

ScanFlo Professional

About ScanFlo

The SunRise microfilm scanning systems, are a multi-format modular architecture for scanning rollfilm, microfiche and aperture card microfilm. ScanFlo is the name of the setup and operating software that is used in these systems. As the name ScanFlo might suggest, it provides continuous scanning of microfilm, as opposed to a manual operation of scanning one image at a time.

ScanFlo is an all-encompassing realtime application. It controls the movement of the microfilm being scanned, light adjustments, image capture, digitization, image processing and saving of these images to a location based on user preference. The location may be the internal hard drive, CD/DVD recorder, an external storage device, or a network server.

The current version of the application is called ScanFlo Professional. It runs under the Windows XP Professional operating system, on an embedded PC system, integrated in the SunRise scanners. As with the earlier versions, the key functionalities of the SunRise software application are:

- Simplify and automate microfilm scanning operations for the user by providing one single software for the greatest variety of microfilm
- User interface to the scanner, and the modules, identify the type of microfilm module, scan the images and convert the images into digital data
- No additional computer device is required to scan and process the digitized data (except a display monitor)

The ScanFlo application interacts with the user in initial setup of parameters via a series of dialogs. User defined values are based on the type of microfilm to be scanned, its content, and output of the desired end result. Once the settings are established, ScanFlo executes the microfilm scanning process automatically. This includes all image capture, processing and motor control operations. The image files are saved in the required format and location. Since 1991, when ScanFlo and the unique 3-in-1 scanners were first developed by SunRise, the application has continuously evolved to include new concepts, features and enhanced capabilities. Many of the image enhancement functions that were prior options, are now integral to ScanFlo. New software algorithms have been developed that maximize the power of new hardware and operating system – resulting in higher speed performance and image quality. Some distinctive technologies that are an integral part of ScanFlo include:

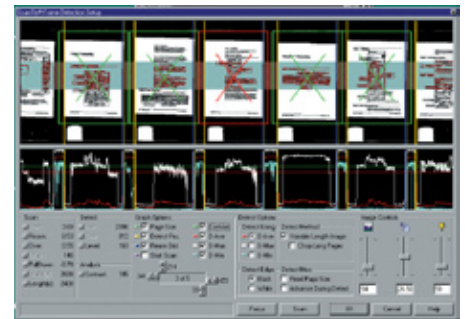
- Simultaneous bi-tonal and grayscale streaming
- Gamma correction – compensates for grayscale contrast
- Advanced image processing options to improve the quality of the scanned images
- Image density compensation – allows original text on poor film to be rendered legible as a bi-tonal image
- High definition grayscale capabilities ideal for scanning historical archived documents, photographs and newspapers

Image Density Compensation

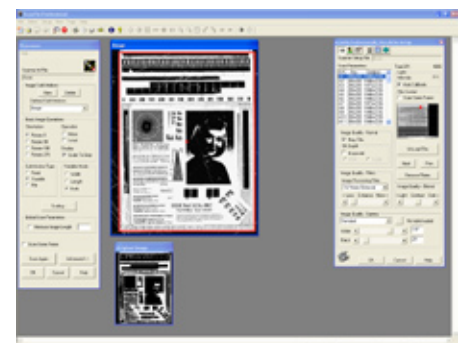
IDC is an automatic image density compensation technology that uses an adaptive threshold technique to correct contrast variances between images. IDC is also known as “Dynamic Thresholding” or “Adaptive Thresholding.” This feature is used to help correct problems with variable density film. Although IDC is a powerful technique in image enhancement, it cannot fix bad film with problems such as out-of-focus images, missing data, or transparent or opaque frames. IDC may be used in all three microfilm Modules.



ScanFlo software is provided with SunRise 3-in1 scanners



ScanFlo Application Makes It Easy and Fast to Setup and Operate Your Scanner



ScanFlo main screen

ScanFlo

Gamma Correction

Gamma Correction, as applied in imaging, generally means compensating for film non-linearity. In SunRise scanning systems, Gamma Correction accomplishes several things that enhance image quality: removal of spurious image components and selecting the best grayscale level. It can be adjusted to bring in more, or less, image information from the background, foreground, or both. This feature is especially beneficial for illegible text documents. Gamma Correction may be used in all three microfilm Modules.

High Definition Grayscale

Grayscale is used to bring out lost details of historical documents and photos and makes them more legible in comparison to bi-tonal scanning. SunRise scanner's have the ability to capture data in 12-bit mode, making it unique and allowing the user to obtain the highest image quality. The 12-bit grayscale data can be reduced down to 4-bit, 8-bit, or bi-tonal, as required by the user. Grayscale is applicable to all three microfilm Modules.

Advanced Productivity Options (APO)

APO includes image enhancement utilities such as: positive or negative film scanning, auto image file overwrite, rotation, scaling, deskew and crop, multi-level blip detection, and mirroring. APO is applicable to all three microfilm Modules.

Features of SunRise ScanFlo software application

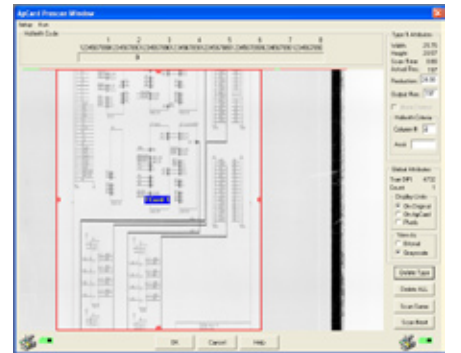
Grayscale scanning	Up to 12-bit												
Imaging processing	Bi-tonal 1, 4, 8 or 12-bit grayscale, grayscale edge detection, crop and deskew, rotation, segmentation, blip detection												
Post processing	View saved images, flip, rotate, invert and save												
Special features	Rollfilm – option to skip blank pages Fiche-apply four different image processing options on same fiche												
Display	Selectable between bi-tonal and grayscale display based on the type of scan												
Digitized data stream	Simultaneous bi-tonal and 12-bit grayscale with different naming options												
File formats	Separate options for bi-tonal or grayscale and bi-tonal in file preferences. Compressed multi-page TIFF or bi-tonal <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Grayscale</td> <td style="width: 50%;">Bi-tonal</td> </tr> <tr> <td>TIFF Uncompressed (4, 8 & 12 bit)</td> <td>TIFF Uncompressed</td> </tr> <tr> <td>TIFF LZW (4, 8 & 12 bit)</td> <td>TIFF CCITG4</td> </tr> <tr> <td>TIFF Multi page (4 & 8 bit)</td> <td>TIFF Multi page</td> </tr> <tr> <td>JPEG (4 & 8 bit)</td> <td></td> </tr> <tr> <td>GIF (4 & 8 bit)</td> <td></td> </tr> </table>	Grayscale	Bi-tonal	TIFF Uncompressed (4, 8 & 12 bit)	TIFF Uncompressed	TIFF LZW (4, 8 & 12 bit)	TIFF CCITG4	TIFF Multi page (4 & 8 bit)	TIFF Multi page	JPEG (4 & 8 bit)		GIF (4 & 8 bit)	
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JPEG (4 & 8 bit)													
GIF (4 & 8 bit)													
Crop & deskew	Crop and save with or without de skewing												
Rescan	Realtime image processing eliminates the need to rescan to view changes												
Utility	Focus utility to help users choose head height and focus												
Help	Extensive dialog specific help displayed without search												

ScanFlo Modularity & Functions

	SunRise Scanner	Standard PC
ScanFlo for all microfilm	✓	✓
Complete image control parameters setup	✓	
Motor and light control	✓	
Image capture and digitization	✓	
Individual image segmentation	✓	
Post image process	✓	
Index and save to folder	✓	



ScanFlo Prescan Fiche with Segementer



Aperture Card PreScan



SunRise 3-in-1 Scanners with Modular Design Digitizes Rollfilm, Fiche and Aperture Cards