The Xplorer™ Slider camera is a low noise, deep cooled digital camera designed for quantitative scientific applications that require selectable color and monochrome imaging. This 14-bit camera provides multiple readout modes, selectable gain levels and a wide field of view that closely matches the view in the microscope eyepieces. Example applications include chemiluminescence, SMF, particle tracking, FRET, FRAP, and TIRF.

### Features

- Mode changing slide
- -42 °C regulated cooling via three-stage Peltier thermoelectric cooler
- 4 Mpixel CCD with 21.4 mm diagonal
- Multiple readout speeds
- Programmable gain
- 40 MHz live mode (dual channel 20 MHz)
- 14 bit image capture
- Interline progressive scan CCD
- Exposure while downloading
- SPOT™ Software
  - Mac® & Windows® operating systems

### Benefits

- Quantitative and qualitative modes in a single camera
- Reduces dark noise and increases repeatability for long exposure image capture
- Provides field of view that closely matches that in the microscope eyepieces without the need for expensive optical couplers
- Allows the user to select between high speed and low noise image captures
- Facilitates live mode previews of low light specimens
- High-speed imaging for real time viewing
- Extra bit depth is ideal for image enhancement
- Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration
- Allows user to overlap exposure with previous image download to improve speed
- 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-4021-M with cover glass
Monochrome progressive scan interline CCD
2048 x 2048, 7.4 µm square pixels
15.16 x 15.16 mm active area, >1” optical format
300x anti-blooming
LCD electronic RGB color changing filter with IR filter

**Cooling:**
-42° regulated cooling via three-stage Peltier thermoelectric cooler; -71° C maximum differential from ambient

**Digitization information:**
Digitized pixel by pixel at CCD sensor
Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20MHz)
Live image frame rate: 11 f/s without binning; up to 17 f/s with binning
Capture mode: 14 bit (10 and 20 Mhz selectable) A/D Converter full scale set to 30,000 e (no binning); 60,000 e (with binning)
Nonlinearity: <1% (gain 1)
Saved bit depths: 8, 12 or 16 bit BW, 24, 36 or 48 bit RGB

**Noise specifications:**
Read noise: 9 e at 10 Mhz, 12 e at 20 Mhz
Dark current: 0.0002 e/p/s

**Exposure:**
No maximum exposure; 1 ms minimum exposure
Captured and live mode automatic exposure
Captured and live mode manual exposure

**Lens mount:** Nikon F-mount

**Sealing window:** Multilayer anti-reflection coating

**Computer interface:** PCI bus card

**External device control:** TTL level output with programmable delay

**External trigger input:** TTL level input with programmable delay

**Mechanical:**
Tripod mount: 1/4 - 20 UNC
Camera head: 5.00” (127 mm) x 4.40” (112 mm) x 7.13” (181 mm), 4.55 lbs. (2.1 kg)
Power supply: 3.61” (92 mm) x 3.90” (99 mm) x 8.13” (207 mm), 3.2 lbs. (1.5kg)
Operating environment: 0 to 30° C ambient, 0-80% relative humidity noncondensing

**Power requirements:** 100-240 VAC, 3 A

**SPOT software features:**
Color 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, interactive print dialog, online help menu, Correct Color Technology™.

**File formats:**
Bitmap, TIFF, TIFF-JPEG, JPEG-2000, PICT, AVI (PC, export only), Quicktime (Mac, export only)

**TIFF File sizes:**
8 bit BW / 4 MB 24 bit RGB / 12 MB
12 bit BW / 6 MB 36 bit RGB / 18 MB
16 bit BW / 8 MB 48 bit RGB / 24 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:**
Full height, half length PCI bus slot or PCI-MCA CardBus slot
* - Requires Magma™ Adapter (sold separately)
PC: Pentium 400 or greater w/
  Windows 98, 98SE, 2000, ME, or XP
  Mac: 400 Mhz G3 - OS 10.2.8 or higher
RAM: 256 MB
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 drivers), software user guide, hardware user guide, and 2 year warranty

Mac** is a registered trademark of Apple Computers, Inc.
Windows® is a registered trademark of Microsoft.
Specifications are typical and subject to change without notice.
Ambient temperature is defined as 20° C.

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