Tachyon©
By Cinnafilm®

THE SOLUTION FOR VIDEO CONVERSIONS

Like its faster-than-light namesake, Tachyon does the seemingly impossible and often faster than real-time.

Specifications

- Supported conversions:
  - NTSC, PAL, 525, 625
  - DCI and Broadcast: 2K, 4K, 5K, 6K, 8K
- Advanced, two-stage deinterlacer
  - 100% vertical resolution
  - 95%+ elimination of aliasing from older SD material
  - Field rate becomes frame rate
- Telecine & patterns removed:
  - 5:4 ratio telecine (AA, BB, BC, CD, DD)
  - 2:2:2:4 pattern (A, B, C, D, D)
  - Euro pattern
  - Repeated progressive frames
  - Broken pattern identification and removal
- Interlace-aware up/down image scaling any resolution up to 8K, 8K down to any resolution
- Advanced sharpening algorithms for image scaling
- Residual combing removal from composited cadence errors
- Real-time output for up to UHD resolution and 50p/60p interchange from a single Telsa V100 (or Quadro/Titan equivalent)
- Companies/transcoders integrated:
  - Dalet Amberfin
  - Encoding.com
  - Evertz Mediator-X
  - HS-ART Diamant
  - Imagine Selenio-Flex File
  - OwnZones
  - PixelStrings (Cinnafilm)
  - Root6 Content Agent
  - Telestream Vantage
  - Vidispine
- Compute requirements:
  - NVIDIA GPU – Kepler class or newer
  - Preferred GPU class – Pascal or newer
  - CPU – not a factor other than ensuring the decoder can supply GPU with enough frames to fill the pipeline

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Overview

Tachyon was created from the ground up for file-based workflows and has always been Nvidia GPU-based to achieve unparalleled performance. There is not another conversion product created for enterprise-grade transcoders that can match the speed and scalability of Tachyon for performing the following:

- Motion compensated-based frame rate conversions for superlative standards conversions
- Advanced, two-stage deinterlacing that nearly eliminates all aliasing in SD content and extracts every possible detail from interlaced HD sources
- Telecine and pattern removal including progressive patterns and patterns with broken cadences
- Resolution interchange (upscale/downscale) up to 8K
- Mixed-mode normalization identifies normalizes disparate video essences
- Motion blur insertion when converting from higher digital rates to lower filmic rates
- Solutions for maintaining filmic look when converting to higher frame rates

Features

- Phase correlation-based, motion compensation engine
- Frame rate conversion
- Ability to synthesize new frames to preserve natural motion
- Format and standards conversions – ANY to ANY
- Highest quality deinterlacing
- Interlace-aware up/down rescaling SD – 8K+
- Inverse telecine
- Broken pulldown cadence detection and correction
- Compositing errors cadence correction
- Multiple telecine pattern insertion
- Output speeds of real-time or faster with a single GPU