

The MITO microscope ready camera is a dual function video camera and frame grabber. It may be used for photo-documentation, pathology, fluorescence, industrial and metallurgical applications, providing for high speed imaging during real time viewing with resolution in fine detail. Its field of view closely matches the field seen through a microscope.

The MITO software allows the user to overlay the date, time, sample temperature, and other experimental information such as sample name onto the digital images. It also enables the user to program the total number of images, and the number of images per time interval, in each desired photo session. The images are directly captured into the host computer through a firewire communication port. MITO can also be hot-swapped between computers, such as a desktop PC and a laptop, for maximum flexibility.



## Features

- Available In Both RGB Color And Monochrome Configurations
- Image Capturing Directly To PC Through Firewire Communication Protocol
- Real Time Image Monitoring On PC
- MITO Software Produces Temperature, Date & Time, And Other Experimental Information Text Overlays Directly Onto The Digital Images When Interfaced With Instec mK1000 Series Standalone Temperature Controller
- 2 Or 4 Mega Pixel, 0.6"CCD (Optional Higher Resolutions Up To 12 Mega Pixels)

## Technical Specifications

Model	MITO-2MC	MITO-4MC
<b>Feature</b>	40 MHz live mode (dual channel 20MHz) 1600 x 1200 (1.92 Mpixel) image capture Programmable gain (1-32x) 14 bit x 20 MHz capture High quantum efficiency CCD Interline progressive scan CCD FireWire® interface	40 MHz live mode (dual channel 20MHz) 2048 x 2048 4 Megasample image capture Programmable gain (1-32x) 14 bit x 20 MHz capture 15.2mm x 15.2mm imaging area Interline progressive scan CCD FireWire® interface
<b>CCD Information</b>	Kodak KAI-2020-CM with cover glass Color mosaic progressive scan interline CCD 1600 x 1200, 7.4 µm square pixels 11.8mm x 8.9mm active area, 1" optical format 300x minimum anti-blooming	Kodak KAI-4020-CM with cover glass Color mosaic progressive scan interline CCD 2048 x 2048, 7.4 µm square pixels 15.16mm x 15.16mm active area, >1 optical format 100x minimum anti-blooming
<b>Digitization Information</b>	Digitized pixel by pixel at CCD sensor Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20MHz) Live image frame rate: 18 f/s w/o binning; up to 41 f/s w/ binning Capture mode: 14 bit x 20MHz A/D Converter full scale set to 33,333 e (Gain=1) Saved bit depths: 24, 36, or 48 RGB; 8, 12 or 16 bit BW	Digitized pixel by pixel at CCD sensor Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20MHz) Color live image frame rate: 14 fps Capture mode: 14 bit x 20MHz A/D Converter full scale set to 27,300 e (Gain=1) Saved bit depths: 24, 36, or 48 RGB; 8, 12 or 16 bit BW
<b>Exposure</b>	0.5 millisecond to 536 seconds Captured and live mode automatic exposure Captured and live mode manual exposure	70 milliseconds to 536 seconds Captured and live mode automatic exposure Captured and live mode manual exposure
<b>Lens Mount</b>	C-mount	C-mount or F-mount
<b>Certifications</b>	CE, FCC Class A, EN60950	
<b>Software Features</b>	Automatic temperature and text overlay onto the captured images when using with Instec mK1000 temperature controller. Color live mode viewing window & controls, auto-exposure live and capture modes, image capture window, predefined and custom image setups, auto white balance, flat field correction, image enhancement tools in three color spaces (RGB, HSL, HSV), pan and zoom windows, customizable floating taskbar, spot metering, annotation, calibration mark, measurement tools, sequential image capture and playback, exportable image archiving database (PC only), report generator, macro scripting, interactive print dialog, online help menu.	
<b>File Formats</b>	Bitmap, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI (PC, export only)	
<b>Min System Requirements</b>	PC: Pentium 400 Mhz or greater with Windows 98SE, 2000, ME, or XP, 256 MB of RAM, Firewire/IEEE 1394a interface, Video card: 24 bit RGB @ desired resolution	

Model	MITO-2MB	MITO-4MB
<b>Feature</b>	40 MHz live mode (dual channel 20MHz) 1600 x 1200 (1.92 Mpixel) image capture Programmable gain (1-32x) 14 bit x 20 MHz capture High quantum efficiency CCD Interline progressive scan CCD FireWire® interface	40 MHz live mode (dual channel 18MHz) 2048 x 2048 4 Megasample image capture Programmable gain (1-20x) 14 bit x 20 MHz capture 15.2mm x 15.2mm imaging area Interline progressive scan CCD FireWire® interface
<b>CCD Information</b>	Kodak KAI-2020-M with cover glass Monochrome progressive scan interline CCD 1600 x 1200, 7.4 µm square pixels 11.8mm x 8.9mm active area, 1" optical format 300x minimum anti-blooming	Kodak KAI-4021-M with cover glass Monochrome progressive scan interline CCD 2048 x 2048, 7.4 µm square pixels 15.16mm x 15.16mm active area, >1 optical format 100x minimum anti-blooming
<b>Digitization Information</b>	Digitized pixel-by-pixel at CCD sensor Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20MHz ) Live image frame rate: 18 f/s w/o binning; up to 41 f/s w/ binning Capture mode: 14 bit x 20MHz A/D Converter full scale set to 33,333 e (Gain=1) Saved bit depths: 8, 12 or 16 bit BW	Digitized pixel-by-pixel at CCD sensor Live mode: 8 bit x 40 MHz (Dual channel 8 bit x 20MHz ) Live image frame rate: 14 frames per second Capture mode: 14 bit x 20MHz A/D Converter full scale set to 27,300 e (Gain=1) Saved bit depths: 8, 12 or 16 bit BW
<b>Exposure</b>	0.5 millisecond to 536 seconds Captured and live mode automatic exposure Captured and live mode manual exposure	70 milliseconds to 536 seconds Captured and live mode automatic exposure Captured and live mode manual exposure
<b>Lens Mount</b>	C-mount	C-mount or F-mount
<b>Certifications</b>	CE, FCC Class A, EN60950	
<b>Software Features</b>	Automatic temperature and text overlay onto the captured images when using with Instec mK1000 temperature controller. Live mode viewing window & controls, auto-exposure live and capture modes, image capture window, predefined and custom image setups, flat field correction, pan and zoom windows, customizable floating taskbar, spot metering, annotation, calibration mark, measurement tools, sequential image capture and playback, exportable image archiving database, report generator, macro scripting, interactive print dialog, online help menu.	
<b>File Formats</b>	Bitmap, TIFF, TIFF-JPEG, JPEG, JPEG-2000, PICT, AVI (PC, export only)	
<b>Min System Requirements</b>	PC: Pentium 400 Mhz or greater with Windows 98SE, 2000, ME, or XP, 256 MB of RAM, Firewire/IEEE 1394a interface. Video card: 24 bit RGB @ desired resolution	

## Ordering Information

Part Number	Description
MITO1-2MB	C-mount ready microscope CCD camera system with 2 megapixel resolution, monochrome (B&W) image. Includes MITO software for automatic text overlay. Real-time computer screen video monitoring capability, FireWire communication protocol.
MITO1-2MC	C-mount ready microscope CCD camera system with 2 megapixel resolution, RGB-color image. Includes MITO software for automatic text overlay. Real-time computer screen video monitoring capability, FireWire communication protocol.
MITO1-4MB	C-mount ready microscope CCD camera system with 4 megapixel resolution, monochrome (B&W) image. Includes MITO software for automatic text overlay. Real-time computer screen video monitoring capability, FireWire communication protocol.
MITO1-4MC	C-mount ready microscope CCD camera system with 4 megapixel resolution, RGB-color image. Includes MITO software for automatic text overlay. Real-time computer screen video monitoring capability, FireWire communication protocol.