SPOT JR

Specs

- CCD Grade: Grade 2 Kodak KAF-0400 CCD
- CCD Format and Resolution: 1.17 million pixels measured per image. Image resolution: 766 x 510 or 1532 x 1020
- Digitization: Pixel-by-pixel digitization in camera head
- Image Acquisition Bit Depth: 24 and 36 bit RGB color
- Binning Modes: 2 x 2, 3 x 3, 4 x 4
- File Sizes: 766 x 510/24 bit RGB = 1.17 MB
- 766 x 510/36 bit RGB = 2.34 MB
- 1532 x 1020/24 bit RGB = 4.68 MB
- 1532 x 1020/36 bit RGB = 9.36 MB
- Pixel Readout Rate: 1.08 MHz
- Image Capture Time: ~6 sec. to display on monitor (Brightfield image and PII 333 CPU)
- Exposure: Choice of auto or manual exposure settings, exposure range 80ms-17 minutes per color
- Fast Focus: 5 subframes per second typical
- CCD Cooling: Thermoelectric cooler with forced air cooled to -12°C (37°C differential at typical room temperature of 25°C)
- Dark Current: 0.3 e/p/s at -12°C (typical), 0.7 e/p/s at -12°C (max)
- Read Noise: 13 e rms (typical), 20 e rms (max)
- Signal to Noise Ratio: 75 dB typical at 90% well fill, 72 dB minimum at 90% well fill
- Operating Environment: 10%-80% relative humidity, 15-30°C ambient
- Lens Mount: Nikon "F" bayonet mount (adapters available for almost all new and older microscopes) can accept Nikon macro lenses
- Power Supply: Factory configurable to 100V, 120V, 220V or 230V, 50/60Hz
- Dimensions: 5.0"H x 10.5"W x 8.0"D
- Weight: 12 lbs.
- Camera Head: Dimensions: 5.0"H x 7.0"W x 7.25"D
- Weight: 7 lbs.
- Copy Stand Mount: 1/4-20 screw mount

Computer Interface:
- PCI Bus

Software and Operating System:
- Proprietary software environment includes:
  - Auto exposure
  - Auto white balance
  - Image database
  - Report generator
  - Calibration mark imprinting
  - Distance, area and angle measurement
  - Editing tools (histogram, sharpen, gamma, etc.)
  - Annotation
  - Flatfield correction
  - Background subtract
  - Twain driver
  - Device driver available for several image analysis programs
- For Mac Power PC: (Stand-alone due 4th Qtr '98)
  - Twain driver (for use with Adobe Photosop and other Twain compliant software)

Computer Requirements PC:
- Pentium required (P666 or faster recommended)
- 64MB RAM required (128MB recommended)
- Video card should provide 24 bit RGB "millions of colors" at desired monitor resolution (8MB VRAM required for recommended 21" monitor operating at 1600 x 1200 resolution)

Computer Requirements MAC:
- Power PC with a PCI bus running
  - MAC OS 7.6 or greater
- 64MB RAM required (128MB recommended)
- Video card should provide "millions of colors" at desired monitor resolution (8MB VRAM recommended for resolution of 1280 x 1024)

External Shutter Control:
- BNC connector on PCI plug-in board;
  - TTL level output for shuttering fluorescence illuminator

Quantum Efficiency of Kodak KAF-0400 CCD

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