



Motion Picture Film Scanning System

Features

Quality

- High precision optics and CCD area imager
- 2K and 4K imaging resolution options
- Optical or mechanical pin registration options for optimum image stability
- Double and Triple-Flash High Dynamic Range (HDR) ^{NEW} for best print film shadow detail
- Continuously self-calibrating, cool LED light source avoids heat damage to film.
- Enclosed cabinet with positive pressure HEPA filtration avoids dust contamination from normal office environments.
- Infrared dust and scratch detection/reduction with Kodak's DIGITAL ICE Technology option.
- Optical scratch and fingerprint reduction
- Aperture and shading correction
- Meticulously calibrated, aligned and tested at the factory.
- Self-calibrating intensity, focus, and film base
- Full one year warranty (parts and labor)
- Extended warranty available



Flexibility

The Director's future-proof modular design allows for quick and easy onsite option changes, upgrades and maintenance.

- Streamlined Archival Film Scanning and Restoration.
- No-risk system intergration.
- Film gate options:
 - 35mm 2/34 perf negative film
 - 35mm 2/34 perf print film
 - 35mm 2/34 perf restoration negative film
 - 16mm/Super 16mm
- Full transport and scanning control.
- 16mm/35mm optical and 16mm magnetic soundtrack reader options featuring:
 - Automatic alignment
 - Simultaneous scanning of image and soundtrack
 - Synchronized image and sound output to QuickTime or WAV file
 - Reduced frame rate sound scanning for fragile film
- Adjustable horizontal and vertical framing
- Selectable imaging speed from 1 to 14 frames/second
- KeyKode Reader with KeyKode-based job management
- Automatic or manual DMin calibration
- Multiple simultaneous output resolutions and data formats including DPX and all popular QuickTime codecs.

Speed

Telecine is Dead!

The Director isn't just fast, in a file-based workflow its faster than the traditional telecine model.



- 14 frames/second at 1.85
- 11 frames/second at full aperture
- 3 frame/second for 4K, full aperture
- Fast HD QuickTime Dailies
- Fast shuttling option up to 100 frames/second with image preview and KeyKode recognition.
- Fast interactive grey balance and base calibration

Simplicity

Simplicity and ease of use are hallmarks of Lasergraphics products. Installation and setup of *The Director* takes less than 2 hours and the intuitive graphical user interface makes it easy to begin scanning within minutes.



- Host computer pre-configured and ready to use with MS Windows and Lasergraphics *CineDirector*™ Motion Picture Film Scanning System software.
- *RollView*™ with thumbnail preview and automatic clip/splice detection at up to 100 frames/second.
- Per-clip color grading
- Negative film type optimization
- Preview full screen image as it would appear on print film and adjust printer lights for optimal display (does not affect scanned image data).
- Visually select scan area of frame



Modular design for easy option changes.



FTS International Pty Ltd
 PO Box 387 Miranda NSW 1490
 Ph./Fax +612 9545 6322
 Mob. +614 1720 3424
 Email: fts-international@optusnet.com.au
 www.fts-international.com.au



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Specifications

Imaging System

- High MTF resolution adjustable focus lens
- 12 µm x 12 µm scanned pixel size on film (2K)
- 6 µm x 6 µm scanned pixel size on film (4K and 16mm)
- 10-bit log or 16-bit linear bit depth (data format dependent)
- 4:3, 16:9 and 1.85 aspect ratios
- 2K, HD and SD output resolution

Color Conversion Matrix

- Printing density or custom

Light Source

- Ultra stable, high intensity, low heat RGB LEDs
- Custom integrating sphere for uniform illumination.
- 100,000 hour lifespan

Film Capacity

- 2,000 feet

Film Transport System

- Continuous motion servo film drive for constant film tension.
- Film transport options:
 - Precision pin-registered Acme mechanism and pressure plate
 - Sprocketless capstan drive system with optical pin registration
- Selectable transport over particle transfer rollers
- Shrunk film handling up to 5.5% (sprocketless) and 2.5% (sprocketed)

KeyKode Reader (included)

- 16mm or 35mm

Soundtrack Reader (optional)

- Automatic alignment
- 16mm magnetic or
- 16mm/35mm optical
 - Reads variable area stereo optical silver or cyan soundtracks.
 - Reads positive or negative soundtracks

Film Types

- Negative, Intermediate, Interpositive, Print, Color and B&W

Output Data Formats

- DPX (conforms to SMPTE 268M for compatibility with graphics, compositing, and other post production systems).
- QuickTime (H.264, DVCPRO HD, Blackmagic Design, CineForm, DNxHD and others)

Host Computer (included)

- High performance multi-processor computer
- Preconfigured with MS Windows and Lasergraphics *CineDirector™* software.
- Wide format LCD monitor
- PCIe slots for high speed connectivity (e.g. customer-supplied 10Gb Ethernet, Fibre Channel, etc.).
- Optional RAID5 internal storage up to 7TB
- Rack-mounted chassis

Scanner Base Cabinet

- Dual 19" rack-mounts for host computer and customer-supplied subsystems.

Weight

- Scanner & Base Cabinet w/Host Computer - 441 lbs. (200 kg)

Dimensions

- 65" H x 45" W x 27" D (165 cm x 114 cm x 69 cm)

Operating Environment

- 15°C to 30°C
- 15% to 85% relative humidity non condensing
- 90-250V ~50/60Hz 750W

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FTS International Pty Ltd
 PO Box 387 Miranda NSW 1490
 Ph./Fax +612 9545 6322
 Mob. +614 1720 3424
 Email: fts-international@optusnet.com.au
 www.fts-international.com.au