

The CFW family of FireWire digital cameras provides cost effective solutions to a variety of scientific imaging applications. These cameras, with 12 bit depth, are well suited for bright-field, dark field, and fluorescence imaging situations. All Scion CFW cameras come complete with software and a full 30-day money-back guarantee of satisfaction. Call us to discuss how a CFW FireWire camera can help in your imaging application.

## CFW Camera Models

Model	Sensor	Depth	MSRP
CFW-1612C	1/1.8" Color CCD	12 Bits	\$1295
CFW-1612M	1/1.8" Mono CCD	12 Bits	\$1295
CFW-1312C	1/2" Color CCD	12 Bits	\$995
CFW-1312M	1/2" Mono CCD	12 Bits	\$995
CFW-1012C	1/3" Color CCD	12 Bits	\$695
CFW-1012M	1/3" Mono CCD	12 Bits	\$695



## Features

- Simple to use FireWire (IEEE-1394) computer connection
- Models from .8 to 2.0 MPixels, all in full 12 bit depth
- All camera settings are software controllable
- Based on popular Sony CCD sensors, mono or Bayer color
- Exposures to 100 seconds for low-light applications
- Analog Gain (36 dB range), RGB gains (6 dB range)
- Variable read-out rates for precision low-noise images
- FireWire cable included
- Free software for Windows and OS X included
- Full 30-day money-back guarantee of satisfaction

## Applications

- General bright-field or dark-field video microscopy
- Fluorescence microscopy
- Ethidium bromide electrophoretic gel documentation
- Pathological, histological, and cytological imaging
- Failure analysis
- Metallurgical and mineralogical microscopy
- Motion and motility analysis
- Semiconductor wafer inspection
- Forensic analysis
- Sequence and time-lapse imaging

## Easy to Use

Scion CFW FireWire cameras are very easy to use. All that is required is a FireWire port on your computer. All necessary cabling and software is included. Simply hook the camera to the computer with the FireWire cable, plug the power transformer into the wall, and install the software. One can be imaging within 5 minutes of opening the box.

The software provided with the CFW FireWire cameras is intuitive and straightforward. Whether using The Scion VisiCapture application, the TWAIN module, or the Image/J plug-in, the user interface is consistent, and all software features are present. The cameras and the software operate identically on both Windows and Mac OS X platforms. Free technical support, whether by telephone or email, is provided for the life of the camera.

## Quantitative Quality

Scion CFW cameras are designed with quantitative performance in mind. They use Charged Coupled Device (CCD) sensors, instead of the CMOS sensors usually found in cameras in this price range. CCD sensors enable capture of lower noise images than CMOS sensors and provide greater dynamic range. Having a camera with a CCD sensor is particularly important in low-light and fluorescence applications.

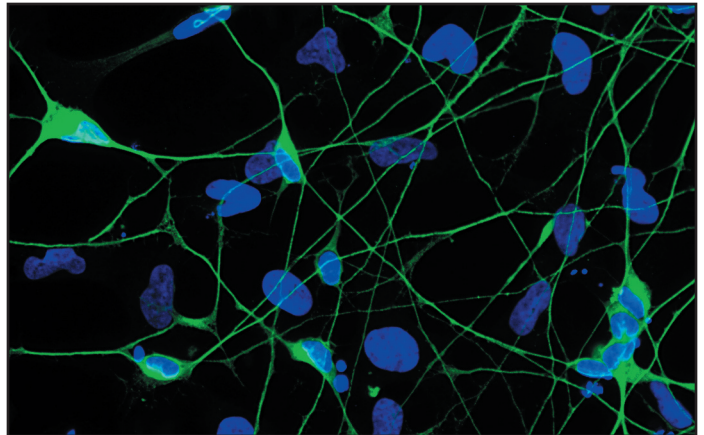
In addition, CFW cameras provide a user selectable low-noise readout mode. This mode increases the readout time per pixel and employs a low pass filter in the digitization circuitry to reduce readout noise, providing highly accurate images. Another factor which improves image quality is the all aluminum case design which minimizes environmental electrical interference.

## Excellent Value

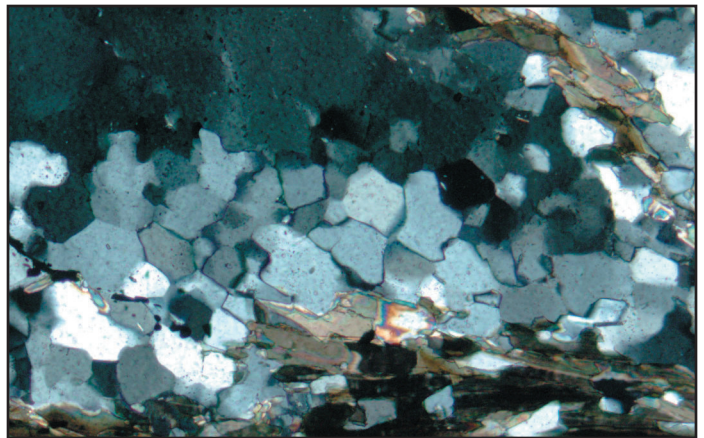
Scion CFW FireWire Cameras provide excellent value for the scientific professional. Cameras comparable in features and specifications with the CFW cameras typically retail for far more -- up to twice the price of a CFW or greater. There are no extras to purchase with Scion digital cameras. Software is included at no charge, technical support is always free, and software development kits are provided with the camera. Additionally, Scion's 30-day money-back guarantee insures satisfaction.

Scion Corporation is committed to remaining a value leader in the field of scientific imaging. Scion forgoes expensive advertising campaigns and costly trade shows in order to provide a superior product at the lowest possible cost. The CFW FireWire family of cameras can help you stretch your research budget.

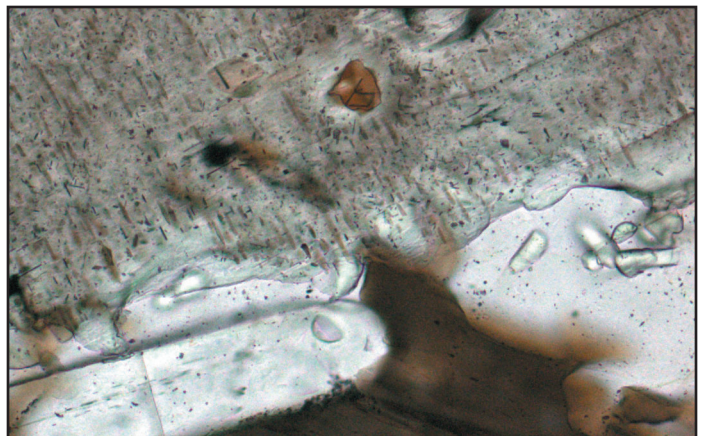
Prof. Ron Goldstein, Faculty of Life Sciences, Bar-Ilan University



Dr. Scott Johnson, Geological Sciences, University of Maine



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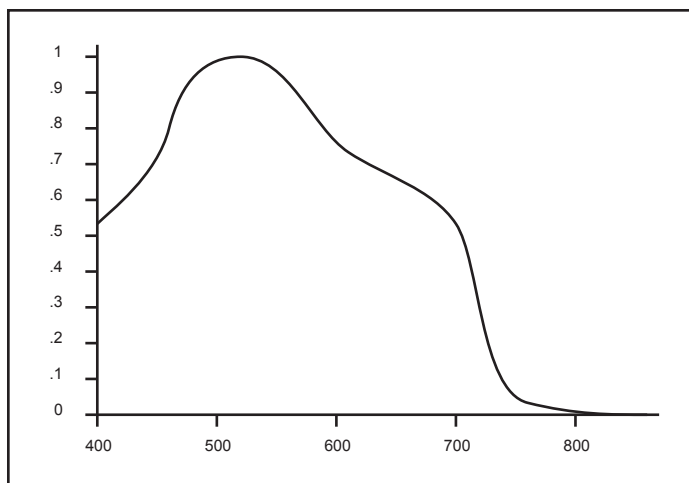




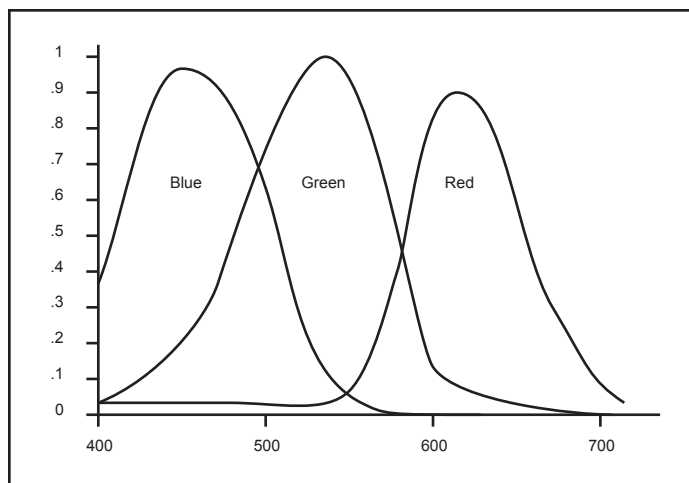
## Specifications

	CFW-1612C	CFW-1612M	CFW-1312C	CFW-1312M	CFW-1012C	CFW-1012M
Image Sensor	Sony ICX274AQ	Sony ICX274AL	Sony ICX205AK	Sony ICX205AL	Sony ICX204AK	Sony ICX204AL
Image Format	1/1.8" Bayer Color CCD	1/1.8" Mono CCD	1/2" Bayer Color CCD	1/2" Mono CCD	1/3" Bayer Color CCD	1/3" Mono CCD
Sensor Size	8.50 mm x 6.80 mm	8.50 mm x 6.80 mm	7.60 mm x 6.20 mm	7.60 mm x 6.20 mm	5.80 mm x 4.92 mm	5.80 mm x 4.92 mm
Pixel Size	4.40 um x 4.40 um	4.40 um x 4.40 um	4.65 um x 4.65 um	4.65 um x 4.65 um	4.65 um x 4.65 um	4.65 um x 4.65 um
Pixel Resolution	1600 x 1200	1600 x 1200	1360 x 1024	1360 x 1024	1024 x 768	1024 x 768
Pixel Depth	12 bits	12 bits	12 bits	12 bits	12 bits	12 bits
Pixel Read Rate	28 MHz/ 14 MHz / 7 MHz	28 MHz/ 14 MHz / 7 MHz	14.318 MHz / 7.159 MHz	14.318 MHz / 7.159 MHz	14.318 MHz / 7.159 MHz	14.318 MHz / 7.159 MHz
Frame Rate	Up to 10 fps	Up to 10 fps	Up to 7.5 fps	Up to 7.5 fps	Up to 15 fps	Up to 15 fps
S/N Ratio	67 dB	67 dB	70 dB	70 dB	65 dB	65 dB
Quantum Efficiency	42%	42%	45%	45%	45%	45%
Sensitivity	4050 e/p/s	4050 e/p/s	4350 e/p/s	4350 e/p/s	4225 e/p/s	4225 e/p/s
Power	15 V	15 V	15 V	15 V	15 V	15 V
Current	400 mA	400 mA	400 mA	400 mA	400 mA	400 mA
Operating Temp	0 C - 40 C	0 C - 40 C	0 C - 40 C	0 C - 40 C	0 C - 40 C	0 C - 40 C
Storage Temp	-20 C - 80 C	-20 C - 80 C	-20 C - 80 C	-20 C - 80 C	-20 C - 80 C	-20 C - 80 C
Operating Humidity	90% Relative Humidity	90% Relative Humidity	90% Relative Humidity	90% Relative Humidity	90% Relative Humidity	90% Relative Humidity

## Spectral Response - Mono Models



## Spectral Response - Color Models



## About Scion Corporation

Since 1991 Scion Corporation has been manufacturing imaging products for the scientific marketplace. It is our goal to provide quality products that will not strain your research budget.

FireWire and OS X are trademarks of Apple Computer, Inc. Windows 2000, Windows XP, and Windows Vista are trademarks of Microsoft Corporation. Photoshop is a trademark of Adobe, Inc.

## System Requirements

The Scion CFW family of digital cameras are compatible with personal computers running Windows 2000, Windows XP, Windows Vista, or Mac OS X. The computer requires a IEEE-1394 port, also known as FireWire.

Effective frame rate is computer dependent. At least 256 Mb of RAM is recommended for best performance. Requires Mac OS X 10.4 or higher, Windows 2000, Window XP, or Windows Vista.