High speed imaging for real time viewing

Resolves fine detail

Facilitates live mode previews of low light specimens

Fast acquisition

Increases sensitivity for faster image captures

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

Stable, high-speed interface for PC and Mac platforms is over 50% faster than Firewire™ (IEEE 1394)

Provides useful tools for modern microscopy

Application

This camera is designed to provide qualitative image capture in both the scientific and industrial work environments.

This camera is used for photodocumentation, pathology, fluorescence, and in industrial and metallurgical applications.

Feature | Benefit
--- | ---
36 MHz live mode (dual channel 18MHz) | High speed imaging for real time viewing
1600 x 1200 (1.92 Mpixel) image capture | Resolves fine detail
Programmable gain (1-32x) | Facilitates live mode previews of low light specimens
8 bit x 18 MHz capture | Fast acquisition
New high quantum efficiency CCD | Increases sensitivity for faster image captures
Interline progressive scan CCD | Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration
PCI Interface | Stable, high-speed interface for PC and Mac platforms is over 50% faster than Firewire™ (IEEE 1394)
SPOT™ Software | Provides useful tools for modern microscopy
Mac® & Windows® operating systems
Basic Applications
Twain & Apple Event
DLL w/ SDK and Tutorial manual
3rd Party Driver support
**CCD information:**
Kodak KAI-2000-CM with cover glass
Color mosaic progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9mm active area
100x minimum anti-blooming

**Digitization information:**
Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel
8 bit x 18MHz)
Color live image frame rate: 15 -19 frames per second
Capture mode: 8 bit x 18MHz (see chart for frame rate)
A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 24 RGB; 8 bit BW

**Noise specifications:**
Read noise: 55 e rms
Dark noise: 5.0 e/p/s mean value

**Exposure:**
40 microsecond to 536 seconds
Captured and live mode automatic exposure
Captured and live mode manual exposure

**Lens mount:** C-mount

**Sealing window:** IR Filter w/ anti-reflection coating

**Computer interface:** PCI bus card

**External shutter control:** BNC TTL level output

**Mechanical:**
Tripod mount: 1/4 - 20 UNC
Camera head: 2.79" (71mm) x 3.75" (95mm) x 5.6" (142mm), 1.4 lbs. (0.62 kg)
Power supply: 1.3” (33mm) x 1.97” (50mm) x 3.35” (85mm), 0.34 lbs. (0.16 kg)
Operating environment: 0 to 30 °C ambient, 0-80% relative humidity noncondensing
Power requirements: 100-240 VAC, 47-63 Hz

**Certifications:** CE, FCC Class A, EN60950

**SPOT software features:**
Color Live mode viewing window, autoexposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement, pan and zoom windows, annotation, calibration, measure, sequential image capture and playback, report generator, interactive print dialog, online help menu

**File formats:**
BMP, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI

**TIFF File sizes:**
8 bit BW / 1.83MB
24 bit RGB / 5.49 MB

**Drivers included:**
Twain for supported Windows® operating systems
AppleEvent for supported Mac® operating systems

**Native drivers for 3rd party software:**
Call or visit our website (www.diaginc.com)

**Minimum system requirements:**
1/2 size PCI bus slot or PCMCIA CardBus slot
PC: Pentium 166 or greater w/ Windows 95, 98, 00, NT, ME, XP
Mac: Power PC, OS 8.6 - OS X
RAM: 64MB minimum, 256MB suggested
Video card: 24 bit RGB @ desired resolution

**Items included:** Camera head, PCI plug-in board, data cable, power supply cable, power supply, power cord, SPOT software install CD (includes Twain and AppleEvent drivers), user guide, 1 year warranty

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**Captured Frames per Second**

<table>
<thead>
<tr>
<th>REGION OF INTEREST</th>
<th>1600 X 1200</th>
<th>512 X 512</th>
<th>256 X 256</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 1</td>
<td>7.8</td>
<td>16.8</td>
<td>25.4</td>
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</table>

*.04ms exposure, no post-processing, images saved to RAM on 1.7 GHz P4 running Windows XP