MVIA
Scientific Imaging

MVIA, Inc
125 Sherwood Dr
Monaca, PA 15061
Phone: 724-728-7493
Email: info@mvia.com
Website: www.mvia.com

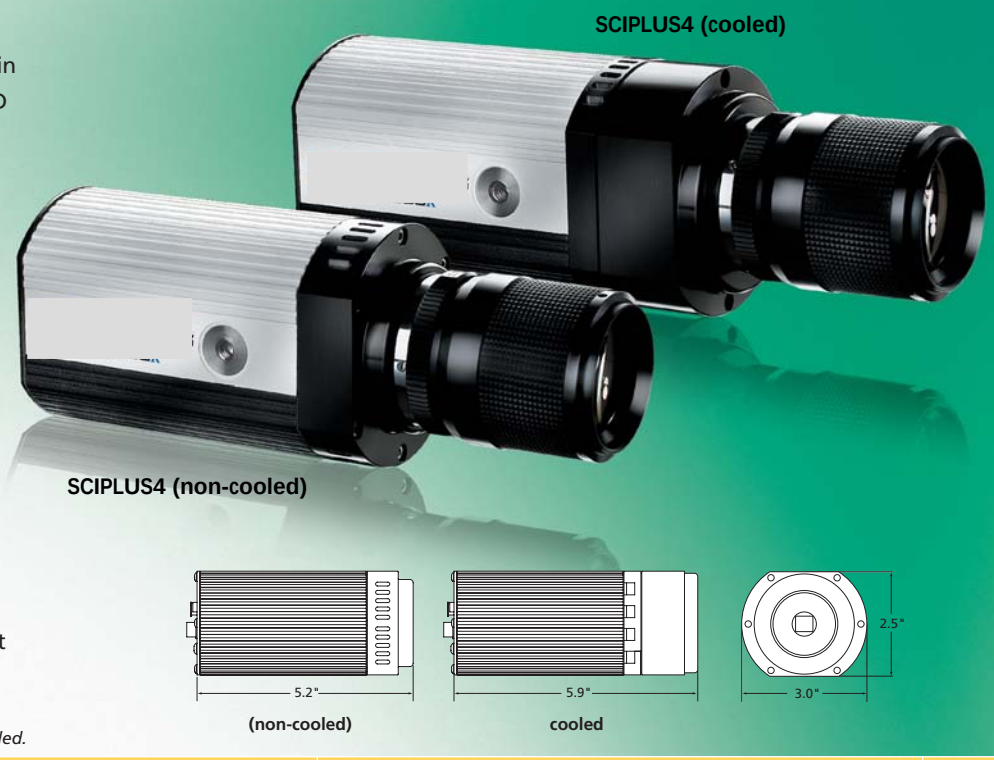
HIGH PERFORMANCE DIGITAL IMAGING
made easy

SCIPLUS4

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

The **MVIA SCIPLUS4** digital camera features enhanced well capacity and resolution resulting in high sensitivity that is perfect for brightfield, LCD inspection, and automated imaging applications. A progressive-scan interline CCD sensor gives a resolution of 4.19 million pixels with an aspect ratio of 1:1 in a 12-bit digital output — making it ideally suited for the 22mm light column provided by many microscope camera mounts. 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 **SCIPLUS4** 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.

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



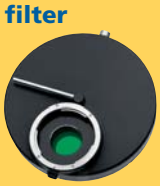
CAMERA MODELS

*Includes: **IEEE 1394 FireWire™ cable, IEEE 1394 PCI card, Capture software and access to SDK***

- **Monochrome SCIPLUS4 Cooled** Model: SCIPLUS4-M-12-C
- **Monochrome SCIPLUS4 Non-cooled** Model: SCIPLUS4-M-12
  CCD Digital Camera, 12-bit
- **Color SCIPLUS4 Cooled**
  Model: SCIPLUS4-CLR-12-C
- **Color SCIPLUS4 Non-cooled**
  Model: SCIPLUS4-CLR-12
  CCD Digital Camera, 12-bit

CAMERA OPTIONS

- Removable **IR cutoff filter**
- **RGB Color Filter** for monochrome cameras (F-mount interface required) Refer to spec sheet for more details



- **Extended Warranty**

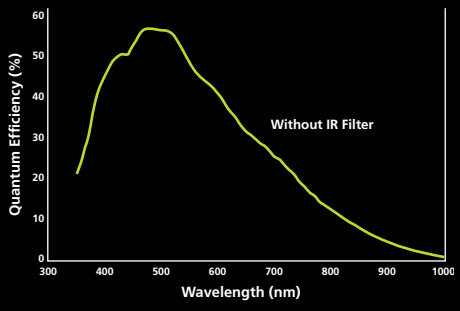
FEATURES	BENEFITS
High-Resolution, 4.19-Million-Pixel Sensor	▪ Highly detailed, sharp images
Large Pixels (7.4µm x 7.4µm)	▪ High sensitivity, high dynamic range, large well capacity
ROI (Region of Interest)	▪ Higher frame rates for precise analysis of rapidly changing specimens
Low-Noise Electronics	▪ Quantitation & imaging of low light levels
12-Bit Digitization/ 36-Bit Color Digitization (with Optional RGB Filter)	▪ 4096 grey levels for precise light-intensity discrimination ▪ 4096 levels per channel for superior color images
External Sync & Trigger	▪ Tight synchronization with flashlamps, automated filters, shutters, & microscope stages
Peltier Cooling	▪ Minimizes thermal noise during low-light, long-exposure imaging
Binning	▪ Increases sensitivity for quantitation & imaging of very low light levels ▪ Increases frame rate
IEEE 1394 FireWire™ MVIA Fast 1394 Technology	▪ 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)
Extensive Application Software Support	▪ Choose from a large selection of life science & industrial software for microscopy, machine vision, & video-streaming functions

SCPLUS4 SPECIFICATIONS

APPLICATIONS

- Brightfield, Phase-Contrast, & Darkfield Microscopy
- Fluorescence Imaging
- Pathology, Histology, & Cytology
- DNA Analysis
- Metallurgical Microscopy
- LCD Inspection
- Manufacturing Quality Control
- Failure Analysis
- Forensic Analysis
- Automated Imaging

SPECTRAL RESPONSE



CCD SENSOR	
Light-Sensitive Pixels	4.19 million; 2048 x 2048
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-4021 progressive-scan interline CCD (monochrome or color)
Pixel Size	7.4µm x 7.4µm
Linear Full Well	40,000e- (1x1)
Read Noise	12e- @ 20MHz
Dark Current	1.64e-/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, 5MHz
Frame Rate	4fps full resolution @ 12 bits (125fps 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	0.549 to 26.2x
Offset Control	-2048 to 2047
Optical Interface	F-mount optical format; aspect ratio 1:1
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)

Refer to MVIA wesbite for detailed listing of supported operating systems

Note: Specifications are nominal and subject to change.

04-0018A-C

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