MARQUISE
TECHNOLOGIES

TORNADO

The world's fastest transcoding engine for IMF, DCP and more

TORNADO is a transcoding engine designed to be integrated in the facilities' infrastructure: Film labs, post houses, VFX studios or OTT vendors can build their own automated transcoding workflows using TORNADO's API.

Designed to achieve up to 240 FPS in JPEG2000 encoding at 4K resolution, TORNADO is the most powerful transcoding solution on the market.
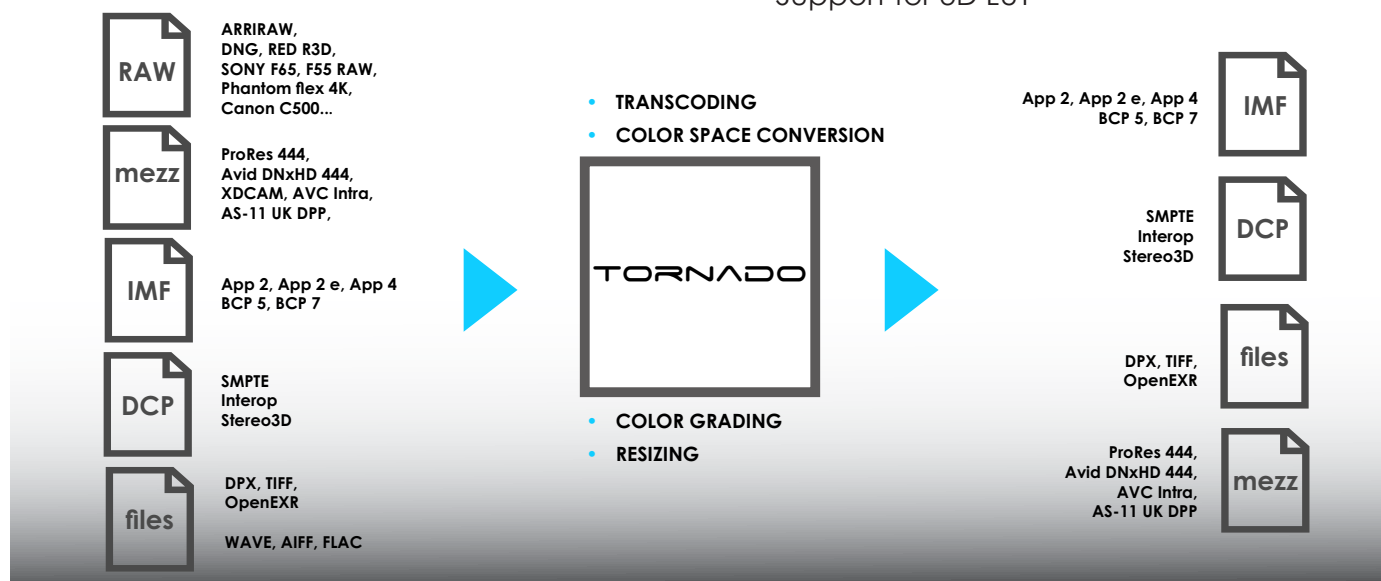
Extensive source media support

- TORNADO supports natively RAW data at the camera resolution (ARRIRAW, DNG, RED R3D, SONY F65, F55 RAW, Phantom flex 4K, Canon C500, etc..)

- Support for mezzanine formats such as ProRes 444, Avid DNxHD 444, XDCAM, AVC Intra, AS-11 UK DPP, IMF

- Support for Interop and SMPTE DCP, including stereo3D DCPs up to 120 FPS

- Support for uncompressed formats such as DPX, TIFF, OpenEXR, etc…

- Audio support includes WAVE, AIFF and FLAC

Multiple Transcoding capabilities

- Simultaneous multiple rendering streams from the same source media

- Mezzanine formats such as ProRes 444, DNxHD 444, AVC Intra, IMF

- Delivery formats such as DCP, AS-11 UK DPP, HEVC, H264

- Uncompressed formats such as DPX, TIFF

Image Processing

- Image resizing (Pan & Scan) for resolution from SD to 8K

- Color space conversion (support for REC 601 / 709, REC 2020, DCI XYZ, ACES 1.0)

- Primary Color correction

- Support for 3D LUT

RAW — ARRIRAW, DNG, RED R3D, SONY F65, F55 RAW, Phantom flex 4K, Canon C500...

mezz — ProRes 444, Avid DNxHD 444, XDCAM, AVC Intra, AS-11 UK DPP,

IMF — App 2, App 2 e, App 4 BCP 5, BCP 7

DCP — SMPTE Interop Stereo3D

files — DPX, TIFF, OpenEXR / WAVE, AIFF, FLAC

- TRANSCODING
- COLOR SPACE CONVERSION

TORNADO

- COLOR GRADING
- RESIZING

IMF — App 2, App 2 e, App 4 BCP 5, BCP 7

DCP — SMPTE Interop Stereo3D

files — DPX, TIFF, OpenEXR

mezz — ProRes 444, Avid DNxHD 444, AVC Intra, AS-11 UK DPP

DCP Support

- Support full 2K and 4K DCI specs, including Stereo3D and up to 120 FPS

- Support for Interop and SMPTE DCP

- Creation of supplementary packages

- Subtitles support includes MXF, PNG, XML InterOp (Texas Instruments CineCanvas) and XML SMPTE (D-Cinema SMPTE 428-7)

- Support for Close Caption (MXF SMPTE Timed Text)

- Validation process with more than 50 tests on the packages

- Track essence encryption and DKDM generation

- Repair and re-wrap functionalities

IMF Support

- Support for IMF App #2, App # 2 e, App 4*

- Includes support for BCP 5 and BCP 7

- Support of TTML for Subtitles and C.C.

- IMF functionalities include creation of IMP and supplemental IMPs, merge and split of packages, repair and re-wrap.

- Support of multiple soundfields

- Validation process with more than 50 tests on the packages

* not yet standardized, subject to modifications

PRODUCT RANGE

Black TORNADO

Transcoding appliance with dedicated hardware acceleration for JPEG2000 transcoding

Support up to 4 boards for JPEG2000 encoding, each one being capable of 60 FPS at 4K resolution, achieving up to 240 FPS at 4K.

Rackable 4U Case

API documentation (REST + CLI)

Blue TORNADO

Transcoding software with GPU acceleration for JPEG2000 transcoding

Support for multiple streams of GPU processing

API documentation (REST + CLI)

Requires Windows 7 64 bit, single or dual CPU, and minimum 1 NVIDIA GPU with a CUDA index of 3.5