matrox MXO2™

Portable · Affordable · Complete I/O for the Mac

Matrox is leading the way in mobile editing. The new Matrox MXO2 is the first truly portable device that gives you broadcast-quality input/output, monitoring, and up/down/cross conversion to streamline your workflow with Apple Final Cut Studio 2. It's lightweight, fits in your laptop bag, and runs for hours on a field battery. It lets you work seamlessly in any format you want. Enjoy new-found freedom with Matrox MXO2 – edit anywhere!

Key features

- Truly portable – fits in your laptop bag, runs off a field battery (or its AC adapter)
- 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
- HDMI input, output, and monitoring with calibration controls including blue-only
- 10-bit realtime hardware up/down/cross conversion
- Up to five user selectable simultaneous video outputs – HD and/or SD on HDMI, SDI, and analog

- Professional audio inputs and outputs with 5.1 surround sound monitoring
- 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
- Supports file-based workflows – XDCAM, XDCAM HD, XDCAM EX, P2
- Works with Final Cut Pro, Apple Color, Adobe After Effects and all QuickTime applications that support the V-out component
- For use with Intel-based MacBook Pros and Mac Pros

Truly portable

Matrox MXO2 is the first truly portable I/O device for the Mac. It fits easily into your laptop bag and can run off 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.

Weight – Less than 3½ pounds (1600 grams)
Dimensions – 13" x 9½" x 2" (330mm x 241mm x 51mm)

HD and SD inputs and outputs

Matrox MXO2 features a full complement of professional inputs and outputs. RS-422 machine control is provided for frame-accurate capture and print-to-tape with Final Cut Pro. Up to five user selectable simultaneous video outputs, HD and/or SD on HDMI, SDI, and analog are supported.

Inputs

- Video
  - SDI - HD/SD
  - Component - HD/SD
  - Y/C
  - Composite
  - HDMI - HD/SD

- Audio
  - 2 XLR - stereo pair (balanced)
  - 2 RCA - stereo pair (unbalanced)
  - 2 AES/EBU
  - SDI embedded – up to 8 channels
  - HDMI embedded - up to 8 channels

Outputs

- Video
  - 2 SDI - HD/SD
  - Component - HD/SD - 12-bit
  - Y/C - 12-bit
  - Composite - 12-bit
  - HDMI - HD/SD

- Audio
  - 4 XLR - 2 stereo pairs (balanced)
  - 6 RCA - for surround sound monitoring unbalanced)
  - 2 AES/EBU
  - SDI embedded – up to 8 channels
  - HDMI embedded - up to 8 channels

Genlock – Matrox MXO2 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 gives you a wide range of workflow possibilities by providing frame-accurate capture via RS-422 deck control to a variety of codecs including:

- ProRes 422
- ProRes 422 HQ
- DV
- DV50
- DVCPRO
- DVCPRO HD
- Uncompressed HD/SD (8- and 10-bit)
- Offline RT

Use your favorite file-based formats – Matrox MXO2 lets you work with file-based formats such as XDCAM, XDCAM HD, XDCAM EX, and P2 on your timeline.

HD and SD video monitoring

Matrox MXO2 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's realtime downscaling feature lets you view your HD projects on an SD monitor.

HDMI monitor calibration – Matrox MXO2 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 completely 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 provides 1:1 pixel mapping on HDMI monitors that support this feature. You get accurate monitoring on your HDMI display in the following resolutions:

- 720 x 486 (NTSC)
- 720 x 576 (PAL)
- 1920 x 1080
- 1280 x 720

Audio monitoring

Matrox MXO2 provides built-in 5.1 surround sound monitoring via RCA and HDMI so you don't need to invest in additional equipment as you do with some other I/O products. Matrox MXO2 also gives you the flexibility to map any audio track in Final Cut Pro or Adobe Premiere Pro to any audio output.

Realtime hardware up/down/cross conversion

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

HD to SD downscaling – Matrox MXO2 provides realtime HD to SD downscaling so that you can monitor or record an SD master of your HD project in real time. Proper conversion of the HD color space to the SD color space and proper aspect ratio conversion to anamorphic, letterbox, and center cut are supported.

SD to HD upscaling – Matrox MXO2 provides realtime SD to HD upscaling with proper conversion of the SD color space to the HD color space.

Cross conversion – Matrox MXO2 offers realtime cross conversions from 720 to 1080 and 1080 to 720. Realtime frame rate conversion is also supported with the following cadences – 2:3:2:3, 2:3:3:2, and 2:2:2:4. 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's realtime frame rate conversion to view your project at 29.97 fps.

Hardware acceleration of Final Cut Pro Dynamic RT segments to original frame size

In Dynamic RT editing mode, Final Cut Pro automatically reduces frame size to let you preview non-realtime segments of your project at a better frame rate. With the MXO2 hardware upscaler, these segments are accelerated to their original frame size saving processing power for other Final Cut Pro operations, so you get better realtime performance.

Matrox MXO2 kit contents

Matrox MXO2 input/output device
Matrox MXO2 PCIe host adapter (for use with Mac Pro)
Matrox MXO2 PCIe host ExpressCard/34 adapter (for use with MacBook Pro)
Matrox MXO2 PCIe cable (1 meter)
Matrox MXO2 external power supply
(IEC-C13 power cord, RS422 cable and Matrox MXO2 battery power cable not included)

matrox
Digital Video Solutions