

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
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Find the *Diagnostic Instruments / SPOT Imaging Solutions 459* at our website: *Click HERE*

SPOT RT, SPOT RT Monochrome, SPOT RT Slider

Camera models:
RT Monochrome- Fixed monochromatic mode (no color capability).
RT Color- Fixed color filter with clear mode.
RT Slider- Slide mounted color filter for selection of color or monochrome mode.

CCD Information:
Kodak KAI – 2092, with protective cover glass removed.

Optical resolution:
1520 x 1080, 7.4 µm square pixels
1,641,600 pixels per color plane
4,924,800 pixels measured per RGB Image

Imaging Area:
11.1mm X 7.9 mm

Digitization:
Pixel by Pixel digitization in camera head at CCD chip

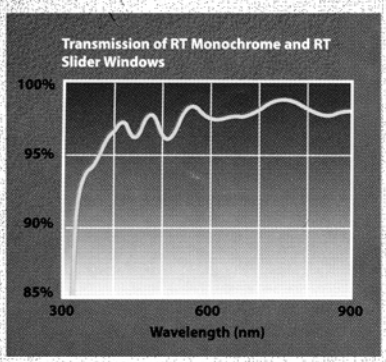
Bit depth:
24 or 36 bit color,
8 or 12 bit monochrome

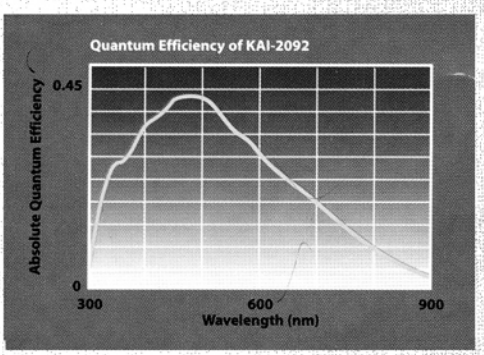
Binning Modes:
2x2, 3x3, 4x4

File sizes:
8 bit monochrome = 1.64 MB
12 bit monochrome = 2.46 MB
24 bit RGB color = 4.92 MB
36 bit RGB color = 7.38 MB

Pixel Readout Rate:
Image capture: 6 MHz /12bit
Live image: 36 MHz, (Dual channel 18MHz / 8 bit)

Image Capture Time:
RGB: ~6.5 sec.
Monochrome: ~1.5 sec.
(Brightfield image and PII 400Mhz)





Because of the three-shot technique, the SPOT camera should not be used for color image captures of moving specimens. Monochrome images are unaffected.

Live Image Frame Rates:
(computer, video card and image brightness dependent)
Monochrome, 1520 x 1080 resolution: 8.5 frames/sec.
Monochrome, 760 x 540 resolution: 19 frames/sec.
Color, 380 x 270 resolution: 12 frames / sec.

CCD Cooling:
37° C differential from room temperature (-12° C @ 25° C room temperature.)

Temperature stability:
±1°C per 8-hr. period

Dark current:
0.15 e/p/s @ -12°C (typical)

Full Scale Charge:
40,000 e (nominal); 35,000 e (minimum)

Signal to noise ratio: 60 dB

Dynamic range: 60 dB

Anti-blooming factor:
300 times (nominal); 100 times (minimum)

Exposure:
Automatic or manual,
1ms-536s per color.

Lens mount:
(Optical couplers available for almost all microscopes).
RT Monochrome: C Mount
RT Color: Nikon "F" Mount
RT Slider: Nikon "F" Mount

Camera Window:
RT Monochrome: UBK7 glass with 320-900nm AR coating
RT Color: BK7 glass with 430-690nm AR coating
RT Slider: UBK7 glass with 320-900nm AR coating

Computer interface card supplied:
PCI Bus Card

External shutter control:
BNC, TTL level output for shuttering fluorescence illuminators.

Power requirements:
Voltage configurable to 100V, 120V, 220V or 240V 50/60 Hz

Mechanical Specifications:
Camera Head: 127 mm x 127 mm x 132 mm, 1400g
Power supply: 127 mm x 140mm x 330 mm, 5500g

Certifications; CE, FCC Class A

Computer Requirements:
PC: Pentium 166 or greater, Windows 95/98/NT
Mac: Power PC with PCI Bus, MacOS 7.6 or greater.
RAM: 64 MB (minimum), 256 MB (recommended).

Video card: Support of 24 bit RGB at desired monitor resolution.

Software Features:
Basic Mode & Advanced Mode.

Live image window, image capture window, auto exposure, auto white balance, image setups, sequential imaging, zoom, pan window.

24/36 bit color or 8/12bit monochrome image editing: undo last, resize, rotate, flip, and crop. Adjust in RGB, HSL or HSV for hue, saturation, brightness, contrast, gamma, histogram, and auto bright-dark stretch.

Sharpen, smooth, unsharp mask, noise filter, match color, convert to gray scale, make negative, combine images, change bit depth, merge images, flat field adjust, dark frame subtract.

Annotate with text, graphics and calibration mark. Measure length, perimeter, area, and angle. Attach memos.

Database,[1] report generation,[1] multiple-image layout print dialog.
([1]–Not currently available for MacOS)

File formats supported:
TIFF, TIFF-JPEG, TIFF-Packed, JPEG, BMP, PICT.

Drivers:
Twain for Windows 95,98, NT, and MacOS included.

Native drivers available [2] for Axiovision, C- Imaging, Image Pro Plus, IP-Labs, Metamorph, Northern Eclipse, Optimas.

([2] 4th Quarter 1999)

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