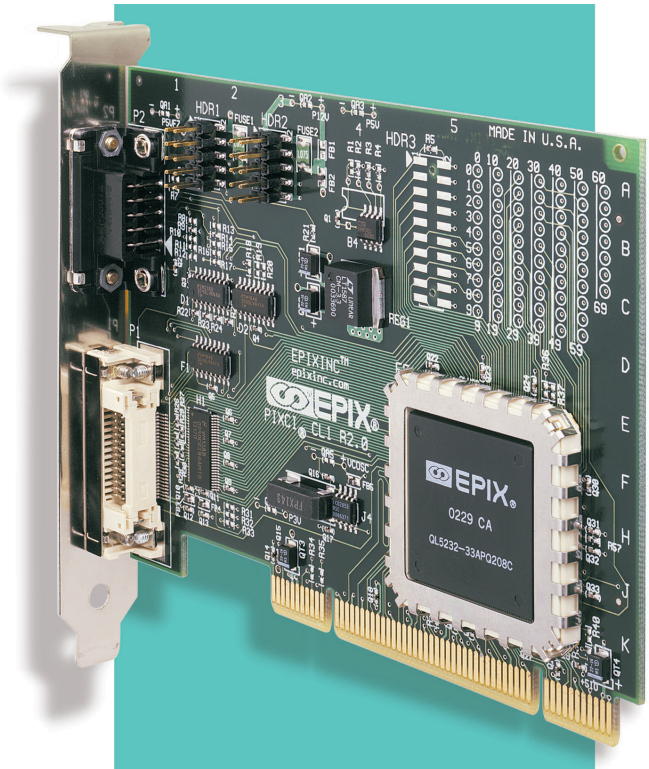
EPIX®

CAMERA Link™

PIXCI® CL1

PCI Interface Board for Base Level Camera Link Cameras



- **Base Camera Link PCI Bus Interface**
- **Up to 4,096 pixels per line**
- **Up to 65,535 lines per frame**
- **Line Scan or Area Scan**
- **Camera Frame Rate Sequence Capture**
- **Triggered Image Sequence Capture**
- **132 MB/s Burst Transfers**
- **Camera Integration and Reset Control**
- **Integration From Seconds to Minutes**
- **Images Stored in Motherboard Memory**
- **32 bit PCI Bus Master**
- **PCI Bus: 32 or 64 bit, 3.3 or 5 volt**
- **Compatible with Windows XP, 2K, NT, ME, 98, 95, & Linux**

The PIXCI® CL1 Camera Link board accepts data from a Camera Link camera while providing exposure, reset, and serial control. The PIXCI CL1 capture and control board reduces the cost of digital imaging systems by reducing the cost of cabling and integrated circuits for interfacing a camera to a computer. The PIXCI CL1 has a single 26 pin connector and supports a camera with the Base configuration of the Camera Link specification. The PIXCI CL1 transfers video data to the PCI bus at up to 100 megabytes per second sustained rates as a PCI bus master. The PIXCI CL1 operates in a 32 bit, 33 MHz PCI bus slot.

VIDEO CAPTURE and CAMERA CONTROL

The PIXCI CL1 has a programmable video capture window to allow capture of less than the entire image from the camera. The user can select a minimum of 1 line of 8 pixels or select up to the entire image array from the camera. A camera control circuit specific to the timing requirements of the attached camera provide camera reset, exposure control, and a strobe output. A trigger input allows the circuit to respond to external events. Camera integration can be programmed from microseconds to minutes.

Supported Camera Link Cameras:

Adimec: 1000m
Atmel: AviivA-512,1024,2048,4096
Basler: A102k, A201b, A201bc, A202k, A301k, 301kc, A302k, A302kc, L101k-1k, L101k-2k, L103k-1k, L103k-2k, L104k-1k, L104k-2k, L301kc
Cohu: 7500CL, 7700CL,7800CL
Dalsa: P2-21-1024, 2048, 4096, 6144, 8192
DVC: 1310AM-CL,1310AC-CL,1312AM-CL,1312AC-CL, 1412AM-CL, 1412AC-CL
Hitachi: KP-F120-CL, KP-F100A-CL, KP-F100B-CL
Jai: CV-4MCL
Perkin Elmer: LD3521-CL, LD3522-CL, LD3523-CL, LD3541-CL, LD3542-CL, LD3543-CL
Pulnix: TM-1020-15CL, TM-1320-15CL, TM-1400-CL TMC-1000-CL, TM-2016-8CL, TM-6710CL, TMC-1000-CL, TMC-1020-15CL, TMC-1400-CL, TMC-6700CL
Silicon Imaging: SI-3170M, SI-3170RGB, SI-3171M, SI-3171RGB
UNIQ Vision: UC-600CL, UP-1830CL
Varian: PaxScan 1313

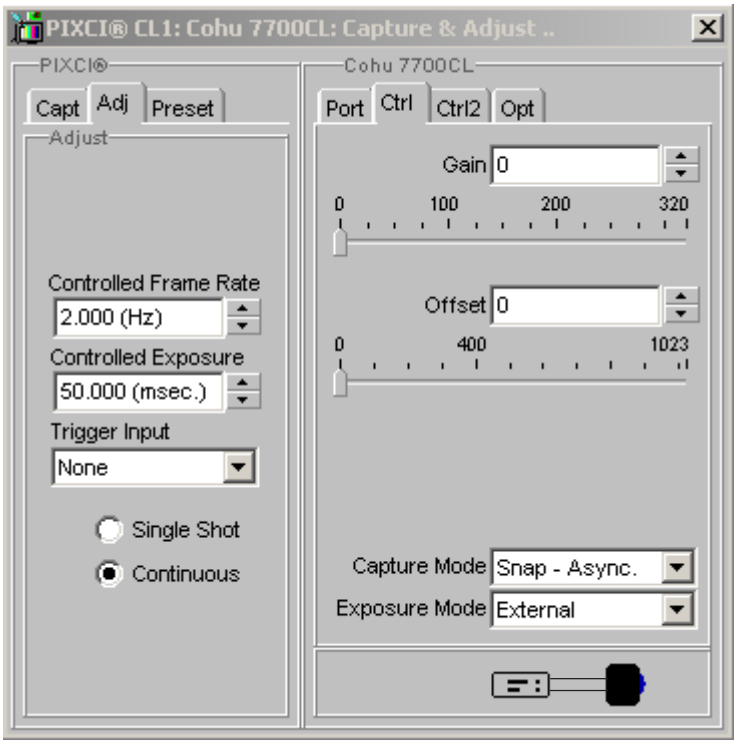
New cameras are always being added to the list.
Contact EPIX if your camera doesn't appear.

SOLUTIONS and SUPPORT

CL1 Camera Link boards are part of the PIXCI series of PCI imaging boards. Accordingly, all CL1 boards are supported by the XCAP imaging program and the XCLIB / PXIPL C /C++ developer libraries.
EPIX, Inc. has been providing imaging solutions and support for OEM machine vision manufacturers and engineers since 1984.

PIXCI® CL1 For Camera Link Digital Cameras

CAMERA CONTROL FROM SOFTWARE



CAPTURE & ADJUST

All cameras supported by PIXCI CL1 imaging boards allow software control of exposure, gain, shutter speed, line rate, and more. The XCAP imaging program provides a dedicated Capture & Adjust Dialog for convenient control.

A Capture & Adjust Dialog is automatically displayed when the PIXCI CL1 board is "Opened" from the Lite, Ltd, Std, or Plus versions of the XCAP program. XCAP knows which Dialog to load by reading the camera identificiation code from the PIXCI CL1 board.

The Adjust Dialog uses camera control names designated by the camera manufacturer. As a result, the camera's user manual provides all the information required to control the camera from

Addendum: Please contact EPIX for an up-to-date listing of the cameras EPIX supports. The most-recently added cameras appear near the bottom of the home page. The PIXCI Selection Guide, reached be clicking a button in the upper-left corner of the home page, provides a listing of all other cameras supported by PIXCI imaging boards. Look in column 5 "Supported By" for "PIXCI CL1". EPIX offers more than 250 PIXCI CL1 boards supporting base configuration camera link cameras.

SPECIFICATIONS

SIGNAL INPUT & OUTPUT:

- EIA RS-644 Drivers & Receivers are used as the interface circuits.

RESOLUTION:

- Pixels: 8 to 4,096 pixels per line
  Pixel offset from horizontal drive:
  0 to 8 pixels less than the number of pixel clocks per line from the camera.
- Lines: 1 to 65,534 lines per image.
  Line offset from vertical drive:
  0 to 1 less than the maximum number of lines from the camera.

MAXIMUM FRAME RATE:

- Camera Dependent

CONNECTIONS:

- 9 pin D-Subminiature for Trigger, Frame Enable, and Strobe.
- 26 pin 3M MDR connector for Camera Link.
- Camera Link cables optionally available.

TRANSFER RATES:

- Requires a burst mode PCI motherboard capable of sustained transfer rates to motherboard DRAM equal to or greater than the peak byte transfer rate of the camera. A motherboard with AGP display is suggested.

BUS REQUIREMENTS:

32 bit, 33 MHz PCI bus master,
3.3 volt or 5 volt PCI slot.
1.6 Amps @ +3.3 or +5 Volts

DIMENSIONS:

12.48 cm long by 9.4 cm high
(4.913" long x 3.7" high) [short slot]

CE / FCC CERTIFICATION:

PIXCI CL1 was tested per EMC directive 89/336/EEC and performed to class B.

EPIX SOFTWARE Support

Supported by **XCAP-Lite (**no charge with camera purchase)**, XCAP-Ltd**, **XCAP-Std**, **XCLIB**, and **XCLIBIPL**. Compatible with WIN XP, 2K, NT, ME, 98, & 95.
XCLIB developer library is available for **LINUX**.

EPIX®

EPIX, Incorporated
381 Lexington Drive
Buffalo Grove, IL 60089 USA