

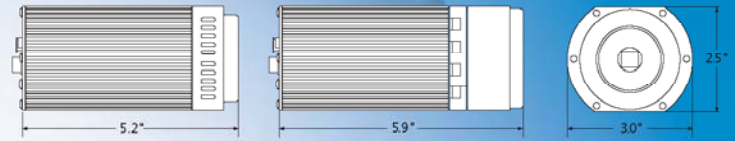
# SCIPLUS

## High-Sensitivity IEEE 1394 FireWire™ Digital CCD Camera – Monochrome or Color

The MVIA SCIPLUS digital camera features enhanced visible-range quantum efficiency resulting in high sensitivity that is ideal for brightfield, machine vision, metrology, and metallurgical imaging applications. A progressive-scan interline CCD sensor gives a resolution of 1.92 million pixels in a 12-bit digital output. High-speed, low-noise electronics provide linear digital data for rapid image capture. The IEEE 1394 FireWire™ digital interface allows ease of use and installation with a single wire. No framegrabber or external power supply is required. The SCIPLUS includes capture software (Windows and Mac OS) for real-time image preview and capture. A **Software Development Kit (SDK)** is available upon request for interfacing with custom software.



SCIPLUS



(non-cooled)

cooled

Note: Lenses are shown for illustration only and are not included.

### CAMERA MODELS

Includes: IEEE Firewire cable, IEEE 1394 PCI card, Capture software and access to SDK

Monochrome SCIPLUS Cooled  
 Model SCIPLUS-F-M-12-C

Monochrome SCIPLUS Non-Cooled  
 Model SCIPLUS-F-M-12

Color SCIPLUS Cooled  
 Model SCIPLUS-F-CLR-12-C

Color SCIPLUS Non-Cooled  
 Model SCIPLUS-F-CLR-12

### CAMERA OPTIONS

▪ **RGB Color Filter**  
 for monochrome cameras (F-mount interface required), refer to spec sheet for more details



▪ **Extended Warranty**

### FEATURES

High-Resolution, 1.92-Million-Pixel Sensor

Large Pixels (7.4µm x 7.4µm)

High-Speed Readout

Low-Noise Electronics

12-Bit Digitization/  
 36-Bit Color Digitization  
 (with Optional RGB Filter)

External Sync & Trigger

Peltier Cooling

Binning

IEEE 1394 FireWire™  
 Fast 1394 Technology

Extensive Application  
 Software Support

### BENEFITS

▪ Highly detailed, sharp images

▪ High sensitivity, high dynamic range, large well capacity

▪ Previewing & focusing in real time  
 ▪ 227fps maximum frame rate  
 ▪ 10fps full resolution @ 12 bits  
 ▪ Ideal for automated imaging applications

▪ Quantitation & imaging of low light levels

▪ 4096 grey levels for precise light-intensity discrimination  
 ▪ 4096 levels per channel for superior color images

▪ Tight synchronization with flashlamps, automated filters, shutters, & microscope stages

▪ Minimizes thermal noise during low-light, long-exposure imaging

▪ Increases sensitivity for quantitation & imaging of very low light levels  
 ▪ Increases frame rate

▪ Simple connectivity  
 ▪ 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)

▪ Choose from a large selection of life science & industrial software for microscopy, machine vision, & video-streaming functions

# SCIPLUS SPECIFICATIONS

## APPLICATIONS

- Brightfield, Phase-Contrast, & Darkfield Microscopy
- Live-Cell Imaging
- Pathology, Histology, & Cytology
- FISH
- Ca<sup>++</sup> Ratio Analysis
- Motility & Motion Analysis
- DNA Analysis
- Metallurgical Microscopy
- Semiconductor Inspection
- Manufacturing Quality Control
- Failure Analysis
- Forensic Analysis

## CCD SENSOR

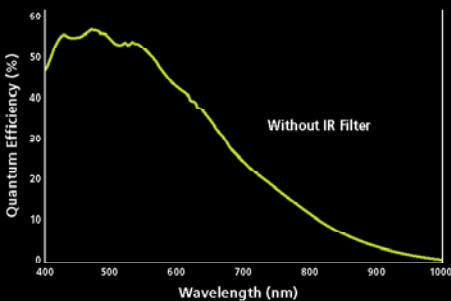
Light-Sensitive Pixels	1.92 million; 1600 x 1200
Binning Modes	2x2, 4x4, 8x8
ROI (Region of Interest)	From 1x1 pixels up to full resolution, continuously variable in single-pixel increments
Exposure/Integration Control	10µs to 17.9min in 1µs increments
Sensor Type	Kodak® KAI-2020 progressive-scan interline CCD (monochrome or color)
Pixel Size	7.4µm x 7.4µm
Linear Full Well	40,000e- without binning
Read Noise	16e-
Dark Current	4*e-/pix/s (cooled)
Cooling Available	Yes (optional)
Cooling Type	Peltier thermoelectric cooling to 25°C below ambient
Digital Output	12 bits
Readout Frequency	20, 10, 5, 2.5MHz
Frame Rate	10fps full resolution @ 12 bits (227fps maximum with binning and ROI functions)

## CAMERA

Computer Platforms/Operating Systems	Windows® & Mac OS**
Digital Interface	IEEE 1394 FireWire™
Sustained Image Data Rate	40MB/s
Shutter Control	Electronic shutter, no moving parts
External Trigger	TTL Input
Trigger Types	Internal, Software, External
External Sync	TTL Output
Gain Control	0.5 to 20x
Offset Control	-2048 to 2047
Optical Interface	2/3", C-mount optical format
Threadmount	1/4" — 20 mount
Power Requirements	11W (non-cooled); 17W (cooled)
Weight	585g (non-cooled); 845g (cooled)
Warranty	2 years
Operating Environment	0 to 50°C (32 to 122°F)
Storage Temperature	-10 to 60°C
Humidity	Less than 80% non-condensing at 35°C (95°F)

\* Nominal rating; 30e-/pix/s maximum for non-cooled cameras.  
 \*\* Refer to MVIA website for detailed listing of supported operating systems.  
 Note: Specifications are nominal and subject to change.

## SPECTRAL RESPONSE



04-0017A-A

**MVIA**  
 Scientific Imaging

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