PIXCI® EB1 mini

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Smallest Camera Link Frame Grabber Series

- **Base Camera Link Frame Grabber**
- **PCI Express Mini Card**

Applications

- Airborne
- Automotive
- Drone
- Industrial

- Mobile
- Rugged
- Underwater

Frame Grabber

- Base Configuration Camera Link
- MDR or SDR connector options
- Line Scan or Area Scan Cameras
- Supports more than 1000 different camera models
- Camera frame rate sequence capture
- Triggered image sequence capture
- Camera Integration & Async Reset Control
- LVTTL Trigger In and Strobe Out
- 50.95 mm long by 30.00 mm wide (2.006 in. by 1.181 in.)

Interface

- PCI Express Mini Card
- Full and Half Length versions
- 64-bit memory addressing
- Burst transfer at 250 megabytes per second
- 200 megabyte per second sustained data transfer

Software

- XCAP-Lite image capture, display, and save program included
- Capture video to computer memory with XCAP-LTD
- Stream video to disk with XCAP-STD
- XCLIB programmer libraries for frame grabber and camera control
- PXIPL image processing, measurement, and analysis libraries
- 3rd Party software available
- Windows & Linux, 32 & 64–bit

The PIXCI® EB1mini series of camera link frame grabbers use internal PCI Express Mini Card slots in small computer systems. Space constraints typically require routing of cables to a side of the case or to a nearby camera. Flexible cables are used to facilitate routing. The four versions of the PIXCI® EB1mini series provide multiple solutions for locating connectors.

VERSIONS

The **PIXCI®**
EB1miniH has an SDR Camera Link connector and FPGA on a separate circuit board for mounting to the side of a small chassis. Two very flexible cables connect to a half length Mini card for the PCI express connection. This allows for more mounting options in space constrained embedded systems that have half length mini PCIe slots or full length slots that have a half length mounting standoff. At the maximum Camera Link clock rate of 85 MHz, cables up to 10 meters long can be used.

Dimensions:
FPGA circuit board: 66.04 x 30.0 mm (2.6 x 1.181 inches)
Half mini circuit board: 26.8 x 30.0 mm (1.055 x 1.181 inches)
Cable length between circuit boards shown: 30.48 mm (12 inches)

The **PIXCI®**
EB1miniG has the Camera Link connector on a separate circuit board and connects to the FPGA circuit board with two very flexible cables. This version requires less space on the panel for more mounting options in space constrained embedded systems with a full size mini card PCIe slot. It is available with an MDR or SDR Camera Link connector, and is

shown here with an SDR. At the maximum Camera Link clock rate of 85 MHz, a maximum length of 7 meters can be used.

Dimensions:
Full mini circuit board: 50.95 x 30.0 mm (2.006 x 1.181 inches)
Connector circuit board: 38.354 x 30.0 mm (1.51 x 1.181 inches)
Cable length between circuit boards shown: 30.48 cm (12 inches)

The **PIXCI®** **EB1miniF** moves the Camera Link connector to a separate board and connects the two with detachable flat ribbon cable. This allows for more mounting options in space constrained embedded systems with a full size mini card PCIe slot. Available with an MDR or SDR Camera Link connector, shown here with MDR. At the maximum Camera Link clock rate of 85 MHz, cable with maximum length of 7 meters can be used.

Dimensions:
Full mini circuit board: 50.95 x 30.0 mm (2.006 x 1.181 inches)
Connector circuit board: 38.354 x 30.0 mm (1.51 x 1.181 inches)
Cable length between circuit boards shown: 20.32 cm (8 inches)

The **PIXCI®**
EB1mini frame grabber provides a vertical Camera Link SDR connector with FPGA on a single printed circuit board using a full size mini card slot. At the maximum Camera Link clock rate of 85 MHz, cables up to 10 meters long can be used.

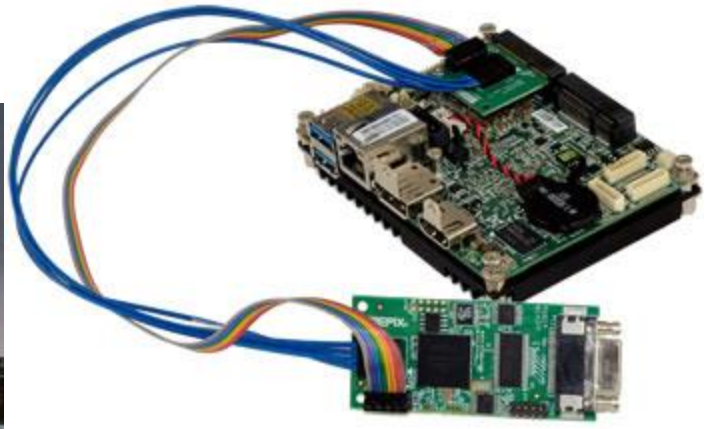
Dimensions:
Full mini circuit board: 50.95 x 30.0 mm (2.006 x 1.181 inches)

OPTIONS

Add PoCL (Power over Camera Link)
Power your PoCL camera without a separate power supply.

EXAMPLE CONFIGURATIONS

PIXCI® EB1miniH with MS-98H6 Motherboard
The PIXCI® EB1miniH base Camera Link frame grabber can be installed in either a Half Mini Card slot or a Full Mini Card slot with



Half Mini Card standoff. This picture shows the PIXCI® EB1miniH with the MS-98H6 Motherboard. The motherboard supports Pentium and Celeron processors and has a Half Mini PCIe slot for the PIXCI EB1miniH. The motherboard has a Pico-ITX form factor measuring 100 x 72mm.

The cables connecting the PIXCI EB1miniH frame grabber's two circuit boards are 30.48cm or 12 inches long. The flexible cables allow the SDR Camera Link connector to be mounted almost anywhere on the computer chassis. At the maximum Camera Link clock rate of 85 MHz Camera Link cables up to 10 meters long can be used to connect the PIXCI EB1miniH to a base configuration Camera Link camera.

PIXCI® EB1miniH with NVIDIA Jetson TK1 or TX1

The PIXCI® EB1miniH base Camera Link frame grabber can be installed in the Half Mini Card slot on the NVIDIA Jetson TK1 developer kit.

Two PIXCI® EB1miniH base Camera Link frame grabbers can be interfaced to the NVIDIA Jetson TX1 with a Connect Tech Elroy Carrier.

The XCLIB library for Linux now supports ARM-7 processors. Deliverables are binary driver blob with C wrappers, makefile, .a or .so library, .h files, examples, and manual. The binary driver blob with C wrappers supports all 3.x or 4.x Linux kernels and gives end-users maximum flexibility in choosing a Linux release for their product.

PIXCI® EB1minis with a PCIe/104 Quad Mini-PCIe Adapter

The Connect Tech Quad Mini-PCIe adapter mounts four PIXCI® EB1mini frame grabbers in a PCIe/104 embedded system.

Any of the EB1mini frame grabbers can be installed in the top two slots.

The EB1miniH or EB1miniG can be installed in the bottom two slots. The Quad Adapter is pictured with the PIXCI® EB1miniG-M frame grabber with MDR Camera Link connectors.

SPECIFICATIONS

Performance (Supports the camera's maximum):	Horizontal Resolution Vertical Resolution Frame Rate Bit Depth
Signal Input & Output:	EIA RS-644 (LVDS) Drivers & Receivers Pixel clock frequencies from 25 to 85 megahertz Supports cameras with data output rates up to 250 megabytes per second
Data Transfers:	Burst data rates to Mini PCIe bus at 2.5 gigabits per second 64 bit memory addressing
Bus Requirement:	PCI Express Mini Card slot
Connectors:	One 26 pin 3M SDR camera link connector for base camera 10 pin header for Trigger, Frame Enable, Strobe, and General Purpose I/O
Power Requirements:	3.3 volts at 150 milliamps 1.5 volts at 200 milliamps
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 32-bit & 64-bit Windows 10, 8, 7, Vista, XP, 2000, LINUX, and 32-bit DOS. Also TWAIN and Image-Pro Compatible.