DeltaPix
- Discover the Details

Infinity X-32

Digital camera for microscopes
USB 2.0
Windows Vista / XP

Features:

- Outstanding performance of a small and compact digital camera for microscopy with extremely high-resolution and exceptional fast live images

- Ideal camera for documentation and analyses for an exceptionally wide-ranging spectrum of applications

- Streaming live video on computer monitor through the high-speed USB 2.0 bus at 480 Mbits/s

- Fast streaming colour video images in high resolution with 30 fps at 640 x 480 pixels resolution

- Selectable video resolution in 4 steps from 1600 x 1200 pixels

- Perfect image and colour quality with the finest detail

- Resolution up to the extreme of 32 million pixels in precise colour

- Selectable resolution between 2 and 8, 16 and 32 million pixels in DeltaVu colour

- Automatic and manual exposure and sensitivity control

- Superior anti-blooming (overexposure) behaviour

- Easy and flexible daily use with dynamic insertion and removal of the camera to PC and notebook through a single standard USB 2.0 high-speed interface

- Small compact microscopy camera with optical C-mount for easy attachment to a microscope

- Tripod receptable for mounting on stands for macro photography

- Silent operation without noisy fan due to very low power consumption

- Intuitive user interface with powerful and easy-to-use image capture and processing functions

- Standard TWAIN driver for integration to 3rd party imaging application and software

- Standard DirectX driver for integration to 3rd party video application and software

- Support for the Dicom file standard

32 Million Pixels and Streaming Video

The Infinity X-32™ is designed to satisfy the unique and varried demands of digital microscopy. It offers exceptional fast streaming video at an incredibly high-resolution on the computer monitor as well as outstanding resolutions on still images.

The impressive performance and revolutionary resolution of the Infinity X-32 is achieved by combining state-of-the-art sensor design with innovative engineering skills.

A ground-breaking resolution of up to 32 million pixels in precise colour puts the Infinity X-32 in a class by its own. By integrating DeltaVu™, a highly successful, patented technology invented by DeltaPix, these incredible resolutions are achieved.

DeltaVu
DeltaVu™ is a revolutionary technology designed to dramatically increase the image resolution of a digital camera. The Infinity X has a 2 million pixels sensor with Red, Green and Blue colour filters placed in standard Bayer pattern.

Through a process of combining precise position information of the sensor, and capturing additional images, by moving the sensor only fractions of the length of a pixel, the DeltaVu technology allows calculation of finer details than the size of a pixel.

This process also includes more detailed reproduction at all virtuel pixel locations in each of the three colour planes, Red, Green or Blue. The result is an impressive image file, where 92 million virtuel pixels have captured the information, an equivalent of 32 Mpixels for each of the 3 colours.

Easy-to-use
The Infinity X-32 is a small and compact digital camera with a standard C-mount interface for flexible attachment to microscopes.

Installation of the electronic connection is also very simple by connecting a single standard USB 2.0 cable between the camera and the PC. The Infinity X-32 uses the USB 2.0 cable for power, control information and the transmission of data. The very low power consumption of the camera has made it possible only to use a single cable.

Fast video
The use of the 480 Mbits/s high-speed architecture of the USB 2.0 standard has allowed the Infinity X-32 to deliver fast streaming colour video in high-resolution on the monitor of the connected computer.

With a rate of 30 frames per second the microscopy image appears on the monitor without delay. The fast live image makes the process of focusing and interactively optimizing the image very easy.

Infinity X-32 specifications:

Imager

Effective size:	1/1.8" format CCD 8.5 mm x 6.8 mm
Colour filter:	Red, Green, and Blue in Bayer pattern
Effective pixels:	1,616 x 1,216 pixels (2 million)
Pixel size:	4.4 x 4.4 microns
Dynamic range:	>66 dB
Read noise:	12 e-rms
Exposure time:	0.01 milliseconds to 60 seconds
Sensitivity:	ISO 200 to 3500
Binning:	Red, Green, Blue and colour
Exposure sensitivity:	Adjustable from 1 times to 23 times
Exposure mode:	Automatic, manual or converging
Colour balance:	Automatic, manual or spot white balance
Shutter:	Electronic global shutter

Light Source 5,000° K

Spectral Response vs Wave Length

Digital video

Resolution:

1,616 x 1,216 pixels (more than 12 fps)

1,280 x 1024 pixels (more than 14 fps)

1,024 x 768 pixels (more than 18 fps)

800 x 600 pixels (more than 22 fps)

640 x 480 pixels (more than 26 fps)

Binning (more than 30 fps)

Digital still image

Single exposure:	1,600 x 1200 pixels (1.920 million pixels)
Multiple exposures:	3,200 x 2,400 pixel (7,680 million pixels) 24 bit RGB: 22.5 MB$_S$
	4,800 x 3,600 pixel (17,280 million pixels) 24 bit RGB: 48 MB$_S$
	6,400 x 4,800 pixel (30,720 million pixels) 24 bit RGB: 96 MB$_S$

Data format & compression

Digital output:

- 24 bit uncompressed TIFF-RGB (8 bits per colour)
- 30 bit uncompressed TIFF-RGB (10 bits per colour)
- 24 bit loss-less compressed JPEG2000 (8 bits per colour)
- 24 bit compressed JPEG (8 bits per colour)
- 24 bit uncompressed DICOM (8 bits per colour)
- 24 bit uncompressed video in AVI format (8 bits per colour)
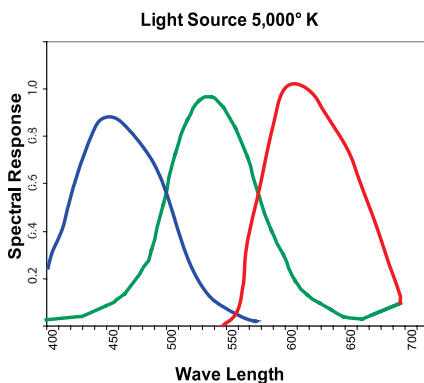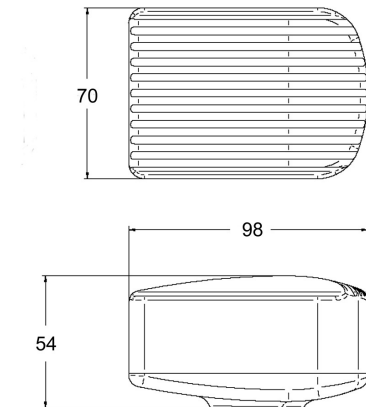
Computer & software

Data interface:	480 Mb/s high-speed USB 2.0 architecture
Cable:	Standard USB 2.0 cable with series "B" connector
Power:	Direct powered from the USB 2.0 bus
Application interface:	Intuitive, easy-to-use user application
Application support:	TWAIN driver for integration to 3rd party imaging applications
	DirectX driver for integration to 3rd party video applications

Operational requirements

Temperature:	0° C to +40° C
Humidity:	15 to 80 % RH (non-condensing)

Physical data

Optical mount:	Standard C-mount
Mechanical mount:	Tripod receptable for macro photography
Housing:	Aluminium with cooling fins
Height:	54 mm
Width:	70 mm
Depth:	98 mm
Weight:	425 g
Compliance:	CE, FCC Class B

70

98

54

Minimum computer platform

Pentium IV,1.3 GHz or similar
512 MB RAM
15 GB free harddisk space
USB 2.0 Port
Windows XP, Windows Vista

Product includes:

- Infinity X digital camera for USB 2.0
- CD-ROM with
  - Stand-alone user application
  - TWAIN driver
  - DirectX driver
  - Documentation
- USB 2.0 cable (2.0 m)

Optional:

- Software Developer Kit (SDK) for developing deep integration with other software applications

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