



World's First HD-SDI Scan Converter with Genlock Under \$1000

Matrox Convert DVI lets broadcasters easily and economically take the computer-based content that is quickly becoming a key part of the nightly news to air. It's ideal for creating broadcast video from computer applications such as Skype, YouTube, Google Earth, video games, and web browser sessions, as well as citizen journalists' mobile phone videos.

Quality HD-SDI scan converters with genlock typically cost thousands of dollars each and SDI audio embedders are often required. Costs balloon when stations require multiple units. Matrox Convert DVI is very inexpensive by comparison and allows system audio to be embedded in the SDI signal. It provides the high-end features, outstanding quality, and ease-of-use necessary in broadcast operations.

Matrox Convert DVI controls are provided via a simple PC-based user interface. By simply dragging a mouse, rather than fiddling with buttons on the unit itself, users can choose to output the entire screen or a region-of-interest of any size. Premium features such as a flicker reduction filter, an underscan mode, customizable presets with user-assignable hotkeys, password protection, and a stand-alone mode ensure optimal flexibility for many different applications. In applications where the DVI signal is not coming from a computer, but from a camera or medical device for example, Matrox Convert DVI can operate independently of a PC to deliver SDI and analog video.

Key features

- DVI-D input up to 1920 x 1200
- Digital outputs: HD/SD SDI
- Analog outputs: HD/SD analog component, S-Video, and composite
- SD analog black burst (bi-level) or HD tri-level genlock with timing offset controls
- Simultaneous analog and digital video output
- Stereo audio input can be embedded into the SDI output signal
- Realtime HD to SD hardware downscaling with proper color space and aspect ratio conversion
- Region-of-interest output support
- Can operate as a stand-alone appliance
- Advanced features such as an anti-flicker filter, underscan mode, customizable presets, and password protection
- Three-year hardware warranty and complimentary telephone support



Input

Matrox Convert DVI accepts common DVI-D signal resolutions up to 1920x1200. A third-party HDMI to DVI adapter lets you use Matrox Convert DVI with compatible HDMI sources.

Supported desktop resolutions

800x600	1600x1200
1024x768	1680x1050
1280x720	1920x1080
1280x1024	1920x1200
1600x900	

Other resolutions work with Convert DVI, but only the resolutions listed above have been tested and approved by Matrox.

Output

Matrox Convert DVI provides a full complement of outputs including HD/SD-SDI, HD/SD analog component, S-Video, and composite. Your choice of analog output and the SDI output are simultaneously live.

Supported output standards

NTSC
PAL
HD 1280x720p at 50 and 59.94 fps
HD 1920x1080i at 25 and 29.97 fps

Audio support

Matrox Convert DVI accepts stereo audio input. The audio input is routed to the audio output for monitoring and is embedded into four channels of the SDI signal.

Genlock

Matrox Convert DVI can be genlocked to a SD analog black burst (bi-level) or HD tri-level genlock source. Horizontal and vertical timing offset controls can be used to align your video output relative to your external genlock source to compensate for cable delays within your facility.

High-quality hardware downscaling

Matrox Convert DVI will output full resolution 1080i HD video or you can choose to downscale to 720p or SD. Proper conversion of the HD color space to the SD color space and proper aspect ratio conversion to anamorphic, letterbox, and center cut are provided.

Region-of-interest

Matrox Convert DVI lets you output your entire computer screen or focus on details in a region-of-interest of any size within the larger resolution. The region-of-interest can be selected by entering screen coordinates or by simply clicking and dragging your mouse over the area you want to output. If your region-of-interest is larger than your selected output standard, Matrox Convert DVI will automatically downscale it to fit.

Stand-alone mode

Matrox Convert DVI is controlled and configured by a PC-based user interface via a USB connection. Once configured, the box can be programmed to behave as a stand-alone appliance so that the control PC can then be disconnected. This lets you use another DVI device as your input such as a camera, Mac computer, medical device, or even another PC. When Convert DVI is in stand-alone mode, the settings cannot be tampered with and configuration information is maintained when the unit is turned off.

Flicker reduction

Matrox Convert DVI provides an anti-flicker filter to reduce artifacts that result from converting progressive images to interlaced video, resulting in a more stable output.

Underscan mode

In cases where you want to output an entire image to a display and not lose the edges of it in the bezel, the underscan feature can be used to shrink the image slightly and place a black border around it.

Customizable presets and password protection

Project and region-of-interest presets can be saved and retrieved at will. Once the proper parameters are set, the ConvertDVI control panel can be locked and password protected by an administrator to prevent accidental modifications or tampering.

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Specifications

General

Works with DVI devices such as computers, cameras, and medical devices

System requirements

For initial configuration, Matrox Convert DVI requires a computer running Microsoft Windows 7 Professional or Ultimate (32-bit), or Windows XP Professional (32-bit) with Service Pack 3, one free USB 2.0 port, and a device that outputs a supported DVI-D signal.

Once Convert DVI has been configured, it can be used in stand-alone mode. In stand-alone mode, the only requirement is a DVI device which outputs a supported DVI-D signal.

Video standards

NTSC, PAL, NTSC-EIAJ, 1080i, 720p

Regulatory compliance

FCC Class A, CE Mark Class A, C-Tick Mark, VCCI
RoHS Directive 2002/95/EC

Dimensions

151mm (L) x 161mm (W) x 46mm (H)

Total power consumption

10 watts

Connections

DVI input and output

DVI-I (single-link) 29-pin female connector

Audio input

1/8" stereo minijack

Genlock reference input

SD analog black burst (bi-level) or HD tri-level sync

BNC connector (75 Ω), terminated

Timing offset controls provided

SDTV SDI output

SD-SDI with 4 channels of SDI embedded audio 24-bit, 48 kHz

BNC connector (75 Ω)

Compliant with SMPTE 259M-C, SMPTE 272M

SDTV S-Video & composite video output

PAL, NTSC, NTSC-EIAJ

Frequency response: +/- 0.25 dB max to 5 MHz

2T pulse response: 0.5% max

Diff. Gain and Diff. Phase: < 2%

BNC connectors (75 Ω)

SDTV analog component video output

Betacam, Betacam SP (NTSC & NTSC-EIAJ)

SMPTE/EBU N10 (PAL)

Frequency response Y: +/- 0.25 dB max to 5 MHz

Frequency response Pb, Pr: +/- 0.2 dB max to 2 MHz

Component channel delay: +/- 3 ns

Component S/N (Y, Pb, Pr): > 54 dB, unified weighted

BNC connectors (75 Ω)

HDTV SDI output

HD-SDI with 4 channels of SDI embedded audio 24-bit, 48 kHz

Compliant with SMPTE 292M, SMPTE 299M

BNC connector (75 Ω)

HDTV analog component video output

Supported video formats: 1080i 25 and 29.97, 720p 50 and 59.94

Compliant to EIA-770.3

Frequency response Y: +/- 0.3 dB max to 28 MHz

Frequency response Pb, Pr: +/- 0.4 dB max to 14 MHz

Component channel delay: +/- 0.5 ns

Component S/N (Y, Pb, Pr): > 57 dB, unified weighted

BNC connectors (75 Ω)

Accessories

DVI and system audio loop-through cable, 1 meter

External AC-DC adapter

Y/C video adapter