# SunRise Microfilm Scanners
## Apollo HS

*"Scanning the World's microfilm*

- Durable Proven design
- LED backlight
- Dual monitor support
- Optical and Digital Zoom
- Built-in i7 PC - Windows 7
- USB3, SATA3, ultra-fast SSD
- Live Scan and Virtual Scan included
- 760 duplex Rollfilm pages / minute
- Nikon Lens for ultra-sharp focus
- Upgrade your older scanner to Apollo

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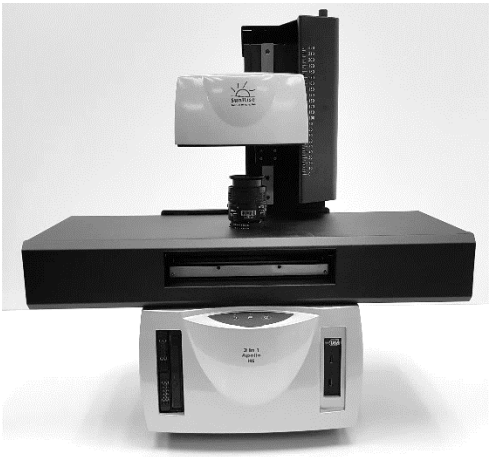
# Hardware Specifications

A SunRise scanner system consists of the Apollo Base Unit and at least one module. The base unit contains the embedded computer, LED light, camera. Specify the type module(s) you need when ordering: Rollfilm, Ultrafiche, or Aperture Card.



*FICHE SCANNER SYTEM*

*APCARD SCANNER SYSTEM*

| FEATURES | Apollo | Apollo HS |
|---|---|---|
| 3-in-1 Modular Design | Yes | Yes |
| Variable Optical zoom – not digital zoom | Yes | Yes |
| High resolution scan mode (8k) | Yes | Yes |
| High Speed scan mode (4k) | Yes | Yes |
| **SOFTWARE** | | |
| Windows 7 | Yes | Yes |
| Applications | | |
| ScanFlo Professional | Std | Std |
| ScanFlo Premier | Std | Std |
| ScanFlo Virtual Scan (VS) | Std | Std |
| Remote access diagnostics | Yes | Yes |
| **COMPUTING SYSTEM** | | |
| Processor 6th gen Intel | i7 | i7 |
| Memory | 4 GB | 4 GB |
| Hard Drive: Internal Solid State | 128GB | 500GB |
| DVD Optical drive | Yes | Yes |
| Removable 2.5" SSD Drives 2 bays | 500GB | 1000GB |
| External drive expansion via USB 3.0 | Yes | Yes |
| **I/O** | | |
| USB 3.0/2.0: Front -2, Rear -4 plus USB-C | Yes | Yes |
| Monitor output: VGA / DVI / HDMI | Dual | Dual |
| Display Resolution Max | UHD | UHD |
| Mouse & Keyboard | Yes | Yes |
| LAN: Gigabit Ethernet | Yes | Yes |
| **IMAGING** | | |
| Linear CCD 4k & 8k pixel array | Yes | Yes |
| Camera: SunRise Apollo | Std | Hi-Speed |
| Lens: Nikon 60mm f/2.8 | Yes | Yes |
| Light Source: SunRise LED | Yes | Yes |

| PERFORMANCE (200 DPI) | | |
|---|---|---|
| Rollfilm: 16mm, 24X | 200 | 375 / 750 simplex/duplex images per minute |
| Jacketed Fiche: 5 rows x 14 images, 24X | 40 | 60 / hour |
| COM fiche: 15 rows x 18 images, 48X | 60 | 120 / hour |
| Aperture Card: 8-bit grayscale, 24X | 600 | 700 cards per hour |

*Important Note: Performance is highly dependent upon film characteristics and quality.*
*The above data is based on SunRise production test films and is provided for reference only.*

| ELECTRICAL | |
|---|---|
| Input power | 110 / 220 VAC, 47 - 63 Hz, 1. / 0.5 Amp |
| Temperature | Operating 10 to 35°C, Non-Operating 0 -70°C |
| Relative Humidity | Operating 10% to 90%, Non-operating 5% to 95% |
| Altitude | 0 -3,048 meters (0 -10,000 feet) |
| Safety | FCC Class A, CE ITE Class |

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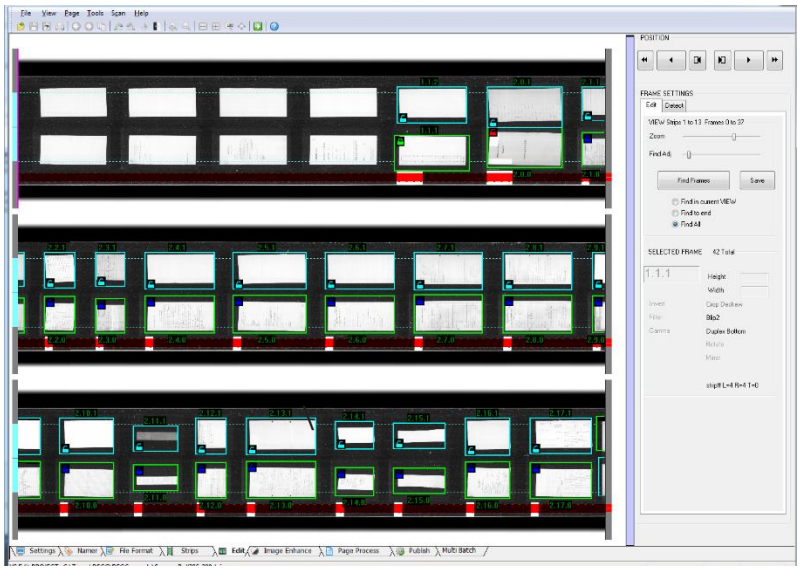
# Software Specifications

The SunRise microfilm scanners include the entire image processing capabilities you will need to output pages that duplicate the appearance of the original page scanned.

**Capabilities of Scanflo**

| | |
|---|---|
| User interface | Scanflo Professional, Scanflo Premier and Virtual Scan applications use tabbed dialogs, logically grouped, and scan presets for fast parameter setting |
| Live Scan | Scan time image processing, create image files during the scan – immediate results |
| Archive Scan | Digital archive Strip Scan is fast and simple, post scan image processing allows QA |
| Scan presets | Scan job parameters are automatically saved making it easy to setup. |
| Dual stream | Simultaneous bi-tonal and 8 bit grayscale scanning |
| File formats | PDF, TIFF, JPEG, GIF, compressed and uncompressed, bi-tonal and grayscale |
| Grayscale | Up to 12 bit pixel depths |
| Image processing | Adaptive threshold Bi-tonal, Edge Sharpen, Crop, De-skew, 90°,180°,270° Rotation, Blip detection, Mirror Flip, Invert, Scale |
| Contrast | Enhance contrast to fix dark or too bright images |
| Special features | Rollfilm – fast rewind, Ultrafiche – apply five different image processing options on same fiche |
| Straighten | Automatic Crop & De-skew |
| Ease of use | Tool Icons, tabbed dialogs, drop down mouse menus, mouse wheel parameter change |
| Help | Context sensitive help, how to use the software including step by step instructions |
| Film polarities | Negative/Positive |
| Reduction Ratio | Enlarge film image 7x – 72x to compensate for size of image on film |
| Document size | A0 – A4 (A – E) |
| Compression | Bi-tonal: TIFF uncompressed, TIFF CCITT G4, Multi page TIFF, PDF, PDF LZW<br>Grayscale: TIFF uncompressed, TIFF LZW, JPEG (8-bit), GIF (8-Bit), PDF, PDF LZW |



VS Edit Tab showing Blipped Duplex film with on screen blip counts

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# Modules

The SunRise modular scanner provides a low-cost way to handle several microfilm types without duplicating the base scanner hardware. In line with the Base the SunRise Module are rugged and designed for 24/7 continuous use.

## Rollfilm

**Roll types**
16mm – 100 and 200 ft reels
35mm – 100 and 200 ft reels
Cartridge film - option
Pancake Rolls – 1000ft – option

**Detection**
Fixed and variable size pages
Portrait and Landscape orientation
Simplex/Duplex
COM
Oil Well Logs (Continuous forms)
Blipped

**Film Transport**
Fast Rewind
Short leader
Handles film splices

## Microfiche

**Fiche**
Standard (Jacketed)
Computer Output Microfiche
Titlebar scanning
Continuous row scan mode

**Size**
Standard 4”x6”
jumbo fiche 5”x8”

**Formats**
Oil Well Logs
AB Dick
Microx
Step & repeat fiche

**Options**
AB Dick locator pins and filter

## Aperture Card

**Hollerith cards**
Card size - 7.4” x 3.75”
80 column Hollerth

**Film Pocket**
Size 50mm x 35m

Cine/Comic
Multiple T-Card
(1,2,3... images per card)

**Standard**
Hollerith code reader

**Mechanical Dimensions (max.)**

| | |
|---|---|
| Base Unit | H 29” (74 cm) x L 30” (76 cm) x W 14” (36 cm) |
| Base Unit + Rollfilm | H 29” (74 cm) x L 30” (76 cm) x W 24” (61 cm) |
| Base Unit + Ultrafiche | H 29” (74 cm) x L 30” (76 cm) x W 28” (71 cm) |
| Base Unit + ApCard | H 29” (74 cm) x L 30” (76 cm) x W 36” (92 cm) |

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