DIAGNOSTIC instruments, inc.

Pursuit™ -XS

Slider | 1.4 MP

The **Pursuit™ 1.4MP Slider** camera is a cooled, low noise, high speed digital camera designed for researchers who have both brightfield color and quantitative scientific applications. The 1.4MP model is optimized for speed over resolution. Key applications include ion imaging, FRET, FRAP, TIRF, SMF and particle tracking as well as color brightfield images.

The Pursuit™-XS Slider is a great choice for core labs where the extreme cooling of the Xplorer™-XS is not required.

The slider model provides essentially two types of high performance cameras in one easy to use system.

Key Features and Benefits

Easy to use Slider Mechanism	Provides 3-shot color and quantitative monochrome in one camera
-10° C regulated cooling	Dark noise reduction and repeatable dark frame correction
Enhanced IR Mode	Increases the Sensitivity for wavelengths > 525 nm (see QE chart)
High speed image capture	Nearly 11 full frames per second
Dual speed readout	Allows users to select between maximum speed or lowest noise level
Live mode gain	Provides real time viewing of low light specimens
14 bit digitization	Over-sampled bit depth ensures best data quality
Interline progressive scan CCD	Electronic shuttering eliminates mechanical shutter shortcomings related to speed, wear, and vibration
Exposure while downloading	Allows user to overlap exposure with previous image download to increase the frame rate
Data /device streaming	Allows the highest speed experiment image captures
SPOT™ Software for Mac® and Windows® operating systems	Provides essential tools for modern microscopy and is widely supported by 3rd party software companies. (SDK available for OEM development)

CCD Information

Sony ICX285AL with cover glass

Monochrome Progressive scan interline CCD

1360 x 1024, 6.45µm square pixels

8.77 x 6.60 mm active area

100x anti-blooming

CCD Grade: Sony Grade 0

Cooling

Peltier thermoelectric cooling, -10°C regulated,

-33° C maximum differential cooling from ambient

Digitization information:

Correlated dual sampling at CCD sensor

Live Mode: 8 bit x 20 MHz

Live Image frame rate: 10 fps full resolution, 17.5 fps 2x2 binning

Capture mode: 14 bit (selectable 10 or 20 MHz)

A-D converter full scale set to 14,000 e-(no binning); 21,540 e-(with binning)

Nonlinearity: <1%

Saved bit depths: 8, 12, or 16 bit;

Monochrome 24, 36, or 48 bit RGB

Noise specifications:

Read noise: <4.5 e @ 10 MHz.; <5.5 e @ 20 MHz

Dark current: 0.001 e/p/s

Exposure:

Minimum: 100 µs

Maximum: >48 hrs

Captured and live mode automatic exposure

Captured and live mode manual exposure

Lens mount: Nikon F-Mount

Sealing window: Corning 7980 fused silica 320 nm – 820 nm anti-refelection coating

Computer interface: PCI Universal or PCI Express

External device control: TTL level output with programmable delay

External trigger input: TTL level input with programmable active state and delay. Manual and bulb exposure modes.

Mechanical

Tripod mount: 1/4-20 UNC

Camera head: 5.00" (127mm) x 4.40" (112mm) x 7.13" (181mm), 4.55 lbs. (2.1 kg)

Power supply: 3.61" (92mm) x 3.90" (99 mm) x 8.13" (207mm), 3.2 lbs. (1.5 kg)

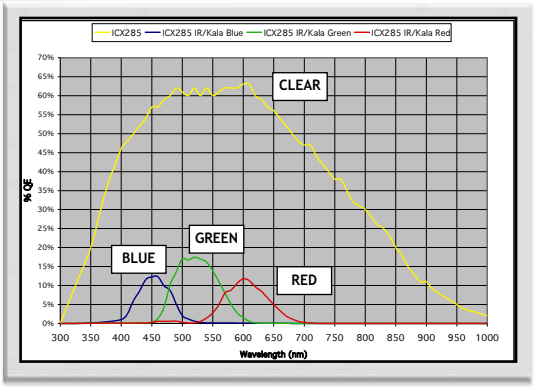
Operating environment: 0-30°C ambient, 0-80% relative humidity noncondensing

Power requirements: 100-240 VAC, 3A

SPOT Basic 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™.

Quantum Efficiency



Quantum Efficiency

Captured Frames per Second*

Region of Interest

Binning	1360 x 1024	640 x 480	512 X 512	256 x 256	50 x 50
None	10.9	21.5	20.5	36.2	92.4
2 x 2	20.1	37.3	35.9	58.3	114.0
3 x 3	28.0	49.4	48.2	73.8	124.6
4 x 4	34.8	59.2	57.7	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.

Formats and Tiff Sizes

File formats:

Bitmap, TIFF, TIFF-JPEG, JPEG-2000, PICT, AVI (PC, export only), Quicktime (Mac, export only)

TIFF File sizes:

8 bit monochrome:1.33MB

12 bit monochrome:2.00 MB

16 bit monochrome:2.66 MB

24 bit RGB: 3.99 MB

36 bit RGB: 6.00 MB

48 bit RGB: 7.98 MB

Driver Information

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)

Computer Requirements

Minimum system requirements:

PC: Pentium® based processor or equivalent @ 1 GHz or greater with Windows 2000, XP, Vista, one available PCI or PCI Express slot.

Mac: Power PC G4 or greater with OS 10.3.9 or higher, 512 MB of RAM, available PCI or PCI Express slot.

Video card: 24 bit RGB @ 1024 x 768 or greater

Items included:

Camera head, PCI or PCI Express card, power supply, power cord, communication cable, SPOT software install CD (includes drivers), electronic software user guide. Quick Start Installation Guide. Includes a 2 year warranty.

Specifications are typical and subject to change without notice.
Ambient temperature is defined as 20°C.

Catalog Number: **PR2340**

Pursuit-XS™
Slider:1.4 MP 4.14.08

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