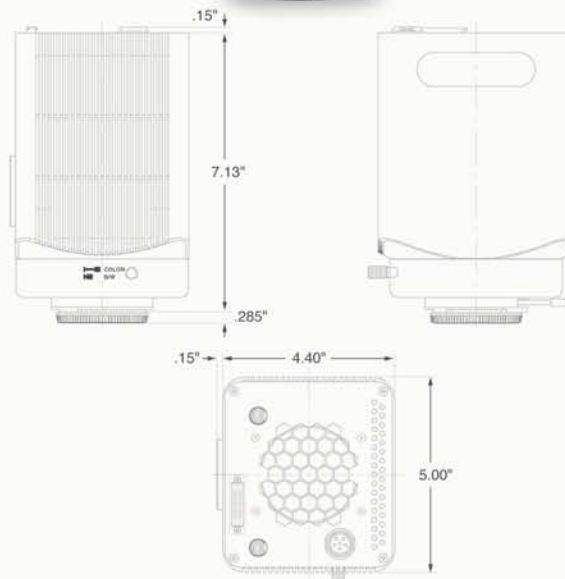


The SPOT™ Xplorer Slider delivers both true color and high sensitivity monochrome imaging in one digital camera. 14-bit digitization with multiple readout speeds makes recording dynamic events easy. This flexible camera offers superior quantum efficiency and deep cooling, optimizing sensitivity for demanding low light applications. The many applications for this camera include brightfield color imaging, GFP imaging, immunofluorescence, ion tracking, and 3D deconvolution.

The SPOT Xplorer includes SPOT Basic software (Windows® and Mac® OS) for real-time image preview and acquisition. Drivers are available for many third party imaging software applications, and a Software Development Kit (SDK) is available at no charge for easy integration with custom applications. Advanced triggering enables precise synchronization with peripherals.



# Xplorer™ 1.4 Mp SLIDER



## Features

## Benefits

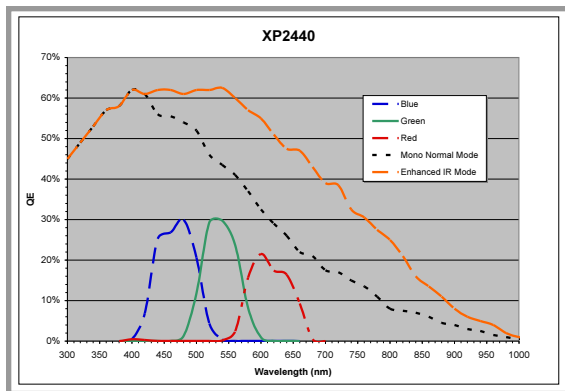
|                                  |   |
|----------------------------------|---|
| Dual Mode Slider Mechanism       | Provides 3-shot color and quantitative monochrome in one camera                           |
| Nearly 11 full frames per second | High speed image capture  |
| -40° C regulated cooling         | Dark noise reduction and repeatable dark frame correction for long exposures              |
| Enhanced IR Mode                 | Increases the sensitivity for wavelengths > 525 nm (see QE chart)                         |
| No Glow Mode                     | Turns off all sources of On-CCD circuit glow during exposure. Important for long exposure |
| 4.5 e <sup>-</sup> Read Noise    | Great lowlight detection limit and SNR  |
| 14-bit digitization              | Over-sampled bit depth ensures best data quality  |



**SPOT™ Imaging Solutions**  
A division of Diagnostic Instruments, Inc.

| Specifications        |   |
|-----------------------|---|
| Resolution            | 1.4 Mp  |
| Sensor Type           | Sony ICX285AL with cover glass<br>Monochrome Progressive scan<br>interline CCD Shutter                  |
| Active Pixels         | 1360 x 1024   |
| Pixel Size            | 6.45 $\mu\text{m}$ x 6.45 $\mu\text{m}$   |
| Optical Format        | 2/3"  |
| Active Imager Size    | 8.77 mm (H) x 6.60 mm (V)   |
| Exposure Time         | 0.5 ms – 1500 sec   |
| Anti-Blooming         | 100x minimum  |
| Binning               | 2 x 2, 3 x 3, 4 x 4, 8 x 8  |
| Region of Interest    | User selectable, 50 x 50 to full<br>resolution  |
| Read Noise            | 4.5 e <sup>-</sup> @ 10 MHz; 5.5 e <sup>-</sup> @ 20 MHz  |
| Dark current          | 0.0013 e/p/s  |
| Full Well Depth       | >16,000 e <sup>-</sup> (no binning)<br>>24,600 e <sup>-</sup> (with binning)                            |
| Non-linearity         | <1%   |
| A-D Converter         | 14-Bit @ 10/20 MHz DCS  |
| Saving Bit Depth      | 8, 12 or 16 bits/channel<br>(Monochrome)  |
| Cooling               | Peltier thermoelectric cooling,<br>-40°C regulated, -70° C maximum<br>differential cooling from ambient |
| Lens Mount            | F-Mount   |
| Computer Interface    | PCI Express   |
| Triggers              | Camera ready (TTL)<br>External trigger input (TTL)<br>Exposure sync output (TTL)                        |
| Tripod Mount          | 1/4"-20 UNC   |
| Weight                | 4.55 lbs (2.1kg)  |
| Size                  | 5.00" W x 4.40"D x 7.13"H<br>(127mm x 112mm x 181mm)  |
| Power Requirements    | 100-240 VAC 1A  |
| Operating Environment | 0 to 30°C ambient, 0- 80% relative<br>humidity (non-condensing)   |
| Storage Temperature   | -20 to 60°C   |
| Certifications        | CE, FCC Class A, EN60950, RoHS  |

### Quantum Efficiency



### Captured Frame Rates (Monochrome mode)

| Captured Frames per Second* |                    |         |         |         |       |
|-----------------------------|--------------------|---------|---------|---------|-------|
| Binning level               | Region of Interest |         |         |         |       |
|                             | 1360x1024          | 640x480 | 512x512 | 256x256 | 50x50 |
| None                        | 10.8               | 21.1    | 20.1    | 35.0    | 92.4  |
| 2 x 2                       | 19.7               | 37.1    | 34.8    | 58.2    | 114.0 |
| 3 x 3                       | 27.4               | 48.4    | 46.3    | 74.4    | 124.6 |
| 4 x 4                       | 33.8               | 59.2    | 57.4    | 84.6    | 130.0 |
| 8 x 8                       | 55.3               | 83.6    | 83.2    | 108.7   | 138.8 |

\*1ms exposure with post-processing deferred, taken with 2.6 Ghz Xeon processor running Windows XP. Capture rates on other computers OS platforms may vary.

| Spot Software                             |   |
|---|---|
| Spot Basic Software Features              | Color Live mode viewing window with controls<br>Image capture window<br>Image capture setups are user defined, named and saved<br>Auto or manual exposure for Live and captured images<br>Zoom control on Live and captured images<br>Auto white balance<br>Spot or average metering<br>Flatfield correction<br>Annotation<br>Calibration mark<br>Measurement tools<br>Image enhancement tools<br>Sequential image capture and playback<br>Report generator<br>Interactive print dialog<br>Help menu<br>Drivers: Twain for Windows®, 3rd Party Interface for Mac® |
| Computer Operating System Compatibility   | Mac®: OS X<br>Windows®: XP, Vista®, 7<br>(32 bit versions only)   |
| Minimum Computer                          | Mac®: 400MHz Power PC, 512MB RAM, FireWire® IEEE 1394a port<br>PC: 1GHz Pentium, 512MB RAM, FireWire® IEEE 1394a port<br>Mac® and PC video: 24-bit color @ 1024 x 768 resolution  |
| Spot Advanced Software                    | Available (includes macro feature, floating taskbars and image archiving database)  |
| Spot Advanced Software Modules (Optional) | Available (adds image display intensity scaling, peripheral device control and extended depth of focus)   |
| Software Development Kit                  | Available for Mac® and Windows®   |
| Native Drivers for 3rd Party Software     | Available (call or visit our website)   |

| Items Included                 |  |
|--------------------------------|--|
| Camera Head                    | With lens cap  |
| PCI Express card               | Computer interface   |
| Communication cable            | Data cable   |
| Power supply with Power Cable  | With power cord, 3.61" (92mm) x 3.90" (99mm) x 8.13" (207mm), 3.2 lbs. (1.5kg) |
| Quick Start Installation Guide | Instructions on how to get up and running quickly                              |
| Software CD                    | Includes Spot Basic software and User Guide                                    |
| Warranty                       | 2 years from date of purchase  |

| Catalog number        | C-Mount | F-Mount |
|-----------------------|---------|---------|
| Xplorer 1.4 Mp Slider | N/A     | XP2440  |

Mac® is a registered trademark of Apple Inc.  
Windows® is a registered trademark of Microsoft.  
Specifications are typical and subject to change.



**SPOT™ Imaging Solutions**  
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