

## EPIX FrameGrabber PIXCI® für

- Adimec Cameras
  - Amber Cameras
  - Atmel Cameras
  - Atmel-Grenoble Cameras
  - Basler Cameras
  - Biophotonics Cameras
  - Chrontel Cameras
  - Cohu Cameras
  - Dage-MTI Cameras
  - Dalsa Cameras
  - DVC Cameras
  - Gigaphoton Cameras
  - Hamamatsu Cameras
  - HanVision Cameras
  - Hitachi Cameras
  - Ikegami Cameras
  - Illunis Cameras
  - Imperx Cameras
  - Indigo Cameras
  - Inframetrics Cameras
  - JAI Cameras
  - Mitsubishi Rayon Cameras
  - NAC Image Technology
  - NTSC/RS-170/PAL/CCIR
  - Photon Vision Cameras
  - Pulnix Cameras
  - Redlake MASD Cameras
  - Reticon Cameras
  - Sarnoff Cameras
  - Sensors Unlimited Cameras
  - Sentech Cameras
  - Silicon Imaging Cameras
  - SILICON VIDEO® Cameras
  - Sony Digital Cameras
  - SVS-Vistek Cameras
  - Takenaka Cameras
  - Teli Cameras
  - Toshiba Cameras
  - Uniq Vision Cameras
  - Varian PaxScan Cameras
  - Zoran Cameras
- PIXCI® Software XCAP

### SILICON VIDEO 9T001C

- 2048 x 1536 10-bit capture @ 12 fps
- Compact Camera Head
- PIXCI® SI Digital Frame Grabber
- 7 Foot Interface Cable (default)
- Infrared Cut Filter
- XCAP-Lite Imaging Program
- Camera Integration and Reset Control
- Sequence Save (XCAP-Ltd or Std)
- Sequence Capture
- Triggered Sequence Capture
- 132 MB/s Burst Transfers
- PCI Bus: 32 or 64 bit, 3.3 or 5 volt
- Compatibility: Win XP/2K/NT/ME/98/95,
- 32-bit DOS & LINUX



### SILICON VIDEO 642

- 640 x 480 10-bit capture @ 200 fps
- Global Shutter (Mircon TrueSNAP™)
- Compact Camera Head
- PIXCI® SI Digital Frame Grabber
- 7 Foot Interface Cable (default)
- Infrared Cut Filter (color camera)
- 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
- Compatibility: Win XP,2K,NT,ME,98,95,32-bit DOS & LINUX



### PIXCI CL2

- Full, Medium & Base Configuration
- Camera Link PCI Bus Interface
- Line Scan or Area Scan
- Camera Frame Rate Sequence Capture
- Triggered Image Sequence Capture
- 64-bit PCI Bus Master
- Camera Integration and Async Reset Control
- Integration From Seconds to Minutes
- Images Stored in Motherboard Memory
- 528 MB/s Burst Transfers
- PCI Bus: 64-bit/66MHz or PCI-X
- Compatible with Windows XP, 2000, NT, ME, 98, 95, & Linux



**Camera Solutions For Any Environment**

**REDLAKE Industrial Cameras**

**MegaPlus II Interline Transfer Cameras (Color or Monochrome)**



**ES2020**  
1600 x 1200 @ 30 fps  
8, 10, 12-bits  
Color / Mono  
CameraLink / Firewire  
Electronic Shutter



**ES2093**  
1920 x 1080 @ 30 fps  
8, 10, 12-bits  
Color / Mono  
CameraLink / Firewire  
Electronic Shutter



**ES4020**  
2048 x 2048 @ 16 fps  
8, 10, 12-bits  
Color / Mono  
CameraLink / Firewire  
Electronic Shutter



**ES11000**  
4008 x 2672 @ 5 fps  
8, 10, 12-bits  
Color / Mono  
CameraLink / Firewire  
Electronic Shutter

**MegaPlus II Cooled Cameras (Color or Monochrome)**



**EC11000**  
4008 x 2672 @ 5 fps  
Cooled 8, 10, 12-bits  
Color / Mono  
CameraLink / Firewire  
Electronic Shutter

**MegaPlus II Full Frame Cameras (Monochrome)**



**ES1602**  
1536 x 1024 @ 6.2 fps  
8, 10, 12-bits  
Mono  
CameraLink / Firewire  
Mechanical Shutter



**ES1603**  
1536 x 1024 @ 6.2 fps  
8, 10, 12-bits  
Mono  
CameraLink / Firewire  
Mechanical Shutter



**ES3200**  
2184 x 1472 @ 2.5 fps  
8, 10, 12-bits  
Mono  
CameraLink / Firewire  
Mechanical Shutter

**MegaPlus Full Frame Cameras (Monochrome)**



**1.4i**  
1317 x 1035 @ 6.9 fps  
8-bits  
Mono  
LVDS  
Mechanical Shutter



**1.6i**  
1534 x 1024 @ 5.5 fps  
10-bits  
Mono  
LVDS  
Mechanical Shutter



**4.2i**  
2029 x 2024 @ 2.1 fps  
8, 10-bits  
Mono  
LVDS  
Mechanical Shutter

**3CCD Color / Multispectral Cameras (Color)**



**MS3100**  
1392 x 1040 @ 7.5 fps  
24, 30-bits  
Color  
LVDS / CameraLink  
Electronic Shutter

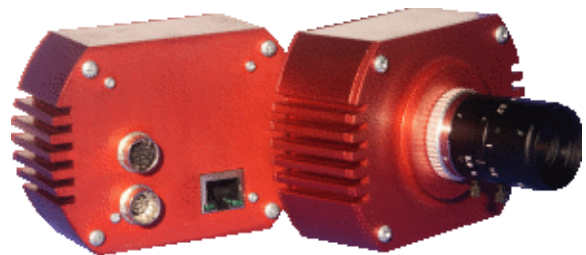


**MS4100**  
1920 x 1080 @ 10 fps  
24, 30-bits  
Color  
LVDS / CameraLink  
Electronic Shutter



## Raptor-1000 GigE-Kamera

Power requirements	DC 15 V
Power consumption	1.5 W
Power out voltage	DC 12V, 10V, 8V, 5V
Max. output current	1.5 A
Operating temperature	0 to 50 °C
Weight	340 g minimal
Dimensions (WxHxD)	96 x 71 x 35,5 mm
CMOS Sensor	1.3MPixel 10-bit ADC
Color	Color / Monochrome
Dynamic range	64 dB (single slope) 80-100 dB (multi slope)
Shutter	Rolling curtain and Synchronous
Pixel size	6.7 µm square
Fill Factor	100%
Optical format	2/3" (8.6 mm x 6.9 mm)
Resolution	1280x1024
Max full frame rate	27 fps @ full resolution
ROI Windowing	Yes
ROI frame rate	100 fps @ 640x480 res. 1657 fps @ 100x100 res
Lens mount	C-Mount



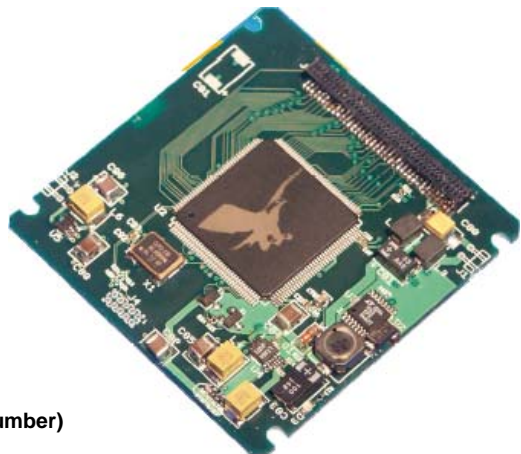
### Raptor-100 Machine Vision System

The Raptor product line is designed from the ground up with the latest technology while keeping in mind cost, performance and machine vision system requirements. It provides a total solution utilizing high-tech hardware and a complete machine vision software suite. Because application requirements fluctuate heavily, the system is designed to be highly flexible and easy to use.

## EAGLE Light OEM Vision Processor Board

Eagle-Light-0010	Threshold, 8 .. 12 bit ; Res. up to 1600x1200
Eagle-Light-0011	Histogram, 8 .. 12 bit ; Res. up to 1600x1200
Eagle-Light-0012	Histogram + Threshold
Eagle-Light-0013	LUT Conversion, input 8 . 12 bit output 8 .. 24 bit
Eagle-Light-0014	Bayer - RGB conversion
Eagle-Light-0015	Laser Triangulation; Line lasers
Eagle-Light-0016	Laser Triangulation ; Spot lasers

More versions under development. Check our website for updates.  
(all algorithms also available as VHDL IP by attaching -IP to the order number)



## Überblick: ISG - FireWire- / Ethernet-Kameras

Line Scan Camera Specifications	LW-ELIS-1024a-1394	LW-SLIS-2048a-1394
Imaging Device:	Linear CMOS	Linear CMOS
Sensing Area:	8.0 mm x 125 microns	14.3 mm x 7.0 microns
Pixel Size:	7.8 micron x 125 micron Rectangular	7.0 micron x 7.0 micron square
Pixels (H x V):	1024 x 1	2048 x 1
Pixel Depth:	14-bit	12-bit
On-Board Image Buffer:	16 MegaBytes	16 MegaBytes
Camera Control:	Via Software	Via Software
Line Scan Rate:	10K Lines per second	27K Lines per second
Pixel Clock:	10 MHz	60 MHz
S/N Ratio:	> 80 db	> 63 db
Video Output:	FireWire™ IEEE-1394	FireWire™ IEEE-1394
Lens Mount:	C or CS-Mount	C or CS-Mount
Power Requirement:	Via FireWire™ IEEE-1394 Cable	Via FireWire™ IEEE-1394 Cable
Dimensions (HxWxL):	39 mm x 52 mm x 70 mm	39 mm x 52 mm x 70 mm
Weight:	176g	176g
Operating Temp.:	-10 <sup>0</sup> C to 45 <sup>0</sup> C	-10 <sup>0</sup> C to 45 <sup>0</sup> C
Monochrome/Color:	Yes/No	Yes/No
Custom Algorithms:	Optional	Optional

Imaging  
Solutions  
Group



Area Camera Specifications	LW-WVGA-G-1394	LW-1.3-S-1394	LW-1.3-G-1394	LW-3-S-1394	LW-1.3-S-Ethernet
Imaging Device:	Wide-VGA CMOS	1.3 Megapixel CMOS	1.3 Megapixel CMOS	3.1 Megapixel CMOS	1.3 Megapixel CMOS
Sensor:	Micron MT9V022	Micron MT9M001	FillFactory IBIS-5a	Micron MT9T001	Micron MT9M001
Sensing Area:	4.55 mm x 2.97 mm (1/3"format)	6.7 mm x 5.3 mm (1/2"format)	8.6 mm x 6.9 mm (2/3"format)	6.6 mm x 4.9 mm (1/2"format)	6.7mm x 5.3mm (1/2"format)
Pixel Size:	6.0 micron square	5.2 micron square	6.7 micron square	3.2 micron square	5.2 micron square
Pixels (H x V):	752 x 480	1280 x 1024	1280 x 1024	2048 x 1536	1280 x 1024
Pixel Depth:	10 / 30 bit (mono / color)	10 / 30 bit (mono / color)	10-bit monochrome	up to 30-bit (color)	10 / 30 bit (mono/color)
On-Board Image Buffer:	16MB for mono & 32 MB for color	16MB for mono & 32 MB for color	16MB for monochrome	32 MB for color	16MB for mono & 32MB for color
Camera Control:	Via Software	Via Software	Via Software	Via Software	Via Software
Frame Rate:	72 fps (752x480) Faster in small ROI's	30 fps (1280x1024), 90+ fps VGA	27 fps (1280x1024), 90+ fps VGA	12 fps (2048x1536), 90+ fps VGA	30fps (1280x1024), 90+fps VGA
Exposure Control:	Fully Programmable, Global Shutter	Fully Programmable, Sync Shutter	Fully Programmable, Global Shutter	Fully Programmable, Sync Shutter	Fully programmable; Sync. Shutter
Dynamic Range:	80 to 110 db	> 64 db	60 to 100 db	> 64 db	> 60 db
Video Output:	FireWire™ IEEE-1394	FireWire™ IEEE-1394	FireWire™ IEEE-1394	FireWire™ IEEE-1394	10/100 Ethernet and NTSC/PAL
Lens Mount:	C or CS-Mount	C or CS-Mount	C or CS-Mount	C or CS-Mount	C or CS-Mount
Power Requirement:	Via FireWire™ IEEE-1394 Cable	Via FireWire™ IEEE-1394 Cable	Via FireWire™ IEEE-1394 Cable	Via FireWire™ IEEE-1394 Cable	Via external 12V power supply
Dimensions (HxWxL):	39 mm x 52 mm x 70 mm	39 mm x 52 mm x 70 mm	39 mm x 52 mm x 70 mm	39 mm x 52 mm x 70 mm	38mm x 51mm x 72mm
Weight:	176g	176g	176g	176g	176g
Operating Temp.:	-10 <sup>0</sup> C to 65 <sup>0</sup> C	-10 <sup>0</sup> C to 65 <sup>0</sup> C	-10 <sup>0</sup> C to 65 <sup>0</sup> C	-10 <sup>0</sup> C to 65 <sup>0</sup> C	-10 <sup>0</sup> C to 85 <sup>0</sup> C
Monochrome/Color	Both Color & Monochrome	Both Color & Monochrome	Monochrome Only	Color Only	Color & Monochrome
JPEG Compression:	Optional	Optional	Optional	Optional	



**ABS Gesellschaft für Automatisierung,  
Bildverarbeitung und Software mbH**



**USB 2.0 - Kameras**

	UK2000		UK2001	UK3058	UK3075
<b>Technische Daten:</b>					
Bildelemente	640 x 480	1280 x 1024	640 x 480	1360 x 1024 (SXGA+)	2048 x 1536 (QXGA)
CMOS-Sensor	1/3 "	1/2 "	1/2 "	2/3" CCD progressive scan, color, monochrom	1/2 CMOS progressive scan
Pixelgröße	7,5 x 7,5 µm	6,0 x 6,0 µm	9,9 x 9,9 µm	6,45 µm x 6,45 µm	3,2 µm x 3,2 µm
Auflösung	12 bit	10 bit	10 bit		
Kennlinie	einstellbar	einstellbar	26 µs - 500 ms		
Bildrate	30 fps	18 fps	120 fps	15 fps bei 1360 x 1024 (Kameraintern) typisch 12 fps im Livebild-Modus 1360 x 1024 über USB2.0	5 fps im Livebild USB 12 fps bei 2048 x 1536 25 fps bei SXGA 90 fps bei VGA-Auflösung
Belichtungszeit			26 µs - 500 ms	30 µs bis 8(unendlich)	50 µs bis 50 s
Belichtungssteuerung				Extsync-Ausgang, potentialgetrennt	
Dynamikbereich	110 dB	71 dB			60 dB
Externer Trigger				Snapshot-Eingang, potentialgetrennt	Extsync-Ausgang, potentialgetrennt
Daten- und Steuerschnittstelle	USB 2.0	USB 2.0	USB 2.0	USB2.0 (nicht bus powered) 4 poliger Spezialstecker	USB2.0 (nicht bus powered) 4 poliger Spezialstecker
Logik	eigener DSP	eigener DSP	eigener DSP	eigener DSP	eigener DSP
Rechenleistung des DSP				1200 MMAC	1200 MMAC
Bildspeicher	8 / 16 / 32 MByte	8 / 16 / 32 MByte	8 / 16 / 32 MByte	20 Bilder bei voller Auflösung	10 Bilder bei voller Auflösung
Shutter	Rolling Shutter	Rolling Shutter	Global Shutter	Global Shutter	Rolling Shutter
Digitale Inputs (potentialgetrennt)				Snapshot frei programmierbar; 1 Input 1 bzw. 3* Inputs (je nach Kamertyp)	Snapshot frei programmierbar 1 Input 1 bzw. 3* Inputs (je nach Kamertyp)
Digitale Outputs				Extsync (für Belichtung) 1 Output	Extsync (für Belichtung) 1 Output frei programmierbar 1 bzw. 3* Outputs
Spannungsversorgung I/O	9 - 36 V / 2,5 W	9 - 36 V / 2,5 W	12 V DC oder 24 V DC ±20 %	12 V DC oder 24 V DC ±20 % (nominal)	12 V DC oder 24 V DC ±20 % (nominal)
Spannungsversorgung Kamera				12 V DC oder 24 V DC ±20 % (nominal)	12 V DC oder 24 V DC ±20 % (nominal)
Stromversorgung	9 - 36 V / 2,5 W	9 - 36 V / 2,5 W	12 V bzw. 24 V; ± 20 % ; 2,5 W	9 V bis 28 V	9 V bis 28 V
Einsatz-Temperaturbereich	0 bis 55 °C	0 bis 55 °C	0 bis 55 °C	0 bis 55 °C	0 bis 55 °C
Abmessungen	51x 51x 56mm	51x 51x 56mm	51x51x56 mm	51 x 51 x 100 mm	51 x 51 x 90 mm
Objektiv-Anschluss	C-Mount	C-Mount	C-Mount	C-Mount	C-Mount
Gewicht				300 g (ohne Objektiv)	280 g (ohne Objektiv)
Zubehör				Spezial-USB2.0-Kabel 12 poliges Versorgungskabel mit HIROSE-Stecker	Spezial-USB2.0-Kabel 12 poliges Versorgungskabel mit HIROSE-Stecker

## EF-USB-232 Lens Controller for Canon EOS Lenses

The EF232 adapter allows the use of Canon EF-mount lenses without requiring the use of a Canon EOS camera body.



With the Adapter, focus and iris functions of the lens are precisely controlled over the serial or USB port.

The beauty of the Canon EOS lens system is that all of the actuators for the lens are incorporated. But the difficulty is that many of the Canon lenses can not even be manually focused without being attached to a Canon EOS Camera body. That is of course, until now. The EF232 Adapter takes the place of the Camera body, giving functionality such as highly repeatable focus control, and iris control in 1/2 stop increments.

The electrical and logical interface to the lens is handled by the adapter. Your programmers will talk to the adapter through a set of intuitive two character commands, for the ultimate in ease of use.

All that is required to make use of the adapter is a standard RS-232 or USB serial port and a 6V/1A DC power supply.

There is no need to understand the complexities of the Canon EF Lens Protocol.

### Interfacing to Your Camera

We offer a mechanical adapter to mount the EF232 directly to any standard C-Mount camera.

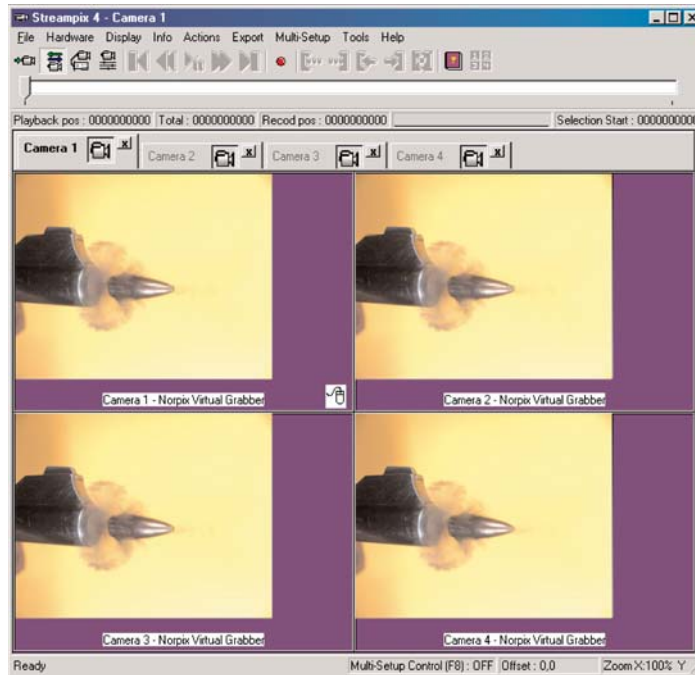
Mechanical adapters for other camera mounts can be provided as required.

The EF232 adapter has a back focal length of 1.1". We can accommodate cameras with back focal lengths much greater than this, such as those employing thermoelectric coolers and/or shutters.

Please contact us to discuss your specific needs.

## StreamPIX - Video Recording Software

**StreamPix** is a digital video recording software package for acquiring live uncompressed or compressed video directly to your computer's hard disk or RAM memory.



- GUI with video like recorder toolbar.
- Thumbnail viewer for sequence files.
- Export sequence files to TIFF, BMP, JPEG, AVI and many more image formats.
- Use for time lapse recording.
- StreamPix supports a wide selection of third party IEEE, analog, digital and high speed cameras along with various frame grabbers.
- **PlugIn modules:** For time stamp recording, levels, off line Bayer filter conversion, histogram, color balance, image de-interlacing, overlay comments.
- Pre/Post video loop recording on trigger.
- Customize your GUI using our API. Run time volume discount available.
- Acquire at up to 625 Mbytes/second.
- High speed acquisition at up to 2000 frames per second.
- Capture multiple video sequences from multiple cameras simultaneously.