

Scanning Cameras



Scanning in Three Dimensions



When you speak about „scanning“ you would normally associate this with capturing a two-dimensional original. The flatbed scanner in the mind’s eye is found today on almost any office desk and in many home offices.

But three-dimensional scanning is nothing extraordinary, it’s plain and simple digital photography using a moving CCD line instead of an array. The only restriction: The subjects must not move and continuous light is a must.

The Scando icoss combines the high-quality results of a flatbed scanner with the versatility of a camera.

The Scando scanning camera is a capable tool for those,

- who need high resolution image data for high-quality printed products
- who need finest detail rendition for analysis and measuring

- who need large enlargements without pixelation for verifying and identification
- who need to scan valuable or fragile originals without contact
- who file high-resolution image data for subsequent use.

Aspect ratio and framing is determined by the choice of lens and the distance from the object. Detail and sharp focus can be controlled in the same way as with an SLR using the reflex viewfinder with split image and micro prism spot.

The complete scanning procedure needs only one pass of the triple CCD line.

Flat large-format originals which do not fit on a flatbed scanner, can be captured in total or in detail using reflective light. In this application the Scando serves as a repro scanner for prints, art works, paintings, maps etc. as well as for reproductions from books.

Translucent originals like large-format transparencies, glass negatives, x-ray films and CTs can be scanned with the Scando mounted on a camera stand and using transmitted light.

Application possibilities for using the Scando as a „scanner“ for capturing three-dimensional still objects are as diverse as the objects themselves. This includes photography for medical, scientific, documentary or measuring purposes, for law enforcement or industrial quality assurance.

5124-29
„Scando icoss X“ Scanning Camera

Can be used as a repro scanner or as a scanning camera for three-dimensional objects, always in conjunction with a PC.

Equipped with one resp. two triple-line CCD sensors the camera provides high resolution image files for prepress, for quantitative and qualitative detail analysis in forensics, in industrial measurement and testing and in research and for future-proof documentation and archiving.

Can only be used for non-moving objects.

Supplied without lens.

**5124-26: Scando icoss X/6, X/6 AF
and X/8**

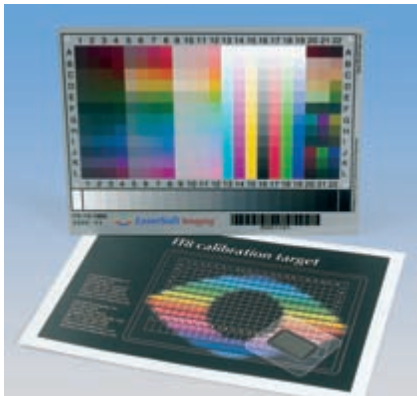
Equipped with one triple-line CCD sensor.

**5127-29: Scando icoss X/N, X/N AF
and X/S**

Equipped with two triple-line sensors.

See pages 112-113 for specifications.





	5124 Scando icoss X/6	5125 Scando icoss X/6 AF	5126 Scando icoss X/8
Type	Digital scanning camera/SLR type		
Viewfinder	Reflex viewfinder with split image and micropism spot for focussing		
Lens mount	Nikon bayonet	Nikon bayonet	Helical focussing mount M 39 x 1
Focussing	manual	autofocus/manual	manual
CCD sensor: Triple line	3 x 9450 pixels	3 x 9450 pixels	3 x 10000 pixels
Scanning area	29 x 38 mm (1.1 x 1.5 in.)	29 x 38 mm (1.1 x 1.5 in.)	40 x 40 mm (1.6 x 1.6 in.)
Pixels	7350 x 9450	7350 x 9450	10000 x 10000
Camera resolution	69 mill. pixels	69 mill. pixels	100 mill. pixels
Maximum file size 8 bit processing 16 bit processing	200 MB 400 MB	200 MB 400 MB	286 MB 572 MB
Color depth	3 x 12 bit (3 x 14 bit)*	3 x 12 bit (3 x 14 bit)*	3 x 12 bit (3 x 14 bit)*
Dynamics (D max)	3.3 (3.9)*	3.3 (3.9)*	3.3 (3.9)*
Scan resolution from letter-size original (optical)	max. 800 dpi	max. 800 dpi	max. 847 dpi
Output size at 300 lpi	62 x 80 cm (24.4 x 31.5 in.)	62 x 80 cm (24.4 x 31.5 in.)	85 x 85 cm (33.5 x 33.5 in.)
Contrast range	11 (13)* f-stops		
Interface	USB 2.0		
Software supplied	SilverFast with Photoshop Plug-In and Twain driver		
Accessories included	Carrying case, USB cable/AC adapter, IT8 targets (reflective, transmitted)		
Operating system	Windows XP, Windows 7		
System requirements	Pentium 4, 3 GHz or better, RAM: 2 GB or more, HD: 200 GB or more	Pentium 4, 3 GHz or better, RAM: 2 GB or more, HD: 200 GB or more	Pentium 4, 3 GHz or better, RAM: 2 GB or more, HD: 200 GB or more

* Multi-Exposure-Function. Makes higher dynamic range possible with transparent originals (X-ray films, slides etc.)

	5127 Scando icoss X/N	5128 Scando icoss X/N AF	5129 Scando icoss X/S
Type	Digital scanning camera/SLR type		
Viewfinder	Reflex viewfinder with split image and microprism spot for focussing		
Lens mount	Nikon bayonet	Nikon bayonet	Helical focussing mount M 39 x 1
Focussing	manual	autofocus/manual	manual
CCD sensor: Two triple line	3 x 9450 pixels	3 x 9450 pixels	3 x 10000 pixels
Scanning area	29 x 38 mm (1.1 x 1.5 in.)	29 x 38 mm (1.1 x 1.5 in.)	40 x 40 mm (1.6 x 1.6 in.)
Pixels	14500 x 19000	14500 x 19000	20000 x 20000
Camera resolution	275 mill. pixels	275 mill. pixels	400 mill. pixels
Maximum file size 24 bit processing 48 bit processing	400 MB 800 MB	400 MB 800 MB	570 MB 1140 MB
Color depth	3 x 12 bit (3 x 14 bit)*	3 x 12 bit (3 x 14 bit)*	3 x 12 bit (3 x 14 bit)*
Dynamics (D max)	3.3 (3.9)*	3.3 (3.9)*	3.3 (3.9)*
Scan resolution from letter-size original (optical)	max. 1600 dpi	max. 1600 dpi	max. 1600 dpi
Output size at 300 lpi	160 x 120 cm (63 x 47.2 in.)	160 x 120 cm (63 x 47.2 in.)	170 x 170 cm (66.9 x 66.9 in.)
Contrast range	11 (13)* f-stops		
Interface	USB 2.0		
Software supplied	SilverFast Archive Suite (Ai IT8-Studio + HDR Studio)		
Accessories included	Carrying case, USB cable/AC adapter, IT8 targets (reflective, transmitted)		
Operating system	Windows XP, Windows 7		
System requirements	Pentium 4, 3 GHz or better, RAM: 4 GB or more, HD: 200 GB or more	Pentium 4, 3 GHz or better, RAM: 4 GB or more, HD: 200 GB or more	Pentium 4, 3 GHz or better, RAM: 4 GB or more, HD: 200 GB or more

* Multi-Exposure-Function. Makes higher dynamic range possible with transparent originals (X-ray films, slides etc.)





5111
Zeiss Planar 1.4/50 mm, ZF.2

Standard lens for scanning cameras „Scando icoss X“ with Nikon bayonet mount (Scando icoss X/6, X/6 AF, X/N, X/N AF).

Optical design: 7 lenses / 6 elements
Lens speed: f/1.4
Focal length: 50 mm
Aperture scale: 1.4-16
Filter thread: 58 mm
Dimensions: length 69-71 mm (2.7-2.8 in.),
ø 66-71 mm (2.6-2.8 in.)



5112
Zeiss Macro-Planar 2.0/50 mm ZF.2

Macro lens for scanning cameras „Scando icoss X“ with Nikon bayonet mount (Scando icoss X/6, X/6 AF, X/N, X/N AF).

Optical design: 8 lenses / 6 elements
Lens speed: f/2.0
Focal length: 50 mm
Aperture scale: 2-22
Filter thread: 67 mm
Dimensions: length 88-91 mm (3.5-3.6 in.),
ø 72-75 mm (2.8-3 in.)



4350
Schneider Lens
Apo-Componon HM 4.0/60 mm

Camera lens for „Scando icoss X/8“ and „Scando icoss X/S“.

Optical design: 6 elements
Aperture scale: 4-22
Diaphragm: preset, click-stop
Filter thread: 43 mm x 0.75
Dimensions: 43.2 mm x ø 46 mm
(1.7 in. x ø 1.8 in.)