SILICON VIDEO 9C10
9 Megapixel Capture at 6.6 fps with Exceptional Image Quality

The **SILICON VIDEO® 9C10** color camera system offers 9 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.

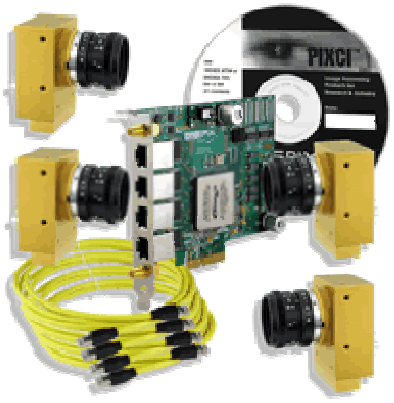
SENSOR BY MICRON – These camera systems are based on the MT9N001 sensor from Micron. The MT9N001 progressive scan sensor offers both an Electronic Rolling Shutter for maximum frame rates, and a Global Reset Release Shutter for improved sharpness. Other features include windowing, column and row skip modes, snapshot mode, 12 bit dynamic range, and an active programmable array resolution of 3488H x 2616V pixels. Visitaptina.com for detailed sensor specifications.

- **3488 x 2616 @ 6.6 fps**
- **1280 x 1024 @ 39.4 fps**
- **640 x 480 @ 93.5 fps**
- **8 or 12 bits per pixel**
- **Compact Camera Head**
- **Infrared Cut Filter**
- **XCAP-Lite Imaging Program**
- **Camera Integration and Reset Control**
- **Sequence Capture**
- **Sequence Save (XCAP-Ltd or Std)**
- **Triggered Sequence Capture**
- **Windows & Linux, 32 & 64–bit**
- **RoHS Compliant**

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.Multiple cabling options are available, see the SILICON® VIDEO Cable page for more details.

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 SV9C10 color camera dialog provides automatic white balance as well as manual adjustment of Red, Green, and Blue gain.

The SILICON VIDEO® 9C10 camera system includes:



- 9 Megapixel Color Camera Head w. Tripod Mount
- Adjustable Lens Mount w. Infrared Cut Filter
- Shielded Interface Cable (various lengths available)
- PIXCI® SI PCI Frame Grabber
- XCAP-Lite Imaging Program (XCAP-Ltd or Std Optional)
- Support for 9.7 fps coming soon.

PIXCI® SI4 – A single PCI Express x4 board supporting up to four SILICON VIDEO® cameras is also available. The cameras may be the same or a mix and can operate simultaneously or independently. The PIXCI® SI4 can have four cameras expose simultaneously from one trigger or can use four trigger inputs – one for each camera.

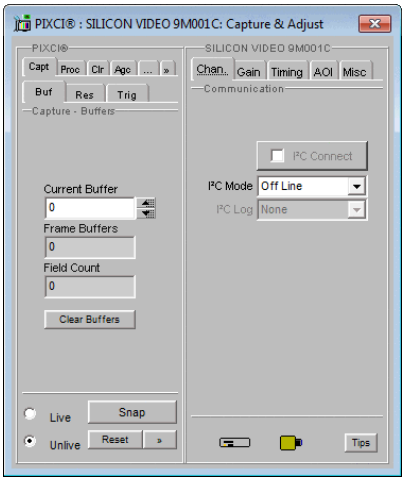
To complete a SILICON VIDEO® 9C10 system add a 1/2" format C-Mount lens, analysis software, lighting, and computer – all available from EPIX, Inc., or your (authorized) distributor of EPIX® imaging products.

FEATURES

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 SV9C10 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 64 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 SV9C10 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. EPIX® offers complete imaging systems, designed to your specifications, guaranteed to capture uncompressed video to disk without dropping frames.

Stereo SV9C10 Camera

One inch center to center spacing on the image sensors in a 2.3 inch square case that is 0.69 inches deep. M12 lens mounts are used. Works with the PIXCI® SI2 or PIXCI® SI4 frame grabbers.

SPECIFICATIONS

Format:

Bayer Pattern Color

Pixel Clock Range:

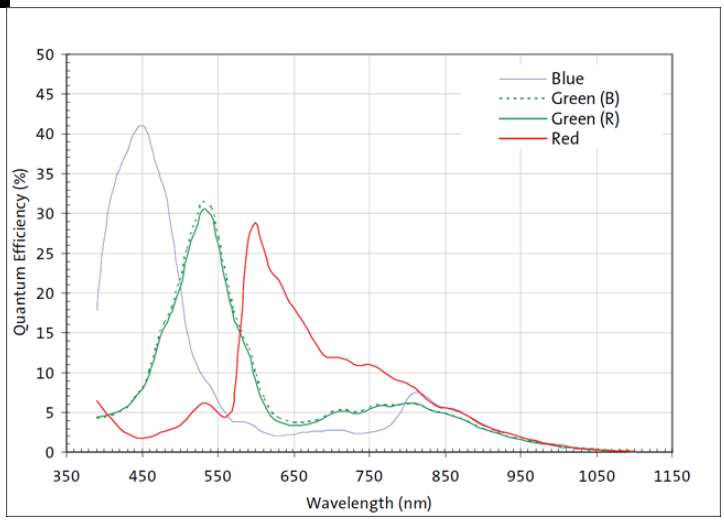
25 MHz - 64 MHz

Frame Resolution:

3488 (H) x 2616 (V) Maximum
4 (H) x 4 (V) Minimum

Exposure Time:

55 µsec Minimum @ 64 MHz
9.26 sec Maximum @ 25 MHz



CAMERA HEAD:

Dimensions:

1.91" H x 1.51" W x 0.82" D
48.5mm H x 38.4mm W x 20.8mm D

Weight:

73 Grams (2.6 Ounces)

Tripod Mount Positions:

Any 1 of the 4 sides: 1/4"-20 thread

Lens:

1/2” optical format C-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:

3.3 or 5 volt PCI slot.

MICRON CMOS MT9N001 Sensor

Resolution:

3488H x 2616V

Pixel Size:

1.75µm x 1.75 µm

Sensor Size:

6.10mm(H) x 4.58mm(V) (4:3)

Responsivity:

0.44 V/lux-sec

Shutter Types:

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

EPIX SOFTWARE Support -
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.

FRAME RATE EXAMPLES
Free-Run 8-Bit Mode w. ERS

Frame Resolution	Pixel Clock Frequency		
	25 MHz	48 MHz	64 MHz
3488 x 2616	2.6 fps	4.9 fps	6.6 fps
3162 x 2386	3.1 fps	5.9 fps	7.9 fps
2968 x 2226	3.5 fps	6.7 fps	9.0 fps
2592 x 1944	4.5 fps	8.7 fps	11.6 fps
2048 x 1536	7.1 fps	13.6 fps	18.2 fps
1920 x 1080	10.4 fps	20.0 fps	26.6 fps
1440 x 1080	12.8 fps	24.5 fps	32.7 fps
1280 x 1024	14.1 fps	27.0 fps	36.0 fps
1280 x 720	19.0 fps	36.5 fps	48.7 fps
800 x 600	26.2 fps	50.4 fps	67.0 fps
640 x 480	33.4 fps	64.1 fps	85.5 fps
320 x 240	56.3 fps	108 fps	144 fps
128 x 128	79.5 fps	152.7 fps	203 fps
146 x 110	85.2 fps	163.6 fps	218 fps