system resources).
- Captured frames
  - Held in virtual memory
  - Can be saved to TIFF version 5.0
  - Each full sized PAL/SECAM frame occupies approximately 1200 Kbytes
  - Each full sized NTSC frame occupies 900 Kbytes
  - (TIFF files can be JPEG compressed using the
  - HP Image Developer's Tool Kit for HP-UX 8.07 and up.)
- Video window controls
  - Continuous scaling downward to 1 pixel
  - Cropping, and Color Adjustments
- Live video display does not affect graphics or CPU performance

TECHNICAL SPECIFICATIONS

Hardware

- Single slot EISA board. Real-time Digital decoder and colorspace converter (achieves full motion video)
- On-board 24 bit video frame buffer
- Video frame buffer accessible from EISA bus
- Backplane
  - 15 pin D-sub for System-Monitor intercept
  - Mini-DIN connector for S-Video
  - 9 pin D-sub for 2 Composites or 1 RGB
- EISA board specification
  - Power: 2.6 Amps at 5 volts
  - 350 ma at + 12 volts
  - 50 ma at -12 volts
- Multiple video source cable
  - 9 pin D-sub to 4 BNC connector
  - BNC/RCA adapter
- System-Monitor cable

Software

- EISA driver
- Motif-based Video Viewer/Frame Grabber Application
  - Layered on HPs Image Integration Library
- LibXv.a (unsupported)
- HP Release of X11R4 with Xv extensions

Supported Equipment

- Workstations: HP 9000 Series 720 (with EISA option), 730 and 750 workstations
- Graphics: CRX, CRX24, CRX24Z, GRX, PVRX
- Operating Systems: HP-UX 8.07 or higher
- Memory: No minimum memory requirement

Suggested Complementary Products

- HP SharedX
  - Network and collaborate on TIFF images saved using the VideoLive card.
- HP Image Developer's Toolkit for HP-UX 8.07
  - Provides a utility for doing JPEG compression on TIFF images

HEWLETT PACKARD

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