



SILICON VIDEO® 1C45, 1M45 1 Megapixel Cameras

The **SILICON VIDEO® 1C45** (color) and **1M45** (monochrome) are 1 megapixel progressive scan cameras with a resolution of 1280 horizontal × 960 vertical, 12 bit pixels. The SV1C45 and SV1M45 cameras have windowing, column and row skip modes, snapshot mode, and a global shutter for capture of fast-moving targets.

Additional camera features include low noise digital signaling, small size, several interface cable options, and low cost. **XCAP** software provides convenient control and configuration of all camera operations out of the box. Software that provides extensive processing, measurement and analysis capabilities is available.

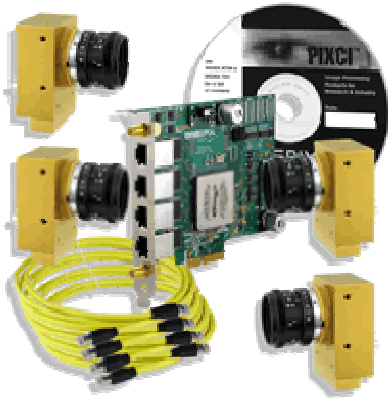
(lens optional)



- 1280 x 960 @ 45.2 fps
- 8 or 12 bits per pixel
- Compact Camera Head
- Infrared Cut Filter included in SV1C45
- Camera Integration and Reset Control
- Sequence Capture
- Sequence Save (XCAP-Ltd or Std)
- Triggered Sequence Capture
- Windows & Linux, 32 & 64-bit
- RoHS Compliant

ASYNCHRONOUS CAPTURE WITH STROBE OUTPUT

The SV1C45 and SV1M45 cameras offer asynchronous capture to acquire an image or image sequence in response to a trigger signal. The cameras have a strobe output signal for synchronizing an LED strobe.



ONE RJ45 CABLE AND 4 FRAME GRABBERS

An RJ45 cable connects the camera to a PIXCI® **SI1**, **SI2**, **SI2x4**, or **SI4** frame grabber. The RJ45 cable has power, control signals, programmable pixel clock, and digital video. A separate power supply is not required.

The **PIXCI® SI1** and **PIXCI® SI2** frame grabbers support one or two cameras in a PCIe x1 or wider slot. The **PIXCI® SI2x4** and **PIXCI® SI4** support 2 or 4 cameras in a PCIe x4 or wider slot. Multiple cabling options are available, see the **SILICON® VIDEO Cable** page for more details.

CAMERA CONTROLS

The **XCAP-Lite** software included with a PIXCI® frame grabber has a Capture & Adjust Dialog for selecting pixel clock frequency, integration/exposure time, capture resolution, trigger control, and more.

The SV1C45 color camera dialog provides automatic white balance, manual adjustment of Red, Green, and Blue gain, and extensive color balance controls.

LENS OPTIONAL

Add a 1/3" format C-Mount lens, programmer libraries, image processing, imaging software, or request a complete imaging computer system. EPIX, Inc. assembles imaging systems, built to your specifications, with cameras, frame grabbers, high-performance motherboards, and RAID arrays for video to disk capture.

SEQUENCE CAPTURE WITH SV1C45 & SV1M45 CAMERAS AND XCAP IMAGING PROGRAM VERSIONS

SILICON VIDEO® SV1C45 and SV1M45 cameras will capture continuously, at various resolutions and frame rates, as shown in the chart [below](#).

XCAP-Lite will capture up to 64MBytes of images. Images must be saved individually. XCAP-Lite is included with the PIXCI SI series frame grabbers.

The XCAP-Ltd program captures and saves sequences into 8 GBytes of available memory (computer must have approximately 12 GBytes of installed memory).

The XCAP-Std imaging program offers video to disk capture, which can allow continuous capture for hours depending on the capacity of the computer's storage system.

Select which version of the XCAP program is best for your application by reviewing the description on the [XCAP](#) product page.

VIDEO-TO-DISK CAPTURE

The optional XCAP-Std imaging program enables video-to-disk capture, potentially for several hours. EPIX® offers complete imaging systems, designed to your specifications, guaranteed to capture uncompressed video to disk without dropping frames.

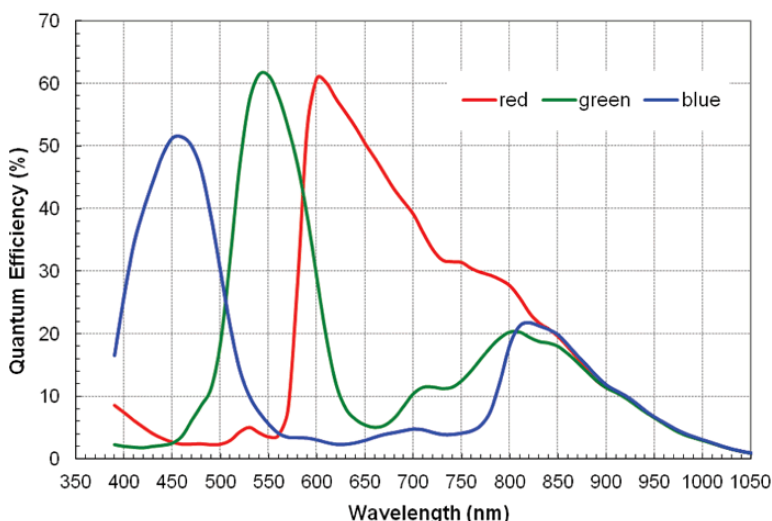
RUGGEDIZED ENCLOSURE

The Type-MX VideoModule [ruggedized enclosure](#) system from Tectivity, Inc. is available for SILICON® VIDEO cameras.

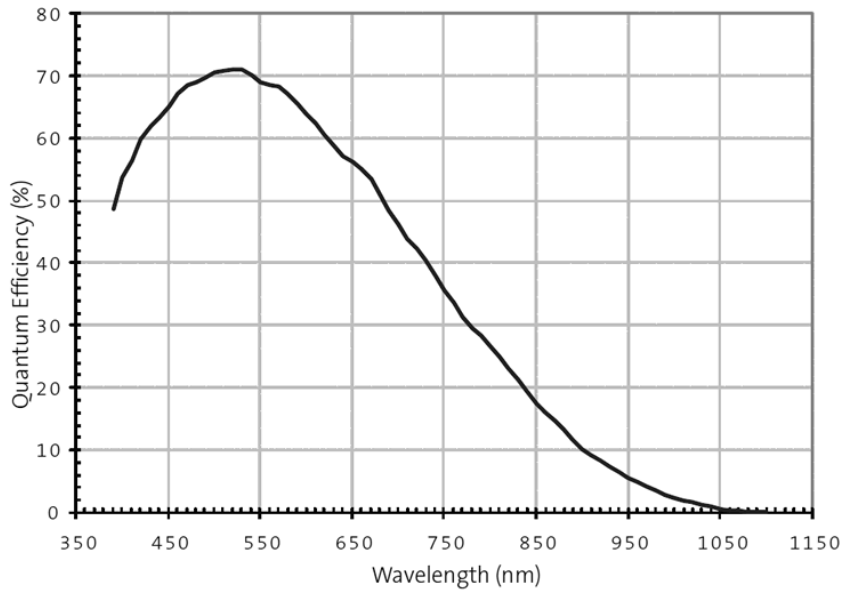


Optical Format:	1/3-inch
Active Image Size:	4.8mm(H) x 3.6mm(V) x 6.0mm Diagonal
Full Resolution:	1280H x 960V
Pixel Size:	3.75µm x 3.75µm
Color Filter Array:	Monochrome or Color (RGB Bayer Pattern)
Shutter Type:	Global Shutter
Pixel Clock:	25 - 74.25 MHz
Frame Rate:	45 fps at 70MHz (1280H x 960V resolution)
ADC Resolution:	12-bit
Responsivity:	6.1Volts/Lux-sec Monochrome 5.3 Volts/ Lux-sec Color
Dynamic Range:	64 dB
Power Consumption:	< 400 mWatt at maximum data rate
Operating Temperature:	-30°C to +70°C
Camera Dimensions:	1.91" H x 1.51" W x 0.82" D 48.5mm H x 38.4mm W x 20.8mm D
Weight:	2.6 oz / 73 Grams

Quantum Efficiency – Color Sensor



Quantum Efficiency – Monochrome Sensor



**SV1C45 & SV1M45
Color/Mono Cameras**

Frame Resolution	Pixel Clock Frequency		
	25 MHz	50 MHz	74.25MHz
1280 × 960	15.4 fps	30.7 fps	45.6 fps
1024 × 768	15.4 fps	30.7 fps	45.6 fps
960 × 960	15.4 fps	30.7 fps	45.6 fps
960 × 720	19.1 fps	38.1 fps	56.7 fps
768 × 768	19.1 fps	38.1 fps	56.7 fps
752 × 480	22.8 fps	45.5 fps	67.6 fps
640 × 640	22.8 fps	45.5 fps	67.6 fps
640 × 480	29.9 fps	59.9 fps	88.9 fps
480 × 480	29.9 fps	59.9 fps	88.9 fps
360 × 720	51.1 fps	102.6 fps	152.4 fps
4 × 960	15.4 fps	30.7 fps	45.6 fps
1280 × 2	541 fps	1082 fps	1257 fps