

Kronos File

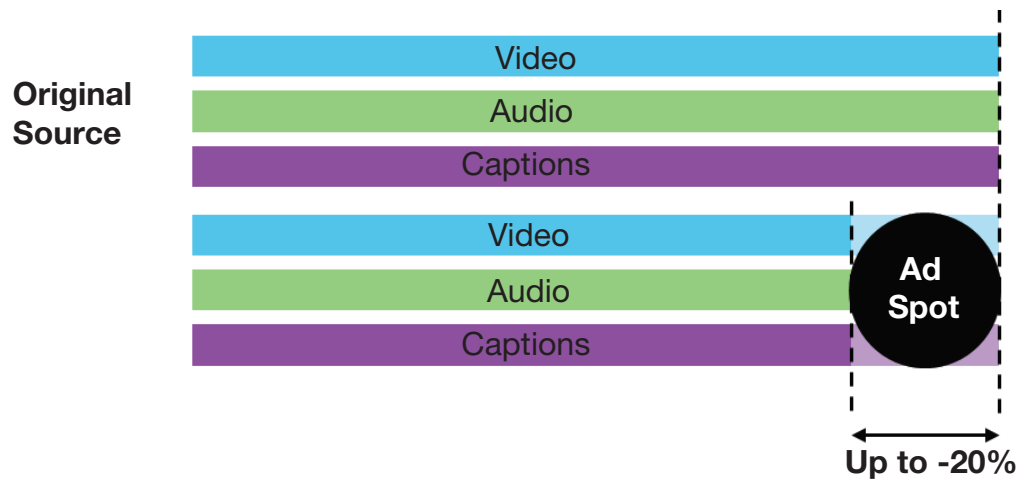
Delivering Faultless Media Retiming — In Software



Kronos File is an unparalleled media retiming solution, enabling run time adjustments of file-based assets with no perceivable quality difference. Offering the very best in motion-compensated image performance and the finest quality audio pitch correction for run time changes of up to $\pm 20\%$.

Kronos File is Grass Valley, a Belden Brand's, Emmy® award-winning image processing expertise in a software package. It runs on commodity IT equipment to deliver picture perfect quality first time, every time.

Maximize on ad spots and air spots to promote other programs and retime content for international markets.



Kronos File Delivering Faultless Media Retiming — In Software

KEY FEATURES

- Media retiming with no perceived difference in quality for video and audio, however complex the source
- Deploy it 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

Retiming Modes

Constant retime

Retime with protected segments (configured via marker file or GV File client)

Duration Adjustment

Percentage Squeeze/Stretch

Time Squeeze/Stretch

Target Duration

Job Specific (Retime with protected segments)

Retiming Processing

Constant retime

Audio pitch correction/re-sampling

Cadence maintained (2:2/2:3/mixed/custom)

Discontinuous cadence repaired

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 and 8.1

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

DRIVER (See NVIDIA website), AMD DRIVER (See AMD website), AMD DRIVER FirePro (See AMD website)

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)

GPU must support Open CL 1.1 or above

Nvidia:

GeForce GTX

Quadro

Tesla

AMD:

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 Engineering.

ORDERING

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