

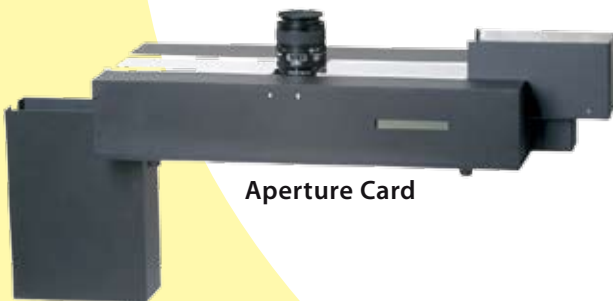
3 in 1 TurboScan Microfilm Scanner - A New Generation



Rollfilm



Ultrafiche



Aperture Card



Base Unit

- 3 in 1 Modular Design
- Outstanding Quality
- Dual Stream Output
- 12-bit Grayscale
- Scalable Solutions
- Fastest ROI
- True DPI

SunRise Imaging has continued to lead the microfilm scanner industry since 1991 with evolutionary new products.

The SunRise signature scanners: 3 in 1 TurboScan,[®] the latest in the SunRise family, together with the powerful new ScanFlo application software takes advantage of the latest in scanning, image processing and computing technologies.

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Hardware Specifications

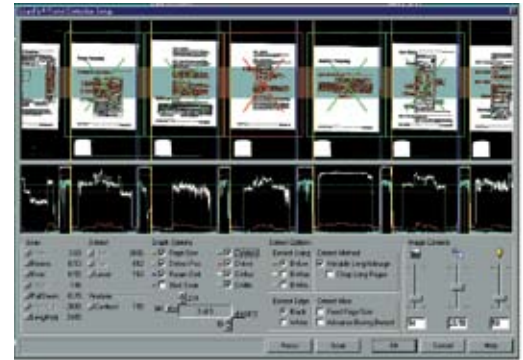
The SunRise 3 in 1 scanning system consists of a Base Unit which includes, computer, software, scanner controls, camera & light source. A Rollfilm, Ultrafiche, or an Aperture Card module completes the system for any type of microfilm to be scanned.

Features of SRI Scanner	3 in 1 TurboScan
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3 in 1	Yes
Dual stream	Yes
True output resolution	Yes
Selectable camera resolution	Yes
Upgradeable	Yes
Module interchangeability	Yes

Software:

Operating System: Windows XP Pro Applications	Yes
ScanFlo professional	Included
RowScan	Option
ReelScan	Option
Remote access diagnostics	Yes



ScanFlo applications makes it easy and fast for you to setup and operate your 3 in 1 scanner

Computing System

Processor	AMD Dual Core 5000
DRAM	2 Gbyte
Hard drive	Dual SATA 320 GByte
Optical drive: Dual layer DVD writer	Yes
Flash drive	Yes

I/O

USB 2.0: Front panel -2, Rear panel -4	Yes
Display:	Analog & DVI
Mouse & Keyboard	Yes
LAN: Gigabit Ethernet	Yes

Imaging

Linear CCD 8160 pixel array	Yes
Camera	SRI-TurboScan
Lens: Nikon 60mm f/2.8	Yes

Performance

Rollfilm	375 ppm
Ultrafiche (without RowScan)	75 ppm
(with RowScan)	150 ppm
Aperture Card	700 pph

Note: Performance data is based on using SRI production test film and is provided for reference only. Performance is highly dependent upon film characteristics and quality. SRI test film specifications are.

Rollfilm: 16mm, 200dpi, 24x reduction

Ultrafiche: 5 rows x 14 images, 200dpi, 24x reduction

Aperture Card: Sizes 26.4"x15.9", 200dpi, 8-bit grayscale, 24x reduction

Electrical

Input power:	110/220 VAC, 47-63 Hz, 5.0/2.5 Amp (surge protection recommended)
Temperature:	Operating 10 to 24°C (50-75°F), Non-operating 0-70°C (0-158°F), Variation 4°C (40°F)/hour
Relative Humidity (noncondensing):	Operating 10% to 90%, Non-operating 5% to 95%
Airflow Criteria:	Operating: 1.05-1.4 CMM (37-50 CFM)
Altitude:	0-3048 meters (0-10,000 feet)
Safety:	FCC Class A, CE ITE Class I

Software Specifications

The new family of SunRise 3 in 1 microfilm scanners now include many of the capabilities that were available options (such as Image Density Compensation, Gamma Correction, Grayscale), as standards. In addition, many new ones have been developed to provide higher level of functionality.

Features of ScanFlo

Grayscale scanning	Up to 12 bit
Image processing	Bi-tonal & 4, 8, 12-bit grayscale. Grayscale edge detection, Crop & deskew, Rotation, Segmentation, Blip detection
Post processing	View saved images, flip, rotate, invert and save
Special features	Rollfilm – option to skip blank pages Ultrafiche – apply four different image processing options on same fiche
Display	Selectable between bi-tonal & grayscale display based on the type of scan
Digitized data stream	Simultaneously bi-tonal and 8 bit grayscale with different naming options
TIFF files	Compressed multi page tiff for bi-tonal
File formats	Separate options for bi-tonal & grayscale and bi-tonal in file preferences
Crop & deskew	Crop & save with or without deskewing
Scan settings	Parameter changes are remembered & shown across all windows
User interface	Improved UI by logically grouping all the fields
Error reporting	Enhanced error logging & reporting
Rescan	Real time image processing eliminates the need to rescan to see the changes
Ease of use	Switch to a specified sub-window in processor window, by specifying the name, or selecting the part of the image in the original sub-window
Utility	Focus utility to help users choose head height and focus
Help	Extensive dialog specific help displayed without search

Microfilm support

Film polarities	Negative/Positive
Reduction	7x – 72x - Scanner DPI range: in half resolution (4K) mode is 2,500 – 11,000 pixels per inch in full resolution (8K) mode is 4,900 – 23,000 pixels per inch <small>A scanner's DPI is the product of the microfilm image reduction ratio and the desired DPI. The above minimum range can be lowered for images with very low reduction ratios by using optional extension tubes.</small>
Document size	A0 – A4 (A – E)
Film formats	Standard & most non-standard
Compression types	Bi-tonal: TIFF uncompressed, TIFF CCITT G4, Multi page TIFF Grayscale: TIFF uncompressed, TIFF LZW, JPEG (8-bit), GIF (8-Bit)

Mechanical

Dimensions (max)

Base Unit: H 29" (74 cm) x L 30" (76 cm) x W 14" (36 cm)

Base Unit + Ultrafiche: H 29" (74 cm) x L 30" (76 cm) x W 28" (71 cm)

Shipping container - Base Unit: H 32" (82 cm) x L 34" (86 cm) x W 20" (50 cm)

Weight (max)

Base Unit: 80 lbs (150 lbs with shipping container)

Module - Ultrafiche: 37 lbs (47 lbs with shipping container)

Base Unit + Rollfilm: H 29" (74 cm) x L 30" (76 cm) x W 24" (61 cm)

Base Unit + Aperture Card: H 29" (74 cm) x L 30" (76 cm) x W 36" (92 cm)

Shipping container - Module: H 13" (33 cm) x L 34" (86 cm) x W 18" (46 cm)

Module - Rollfilm: 18 lbs (27 lbs with shipping container)

Module - Aperture Card: 27 lbs (37 lbs with shipping container)

(Note: The Base Unit and the modules are shipped in a separate container)

Modules

Rollfilm



Film types:

16mm, 35mm (edge to edge)
Cine/Comic (Portrait/Landscape),
Simplex/Duplex/Multiplex, COM
Roll, Oil Well Logs

Options: 1000 ft reel attachment;
16mm 3M cartridge adapter

Ultrafiche



Film types:

Standard and jumbo fiche, Jacketed,
Cine/Comic (Portrait/Landscape),
Simplex/Duplex/Multiplex, COM,
Oil Well Logs, AB Dick, Microx,
Step & repeat fiche

Options: Reflective title bar;
AB Dick locator pins and filter

Aperture Card



Film types:

Cine/Comic
Multiple T-Card

Standard:

Hollerith code reader



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