

colorfront 

Transkoder 2016



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TRANSKODER IS BASED ON COLORFRONT'S AWARD WINNING ON-SET DAILIES ARCHITECTURE AND USES COST-EFFECTIVE, COMMODITY HARDWARE TO DELIVER FASTER-THAN-REAL-TIME PROCESSING TO TRANSCODE, DECODE, CONVERT, WRAP AND PROCESS FILES TO VARIOUS HIGH-END FORMATS.

Transkoder 2016 is the latest release of Colorfront's mastering system for digital cinema and high-end UHD TV 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 **Dolby CMU control** 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 Photon, multi-channel audio labeling and naming templates.



TRANSKODER 2016 IS THE LATEST RELEASE OF COLORFRONT'S STANDALONE MASTERING SYSTEM FOR DIGITAL CINEMA AND HIGH-END UHD TV PRODUCTION, BASED ON COLORFRONT'S AWARD WINNING ON-SET DAILIES ARCHITECTURE.

Running on the latest **Mac** and **PC** platforms, including the latest **Supermicro** and **HP Z840** workstations and the **Mac Pro**, **Transkoder 2016** allows online editing of RAW camera data, converting to various output formats, color grading and mastering for HDR and rendering various **2K/4K/UltraHD** high-end delivery and mezzanine formats.



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, HDR10 and HLG 1.2 support with 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
- Stereoscopic 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, SI2K, Aaton, Indicom 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, JPG2000, JPG
- WAV broadcast wave audio files, stereo and multi-channel

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

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