



**From the established leader in frame grabber technology**

FlashPoint 3D Pro is a high-performance PCI bus frame grabber that captures and displays 24-bit color and RS-170 video.

**Applications**

- Machine vision
- Inspection and process control
- Image analysis
- Scientific imaging
- Microscopy
- Medical imaging
- Fingerprint biometrics
- Law enforcement
- Security and access control
- Traffic control

**Users**

- Ideal for OEMs, VARs and system integrators designing systems that require high-quality video acquisition in a low-cost, easy-to-install solution.

**Key Features**

- High-performance PCI bus frame grabber
- Integrated 3D graphics accelerator
- 8MB SGRAM video frame buffer
- Display resolution up to 1600x1200
- High-quality capture and display of NTSC and PAL video
- Non-destructive color key overlay of graphics on live video
- 1 RGB, 6 composite, 3 S-Video, and 1 RS-170 video inputs
- High-quality RGB, composite, or S-Video output
- Progressive scan camera support
- Asynchronous trigger support
- Separate H, V, and pixel clock inputs
- On-board programmable sync generator for camera genlock
- 24-bit RGB, YUV 4:2:2 composite/S-Video, and 8-bit RS-170 monochrome video digitizing
- Programmable offset and gain on video input
- Separate A/D with LUT on RGB and RS-170 video inputs
- Optically isolated output trigger, strobe interface
- General purpose TTL input and output triggers
- On-board microcontroller
- Camera integration support
- Chroma key for live video graphics underlay
- 12-volt DC output for camera power (resettable fuse)
- System interrupt based on Vsync or input trigger
- Hardware pan and zoom (up to 4x)
- Software Developers Kit (Windows 2000, 95/98, NT)

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FlashPoint 3D Pro is a **high-performance AGP and PCI frame grabber** designed to capture and display full-frame color and RS-170 video in real time to VGA display memory. It was specifically designed with features for OEMs, VARs and system integrators designing systems that require high-quality video acquisition in a single-slot, easy-to-install solution.

FlashPoint 3D Pro incorporates an **on-board 3D accelerator and 8MB of fast SGRAM**. Its 128-bit memory interface is capable of display resolutions up to 1600x1200 at 85Hz.

FlashPoint 3D Pro supports **non-destructive overlay of text and graphics on live video**. This allows applications that require crosshairs, selector boxes or other objects to be displayed on live video while the underlying video is cleanly captured or displayed. Its independent control of the graphics and video color depth allows efficient memory usage that supports the simultaneous display and capture of high-resolution video (up to 768x576) on a high-resolution desktop (up to 1280x1024).

FlashPoint 3D Pro **multiplexes** up to 6 composite, 3 S-Video, 1 RGB and 1 RS-170 **video inputs** in both NTSC and PAL formats. The RGB and RS-170 video inputs are digitized using separate A/D and PLL circuitry and support the capture of non-interlaced video from progressive scan cameras. A programmable Look-Up Table (LUT) is available on both the RGB and RS-170 input channels. Video is displayed full-screen or in a resizable window and can be adjusted (offset and gain) to the desired levels through software-controlled video amplifiers. Very low pixel jitter ensures accurate representation of horizontal detail.

FlashPoint 3D Pro allows for simultaneous display of VGA and video by incorporating an on-board video encoder. **Video outputs** can be RGB, composite or S-Video in both NTSC and PAL formats. It is software selectable from the entire VGA desktop, a region of interest, or just the live video. Programmable video parameters such as horizontal and vertical size and position, flicker filter and scaling are supported.

To control external devices or cameras, the FlashPoint 3D Pro has been designed with **multiple I/O or on-board camera interface controls**. A software-controlled, optically isolated contact closure circuit enables the triggering of a strobe for synchronizing illumination to a digitized video frame. A general-purpose input trigger, along with two TTL output triggers, allows for the synchronization of image acquisition to external events. A camera interface allows for the input of the horizontal sync, vertical sync and pixel clock from the camera, thus allowing for precise capture. An on-board sync generator provides for genlock of external cameras.

FlashPoint 3D Pro also incorporates **on-board programmable intelligence** to guarantee accurate strobe synchronization, robust triggering and serial I/O while relieving the host CPU of the details of counting syncs or servicing serial interrupts. A fused 12-volt DC power output is supplied through the DB-25 connector, eliminating the need for and cost of an external camera power supply.

A **comprehensive Software Developers Kit** provides programmable access to the features of the 3D's hardware architecture. The SDK includes DLLs for Microsoft Windows 2000/98/95/NT; Visual BASIC support; drivers for MCI, Video for Windows (AVI), and TWAIN; and sample applications for source code. Source code samples provide insight to various functions of the FlashPoint 3D, such as video-in-a-window, color and chroma key, camera integration control and triple buffering. FlashPoint 3D offers full DirectX support.

#### Analog Video Input

- 25-pin connector
- 1 RGB input with LUT
- 6 composite video inputs
- 3 S-Video color inputs
- 4 RS-170, 8-bit, 256-level monochrome inputs with LUT

#### Video Decoder/Digitizer

- NTSC, PAL, RS-170 and CCIR
- Square pixel digitizing resolutions for NTSC (12.27Mhz at 640x480) and PAL (14.75Mhz at 768x576)
- Input Look-Up Table (256x24) on RGB or RS-170 monochrome video
- Separate RGB and RS-170 A/D converters
- Progressive scan camera support
- Software-programmable digital control of offset, gain, hue and saturation
- EEPROM for storing configuration and calibration settings

#### Video Output

- RGB, composite or S-Video output in NTSC and PAL formats
- Software-controlled region of interest or horizontal and vertical size and position

#### Video Pixel Format

- YUV 4:2:2 color for composite and S-Video
- 24 bits/pixel RGB, 8 bits/pixel for RS-170

#### VGA Frame Buffer & Pixel Format

- 8MB SGRAM
- 8/16/32 bits per pixel—up to 16 million colors

#### Video Scaling Processor

- High-quality still frame video capture
- Smooth, high-quality interpolated scaling
- Support for hardware pan and zoom up to 4 to 1

#### I/O Control

- Optically isolated output trigger for flash interface
- Asynchronous trigger support
- 1 general-purpose input trigger
- 2 general-purpose TTL output triggers
- On-board programmable sync generator for camera genlock

#### External Control

- RS-232 serial
- On-board microcontroller
- Programmable DAC output (0V-10V)
- 12-volt DC fused output at 1 amp, resettable and on/off control

#### Software Developers Kit

- Windows 2000, 95, 98 and NT display drivers
- Windows 2000, 95, 98 and NT DLLs
- Windows MCI and Video for Windows (AVI) drivers
- DirectDraw support
- Visual BASIC support
- TWAIN driver
- Sample applications with source code
- Windows-based FPG video capture application
- Media Cybernetics Image-Pro Plus 4.0 drivers
- Optimas 6.2 drivers

#### Video Input Cable

Composite, S-Video and RS-170 video input cable. Custom cables and connector pin-out available upon request.