



## **MicroPix**

### **IEEE-1394 CCD Camera Progressive Scan**

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#### **GENERAL DESCRIPTION**

The MicroPix camera series is a IEEE-1394 compliant (Firewire™) progressive scan monochrome or color CCD camera designed for scientific or industrial imaging applications. Through the IEEE-1394 interface, reliable transmission of images and full software control of the camera parameters are assured. No Framegrabber is required !

#### **NETWORK CAPABLE**

IEEE-1394 hubs can be used to connect multiple cameras on the same bus. Simply by connecting the hub to a PC host it is possible to simultaneously acquire images from any one of the cameras. DCAM 1.30 specification allows up to 16 cameras on the same bus. Multiple cameras can be configured to provide uncompressed streaming video simultaneously.

#### **AUTO SYNCHRONIZATION**

All MicroPix cameras feature auto synchronization. When more than one camera is present on the IEEE-1394 bus, all cameras automatically synchronize their acquisition time within 20 microseconds, allowing simultaneous image acquisition from multiple view points

- PROGRESSIVE SCAN 1/3" CCD SENSOR
  - UP TO 1024 (h) x 768 (v) PIXELS
  - MONOCHROME or COLOR
  - UP TO 30 FRAMES / SEC
  - 10-bit MONO or 24 BIT RGB COLOR
  - AUTO SYNCHRONIZATION
  - EXT TRIGGER & TWO STROBE I/O
  - C/CS MOUNT w/ BACK FOCUS ADJUST
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#### **GENERAL PURPOSE I/O**

All MicroPix cameras have general purpose I/O and an external trigger input. The I/O can be used to control external devices such as strobes with user defined delays. The external trigger feature meets the IEEE-1394 based Digital Camera Specification (v1.3) and can be supplied by a single TTL pulse or contact closure.

#### **SOFTWARE CONTROL**

Software provided with all MicroPix cameras allow manual and automatic control of all camera parameters, including shutter speed, gain, gamma, triggering, white balance, and extended exposure. Supported image file formats include TIFF and PPM.

A complete software development kit is available to simplify integration into your project.

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## **SPECIFICATIONS**

<b>MODEL</b>	<b>M640</b>	<b>C640</b>	<b>M1024</b>	<b>C1024</b>
Sensor Type	1/3-in. HAD Monochrome Sony ICX-084AL	1/3-in. HAD Color – Bayer Tiled Sony ICX-084AK	1/3-in. HAD Color – Bayer Tiled Sony ICX-204AL	1/3-in. HAD Monochrome Sony ICX-204AK
Effective Pixels	640 (H) x 480 (V) Pixels	640 (H) x 480 (V) Pixels	1024 (H) x 768 (V) Pixels	1024 (H) x 768 (V) Pixels
Pixel Size	7.4 um (H) x 7.4 um (V)	7.4 um (H) x 7.4 um (V)	4.65 um (H) x 4.65 um (V)	4.65 um (H) x 4.65 um (V)
Data Output	Selectable 8-bit or 16-bit ( 10-bit A/D )	24-bit RGB Color or 8-bit Raw Data	Selectable 8-bit or 16-bit ( 10-bit A/D )	24-bit RGB Color or 8-bit Raw Data
Camera Interface	IEEE-1394 based Digital Camera Specification (DCAM v1.3)			
Frame Rate	3.75, 7.5, 15, 30 Frames/Sec (Full Resolution)		3.75, 7.5, 15 Frames/Sec (Full Resolution)	
Partial Scan	640 x 240 @ 50 Frames/Sec		N/A	
Electronic Shutter	Auto Electronic Shutter (AES) or Manual Software Ctrl. 1/30 sec. To 1/16,000			
Extended Exposure	1/30 sec. To 64 Sec			
White Balance	N/A	Auto / Manual	N/A	Auto / Manual
Gain	Auto / Manual Software Ctrl 0-34dB (.035 Steps)			
Auto Synchronization	125 us or Better			
External Triggering	+ TTL (Max Delay 6 us)		+ TTL (Max Delay 10 us)	
General Purpose I/O	Two I/O pins. User Defined for Input, Output, Async Trigger, or Strobe ( 1.3 volt w/ var. delay & pulsewidth )			
S/N	58dB or Better		58dB or Better	
Min. Illumination (est)	1 Lux F/2.0 ( at 1/30 sec.)	2 Lux F/2.0 ( at 1/30 sec.)	2 Lux F/2.0 ( at 1/30 sec.)	4 Lux F/2.0 ( at 1/30 sec.)
Lens Mount	C / CS Mount (Adjustable Back Focus)			
Dimensions	6.8 x 5.6 x 3.6 (cm)			
Mass / Weight	250 g (9 oz.)			
Power Requirements	12 Volts Provided by IEEE-1394 Port, Approx. 1.5 Watts			



### **Minimum Recommended System Requirements:**

- 1.6 Ghz Processor or Better
- 256 Mb RAM
- Windows 2000 / XP