Alchemist File

Software-based Faultless Framerate Conversion

Alchemist File is a unique media transformation tool designed to process valuable content for the global audience. A file-based software product, it enables the next generation of unrivaled motion-compensated image transformation.

Alchemist File from Grass Valley is an Emmy® award-winning image processing tool in a software package that runs on commodity IT equipment to deliver picture-perfect quality the first time, every time.

Stunning Images

Alchemist File benefits from more than two decades of research and experience into the exacting demands of format and framerate conversion. It couples this "know how" with the latest innovative image processing technique to provide a solution which offers the industry's best motion compensated image quality. Dealing with the challenges of complex high framerate sports media or low framerate drama and feature films, Alchemist File seamlessly and transparently converts from one frame rate to another, making it the best Alchemist yet.

Alchemist File performs every conversion including:

Any Resolution
- SD, HD, 3G, 4K UHD, 4K DCI and 8K UHD
- Custom 32x32 to 8192x8192

Advanced Cadence Handling Tools
- Mixed cadence support
- Cadence detection & repair
- Cadence removal & insertion
- Custom cadence

Any Framerate
- 23.98, 24, 25, 29.97, 30, 50, 59.94 and 60
- Custom 12 Hz – 300 Hz
- Video off-speed conversion with audio pitch correction

Our Finest De-interlacer

Alchemist file offers our latest intelligent, adaptive de-interlacing to provide the sharpest pictures ever. Using a robust motion detector, our technology can intelligently soft switch the optimum de-interlacing mode on a pixel-by-pixel basis to ensure each pixel maintains the maximum possible resolution.

Each de-interlacing mode has been carefully engineered to focus on a particular property of real images. These include static, vertical temporal and diagonal apertures of varying gradients. The use of soft switching avoids switching artefacts which can otherwise look more objectionable than the original interlace artifacts.

Flexible Deployment

Alchemist File is available as professional- and enterprise-level turnkey solutions, as well as software only, enabling each user to use their preferred IT vendors.

Free Trial Version Available
Click here for free trial

KEY FEATURES

- New technology optimized to offer stunning image quality however complex the source

- Deploy on commodity IT infrastructure from a single node to the cloud

- Simple integration via watch folders or standardized FIMS SOAP interface

SPECIFICATIONS

File Wrappers

MXF OP1a (AVC-I, DNxHD, DNxHR, DV, XDCAM, JPEG2000, D10 IMX, XAVC)

MOV (ProRes/DNxHD/JPEG 2000/DNxHR/ AVC-I (decode only)/XDCAM/DV)

MTS (AVCHD only)

MJ2 (JPEG 2000 only)

MP4 (H.264 Long GOP only)

MBG/TS (MPEG-2)

Video Formats

SD, HD and 3 Gb/s broadcast standards

2K, 4K and custom resolutions up to 8K

Custom frame rate (12-300 Hz)

Video Codecs

DNxHD

DNxHR

DV25/DVCPRO25/50/100

XDCAM HD

D10 (IMX 30/40/50)

AVC-Intra 50/100

AVC-Intra RP2027 50/100/200

Apple ProRes

JPEG 2000 (Lossy/Lossless/DCI)

AVC-HD (MTS only)

XAVC (I-Frame/Long GOP)

MPEG-2

H.264 (Long GOP)

Uncompressed Video

DPX*

Uncompressed MOV

Audio

PCM input – support for 44.1, 48, 96 kHz

PCM output – 48 kHz only

AAC input only – support for 32, 44.1, 48 kHz
Output will always be PCM 48 kHz

Audio Stream Routing

Audio Channel Shuffling

Conversion Modes

Motion Compensated Interpolating

2:2/2:3/custom film cadence insertion and removal

2:2/2:3/custom film cadence repair

Mixed video/film 2:2/2:3/custom cadence

Video off-speed with audio pitch correction/re-sampling

Video Utilities

Color space conversion (REC601 BT709/SMPTE ST 2020)

RGB Legalization (700/721/735/custom)

Luma Clipper

Luma/Chroma/Black Level

HDR Processing

HDR (PQ/S-Log3/HLG) to SDR (BT709) using Grass Valley's Advanced Tone Mapping

HDR (PQ/S-Log3/HLG) to HDR (PQ/S-Log3/HLG)

SDR to HDR (PQ/S-Log3/HLG)

Control

GV File Client

Watch Folder

FIMS Media SOA Framework v1.0.7

Operating System

Windows (64-bit) server 2012/2008 R2

Windows (64-bit) 7, 8, 8.1 & 10

Linux (RedHat, CentOS)

OSX 10.9 and 10.10 (Client only)

Minimum Configuration

1x 4 Core 2.5 GHz processors

1 or more GPUs (Multiple cards should be matched)

Memory:

SD/HD 1 GPU: 8 GB

SD/HD 2 GPU: 16 GB

SD/HD 3 GPU: 24 GB

SD/HD 4 GPU: 32 GB

4K 1 GPU: 16 GB

4K 2 GPU: 32 GB

4K 3 GPU: 48 GB

4K 4 GPU: 64 GB

Metadata

Closed Caption 608/708 SMPTE ST 436 support in MXF (not including XAVC)

Closed Caption Line 21 IMX only

GPU Support

Min. 2 GB for SD/HD

Min. 4 GB for 4K

Must support Open CL 1.2 or above

NVIDIA:

GeForce GTX

Quadro

Tesla

AMD:

AMD Vega

AMD FirePro

AMD HD 6000 Series**

AMD HD 7000 Series **

AMD R7 Series**

AMD R9 Series

AMD RX Series

AMD Pro WX-Series

Conversion times will vary depending on hardware specification.

* Trial feature

** These cards have not been verified by Grass Valley.

ORDERING

Software License

9800000

Alchemist File Base Model single license: Software only video standards converter. Enables video frame rate conversion of media files.

Mandatory Maintenance

Conver-Prime+

Mandatory 1-year annual maintenance — includes 24 x 7 technical phone support and in-version software updates.

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