

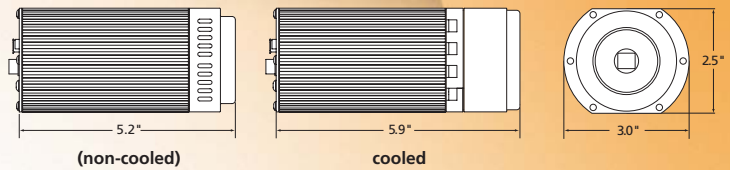


HIGH PERFORMANCE DIGITAL IMAGING
made easy

QICAM *FAST1394*

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

The QImaging QICAM digital camera is designed for high-resolution, brightfield 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 up to 110 fps with binning and ROI. 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 QICAM includes QCapture 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, QCapture software, & access to SDK

- **Monochrome QICAM Cooled** Model: QIC-F-M-12-C
- **Monochrome QICAM Non-Cooled** Model: QIC-F-M-12 CCD Digital Camera, 12 Bits
- **Color QICAM Cooled** Model: QIC-F-CLR-12-C
- **Color QICAM Non-Cooled** Model: QIC-F-CLR-12 CCD Digital Camera, 12 Bits

CAMERA OPTIONS

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



- **Extended Warranty**

FEATURES

- High-Resolution, 1.4-Million-Pixel Sensor
- High-Speed Readout
- Flexible Exposure Control from 12µs to 17.9min
- 12-Bit Digitization/ 36-Bit Color Digitization
- External Sync & Trigger
- Peltier Cooling
- ROI (Region of Interest)
- Binning
- IEEE 1394 FireWire™ QImaging Fast 1394 Technology
- Extensive Third-Party Software Support

BENEFITS

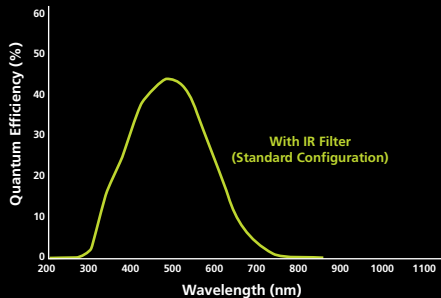
- Highly detailed, sharp images
- Previewing & focusing in real time
- 205*fps maximum frame rate
- 110fps with 4x4 binning & ROI
- 10fps full resolution
- Ideal for automated imaging applications
- Optimal integration over a wide range of light levels
- 4096 grey levels for precise light-intensity discrimination
- 4096 levels per channel for superior color images
- Tight synchronization with flashlamps, automated filters, shutters, & microscope stages
- Minimizes thermal noise during low-light imaging
- Higher frame rates for precise analysis of rapidly changing specimens
- 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 applications

QICAM FAST1394 SPECIFICATIONS

APPLICATIONS

- Brightfield and Phase-Contrast Microscopy
- Live-Cell Imaging
- Pathology, Histology, & Cytology
- Motility & 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 color) |
| Pixel Size | 4.65µm x 4.65µm |
| Linear Full Well | 10,000e ⁻ |
| Read Noise | 12e ⁻ |
| 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 (205*fps maximum with binning and ROI) |

CAMERA

| | |
|--------------------------------------|---|
| Computer Platforms/Operating Systems | Windows® & Mac OS** |
| Digital Interface | IEEE 1394 FireWire™ |
| Sustained 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 15x |
| Offset Control | -2048 to 2047 |
| Optical Interface | 1/2", C-mount optical format |
| Threadmount | 1/4" — 20 mount |
| Power Requirements | 7W (non-cooled); 13W (cooled); 8-24V |
| Weight | 635g (non-cooled); 915g (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) |

* Special order only. Standard model achieves 165fps.

**Refer to QImaging website for detailed listing of supported operating systems.

Note: Specifications are nominal and subject to change.

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