EPIX®

SV642M Monochrome Camera
SV642C Color Camera

(Lens not included)

- **640 x 480 8-bit capture @ 204 fps**
- **Global Shutter (Mircon TrueSNAP™)**
- **Camera Head w Case & C-Mount for Lens**
- **Camera Head w M-12 Lens Mount & No Case**
- **PIXCI® SI Digital Frame Grabber for PCI bus**
- **Interface Cable (data, control, & power)**
- **Infrared Cut Filter (color camera)**
- **XCAP-Lite Imaging Program**
- **Camera Integration and Reset Control**
- **Sequence Capture**
- **Sequence Save (XCAP-Ltd or XCAP-Std)**
- **Video To Disk: 204 fps for hours (XCAP-Std)**
- **Triggered Sequence Capture**
- **132 MB/s Burst Transfers**
- **PCI Bus: 32 or 64 bit, 3.3 or 5 volt**
- **Compatibility: Windows XP, 2000, NT; ME, 98, 95; 32-bit DOS & LINUX**

204 Frames per Second for $1595

The ***SILICON VIDEO® 642M*** and ***642C*** camera systems provide 640 by 480 resolution at 204 frames per second (fps). Reducing the number of lines to 4 allows frame rates up to 19,600 fps. Fast frame rates, global shutter, asynchronous reset, and shutter speeds as short as 20 microseconds (1/50,000th of a second) provide sharp images of high speed motion. Example applications include high-speed inspection, particle tracking, kinematics, collision studies, sports analysis, ballistic analysis, and biological image analysis.

Available in either monochrome or color, this 10-bit progressive scan camera system includes camera head, PCI interface board, 7 foot interface cable, and control software for only $1595.00. The system provides image transfer to computer memory at rates exceeding 100 megabytes per second.

The rugged aluminum camera case is 3.3 cm high by 3.3 cm wide by 4.5 cm deep, which includes the RJ45 connector. Each side of the case has two M2-0.4 screw holes for attaching the ¼-20 tripod mount.

A board camera (no case), with M12 lens mount, is available for $1395.00 (lens optional).

The category 5e, shielded RJ-45 interface cable is flexible and only 6 mm in diameter. It provides data transfer, camera control, and camera power while allowing easy camera positioning in tight spaces.

The PIXCI® SI imaging board provides a real-time interface between camera head and PCI bus. In addition to providing power, camera control, and data transfer, the board has a trigger input to control data capture, and a strobe output to synchronize external equipment.

The XCAP-Lite camera control and capture program is included with the SV642 camera system. XCAP-Lite captures up to 218 frames with 640 by 480 8-bit resolution. The XCAP-Std program ($1495.00), provides video-to-disk capture at 640 x 480 resolution, 8 bits per pixel, 204 fps, to the limit of the computer's RAID array (potential duration greater than 8 hours). User-selectable playback rates [slow motion] reveal hidden detail.

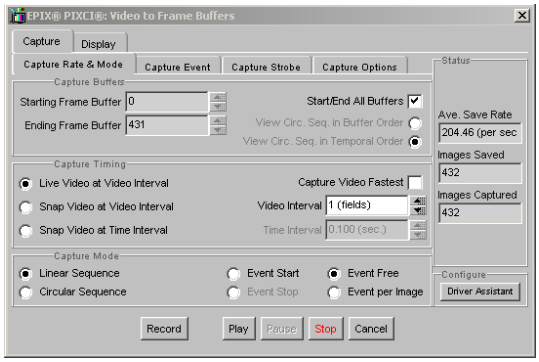
Optionally purchase the SV642 camera with an EPIX® imaging computer system which can be optimized to capture for a specified frame rate and time period.

The SILICON VIDEO 642 camera is available from EPIX, Inc., or from an authorized EPIX, Inc. Distributor. Quantity discounts are available.

SV642 High Speed Digital Cameras

CAMERA CONTROL SOFTWARE

Sequence Capture with SV642 Camera and XCAP Imaging Program

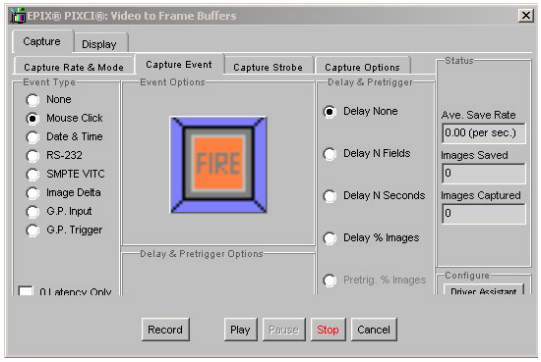


XCAP Capture Rate & Mode

The SILICON VIDEO® 642 camera is designed to capture thousands of images at fast frame rates.

XCAP-Lite, included with camera purchase, will capture for a maximum of one second at full resolution, 8 bits per pixel, and maximum frame rate. Images must be saved individually.

The XCAP-LTD program captures and saves sequences to the limit of the available computer memory. Capture for up to one minute with 4 GB of computer memory.



XCAP Capture Event

The XCAP-STD imaging program offers video to disk, which allows sequences of images to be captured directly to as few as two hard disks configured as RAID 0. Using four 500 GB hard drives, 7200 rpm, images can be captured continuously for 8 hours (640 x 480 resolution, 8-bits per pixel, 204 fps). Longer durations are possible.

The XCAP program is optimized for capturing image sequences. The ***Capture Rate & Mode*** window allows selection of sequence length and interval rate. Linear and Circular sequences are offered. A *Linear Sequence* is a simple capture of a preset number of frames. A *Circular Sequence* offers continuous capture until an event stop. The ***Capture Event*** window offers different conditions that can start, modulate, or stop sequence capture. Events include (among others) *Date & Time, RS-232 Signal*, or a *Mouse Click.*

Images can be overlayed with frame number and time stamp. XCAP offers 16 different time stamp formats.

The ***Display Rate*** window provides automatic playback at rates easily selected by the user. A sequence can be displayed once, or can be displayed continuously. Display can progress from beginning to end or in reverse. A subset of frames, extracted from the complete sequence, can be displayed or saved.

XCAP compliments the SV642 camera with sequence capture, display, processing, analyzing, and saving operations. Select which version of the XCAP program is best for your application by reviewing the description at http://www.epixinc.com/products/xcap.htm.

Camera With Aluminum Case, PCI Interface & 7FT Cable:
SI-SV642C-7FT Color: $1595.00
SI-SV642M-7FT Mono: $1595.00

Board Camera (no case) w. PCI Interface & 7FT Cable:
SI-SV642C-B-7FT Color: $1395.00
SI-SV642M-B-7FT Mono: $1395.00

Cable Options:
CBL-SI- 7FT: (2.14M) $29.00
CBL-SI-10FT: (3.05M) $35.00
CBL-SI-14FT: (4.27M) $39.00

SPECIFICATIONS

SV642 CAMERAS
http://www.epixinc.com/products/sv642.htm

Frame Resolution:
640 (H) x 480 (V) Maximum
4 (H) x 4 (V) Minimum

FRAME RATE EXAMPLES (8-Bit Mode)

Vertical Resolution	Pixel Clock Frequency 48 MHz	66 MHz	70 MHz
480 Rows	148 fps	204 fps	216 fps
240 Rows	296 fps	408 fps	432 fps
120 Rows	591 fps	812 fps	862 fps
60 Rows	1172 fps	1612 fps	1709 fps
4 Rows	14305 fps	19600 fps	20861 fps

Notes: Reduced horizontal resolution (less than 640 pixels / line) increases the number of available frame buffers but does not increase frame rate. Pixel clock frequencies above 66 MHz may reduce image quality.

CAMERA HEAD (with case)
Dimensions: [without tripod mount]
3.3 cm (H) x 3.3 cm (W) x 4.5 cm (L)
1.3" (H) x 1.3" (W) x 1.8" (L)

Weight: 55 Grams (1.9 Ounces)
Lens: 1/2" optical format C-Mount

CAMERA HEAD (board camera)
Dimensions: [includes M-12 lens mount]
2.8 cm (H) x 2.8 cm (W) x 4.4 cm (L)
1.1" (H) x 1.1" (W) x 1.7" (L)

Weight: 20 Grams (0.78 Ounces)
Lens: 1/2" optical format M-12 mount

PIXCI SI Board Dimensions:
12.7 cm (L) x 7.4 cm (H)
5.0" (L) x 2.875" (H) [short slot]

INTERFACE CABLE:
Shielded CAT-5 with RJ45 plugs.

BUS REQUIREMENTS:
32 or 64 bit, 3.3 or 5 volt PCI slot.

MICRON MT9V403 Sensor
http://www.micron.com

Resolution:	640H x 480V x 10 bits
Pixel Size:	9.9µm x 9.9µm
Responsivity:	2.0 V/lux-sec (550nm)

EPIX SOFTWARE Support
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 XP, 2000, NT, ME, 98, 95, DOS and LINUX.

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