

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.

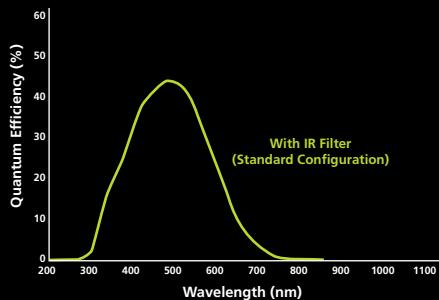
| CAMERA MODELS | FEATURES | BENEFITS |
|--|---|--|
| <p><i>Includes: IEEE 1394 FireWire™ cable, IEEE 1394 PCI card, QCapture software, & access to SDK</i></p> <ul style="list-style-type: none"> Monochrome QICAM Cooled Model: QIC-F-M-12-C Monochrome QICAM Non-Cooled Model: QIC-F-M-12 CCD Digital Camera, 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 | <p>High-Resolution, 1.4-Million-Pixel Sensor</p> <p>High-Speed Readout</p> <p>Flexible Exposure Control from 12µs to 17.9min</p> <p>12-Bit Digitization/ 36-Bit Color Digitization</p> <p>External Sync & Trigger</p> <p>Peltier Cooling</p> <p>ROI (Region of Interest)</p> <p>Binning</p> | <ul style="list-style-type: none"> Highly detailed, sharp images Previewing & focusing in real time 165fps maximum frame rate 110fps with 4x4 binning & ROI 10fps full resolution Ideal for automated imaging applications <p>Optimal integration over a wide range of light levels</p> <ul style="list-style-type: none"> 4096 grey levels for precise light-intensity discrimination 4096 levels per channel for superior color images <p>Tight synchronization with flashlamps, automated filters, shutters, & microscope stages</p> <p>Minimizes thermal noise during low-light imaging</p> <p>Higher frame rates for precise analysis of rapidly changing specimens</p> <ul style="list-style-type: none"> Increases sensitivity for quantitation & imaging of very low light levels Increases frame rate |
| CAMERA OPTIONS | | |
| <ul style="list-style-type: none"> RGB Color Filter for monochrome cameras (F-mount interface required), refer to spec sheet for more details Extended Warranty | <p>IEEE 1394 FireWire™ QCImaging Fast 1394 Technology</p> <p>Extensive Third-Party Software Support</p> | <ul style="list-style-type: none"> 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) <p>Choose from a large selection of life science & industrial software for microscopy, machine vision, & video-streaming applications</p> |

QICAM FAST 1394 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 (165fps 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) |

*Refer to QImaging website for detailed listing of supported operating systems.
Note: Specifications are nominal and subject to change.

ISO 9001:2000



04-0003C-D



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