



Mach 10

Production Microfilm Scanner

MEET (OR EXCEED) TRUE OPTICAL DPI AND SPEED REQUIREMENTS WITH EASE AND PRECISION

For archivists, records managers and service bureaus there is no greater measure of digitization success than accuracy to the original media. The award-winning [Mekel Technology MACH10 microfilm scanner](#) pairs maximum efficiency with adherence to FADGI, Metamorfoze and International Standards Organization (ISO) preservation specifications for an unmatched return on investment.



MACH 10 SCANNERS FEATURE:

- 24/7 operation with minimal maintenance requirements
- 16 mm and 35 mm microfilm capabilities
- 1,000' rollfilm and 3M/ANSI/Ektamate cartridge handling as standard
- Digital conversion to most electronic imaging formats including text-searchable PDF varieties and archival formats
- Accurate image capture from microfilm in varying states of decomposition
- Vertical transport system for stable and gentle film handling
- Fast throughput
- Highly refined precision lenses
- Mekel's one-of-a-kind **QuantumScan** and **QuantumProcess** [software suites](#)
- A sophisticated toolkit of automated and manual image processing features to guarantee the best image quality possible and eliminate the need for rescans
- 100% accurate image capture on first pass — no reloads necessary
- External PC drives the MACH10 scanner for maximum uptime and easy technology updates
- Calibrated/focused LED light source
- Sturdy case with built-in reel storage
- "Load and go" intuitive operation
- Compatible with [iMAGEhost](#)*



“ We would have to charge double or triple the price if we were using our former scanners. With the MACH scanners, we require less scanners, less operators and have been able to cut the cost of rescans due to the higher quality images. We are saving hundreds of dollars per day, pay operator, since installing the Mekel products.



Quantum SOFTWARE

Increased operator production

- Scan at full-rated speeds without operator intervention
- Drive multiple MACH10 microfilm scanners with a single operator
- Share quality assurance tasks with multiple operators

Reduce microform scanning costs

- Never search for lost images
- Eliminate the need for rescans

Guaranteed 100% image capture

Optimum image quality

Windows 10 and 11 support

Quantum Scan

Advanced Capture Software

- ▶ Speed
- ▶ Optimum Resolution
- ▶ Template Options
- ▶ Image Quality Settings
- ▶ Advanced Focus Option
- ▶ Pre-Scan Testing
- ▶ Multiple Ribbon Output Options
- ▶ Advanced Frame Detection
- ▶ Easy Transfer
- ▶ Easy Workflow Integration
- ▶ IMAGEhost Integration*



Quantum Process

Revolutionary Processing Software

- ▶ Optical Character Recognition (OCR)
- ▶ Batch Processing
- ▶ Strip Zoom Capability
- ▶ Editing Toolkit
- ▶ Automatic Frame Detection
- ▶ Fixed-Grid Frame Replication
- ▶ Blip Removal
- ▶ Irregular Frame Flag
- ▶ Custom Processing
- ▶ Multiple Output Options
- ▶ Easy Workflow Integration
- ▶ Image Enhancement
- ▶ File-Naming Features
- ▶ Auto Split and Book Mode
- ▶ "Go To" Command
- ▶ Re-Detect Frames
- ▶ Blackout Framing
- ▶ Document Separation Tagging

HARDWARE

Camera/Optics	Up to 12-bit dynamic range with gamma correction grayscale output. Full depth of pixels processed. Superior real-time or post-scan image processing speed Direct path imaging: camera, film and light source are in-line to ensure optimum image quality Full 8,192 pixel CCD array for highest true optical dpi in the industry Automatic Gain Control (AGC) to optimize image quality while scanning Mekel smoothlight fiber optic bundle balances lighting across entire scan area; no hot spots or shadowing
Resolution	100-600 true optical dpi; 4x-96x reduction ratio range
Film Types (100', 215' and 1,000' roll standard)	16/35 mm microfilm; ANSI, M-types, Kodak Ekamate and open spools; simplex/duplex; positive/negative; silver, diazo and vesicular formats
Hardware Image Enhancement	Real-time image sharpen and enhancement done in hardware with no reduction in throughput
Film Control	Electronically controlled film format selection for precise positioning of the CCD camera and lens High-speed rewind
Hardware Notables	Industry-leading reliability Film cleaning rollers: custom technology cleans film as it scans if desired No pinch rollers to dislodge or separate brittle/old film splices Superior transport stability via vertically aligned film transport system Completes rolls in half the time using speed mode No adaptive speed control necessary

SCAN SPEEDS

QuantumScan Speed (100' roll, 200 dpi)	3 mins
QuantumScan Speed (100' roll, 300 dpi)	4.5 mins
Rollfilm Speed (per image) (**200 dpi using speed mode)	700 images/1400 images** or more per minute

PROCESSING AND OUTPUT

Quantum Image Processing	Task set up by job or saved in set-up file 1600 images or more per minute (32 bit; 64 bit higher) Single-, double- or triple-level blip code detection Full frame, leading and trail edge image detection
File Formats	Simultaneous grayscale and bitonal output; single or multi-page TIFF and PDF; TIFF (G4/LZW/uncompressed), JPEG, PDF, PDF/A, JPEG2000, bitonal CALS type 1 and others; OCR output to single/multi-page .PDF, .TXT and HOOCR formats
IMAGEhost Option*	Crowley software platform for online image hosting, storage, easy retrieval, editing and output

GENERAL TECHNICAL INFORMATION

Agency Approvals	FCC, UL, RoHs and CE certification
Power Requirement	50Hz or 60Hz; 90-240v; 500w, single-phase switch for domestic or international use
Operating System	Windows 10 and 11 Pro Includes external Dell high-end multi-processor, multi-core workstation for maximum uptime and performance Visit www.thecrowleycompany.com for full PC specs
Dimensions (LxWxH)	15.5 x 15.5 x 22 in (394 x 394 x 560 mm)
Weight	50 lbs/22.7 kg