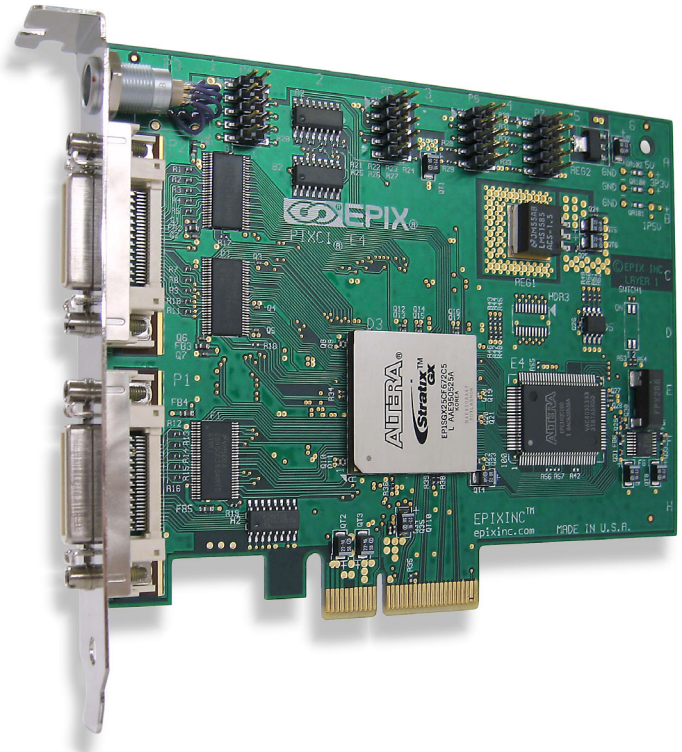
EPIX®

CAMERA Link™

PIXCI® E4



PIXCI® E4

PCI Express x4 Frame Grabber
For High Bandwidth Camera Link Cameras

- **High Bandwidth Camera Link Frame Grabber**
- **PCI Express x4 Bus Compatible**
- **1 Gbyte/sec Burst Transfer**
- **Up to 700 Mbyte/sec Sustained Data Transfer**
- **Line Scan or Area Scan**
- **Camera Frame Rate Sequence Capture**
- **Triggered Image Sequence Capture**
- **64-Bit Memory Addressing**
- **Camera Integration & Async Reset Control**
- **Integration From Microseconds to Minutes**
- **Images Stored in Motherboard Memory or RAID Array**
- **Compatible with Windows XP, 2000, Linux & 32-bit DOS**
- **RoHS Compliant**

The PIXCI® E4 is a plug-n-play frame grabber. Load the software, connect the camera, and begin to capture images. In addition to supporting high bandwidth cameras, the PIXCI E4 supports more than 100 Full, Medium, and Base configuration Camera Link cameras with lower bandwidth requirements.

The PIXCI E4 offers:

- 700 Megabyte per second sustained data transfer to PCI Express x4 bus.
- Camera specific controls – exposure, bit depth, gain, frame rate, etc.
- Camera operation in free-run mode for maximum frame rate sequence capture.
- Camera operation in control (trigger) mode.

64-bit memory addressing allows video rate sequence capture into gigabytes of motherboard memory for longer durations than possible with 32 bit addressing – which is limited to 4 gigabytes.

Multiple PIXCI E4 boards can be installed in the same computer and can support different cameras, either area scan or line scan, monochrome or color, and can have different resolutions, frame rates, and bit depths.

Solutions and Support: EPIX, Inc. has been providing imaging solutions and support for OEM machine vision manufacturers and engineers since 1984. EPIX, Inc. assembles complete imaging systems with cameras, frame grabbers, high-performance PCI Express buses, and with RAID arrays for video-to-disk capture. EPIX® imaging systems, custom-built to your specifications, feature Intel motherboards and processors. Contact EPIX, Inc., or an authorized distributor of EPIX® imaging products, for help selecting cameras, frame grabbers, imaging software, optics, and computer systems.

PIXCI® E4

High Bandwidth Camera Link
For the x4 PCI Express Bus

SUPPORTED HIGH BANDWIDTH CAMERAS

Camera	Resolution	Frame Rate	Bit Depth / Pixels	Notes
Basler A504k Monochrome or Color	1280 x 1024	500 fps	8-Bit CMOS 12 μ^2 1.25 Mpixel	Global Shutter. Windowing for faster frame rate.
NAC HotShot 512 CL Monochrome or Color	512 x 512	2300 fps	8-Bit CMOS 16 μ^2 0.25 Mpixel	ISO 1650 (Mono). Freeze-Frame Global Shutter.
NAC HotShot 1280 CL Monochrome or Color	1280 x 1024	500 fps	8-Bit CMOS 12 μ^2 1.25 Mpixel	ISO 400 (Mono). Freeze-Frame Global Shutter.
Princeton Instruments Megaplus II ES2020 or ES2001 Monochrome or Color	1600 x 1200	31.85 fps	12-Bit CCD 7.4 μ^2 1.92 Mpixel	Simultaneous capture with display from up to 4 camera heads at full resolution, bit depth, and frame rate.
Princeton Instruments Megaplus II ES2093 Monochrome or Color	1920 x 1080	30.12 fps	12-Bit CCD 7.4 μ^2 2.074 Mpixel	
Princeton Instruments Megaplus II ES4020 Monochrome or Color	2048 x 2048	15.05 fps	12-Bit CCD 7.4 μ^2 4.19 Mpixel	
Princeton Instruments Megaplus II ES11000 Monochrome or Color	4008 x 2672	4.63 fps	12-Bit CCD 9.0 μ^2 10.71 Mpixel	
Princeton Instruments Megaplus II ES1602 or S1603 Monochrome	1536 x 1024	6.2 fps	12-Bit CCD 9.0 μ^2 1.57 Mpixel	
Princeton Instruments Megaplus II ES3200 Monochrome	2184 x 1472	2.9 fps	12-Bit CCD 6.8 μ^2 3.3 Mpixel	
Princeton Instruments Megaplus II EC11000 Monochrome or Color	4008 x 2672	4.63 fps	12-Bit CCD 9.0 μ^2 10.71 Mpixel Peltier Cooled	
Virtually ALL Full, Medium, & Base Camera Link Cameras	Supports Camera's Maximum Resolution	Supports Camera's Maximum Frame Rate	Any	Optimzed for camera link cameras listed in PIXCI Selection Guide. 700 MB/sec Max Data Rate

The chart lists high-performance cameras that showcase the PIXCI E4 board's capability to transfer massive amounts of image data – which translates into the ability to capture high resolutions at comparatively fast frame rates. The PIXCI E4 is primarily designed to support high performance cameras, but it also works with virtually *ALL* camera link cameras with a bandwidth requirement of 700 MB/second or less.

Please visit the PIXCI Selection Guide on the EPIX web site (www.epixinc.com) for a comprehensive listing of supported cameras.
Contact EPIX, Inc., or your authorized EPIX, Inc. distributor, if your camera isn't already listed.

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SPECIFICATIONS

PIXCI E4

SIGNAL INPUT & OUTPUT:
- EIA RS-644 (LVDS) Drivers & Receivers support pixel clock frequencies up to 85 MHz.

PERFORMANCE:
Supports the camera's maximum:
- Horizontal Resolution
- Vertical Resolution
- Frame Rate
- Bit Depth

CONNECTIONS:
- Two 26-pin 3M MDR Camera Link connectors for Full, Medium, and Base.
- 6-pin connector for Trigger, Frame Enable, and Strobe.
- Camera Link cables available.

DATA TRANSFERS:
- Supports cameras with data output rates up to 700 MBytes/second.
- 64-bit memory addressing

BUS REQUIREMENTS:
- x4 PCI Express Bus slot Operates in x16, x8, or x4 PCI Express Bus slot.

DIMENSIONS:
- 13.6 cm long by 10.5 cm high (5.34" long x 4.13" high)

CERTIFICATIONS:
- CE Compliant
- ROHS Compliant

EPIX SOFTWARE Support

Supported by **XCAP-Lite (**no charge with board purchase**), XCAP-Ltd**, **XCAP-Std**, **XCLIB**, and **XCLIBIPL**.
Compatible with WIN XP (32 & 64 bit), 2000, Linux (32 & 64 bit) and 32-bit DOS.
Also TWAIN and Image-Pro compatible.

EPIX®

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