

Nikon

COOLSCAN IV ED

35mm/IX240 Film Scanner

COOLSCAN IV ED

- High-resolution 2,900 dpi
- 12-bit A/D, 16-/8-bit output
- Newly developed custom CCD
- SCANNER NIKKOR ED lens
- Gentle-on-film LED illumination
- Fast 42 sec. scanning (including image transfer to display)
- New setup function for color negative film
- Quick AF & Quick Preview
- Easy-to-connect USB interface
- Digital ICE[™] (Digital ICE cubed)
 - Digital ICE[™] (Image Correction & Enhancement)
 - Digital ROC[™] (Reconstruction of Color)
 - Digital GEM[™] (Grain Equalization & Management)



Your film's digital bridge to the future

* Cover page image is a composite picture.

Digital ICE³™ for magnificent image reproduction

Does your film suffer from defects such as film surface dust and scratches, faded color, mold or grain? The Nikon COOLSCAN IV ED's Digital ICE³™ function resolves these problems for truly dramatic results, regardless of film age. What's more, its three component functions work independently.

1. Digital ICE™ (Image Correction & Enhancement)

Digital ICE™ is a unique function that removes dust, scratches and fingerprints from the scanned image.



Digital ICE™ applies to color film and color process monochrome film, but is not recommended for use with Kodachrome film.

● with ICE

2. Digital ROC™ (Reconstruction of Color)

Equipped with user-adjustable Digital ROC™, the COOLSCAN IV ED restores faded images to true, brilliant color, improving image tone.

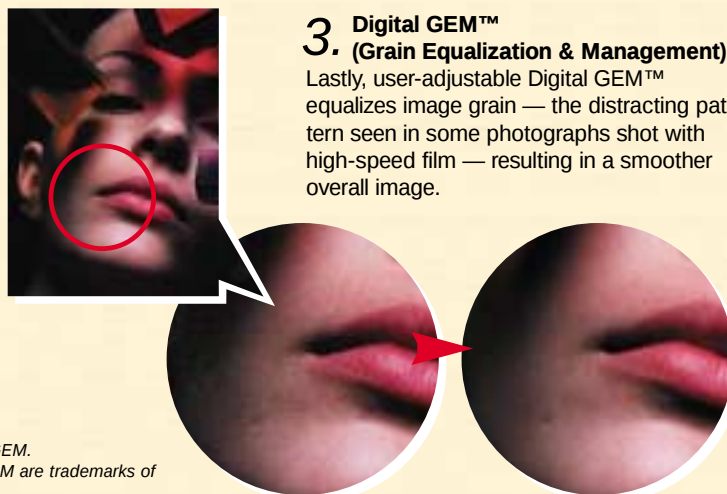


1975 (negative film)

● with ROC

3. Digital GEM™ (Grain Equalization & Management)

Lastly, user-adjustable Digital GEM™ equalizes image grain — the distracting pattern seen in some photographs shot with high-speed film — resulting in a smoother overall image.



● with GEM



Digital ICE³ (Digital ICE cubed) is Digital ICE, Digital ROC and Digital GEM.
Digital ICE³ (Digital ICE cubed), Digital ICE, Digital ROC and Digital GEM are trademarks of Applied Science Fiction Inc.
Digital ICE³ (Digital ICE cubed) are technologies developed by Applied Science Fiction Inc.

Driver software Nikon Scan 3

The COOLSCAN IV ED is an easy scanner to use, giving you the comprehensive control you need for professional results. A completely redesigned Photoshop™ plug-in for Mac OS™, and a TWAIN source for Microsoft® Windows® users are bundled with the scanner. The new Nikon Scan 3 driver runs with any Photoshop™ or TWAIN-compatible image-editing software, as well as stand-alone.



Easy Scan

From simple scanning to advanced editing, even a beginner can use Nikon Scan 3 thanks to the easy-to-understand GUI (graphical user interface). The image display can be resized and drag-and-drop can be performed. Preview, rotation, reversal, enlargement/reduction display, trimming, resolution setting, and various adjustments can also be done.

Thumbnail Scan

Nikon Scan 3 is best suited for scanning six-frame strip films and Advanced Photo System™ films. It can display thumbnails at high speed, enabling the selection of any frame or continuous scanning of all frames. You can select and display any frame by entering frame numbers. Batch scanning is also available for any number of frames.

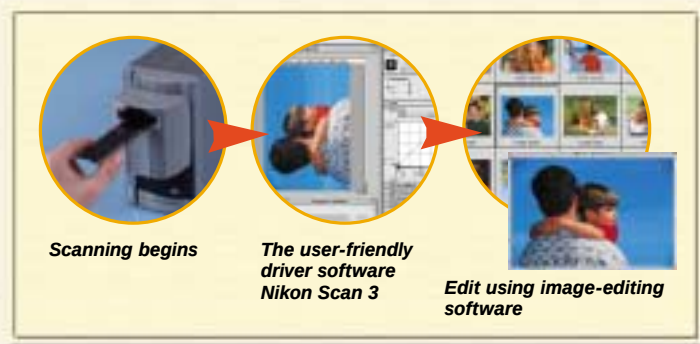


Power switch on front panel

The pursuit of high-quality im

So, you want to organize your negative and positive film stock? Sorting, arranging and storing it all can be a time-consuming process. Add to that, upon closer examination you discover some of your film is in less than perfect condition. Film surface dust, scratches and faded color have all taken their toll.

Don't despair! Nikon has the film scanning solution you've been looking for, offering you high-resolution images in abundant color — the new Nikon COOLSCAN IV ED. Your photographs will look superb once they are digitized by the Nikon COOLSCAN IV ED.



Layout-free

High-resolution scanning — 12-bit A/D, 16-/8-bit output for vivid images

The COOLSCAN IV ED realizes high-resolution scanning at 2,900 dpi for exceptionally sharp images with superb reproduction of solid objects and minute detail. Precise 12-bit A/D conversion input and 16-/8-bit output deliver image data in 68,700 million colors.

Newly developed custom CCD

The COOLSCAN IV ED's newly developed custom CCD automatically reduces noise, and offers wide dynamic range to clearly reproduce the scanned image.

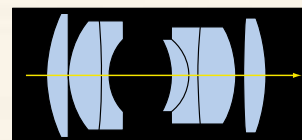
New setup function for color negative film

The new scene analysis function, featuring intelligent tone and color auto-correction, enables fine reproduction of orange-tinged negative film.

SCANNER NIKKOR ED lens



Lens quality is a major factor in image scanning clarity. That is why Nikon has developed the SCANNER NIKKOR ED lens, employing Extra-low Dispersion glass elements for greatly reduced color aberration. This lens also minimizes image distortion and delivers sharp delineation to produce brilliant results.



Lens cross-sectional view

High-speed operation

■ Quick startup

You can get right to work after turning the power on — there's no need to wait for this scanner to warm up.

■ Quick AF & Quick Preview

Quick AF [with SLIDE MOUNT ADAPTER MA-20(S) only] is automatically initiated once the appropriate film format for scanning has been detected, and image preview

and image exposure correction capabilities are made possible by Quick Preview.

■ Enhanced scanning speed

Scanning is accelerated by the incorporation of an ASIC (Application Specific Integrated Circuit). High-speed 2,900 dpi scanning takes only 42 seconds to display on the monitor.

■ Batch scanning

The ability to scan multiple frames in one shot will save you time [with STRIP FILM ADAPTER SA-21 or IX240 FILM ADAPTER IA-20(S)].

Various film formats

The COOLSCAN IV ED is compatible with a variety of film formats as follows:

Adapter	Film format
STRIP FILM ADAPTER SA-21	35mm film; from two- to six-frame continuous loading; thumbnail display, continuous scanning and batch scanning are possible
SLIDE MOUNT ADAPTER MA-20(S)	Slide
STRIP FILM HOLDER FH-3 [used with MA-20(S)]	35mm strip film
IX240 FILM ADAPTER IA-20(S) (optional)	Advanced Photo System (IX240) film cartridge; thumbnail display, continuous scanning and batch scanning are possible

COOLSCAN LED illumination

You needn't be afraid of damaging film during the scanning process either. As a member of the new COOLSCAN series, the COOLSCAN IV ED's LED illumination differs from that of other products, being considerably gentler on film. Another benefit is the minimal maintenance required by LED illumination, resulting in hassle-free extended usage.

Further advantages

■ Energy-saving design

■ USB interface

The COOLSCAN IV ED's USB interface allows easy connection and fast data transmission to your computer.



Adapters for 35mm/IX240 Film Scanner LS-40 ED



**STRIP FILM ADAPTER
SA-21**



**SLIDE MOUNT
ADAPTER MA-20(S)**



**IX240 FILM ADAPTER
IA-20(S) (optional)**



Holders

- **STRIP FILM HOLDER
FH-3 [used with MA-20(S)]**
- **MEDICAL SLIDE HOLDER
FH-G1 (optional)
[used with MA-20(S)]**

35mm/IX240 Film Scanner LS-40 ED Specifications

Reading system/Optics	
Film type	35mm (135)/IX240 film, slide glass for microscope
Reading resolution	2,900 dpi
Film adapter	STRIP FILM ADAPTER SA-21 (2 to 6 frames) SLIDE MOUNT ADAPTER MA-20(S) STRIP FILM HOLDER FH-3 (1 to 6 frames) IX240 FILM ADAPTER IA-20(S) (15/25/40 frames; optional) MEDICAL SLIDE HOLDER FH-G1 (for slide glass; optional)
Scanning area (max.)	25.1 x 38.0mm (2,870 x 4,332 pixels)
Effective area (size/pixels)	SA-21: 23.3 x 36.0mm (2,657 x 4,104) MA-20(S): 25.1 x 36.8mm* (2,870 x 4,203) FH-3: 24.0 x 36.0mm (2,736 x 4,104) IA-20(S): 16.1 x 26.9mm (1,836 x 3,067) FH-G1: 22.9 x 35.0mm (2,610 x 3,989) <i>* Actual effective size depends on slide mount aperture size.</i>
Illumination	R, G, B and D-LED array
Color separation	RGB line sequential
Imaging optics	SCANNER NIKKOR ED lens (7 elements in 4 groups including 3 ED glass elements)
Focusing	Autofocus and Manual focus
Scanning/Signal processing	
Scan time	Approx. 42 sec. at 2,900 dpi (35mm), 8-bit output (typical scan time with display, Windows, CMS off)
Density range	3.6
Thumbnail scanning and batch scanning	35mm (135) strip film: 2 to 6 frames
A/D conversion	IX240 film cartridge: 15/25/40 frames (optional)
Output data	12 bits
Digital ICE³™	16 bits, 8 bits per color channel (user selectable)
Color Management System	Digital ICE™, Digital ROC™, Digital GEM™
Data transfer	Built-in
Data transfer	
Interface	USB 1.1
Operating conditions	
Power requirements	100~240 VAC, 0.3~0.2A, 50/60Hz
Environmental	Temperature: 10~35°C (50~95°F) Relative humidity: 20~60% RH (non-condensing)
Dimensions (W x H x D)	93 x 169 x 315mm (3.7 x 6.6 x 12.4 in.)
Weight (approx.)	3kg (6.6 lbs.)
Others	
Accessories included	STRIP FILM ADAPTER SA-21, SLIDE MOUNT ADAPTER MA-20(S), STRIP FILM HOLDER FH-3, USB cable, Nikon Scan 3 Driver Software, AC power cord, Manual
Bundled software	Photoshop LE 5.0 (Adobe Systems Inc.)

* Accessories may differ in each country or region.

Nikon Scan 3 Driver Software Requirements

	For Macintosh®	For Windows®
CPU	Power PC G3 or later (Power PC G4 or later recommended)	MMX Pentium 166 MHz or better (Pentium II or better recommended)
OS	System 8.6 or later	Windows 98 Second Edition (SE), Windows Me, Windows 2000 or later
RAM	32 MB (64 MB or more recommended)*	
Hard-Disk Space	20 MB free for installation with additional 20 MB available while Nikon Scan is running (200 MB or more recommended, or 400 MB or more when using Digital ROC™ or Digital GEM™)	
Video Resolution	640 x 480 pixels or greater with 16-bit RGB color (thousands of colors) or more	640 x 480 pixels or greater with 16-bit RGB color (high color) or more
Interface	Only built-in USB ports are supported†	
Miscellaneous	CD-ROM drive required for installation	

* A minimum of 192 MB is recommended when using Digital GEM™, Digital ROC™, or IX240 FILM ADAPTER IA-20(S) (optional). Additional memory is required to run the host application when Nikon Scan functions as a TWAIN source or as an acquire plug-in.

† The scanner may not function as expected when connected to a USB hub.



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WARNING

TO ENSURE CORRECT USAGE, READ MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT. SOME DOCUMENTATION IS SUPPLIED ON CD-ROM ONLY.



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