

5 Megapixel Capture at 10 fps with Exceptional Image Quality



(Lens not included)

- 2592 x 1944 8-bit capture @ 10 fps
- Compact Camera Head
- PIXCI® SI Digital Frame Grabber
- 7 Foot Interface Cable (default)
- Infrared Cut Filter (SV 5C10)
- XCAP-Lite Imaging Program
- Camera Integration and Reset Control
- Sequence Capture
- Sequence Save (XCAP-Ltd or Std)
- Triggered Sequence Capture
- 132 MB/s Burst Transfers
- PCI Bus: 32 or 64 bit, 3.3 or 5 volt
- RoHS Compliant
- Compatibility: Windows VISTA, XP, 2000, NT; ME, 98, 95; 32-bit DOS & LINUX

The **SILICON VIDEO® 5C10** (color) and **5M10** (monochrome) camera systems offer 5 Megapixel progressive scan capture, low noise digital signaling, small size, flexible interface cable, convenient software control, the availability of extensive processing, measurement and analysis capabilities, and low cost. XCAP software provides control of all camera operations.

SENSOR BY MICRON – These camera systems are based on the MT9P001 sensor from Micron. The MT9P001 progressive scan sensor offers both an Electronic Rolling Shutter for maximum frame rates, and a Global Reset Release Shutter for improved sharpness. Other features include windowing, column and row skip modes, snapshot mode, 12 bit dynamic range, and an active programmable array resolution of 2592H x 1944V pixels. Visit www.micron.com for detailed sensor specifications.

ASYNCHRONOUS CAPTURE with STROBE OUTPUT – The SV5C10 and SV5M10 cameras offer Asynchronous Capture: the recording of an image (or images) in response to a trigger signal. The cameras also provide a strobe output signal to synchronize an electronic flash (strobe), for bright, uniform, short duration illumination. These cameras can be triggered to capture an image (or images) as might be required in product inspection, laser beam profiling, medical imaging, or any application that requires image capture at a specific time (there is a delay of one frame time between trigger and start of frame capture). The optional use of strobe illumination allows minimum exposure time with maximum image sharpness.

ONLY ONE CABLE – A single cable connects the camera head to the PIXCI® SI board. The PIXCI® SI board provides power to the camera, sends and receives camera control signals, generates the programmable pixel clock, and receives video data. No dedicated power supply or power cable required.

CAPTURE & ADJUST DIALOG – The XCAP Imaging Application provides a Capture & Adjust Dialog for selecting pixel clock frequency, integration/exposure time, capture resolution, gain, offset, trigger control, and more. The SV5C10 color camera dialog provides automatic white balance as well as manual adjustment of Red, Green, and Blue gain.

The **SILICON VIDEO® 5C10 / 5M10** camera systems include:

- 5 Megapixel Camera Head (color or monochrome)
- Infrared Cut Filter (color camera only)
- Shielded Interface Cable (various lengths)
- PIXCI SI PCI Frame Grabber
- XCAP-Lite Imaging Program (XCAP-Ltd or Std Optional)

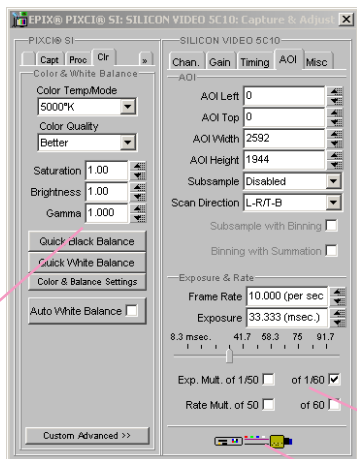
To complete the system add 1/2" format C-Mount lens, analysis software, lighting, and computer – all available from EPIX, Inc., or from your authorized EPIX, Inc. distributor.

SV5C10 / SV5M10 Digital Cameras

CAMERA CONTROL FROM SOFTWARE

Capture & Adjust Dialogs

The XCAP Imaging Program simplifies camera operation with a dedicated Capture & Adjust Dialog. The Capture & Adjust Dialog provides one convenient location for camera controls such as exposure, resolution, triggering, color balance and frame rate. In addition, the SV5C10 Dialog provides a camera-to-computer communication indicator, a programmable pixel clock, and exposure synchronized to AC power frequencies.



The Color & White Balance menu offers simple color balance settings for common sunlight, fluorescent light, and incandescent light conditions. In addition, for greater color precision, or for unusual light sources, XCAP offers advanced options for building custom color settings.

The camera's pixel clock frequency is user-selectable over a range of 25 MHz to 70 MHz. The programmable pixel clock

provides a wider range of frame rates and exposure times.

The intensity of AC lighting fluctuates with the phase of the AC voltage that powers it. Capturing sequences of images using arbitrary frame rates with AC lighting will result in images with differing brightness. The SV5C10 Capture & Adjust Dialog offers a convenient fix for this problem — exposure times can be easily set to multiples of the local AC line frequency, either 1/50th or 1/60th second.

Synchronizing exposure times to the line voltage provides images with consistent illumination from a varying-intensity AC light source.

The presence or absence of the 2 lines between the camera and computer icons indicate whether or not the computer and camera are properly connected and capable of communicating.

Video-To-Disk Capture

The optional XCAP-Std imaging program enables video-to-disk capture, potentially for several hours. Requires a host computer with two 7200 rpm hard drives configured as RAID 0. EPIC® offers complete imaging systems, designed to

your specifications, guaranteed to capture uncompressed video to disk without dropping frames.

Contact EPIC, Inc., or your authorized EPIC, Inc. distributor, with your system requirements.

SPECIFICATIONS

Format: Bayer Pattern Color (SV5C10)
Monochrome (SV5M10)

Pixel Clock Range: 25 MHz - 70 MHz

Frame Resolution:

2592 (H) x 1944 (V) Maximum
4 (H) x 4 (V) Minimum

FRAME RATE EXAMPLES

Free-Run 8-Bit Mode w. ERS

Frame Resolution	Pixel Clock Frequency	25 MHz	48 MHz	70 MHz
2592 x 1944		3 fps	6 fps	10 fps
2048 x 1536		4 fps	9 fps	14 fps
1920 x 1080		7 fps	13 fps	22 fps
1280 x 1024		10 fps	20 fps	30 fps
1280 x 720		15 fps	29 fps	42 fps
800 x 600		23 fps	44 fps	64 fps

CAMERA HEAD:

Dimensions:

4.85 cm (H) x 3.84 cm (W) x 1.88 cm (D)
1.91" (H) x 1.51" (W) x 0.74" (D)

Weight: 73 Grams (2.6 Ounces)

Tripod Mount Positions:

Any 1 of the 4 sides: 1/4"-20 thread
(tripod mount attachment not pictured)

Lens: 1/2-inch C-mount

INTERFACE CABLE:

Shielded CAT-5 with RJ45 plugs.

PIXCI® SI Frame Grabber

Dimensions:

12.7 cm (L) x 7.4 cm (H)
5.0" (L) x 2.875" (H) [short slot]

Bus Requirements:

3.3 volt or 5 volt PCI slot.

Operating Temperature Range:

0°C to 70°C

MICRON CMOS MT9P001 Sensor

<http://www.micron.com>

Resolution: 2592H x 1944V

Pixel Size: 2.2µm x 2.2µm

Sensor Size: 5.70mm(H) x 4.28mm(V) (4:3)

Responsivity: 1.4 V/lux-sec (550nm)

Shutter Types: Global Reset Release (GRR)
Electronic Rolling Shutter (ERS)

CONFIGURATIONS

SI-SV5C10-7FT	Color camera w. IR cut filter, 7-foot cable, PIXCI SI imaging board, tripod mount, and XCAP-Lite Imaging Program.	\$1095.00
SI-SV5M10-7FT	Monochrome camera, 7-foot cable, PIXCI SI imaging board, tripod mount, and XCAP-Lite Imaging Program.	\$1095.00
TTL-MOD-A-SI-OPT	Allows TTL level trigger input signal and produces TTL level strobe output signal.	\$ 130.00

Infrared (IR) Cut Filter: The CMOS sensor is more sensitive to infrared wavelengths than a CCD sensor. Infrared sensitivity skews color fidelity. An IR cut filter attenuates (reduces) the CMOS sensor's response to infrared light while improving color fidelity. The SV5C10 CMOS color camera includes an IR cut filter.

The optional SV5C10-OPT-MNTNOF allows operation *without* an IR cut filter.

Available Cable Lengths: 7', 10', 14', 25' & 30' (2.1, 3, 4.2, 7.6 & 9.2 meters). Solid-core cables allow longer cable lengths. Stranded cables offer more flexibility.

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EPIX SOFTWARE

<http://www.epixinc.com/products/index.htm>

Supported by **XCAP-Lite** (no charge with camera purchase), **XCAP-Ltd**, **XCAP-Std**, **XCLIB**, and **XCLIBIPL**. Compatible with WIN Vista, XP, 2K, NT, ME, 98, 95; DOS and LINUX.

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