MVIA, Inc
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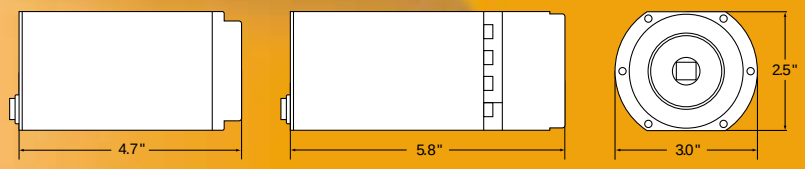
Scientific Imaging

HIGH PERFORMANCE DIGITAL IMAGING
made easy

SCIGEN FAST1394

High Performance IEEE 1394 FireWire™ Digital CCD Camera – Monochrome and Color

The MVIA SCIGEN digital camera is designed for high resolution brightfield and 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 and 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. The SCIGEN includes Capture Software for Microsoft Windows® and Mac® OS based systems 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, QCapture software and access to SDK***

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

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

CAMERA OPTIONS

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

- **Extended Warranty**

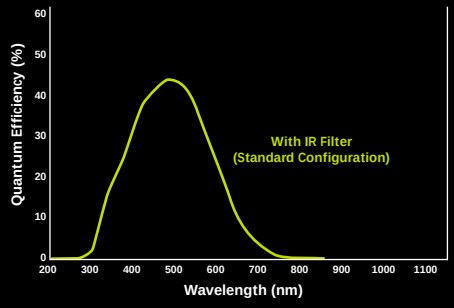
FEATURES	BENEFITS
High Resolution 1.4 Million pixel sensor	Highly detailed, sharp images
High Speed Readout	■ Previewing & focusing in real time ■ 205*fps maximum frame rate ■ 110fps in 4x4 binning & ROI ■ 10fps full resolution ■ Ideal for automated imaging applications
Flexible Exposure Control from 12µs to 17.9min	■ Optimal Integration over a wide range of light levels
12-bit digitization/ 36-bit colour digitization	■ 4096 grey levels for precise light intensity discrimination ■ 4096 levels per channel for superior colour images
External Sync and Trigger	■ Tight synchronization with flashlamps, automated filters, shutters & microscope stages
Peltier Cooling	■ Minimizes thermal noise during low light imaging
ROI (Region Of Interest)	■ Higher frame-rates for precise analysis of rapidly changing specimens
Binning	■ Increased sensitivity for quantitation & imaging of very low light levels ■ Increased 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 third party software support	■ Choose from a large selection of life science & industrial software for microscopy, machine vision and video streaming applications

SCIGEN FAST 1394 SPECIFICATIONS

APPLICATIONS

- Brightfield and Phase Contrast Microscopy
- Live Cell Imaging
- Pathology, Histology, Cytology
- Motility and Motion Analysis
- DNA Analysis
- Metallurgical Microscopy
- Semiconductor Inspection
- Failure Analysis
- Forensic Analysis

SPECTRAL RESPONSE



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 Colour
Pixel Size	4.65µm x 4.65µm
Linear Full Well	10,000e^-
Read Noise	12e^-
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, 205*fps maximum with binning and ROI
CAMERA	
Computer Platforms/Operating Systems	Microsoft 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	0.6 to 15 times
Offset Control	Controlled in Software
Optical Interface	1/2", C-Mount optical format
Threadmount	1/4"-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)

** Special order model only. Standard model achieves 165fps.*
***Refer to MVIA website for detailed listing of supported operating systems.*
****20MB/s when used with Mac® OS.*
Note: Specifications are nominal and subject to change.

04-0003C-A

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