**Colorfront Transkoder 2016**

Transkoder 2016 is the latest release of Colorfront’s mastering system for digital cinema and high-end UHDTV production. Colorfront Transkoder is the ultimate tool for DCP and IMF mastering, offering the industry’s highest performance JPEG2000 encoding and decoding, 32-bit floating point processing on multiple GPUs, MXF wrapping, accelerated checksums, encryption & decryption, IMF/IMP and DCI/DCP package mastering, editing and versioning.

**Transkoder 2016 adds features such as**
- Dolby Atmos audio and Dolby Vision HDR encoding, per frame metadata to OpenEXR, 
- Civolution NexGuard forensic watermarking, AS-11-DPP output, audio level meter and vectorscope, CIE XY HDR analyzer, automatic calculation of MaxFALL / MaxCLL values to be inspected in a graph window for SMPTE ST 2086:2014.

Advanced DCP/IMF mastering features include
- Time Text format (SMPTE-TT), closed caption and subtitles, including keyframe animated PNG/text based subtitles, insert editing, bitrate and PSNR analysis, two pass encoding with PSNR and bitrate targeting, package validation with logging and reporting and international language support.

**KEY FEATURES OF TRANSKODER 2016 INCLUDE**

- **DCP, IMF & AS-11 DPP**
  - Industry-leading IMF, DCP, AS-11 DPP mastering, authoring, validation, and QC tool

- **PERFORMANCE**
  - 4K DCP/UHD IMF and HEVC encoding at 100+ FPS

- **RAW SUPPORT**
  - Highest quality RAW debayering from any camera including ALEXA65, Varicam 35, Red Weapon 8K

- **COLORFRONT ENGINE**
  - 32-bits per channel managed look pipeline built on ACES 1.0

- **WATERMARKING**
  - NexGuard forensic watermarking from Civolution with extreme performance even in 4K

- **HIGH DYNAMIC RANGE**
  - Dolby Vision support and industry leading HDR mastering tools

- **DOLBY ATMOS**
  - Transkoder is certified to create DCPs with Dolby Atmos audio

- **DUAL UHD/4K OUTPUT**
  - 2x simultaneous real-time 4K video outputs for concurrent HDR / SDR mastering

- **PC, MAC AND CLOUD PLATFORMS**
  - Running on off-the-shelf workstation, no obsolescence-prone, proprietary hardware
**TECHNICAL SPECIFICATIONS**
**ULTRA HIGH PERFORMANCE AND OPEN ARCHITECTURE**
Native 64-bit application
Real-time 4K60P playback of most RAW camera formats
32 bits per channel, floating point image processing
Python scripting for flexible customization
Watch folders and full featured REST API
Automatic QC tools and PDF report generation
SMPTE ST 2086:2014 Dynamic metadata support

**DCP AND IMF MASTERING**
InterOP and SMPTE packages
Encryption and KDM generation
MXF wrapping for video and audio
Checksum calculation
Supplemental DCPs / versioning
Validation tools with reporting
Package naming based on DCI convention
Stereo 3D support
High Frame-rate support
PNG/timed text animated subtitles
Closed caption support
Dolby Atmos and D-BOX support
Insert Editing for IMF / DCP / AS-11 MXF
Bitrate and PSNR analysis tools
Dolby Vision metadata support
App2E+ IMF with HDR support
Automatic trans-wrapping engine

**COLOR CORRECTION AND IMAGE PROCESSING**
Full ACES 1.0 workflow support with IDT, RRT, ODT
ASC-CDL import / export in CMX EDL, ASC CCC
1D and 3D LUTs in .cube and .3dl formats
Resizing and anamorphic squeeze
UltraScaler - high quality resize engine for HD to UHD scaling
DVE - reposition, resize, rotation, flip & flop
Burn-in - text burn-in of multiple metadata including KK, TC, user text, watermark, logo, and spoiler, letterboxing
Advanced monitor calibration including probe support
High Dynamic range expansion
Advanced Look Design tools

**SUPPORTED FORMATS**
**SOURCE MEDIA & CAMERA FORMATS**
Uncompressed media (DPX, TIFF)
OpenEXR uncompressed 16bit format support
Sony F65RAW/F55RAW/F5RAW, XAVC 4K
Canon C500 RAW, 4K XF-AVC INTRA
Panasonic Varicam 35 AVC-Intra and VRAW
Alexa ARRIRAW, including Mini, MXF (RAW), SXT and ALEXA65 RAW
ProRes 422 and 4444, including XQ
Phantom, S12K, Aaton, Indicum etc.
Blackmagic Cinema Cameras, Cinema DNG
Red (R3D) support with GPU deBayer including 8K Weapon
Panasonic Varicam 35, AVC-Intra 422,444,LT (4K, 2K, HD) and VRAW
XDCAM
JPEG2000 MXF and J2K/J2C
DSLR RAW (CR2, NEF, ARW)
Various H264 formats
YUV 422 uncompressed AVI

**ENCODING FORMATS**
High Efficiency Video Codec (HEVC)
VFX export in DPX and OpenEXR format with per-frame metadata
Digital Cinema Package (DCP) with subtitles, CC, encryption
Interoperable Mastering Format (IMF)
3:2 pull-down for Quicktime ProRes deliverables
AS-11 DPP MXF, AS-02, Dolby Vision MXF
Apple ProRes (444, 422, Lt, Proxt, HQ) PCM / AC3 audio
Avid DNxHR and DNxHD MXF and DNxHD QuickTime files, SD codecs
MPEG4 H.264 for broadcast and web delivery including 10-bit / x264
MPEG2 for authored DVDs, chaptered Blu-ray, etc.
MPEG TS H.264 10bit at various bitrates with AC3 audio
XDCAM
DPX, TIFF, OpenEXR, JPEG2000, JPG
WAV broadcast wave audio files, stereo and multi-channel

For more information, please visit: www.colorfront.com.

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