



## Faster Than Realtime H.264 Encoding Technology

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.

Matrox MAX technology for Mac is available in the Matrox CompressHD accelerator card and the Matrox MXO2 family of I/O devices.

### Key features

- Faster than realtime creation of H.264 files, for resolutions ranging from iPod to HD
- A specialized, dedicated hardware processor liberates system resources for other tasks
- Accelerated encoding for Blu-ray, Apple TV, YouTube, Flash, web formats, and mobile devices including iPhone and iPod from various video sources including SD, HD, and RED proxy files up to 2K
- Direct integration with Apple Compressor and Telestream Episode on the Mac to simplify workflow
- Creation of Blu-ray H.264 files that can be authored in Apple Compressor, Adobe Encore, and Roxio Toast then burned without re-encoding
- Support for Apple Qmaster to take advantage of multiple systems with a Matrox MAX processing engine for distributed encoding across a network



### Support for Apple Compressor

Matrox MAX technology taps into Apple Compressor to let you quickly and easily create H.264 files from a variety of video sources including SD, HD, and RED proxy files up to 2K. You can use the three categories of Matrox MAX presets – Fast Encode, High-Quality, and Blu-ray – or you can create your own customized settings.

Matrox Fast Encode presets and Matrox High Quality presets are used to create H.264 deliverables such as those destined for Apple TV, YouTube, Flash, the web, and mobile devices including iPhone, and iPod. Matrox Fast Encode presets use the MAX hardware and your CPU to deliver H.264 files faster than realtime. Quality is better than Compressor Single-pass. Matrox High Quality presets use the MAX hardware exclusively, thereby freeing up your CPUs for other tasks. Quality is comparable to Compressor Multi-pass.

Matrox Blu-ray presets use the Matrox High Quality technology to create Blu-ray compliant H.264 files faster than realtime. The Matrox MAX hardware performs proper color space conversions from HD to SD and SD to HD as well as proper color space conversion from RGB to YUV to prevent gamma shift.

### Efficient Blu-ray disc creation

Matrox MAX technology lets you create Blu-ray H.264 video files, directly from Compressor that can be authored in Apple Compressor, Adobe Encore, or Roxio Toast and burned without re-encoding on either Blu-ray or DVD media.

Use H.264 level 4.0 if you want to create Matrox MAX H.264 files intended for mass replication of Blu-ray discs. Use either H.264 level 4.0 or 4.1 if you want to author and burn individual copies that are compatible with Blu-ray disc players.

### Support for Final Cut Pro and QuickTime Pro

Matrox MAX technology is also accessible to all applications that support the QuickTime codec component such as Final Cut Pro and QuickTime Pro. You get faster than realtime delivery of H.264 files, at resolutions for iPod to HD, directly from the application.

### Support for Telestream Episode

Matrox MAX technology works with Telestream Episode to create H.264 files for Apple TV, YouTube, Flash, web formats, and mobile devices much faster than the software alone. You can take advantage of all the familiar settings or customize your own.

### Customizable encoding parameters

Matrox MAX technology lets you customize the following setting parameters in any supported H.264 encoding application:

- Resolutions: even frame sizes from 64x64 to 1920x1088
- Frame rates: 15, 23.98, 25, 29.97, 50, and 59.94
- Bit rates: from 100 Kb/s to 50 Mb/s
- Baseline or main profile encoding
- CABAC or CAVLC entropy encoding
- GOP structure controls

[www.matrox.com/video](http://www.matrox.com/video)

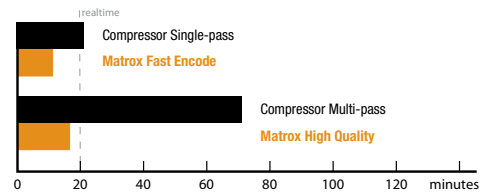
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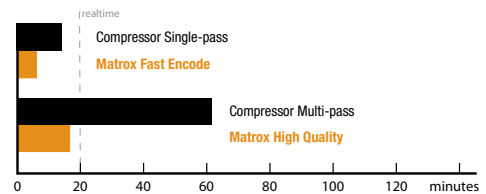
## Matrox MAX H.264 encoding performance with Apple Compressor 3.5

Typical H.264 encoding times for a 20 minute clip from a XDCAM HD 50 Mb/s 1080i 29.97 fps source

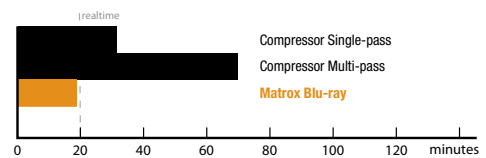
### iPod/iPhone 640x360 at 29.97 fps – 1.5 Mb/s



### Flash 640x360 at 29.97 fps – 1.8 Mb/s



### Blu-ray 1080i at 29.97 fps – 30 Mb/s

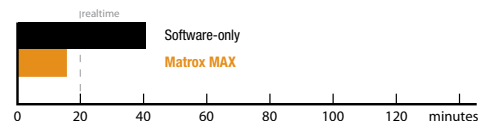


■ Using Apple Compressor 3.5 alone on an 8-core Mac Pro 2.8 GHz, 4 GB RAM  
 ■ Using Apple Compressor 3.5 and Matrox Compress HD in an 8-core Mac Pro 2.8 GHz, 4 GB RAM

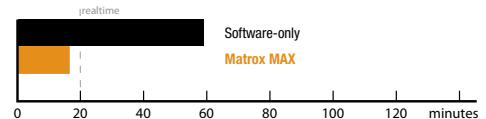
## Matrox MAX H.264 encoding performance with Telestream Episode

Typical H.264 encoding times for a 20 minute clip from a XDCAM HD 50 Mb/s 1080i 29.97 fps source

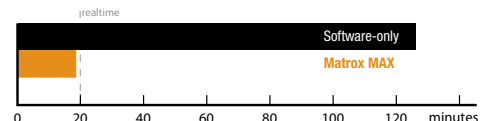
### iPod/iPhone 640x360 at 29.97 fps – 1.5 Mb/s



### Web video 1280x720 at 29.97 fps – 5 Mb/s



### MOV 1080p at 29.97 fps – 11 Mb/s



■ Using Telestream Episode alone on an 8-core Mac Pro 2.8 GHz, 2 GB RAM  
 ■ Using Telestream Episode and Matrox Compress HD in an 8-core Mac Pro 2.8 GHz, 2 GB RAM

