This camera is designed for high-resolution capture of brightfield and moderately bright fluorescence images.

This camera is excellent for use in machine vision, metrology, metallurgical, and other industrial applications, such as defect analysis.

### Application

- High-speed imaging for real time viewing
- Resolves fine detail
- Facilitates live mode previews of low light specimens
- Extra bit depth is ideal for image enhancement
- Increases sensitivity for faster image captures
- 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

### 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 (1-16x) | Facilitates live mode previews of low light specimens
10 bit x 18 MHz capture | Extra bit depth is ideal for image enhancement
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
FireWire® interface | Allows for effortless installation, hot-swapping, and laptop connectivity for greater ease of use

SPOT™ Software
- Mac® & Windows® operating systems
- Basic & Advance Applications
- Twain & Apple Event
- DLL w/ SDK and Tutorial manual
- 3rd Party Driver support
**CCD information:**
Kodak KAI-2001-M with cover glass
Monochrome progressive scan interline CCD
1600 x 1200, 7.4 µm square pixels
11.8mm x 8.9mm active area
100x minimum anti-blooming

**Cooling:** Fan cooled heat sink

**Digitization information:**
Digitized pixel-by-pixel at CCD sensor
Live mode: 8 bit x 36 MHz (Dual channel
8 bit x 18MHz )
Live image frame rate: 22 frames per second
Capture mode: 10 bit x 18MHz (see chart for
frame rate)

A/D Converter full scale set to 31,500 e (Gain=1)
Saved bit depths: 8, 12 or 16 bit BW

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

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

**Lens mount:** C-mount

**Sealing window:**
UBK 7 w/anti-reflection coating (IN1100)
IR Filter w/anti-reflection coating (IN1100)

**External shutter control:** BNC TTL level
output w/programmable delay

**External Trigger Input:** Plug on camera
back w/TTL level

**Mechanical:**
Tripod mount: 1/4 - 20 UNC
Camera head: 2.79" (71mm) x 3.75" (95mm) x 6.2" (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:**
Live mode viewing window & controls, auto-
exposure live and capture modes, image capture
window, predefined and custom image setups,
flat field correction, pan and zoom windows,
customizable floating taskbar, spot metering,
annotation, calibration mark, measurement tools,
sequential image capture and playback, exportable
image archiving database, report generator, macro
scripting, 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
12 bit BW / 2.75 MB
16 bit BW / 3.66 MB

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

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

**Minimum system requirements:**
PC: Pentium 400 Mhz or greater with Windows
98SE, 2000, ME, or XP, 128 MB of RAM,
Firewire/IEEE 1394a interface*

Mac: Power PC 400 Mhz G3 or greater with
OS 10.1 or higher, 256 MB of RAM, Firewire/IEEE
1394a interface

Video card: 24 bit RGB @ desired resolution

**Items included:**
Camera head, FireWire® data cable, power supply
cable, power supply, power cord, SPOT software
install CD (includes drivers), 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

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