

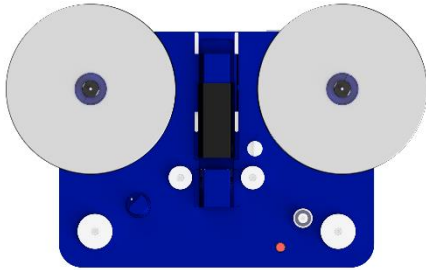


EZ16

Reel easy

For the Masses

Digitization made EZ



Simple

EZ16 can be operated by nearly anyone. With minimal setup and overhead, EZ16 is ready to go.

EZ16's workflow requires no expertise or prior knowledge of film types. Anyone can digitize films in the shortest possible time. After digitization, films are smoothly wound at suitable tensions for storage or shipping.

Versatile

Small enough to sit on a desk, light enough to move between workstations, EZ16's design is the most dynamic and unique digitization platform on the market.

EZ16 is machined from a single piece of aluminum. Precise construction and minimal moving parts ensure effortless and inexpensive maintenance for years to come.

Speedy

Set up is impossibly fast. There's no need to prep your film. Simply take it out of the can and thread it into the spools.

EZ16 has been designed to remove as many barriers to digitization as possible, so you can get your collection scanned, catalogued, and analyzed as quickly as possible, before time runs out.

Expandable

No motion picture film archive is the same. EZ16 is a platform that adapts to your collection's unique needs.

With swappable adapters, spacers, camera modules, storage, and more, EZ16 gives you the options you need as you need them, without a massive up-front commitment.

Advanced Features

Advanced Workflow

No need to spend many hours preparing films before they go onto a machine. Simply take the film out of the can, and thread it onto the EZ16. It doesn't matter if it is tails out and backwards, EasyReel™ will fix it!

Film repair and winding has traditionally been the most time-consuming step in digitizing films. EZ16's workflow eliminates that costly and slow film preparation.

AI Control

EZ16 uses an algorithm to control the torque motors, taking the guesswork out of revealing the reel.

EZ16 is designed to keep things simple. EasyReel's AI does the heavy-lifting, analyzing your film, frame-by-frame to detect damage and help you digitally triage your collection before sending to a specialist or hosting in an online archive.

Sprocket-less Transport

Super gentle handling so even highly distressed films can be successfully digitized by EZ. Choose between 3 different winding tensions to ensure success.

And don't worry about accidental film breakage, the EZ16 is designed to stop automatically if it senses a change in tension.

Ease of Use

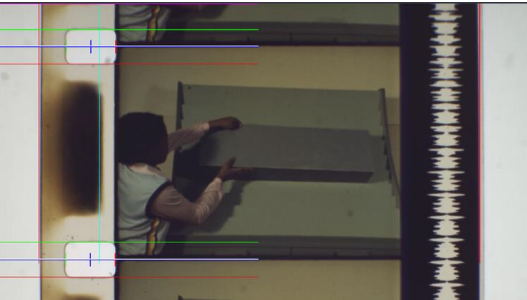
EZ16 is designed to get out of your way, without sacrifice.

With runout detection, a magnetic audiohead, and platters that support up to 2,000 feet of film, you can trust EZ to not only meet your needs, but exceed your expectations.

EasyReel™ Technology

AI-Assisted Analysis

EasyReel uses computer vision to develop an objective analysis of the state of your film, detecting perforation integrity, shrinkage, stretch, and edge deviation, and then building a condition report on your film, offering a detailed assessment of damage.



Film Inspection

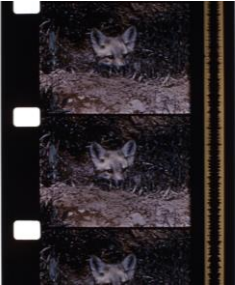
Film Condition Reports are developed automatically and include the Reel ID, any operator observations (odor, etc.), and detailed analysis made by our AI.

EasyReel identifies lengthwise and lateral shrink/stretch, vertical and horizontal perforation distortion, and edge damage, and includes technical metadata to help catalogue and archive efficiently.

FILM CONDITION REPORT				
Reel ID: 8-mm-Hong-Kong.				
Feet of Film Inspected: 286				
Inspection Date: 2022-12-27				
Report Generated: 2022-12-27				
Generated by User ID: Jenna Smith				
Profile				
The following values are EZ16 operator observations				
GAUGE	FORMAT	SOUND	PROCESS	ODOR
18mm	1-pf	None	1/4	none
Notes taken after inspection: A traveling around Hong Kong. Judging from cars and double decker buses, it looks like the early 1950s or late 1940s. I found it fascinating to watch. I can't tell if it's a reprint but it looks good for 8mm of this vintage. Shrinkage shows, it's best to watch the Full workprint to see it. For the movie workprint, a video editor can do that.				
The following values are the result of computer vision analysis				
Shrink & Stretch				
These values represent overall shrink and stretch of the film as a whole				
Lengthwise Shrink	0.147%			
Lengthwise Stretch	0.119%			
Lateral Shrink ¹	0.066%			
Lateral Stretch ¹	0.151%			
Edge Deviations				
These values represent percentage of edge damage and deviations of the film				
Left Edge	0.000%			
Right Edge	0.000%			
Overall Edge ³	0.000%			
Left Perforation Integrity & Uniformity				
These values represent focal variations, as a % of frames where the following are present:				
Vertical Perf Distortion	0.367%			
Horizontal Perf Distortion	0.310%			
Lengthwise Shrink ²	0.163%			
Lengthwise Stretch ²	0.068%			
Lateral Shrink ^{1,2}	0.066			
Lateral Stretch ^{1,2}	0.173%			
Right Perforation Integrity & Uniformity				
These values represent focal variations, as a % of frames where the following are present:				
Vertical Perf Distortion	N/A			
Horizontal Perf Distortion	N/A			
Lengthwise Shrink ²	N/A			
Lengthwise Stretch ²	N/A			
Lateral Shrink ^{1,2}	N/A			
Lateral Stretch ^{1,2}	N/A			
¹ May represent variation in sitting width at time of manufacture. ² 2 or more the "nearest" values used above. ³ overall doesn't count both edges of a frame but only if a frame has either/or				
Frames with edge deviations				
The following numbers represent the frames that edge deviations were detected on 832, 833, 851, 1148				

Workprints

EasyReel allows the operator to create FFMPEG files in three crops: Full Sensor, Inspection, and Movie.



Full Crop

This is a camera's full field of view including two adjacent film frames. Overlays can be applied to identify frame numbers, time, and Reel ID (film's unique identifier).



Inspection Crop

This crop shows edge-to-edge over scan so archivists and others can examine edge codes, edge damages, sprockets, type of sound, etc. AI stabilization is not applied.



Movie Crop

Sprockets and edges removed from view, while AI stabilizes the imagery to reduce jitter commonly visible in motion picture film.

Market Comparison

	EZ16	Competitor 1	Competitor 2	Competitor 3
Film Gauges Supported	8mm, Super 8mm, 16mm	8mm, Super 8mm, 9.5mm, 16mm	16mm, Super 16, 35mm, Super 35mm	8mm, Super 8mm, Double 8mm, 9.5mm, 16mm, Super 16mm, 17.5mm
Platter/Reel Capacity	2000ft	???	2000ft	2000ft
Capture Resolution/MP	5MP (2448x2048), 24MP (5328x4608)	12MP (4096x3000)	12MP (4096x3072)	"5K"
Color Depth	Bayer 8, Bayer 12	Bayer 8, Bayer 10, Bayer 12	Bayer 12	Bayer 8, Bayer 10, Bayer 12, Bayer 16
Output Resolutions	SD, HD, Full HD, QHD, 4K, 4K Film	???	Full HD, 4K	SD, HD, Full HD, 2K, 4K, 5K
Output Formats	H.264, H.265, ProRes, BMP, DPX, AVI	H.264, H.265, ProRes, TIFF, DPX, AVI	???	ProRes, DPX, TIFF, JPEG 2000
Capture Speed (fps)	5MP: Up to 60fps (all film gauges) 24MP: Up to 24fps (all film gauges)	8mm: Up to 50fps, 16mm: Up to 35fps	Up to 30fps	Up to 30fps
Rewind Speed	Up to 90fps	???	Up to 200fps	Up to 200fps
Tension	50g, 200g, 350g (selectable)	???	???	???
Optical Audio	Included	Optional	Included	Included
Magnetic Audio	Optional	Optional	Optional	Included
Specialized Training	Not Required	???	???	???
Automatic Inspection Report	Yes	No	No	No
Weight	~70lbs	~75lbs	~130lbs	~190lbs
Price	Starting at \$29,000	+\$30,000	+\$30,000	+\$40,000

Technical Specifications

Digitization Features

Film Gauges

- 8mm
- Super 8mm
- 16mm
- 9.5mm and Super 16mm Coming Soon

Film Types

- Print
- Reversal Positive
- Negative
- Color
- Black and White

Audio

- Single Pass, 44.1kHz
- Optical Channel Included
- Magnetic Channel via Optional Audiohead

Color

- 8-bit
- 12-bit

Capture Formats

- BMP
- DPX

Capture Resolutions

- 5MP – 2448x2048 (Sony IMX250)
- 24MP – 5328x4608 (Sony IMX530)

Output Types

- Movie – Active image area only
- Inspection – Full sensor width, frame height
- Full – Full sensor

Output Resolutions (Movie Crop)

- 640x480 (4x3)
- 960x720 (4x3)
- 1440x1080 (4x3)
- 2560x1440 (16x9)
- 2048x1556 (4x3)
- 2880x2160 (4x3)
- 3840x2160 (16x9)

Output Formats

- h.264 MP4
- h.264 MOV
- h.264 AVI
- h.265 MP4
- ProRes MOV
- FFV1 MKV

Transport Features

Transport Type

Sprocket-less, AI-controlled torque motors with 3 winding tensions

Portability

- Suitable for desktop use
- EZ16 and accessories – ~40lbs
- Dell 3930 1U Rack Server – ~25lbs

Capacity

- Platters – up to 2000' per capture
- Daily run capacity depends upon storage capacity, speed of capture, and staffing

Continuous Motion

- Capture speed selectable – 6fps to 60fps
- Winding speed selectable – 6fps to 90fps

Film Shrinkage Tolerance

As the transport and videos are independent of the film's dimensions, the amount of shrinkage no longer matters

Winding Tensions

- 50g – Best for distressed films, long term storage
- 200g – Suitable for most projects
- 350g – Ideal for films that will be shipped

Questions?

Contact us at sales@filmictech.com