



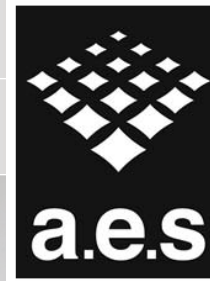
## Bio-Imaging Microscopy Camera

### Versatile Microscopy Camera for Bio-Imaging

Bio-research imaging can require many capabilities – everything from high resolution brightfield imaging such as phase contrast, accurate color representation of H & E staining all the way through to low light fluorescent protein imaging. The new EXi Aqua camera was specifically designed to address *all* of these needs of life science professionals. Providing high resolution and sensitivity, it is also available with a Bayer mask color CCD option, all with the added convenience of simplicity and ease of use. The camera is a multi-talented, cost-effective, and user-friendly laboratory workhorse suited to a variety of bio-imaging applications.

The EXi Aqua camera allows for highly versatile, high performance capability. The camera is cooled to 0 degrees C, and boasts enhanced sensitivity, a broad spectral response, and approximately 20% less read noise than its predecessor. Coming in at less than 2 pounds it requires no bulky external controller, minimizing bench clutter. The EXi Aqua camera is backed by superior QImaging application and product support and a two-year limited warranty – the industry's best.

The EXi Aqua camera is easy to use. It can be installed and operational within minutes, and features a fast IEEE1394b "FireWire" interface and simple, versatile software.



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features	benefits
High sensitivity	▪ Short exposure time and minimal cell toxicity
Active cooling	▪ Reduced thermal noise
Low read noise	▪ Precise measurement of dim signals
High quantum efficiency	▪ Excellent sensitivity
6.45 micron pixels	▪ Matched to common objective lenses
14-bit readout	▪ More than 16,000 gray levels per pixel
Low dark current	▪ Enhanced low light detection with longer exposure times
Integrated digitization	▪ No RF interference
No need for external controller	▪ Keeps bench space clutter-free
Easy installation	▪ Ready to use in less than 10 minutes
Software included	▪ Enables a variety of life-science applications
IEEE 1394b FireWire connection	▪ Portability and ease of use
RGB module available	▪ High-resolution color images

applications
<p>The EXi Aqua Bio-Imaging Microscopy camera is an extremely versatile, simple-to-use laboratory workhorse that is ideally suited to a variety of life sciences applications.</p> <ul style="list-style-type: none"> <li>▪ Fluorescent protein imaging (BFP, GFP, YFP, RFP)</li> <li>▪ Time-lapse fluorescence imaging</li> <li>▪ Immunofluorescence imaging</li> <li>▪ Phase contrast, DIC and bright-field</li> </ul>

# EXi Aqua Specifications

ccd sensor	
Light-Sensitive Pixels	1392 x 1040
Binning Modes	2, 4, 8
Exposure/Integration Control	10µs to 17.9min
Sensor Type	Sony® ICX285 front-illuminated interline CCD
Pixel Size	6.45µm x 6.45µm
Linear Full Well (1x1 Binning)	18,000e- (20MHz); 18,000e- (10MHz)
Read Noise	6.5e- (10MHz); 7.2e- (20MHz)
Dark Current	0.15 e-/pix/s
Cooling	0°C (regulated)
Digital Output	8 bits/14 bits
Readout Frequency	20, 10MHz
Frame Rate	10.9fps full resolution @ 14 bits (20MHz)

camera	
Black-Out Mode	Turns off all LEDs on camera for low-light applications; software controlled
Computer Platforms/ Operating Systems*	Windows® XP and Vista (32 bits)
Digital Interface	IEEE-1394b FireWire (two ports with simultaneous camera control)
External Trigger	TTL Input
Trigger Types	Internal, Software, External (Edge-Hi/Edge-Low/Pulse-Hi/Pulse-Low/Strobe-Hi/Strobe-Low)
External Sync	TTL Output
External RGB Filter Control	Support for RGB filter
Analog Gain Control	0.8x to 34.7x
Optical Interface	2/3", C-mount optical format
Threadmount	1/4" – 20 mount
Power Requirements	13.5 watts at 12 volts
Weight	800g (1.75lbs)
Warranty	2 years
Operating Environment	0 to 27°C, 80% relative humidity non-condensing
Storage Temperature	-10 to 60°C



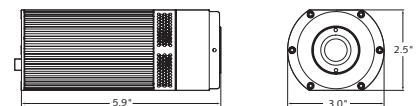
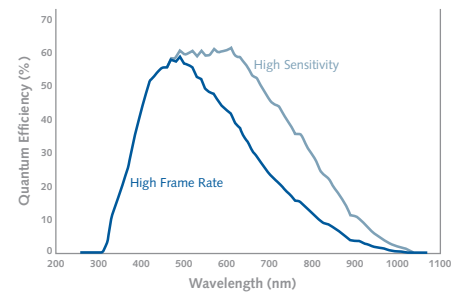
## included

- **EXi Aqua Bio-Imaging Microscopy Camera**  
Model: EXI-AQA-R-F-M-14-C (monochrome)  
Model: EXI-AQA-R-F-CLR-14-C (color)
- **Power supply**
- **IEEE1394b FireWire cable (9-pin to 9-pin)**
- **IEEE1394b FireWire PCI card**
- **QCapture Suite software for PC**
- **Limited Warranty**

## camera options

- **Performance Assurance Program (extended warranty)**
- **RGB Filter Module**

## spectral response



RoHS



\*Refer to QImaging website for detailed listing of supported operating systems.  
Note: Specifications are typical and subject to change.

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Sony is a registered trademark of Sony Corporation.  
Windows is a registered trademark of Microsoft Corporation in the United States and other countries.  
Other brand and product names are the trademarks or registered trademarks of their respective owners and manufacturers.

Digitizer Speed	10MHz				20MHz			
	1x1	2x2	4x4	8x8	1x1	2x2	4x4	8x8
Binning (Pixels)	1x1	2x2	4x4	8x8	1x1	2x2	4x4	8x8
Frame Rate (Full Field)	5.9fps	10.3fps	18.7fps	29.2fps	10.9fps	18.7fps	29.3fps	40.9fps
Full Well Capacity	18,000e-	36,000e-			18,000e-	33,500e-		
Read Noise	6.5e-				7.2e-			
Dynamic Range	2769:1	5538:1			2500:1	4653:1		

Results are typical and may vary from camera to camera.



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