

FROM IMAGES TO ANSWERS[®]

Evolution[™] VF Digital Kit

The High Performance Camera for Brightfield or Fluorescence Applications

Overview

The Evolution VF digital camera is designed for high resolution brightfield or fluorescence scientific and industrial applications. A progressive scan interline CCD sensor gives a resolution of 1.4 million pixels in a 12-bit digital output.

High-speed low noise electronics provide linear digital data at frame rates of up to 110 fps in region of interest with binning. The IEEE 1394 FireWire[™] digital interface allows ease of use and installation with a single wire requiring no frame-grabber or external power supply.



Available Camera Models:

- Evolution VF Monochrome Cooled
- Evolution VF Monochrome Non-cooled
- Evolution VF Color Cooled
- Evolution VF Color Non-cooled

Features	Benefits
High Resolution 1.4 Million pixel sensor	<ul style="list-style-type: none"> ▪ Highly detailed, sharp images
High Speed Readout	<ul style="list-style-type: none"> ▪ Previewing & focusing in real time ▪ 165fps maximum frame rate* ▪ 110fps in 4x4 binning and ROI* ▪ 10fps full resolution* ▪ Ideal for automated imaging applications
Flexible Exposure Control from 12μs to 17.9min	<ul style="list-style-type: none"> ▪ Optimal integration over a wide range of light levels
12 bit digitization 36 bit color digitization	<ul style="list-style-type: none"> ▪ 4096 grey levels for precise light intensity discrimination ▪ 4096 levels per channel for superior color images
External Sync and Trigger	<ul style="list-style-type: none"> ▪ Tight synchronization with flashlamps, automated filters, shutters and microscope stages
Peltier Cooling	<ul style="list-style-type: none"> ▪ Minimize thermal noise during low light imaging
ROI (Region of Interest)	<ul style="list-style-type: none"> ▪ Higher frame-rates for precise analysis of rapidly changing specimens
Binning	<ul style="list-style-type: none"> ▪ Increased sensitivity for quantitation & imaging of very low light levels ▪ Increased frame rate
IEEE 1394 FireWire[™]	<ul style="list-style-type: none"> ▪ Ease of use & installation ▪ Portability with laptop computer ▪ Simultaneous use of multiple cameras through a single port ▪ Single cable operation, no external power supply or control unit
Image-Pro Drivers	<ul style="list-style-type: none"> ▪ Offers out-of-the box image capture and analysis when combined with Image Pro Family image analysis software

*Performance will vary depending upon the associated computer system.

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Evolution VF Specifications

CCD Sensor	
Light Sensitive Pixels	1.4 million, 1392 x 1040
Binning Modes	2x2, 4x4, 8x8
ROI (Region Of Interest)	From 1x1 pixels up to full resolution, continuously variable in single pixel increments
Exposure/Integration Control	12µs to 17.9min. in 1µs increments
Sensor Type	Sony ICX205 Progressive Scan Interline CCD, Monochrome, or Color
Pixel Size	4.65µm x 4.65µm
Linear Full Well Capacity	10,000 e ⁻
Readout Noise	< 12 e ⁻
Cooling Available	Yes
Cooling Type	Peltier Thermoelectric cooling to 25 degrees Celsius below ambient
Digital Output	12-bit
Readout Frequency	20, 10, 5, 2.5MHz
Frame Rate	10fps full resolution @ 12-bits, 165fps maximum with binning and ROI*
Camera	
Computer Platforms/Operating Systems	Microsoft® Windows
Digital Interface	IEEE 1394 FireWire™
Sustained Image Data Rate	40 MB/s
Shutter Control	Electronic shutter, no moving parts
External Trigger	TTL Input
Trigger Types	Internal, Software, External
External Sync	TTL Output
Gain Control	0.6 to 15 times
Offset Control	Controlled by software
Optical Interface	½", C-Mount optical format
Threadmount	¼" -20 mount
Power Requirements	6 watts non-cooled; 11 watts cooled; 8-24V
Weight	595g; cooled 865g
Warranty	2 years
Operating Environment	0 to 35 degrees Celsius (32 to 95F)
Humidity	Less than 80% at 35 degrees Celsius (95F)

* Performance will vary depending upon the associated computer system.

Works Seamlessly with Image-Pro Software

The Evolution VF kit comes with an Image-Pro family driver that requires one of the following Image-Pro family applications:



■ Image-Pro® Express

Perfect for basic imaging or image capture stations, Image-Pro Express

offers quick capture and enhancement tools.



■ Image-Pro® Discovery

More advanced than Image-Pro Express, Image-Pro Discovery offers added measurement and analysis capabilities.



■ Image-Pro® Plus

The ultimate imaging software package, Image-Pro Plus includes all of the

functionality of Image-Pro Discovery along with added analysis tools and the ability to write customized macros.

Experience a Fully Integrated Solution

Don't risk valuable time and money by attempting to use poorly integrated software and hardware components. Evolution VF Digital Kits provide guaranteed compatibility from one source, at a price that is easy on your budget.

Our Worldwide Dealer Network is There to Assist You. For a Dealer in Your Area, Contact Us Today!

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