New! Final Cut Studio 3 support

matrox MXO2 LE

Also available with Matrox MAX technology for faster than realtime H.264 HD file creation.

Professional HDMI, SDI, and analog I/O for the Mac

Matrox MXO2 LE provides all the features of an I/O card in a sturdy, portable breakout box with professional audio and video connectivity. This device can easily be moved among the Mac Pros in your facility as the need arises and you can take it on the road with a MacBook Pro. It gives you highly-reliable, broadcast-quality input/output via HDMI, SDI, and analog; professional audio inputs and outputs; and HDMI video monitoring with calibration controls including blue-only. You also benefit from a wide variety of HD and SD workflows with Final Cut Studio thanks to Matrox MXO2 LE's 10-bit hardware up/down/cross scaling engine and support for a wealth of file-based formats and industry-standard codecs. Enjoy maximum I/O flexibility with Matrox MXO2 LE – edit anything, anywhere!

Matrox MXO2 LE is also available with Matrox MAX technology for faster than realtime high definition H.264 file creation.

Key features

- Works with Intel-based MacBook Pros, Mac Pros, and Apple Xserve systems
- Lightweight – 2¾ lbs. (1245 grams)
- Fits in your laptop bag – 9¼" x 9½" x 2" (235mm x 241mm x 51mm)
- 4-pin XLR power connector for AC or field battery operation
- HD/SD SDI, HD/SD analog component, Y/C, and composite inputs and outputs
- Genlock – SD analog black burst (bi-level) or HD tri-level sync
- 10-bit HDMI input, output, and monitoring with calibration controls including blue-only
- 10-bit realtime hardware up/down/cross conversion on capture and output
- Up to five user selectable simultaneous video outputs – HD and/or SD on HDMI, SDI, and analog
- RS-422 machine control for frame-accurate capture and print-to-tape
- Captures to a variety of codecs – Apple ProRes 422 HQ, 10-bit uncompressed HD, and many more
- File-based workflow support – XDCAM, XDCAM HD, XDCAM EX, P2, P2HD
- RED workflow support
- HD-SDI closed captioning support
- Works with Final Cut Pro, Apple Color, Adobe After Effects and all QuickTime applications that support the V-out component
- Also available with Matrox MAX for faster than realtime H.264 encoding
- Three-year hardware warranty and complimentary telephone support

with matrox MAX

Matrox MAX is a unique technology that implements faster than realtime H.264 encoding for resolutions ranging from iPod to HD. It uses a dedicated hardware processor to accelerate the creation of H.264 files for Blu-ray, the web, and mobile devices. By using specialized hardware acceleration, jobs are finished with amazing speed and system resources are liberated for other tasks. Quality and flexibility are ensured through direct integration with professional applications such as Apple Compressor and Telestream Episode on the Mac and Adobe Media Encoder on the PC.

Truly portable

Matrox MXO2 LE is a truly portable I/O device for the Mac. It fits easily into your laptop bag and connects directly to standard field batteries or the included AC power adapter. It connects to your MacBook Pro via Apple's ExpressCard/34 slot or to your Mac Pro via a PCI Express adapter card.

HD and SD inputs and outputs

Matrox MXO2 LE features professional inputs and outputs. RS-422 machine control is provided for frame-accurate capture and print-to tape with Final Cut Pro. A 4-pin XLR power connection is provided for AC or field battery operation.

Inputs

- Video
  - SDI - HD/SD
  - Component - HD/SD - 10-bit
  - Y/C - 10-bit
  - Composite - 10-bit
  - HDMI - HD - 10-bit
- Audio
  - 2 XLR - balanced
  - 2 RCA - unbalanced
  - SDI embedded – up to 8 channels
  - HDMI embedded - up to 8 channels

Ouputs

- Video
  - 2 SDI - HD/SD
  - Component - HD/SD - 12-bit
  - Y/C - 12-bit
  - Composite - 12-bit
  - HDMI - HD/SD - 10-bit
- Audio
  - 2 XLR - balanced
  - 2 RCA - unbalanced
  - SDI embedded – up to 8 channels
  - HDMI embedded - up to 8 channels

Up to five user selectable simultaneous video outputs, HD and/or SD on HDMI, SDI, and analog are supported.

Genlock – Matrox MXO2 LE provides SD analog black burst (bi-level) or HD tri-level sync genlock. It can genlock to any type of video input or to house sync. 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.

Flexible workflows

Capture to a variety of codecs – Matrox MXO2 LE lets you capture to HD and SD codecs supported by Final Cut Pro. On a Quad-Core MacPro, you can capture HD to ProRes 422 HQ, DVCPRO HD, DV, DVCPRO, and DVCPRO50. On a MacBook Pro Core2 Duo 2.4 GHz or faster, you can capture HD to ProRes 422 HQ (720p at 24, 25, and 30 fps), ProRes 422 (LT), and DVCPRO HD. On systems equipped with proper storage you can capture uncompressed 8- and 10-bit HD.

Use your favorite file-based formats – Matrox MXO2 LE lets you work with file-based formats such as XDCAM, XDCAM HD, XDCAM EX, P2, and P2HD. You can play out these formats directly from Final Cut Pro – no intermediate codec is needed. Matrox MXO2 LE lets you play out these formats from a MacBook Pro without dropping frames.

RED workflow support – RED users can benefit from Matrox MXO2 LE to capture, monitor, and playback on set. Back in the post suite, they can use Matrox MXO2 LE to work with 1K and 2K RED timelines and output to SD, 720, or 1080 via MXO2 LE's realtime 10-bit hardware scaling feature.

HD-SDI closed captioning support – You will no longer need to spend time and money recreating HD captioning data that is typically lost when editing projects in Final Cut Pro. Matrox MXO2 LE offers a unique workflow to capture, playback, and preserve closed captioning data while editing. Nothing is destroyed even when trimming or color correcting video clips. In addition, Matrox has worked with CPC, the closed captioning software leader, to develop an innovative solution that allows the MacCaption software to encode, decode, edit, and create HD and SD closed captioning for use with Matrox MXO2 LE. Matrox MXO2 LE also provides a cost effective way to monitor HD timelines containing closed captioning data on SDI and component SD monitors, while also inserting closed captioning information into line 21 of active video for SD deliverables. You can deliver HD and SD masters containing closed captions simultaneously.

HD and SD video monitoring

Matrox MXO2 LE turns your HDMI monitor into a true-color video display you can trust, even for color grading. It's packed with features that make it the ideal monitoring solution for Final Cut Pro, Apple Color, Adobe After Effects, and other QuickTime-based applications. You won't need to buy expensive HD monitoring equipment. In addition, MXO2 LE's realtime downscaling feature lets you view your HD projects on an SD monitor.

HDMI monitoring with 10-bit 4:2:2 color precision – Matrox MXO2 LE lets you adjust and control your HDMI monitor exactly like you would a broadcast HD/SD monitor. Controls for hue, chroma, contrast, brightness, and blue-only are provided. This unique control gives you accurate color representation so that you can use your HDMI monitor even for color grading.

Pixel-to-pixel mapping on the HDMI display – Matrox MXO2 LE provides 1:1 pixel mapping on HDMI monitors that support this feature.

Realtime hardware up/down/cross conversion on capture and output

Matrox MXO2 LE lets you deliver in any format your clients demand. The 10-bit hardware scaling provides high-quality mastering.

HD to SD downscaling – Matrox MXO2 LE provides realtime HD to SD downscaling with proper conversion of the HD color space to the SD color space and proper aspect ratio conversion to anamorphic, letterbox, and center cut. You can monitor or record an SD master of your HD project in real time.

SD to HD upscaling – Matrox MXO2 LE provides realtime SD to HD upscaling with proper conversion of the SD color space to the HD color space. MXO2 LE will "pillarbox" 4:3 footage and scale 16:9 SD footage to full screen.

Cross conversion – Matrox MXO2 LE offers realtime cross conversions from 720 to 1080 and 1080 to 720. Realtime frame rate conversion is also supported with 2:3:2:3 and 2:3:3:2 cadences. This feature is useful if, for example, your source material is recorded at a different frame rate or resolution than the delivery format your client requires. It also facilitates monitoring when, for example, you need to work with 23.98 fps footage but your monitor does not support that frame rate. You can use MXO2 LE's realtime frame rate conversion to view your project at 29.97 fps. Conversion from 23.98 fps to 25 fps is handled by Final Cut Pro and the host.

Matrox MXO2 LE kit contents

Matrox MXO2 LE input/output device
One of the following:
  Matrox MXO2 PCIe host adapter (for use with Mac Pro) or
  Matrox MXO2 PCIe ExpressCard/34 adapter (for use with MacBook Pro)
Matrox MXO2 PCIe cable (1 meter)
Matrox MXO2 LE external power supply and IEC-C13 power cord
(Additional Matrox MXO2 host adapters may be purchased separately. A third-party RS422 cable is required for machine control.)

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