



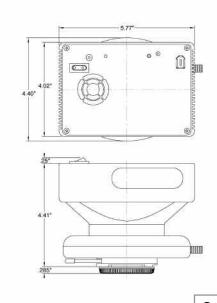


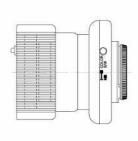
The **RT3** Slider digital camera system affords the ultimate flexibility to researchers by combining both monochrome and color capability in one camera. The **RT3** Slider is the newest camera version from the popular RT line of cameras, and delivers improved performance in a number of areas.

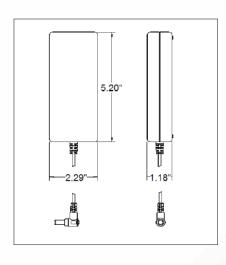
The **RT3** Slider camera is a 14-bit camera featuring high speed FireWire connectivity. With an effective differential cooling of -43°C, this camera provides significant performance for long exposure fluorescence imaging by reducing dark current to below 0.03 e/p/s. Easily switch the slider to color and get exceptional color images through the application of ICC color profiling standards.

The **RT3** Slider boasts reduced read noise, providing higher dynamic range when combined with the deep pixel wells of its Kodak KAI 2020 CCD. Frame capture rates have been tripled when compared with its predecessor.









RT3 POWER SUPPLY

CAMERA FEATURES

- CCD cooled to -43.3°C below ambient
- 1600 x 1200 (1.92 Mpixel) image capture
 - Programmable gain (1-16x)
 - 14 bit x 20 MHz capture
- 40 MHz live mode (dual channel 20 MHz)
 - Interline progressive scan CCD
 - FireWire® interface

SPOT™ Software
Mac® & Windows® operating systems
Basic & Advance applications
Twain & Apple Event
DLL w/ SDK and tutorial manual
3rd party driver support

Reduces dark noise for long exposure image capture

Resolves fine detail

Facilitates live mode previews of low light specimens

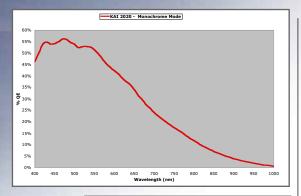
Extra bit depth is ideal for image enhancement

High-speed imaging for real time viewing

Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration

Allows for effortless installation, hot-swapping, and laptop connectivity for greater ease of use

Provides essential tools for modern microscopy and is widely supported by 3rd party software companies for high end applications as well as providing DLL with SDK for OEM Driver development



CCD INFORMATION

Kodak KAI-2020-M with cover glass
Monochrome progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9 mm active area, 14.8 mm diagonal
100x minimum anti-blooming

 $\textbf{C} \, \texttt{ooling}$

-43.3°C differential from ambient via thermoelectric cooler with fan cooled heat sink (-23.3°C from an ambient of 20°C)

DIGITIZATION INFORMATION

Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20 MHz)
Live image frame rate: 18 frames per second
Capture mode: 14 bit x 20 MHz (see chart for frame rate)
A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 8, 12, 14 or 16 bit BW

READ NOISE SPECIFICATIONS

Read noise: 16 e- rms Dark current: 0.003 e/p/s (typical)

EXPOSURE

0.5 ms to 286 minutes; captured and live mode automatic exposure; captured and live mode manual exposure

LENS MOUNT

F-mount

SEALING WINDOW

Corning 7980 fused silica 320 nm–820 nm anti-reflection coating

COMPUTER INTERFACE

FireWire (IEEE 1394a)

INPUT/OUTPUT

External device control: TTL level output with programmable delay

External trigger input: TTL level input

MECHANICAL

Tripod mount: 1/4 - 20 UNC

Camera head: 5.77" (147 mm) x 4.02" (102 mm)

x 3.15" (80 mm), 2.4 lbs. (1.09 kg)

Power supply: 2.29" (58 mm) x 5.20" (132 mm) x 1.18" (30 mm), 0.70 lbs. (0.32 kg)

Captured image/Frame rate* 1600 x 1200 1024 x 1024 512 x 512 256 x 256 50 x 50 8.9 16.0 58.2 2x2 26.2 63.4 13.8 15.8 38.6 3x3 18.7 20.9 32.2 44.5 64.6 4x4 22.1 24.5 35.9 46.2 60.6 29.6 8x8 27.9 37.0 41.4 40.9

*0.5 ms exposure with post-processing deferred, taken with 1.67 GHz AMD XP2000 processor running Windows XP monochrome mode. Other platforms may provide different results.

Operating environment: 0 to 30°C ambient, 0-80% relative humidity noncondensing

Power requirements: 100-240 VAC, 1.5A

CERTIFICATIONS

CE, FCC Class A, EN60950, RoHS compliant

SPOT SOFTWARE FEATURES

Live mode viewing window & controls, auto-exposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement tools in three color spaces (RGB, HSL, HSV), pan and zoom windows, multiple customizable floating taskbars, spot metering, non-destructive annotations, non-destructive calibration marks, measurement tools, sequential image capture and playback, exportable image archiving database (PC only), report generator, macro scripting, peripheral device control, interactive print dialog, online help menu, and Correct Color TechnologyTM.

FILE FORMATS

BMP, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI

TIFF FILE SIZES

8 bit BW / 1.83MB • 12 bit BW / 2.75 MB 16 bit BW / 3.66 MB

DRIVERS INCLUDED

Twain for supported Windows® operating systems AppleEvent for supported Mac® operating systems

3RD PARTY SOFTWARE

Call or visit our website (www.diaginc.com)

MINIMUM SYSTEM REQUIREMENTS

PC: Pentium 400 Mhz or greater with Windows 98 SE, 2000, ME, or XP, 512 MB of RAM, Firewire/IEEE 1394a interface* **Mac:** Power PC G4 or greater with OS 10.3.9 or higher, 512 MB of RAM, Firewire/IEEE 1394a interface. Video card: 24 bit RGB @ desired resolution

Items included: Carnera head, FireWire® data cable (6-pin), power supply cable, power supply, power cord, SPOT software install CD (includes drivers), software user guide, hardware user guide, 2 year warranty

*Desktop computers may require IEEE 1394a to PCI bus interface card, laptop computers may require IEEE 1394a to PCMCIA interface card Firewire® and Mac® are registered trademarks of Apple Computers, Inc. Windows® is a registered trademark of Microsoft. Specifications are typical and subject to change.

All specified performance is typical, unless noted otherwise.

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Diagnostic Instruments, Inc. 6540 Burroughs Street Sterling Heights, MI 48314 586.731.6000 • www.diaginc.com

