PixeLINK

PL-A782 MV Camera

The all-in-one digital camera designed with *your* industrial inspection application in mind.

General Description

The PL-A782 is a high-resolution, 6.6 megapixel (2208 x 3000) camera designed specifically for industrial inspection applications. Fully IIDC 1.31 (DCAM) compliant, the PL-A782 uses a standard FireWire interface for plug-and-play operation with the host computer. The high resolution allows the camera to be used to resolve small features while maintaining a large field of view. Region of interest controls and multiple decimation modes make the PL-A782 a flexible choice. Features such as trigger and general purpose output controls add a level of functionality beyond the IIDC standard, providing excellent performance for the price. On board Flat Field Correction provides image quality similar to high-end CCD cameras.

Easy to Use!

- Compatible: The PL-A782 can be operated right out of the box with any system that supports the FireWire (IEEE 1394) IIDC 1.31 specification. Within minutes, the camera can be controlled by any IIDC compatible software such as National Instruments LabVIEW, and a host of other applications.
- Connectable: The PL-A782 connects to the computer via a single FireWire cable that supplies power to the camera and allows high-speed data communication. No special or expensive frame grabber card is required. The camera's two FireWire ports allow multiple cameras to be connected together ("daisy chained") on a single FireWire bus. The external trigger allows cameras to be synchronized with each other or with external systems.
- Controllable: The camera's rich set of features and capabilities can all be controlled through software. The external trigger allows synchronization in demanding machine vision applications.

Advanced Features Include:

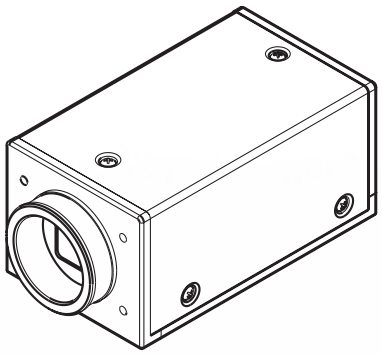
- Flexible region of interest combined with 5 levels of decimation control. The full field of view can be maintained at lower resolutions and higher frame rates. In addition, the camera can provide real-time off-chip binning to effectively increase pixel size.
- On-board non-volatile memory for storage of the camera settings. When the camera is shut down, it can be restarted with the same settings even when connected to a different computer.
- Two general-purpose output connections for camera-based control of external equipment such as lighting and filters. The output controls can be software enabled or programmed to respond to an input trigger signal incorporating user-defined delays.
- New features can be added in the field via the FireWire interface.

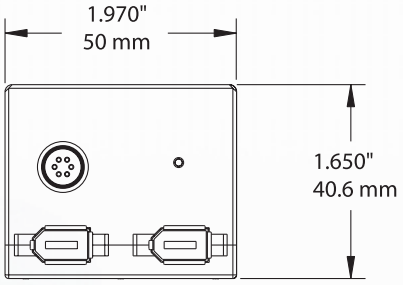
→ 6.6 Megapixel Resolution

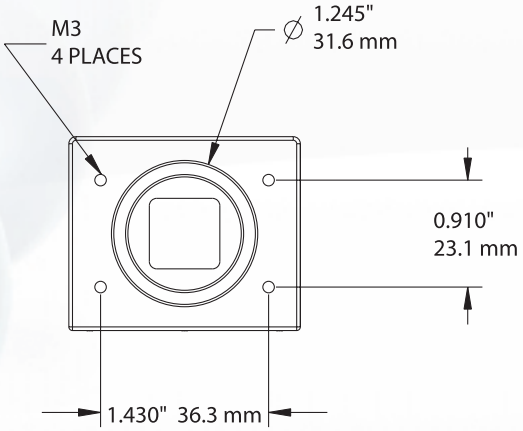
- → **Color or Monochrome**
- → **Easy to Use**
- → **Cost-Effective**
- → **IIDC 1.31 (DCAM) Compatible with Extended Features**
- → **FireWire Interface**
- → **External Trigger (TTL to 12 V)**
- → **Fully Supported by Software, for Operation "Out of the Box"**

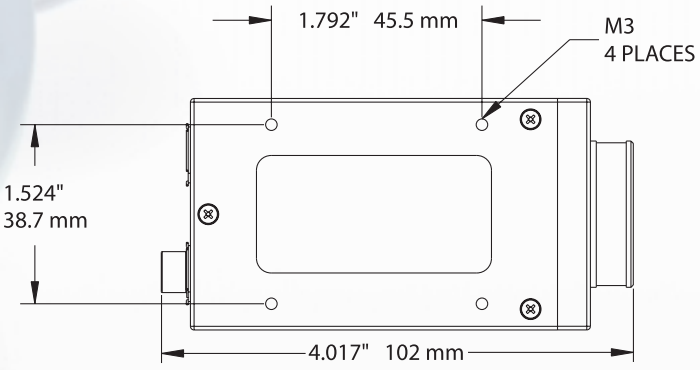
"Connected by FireWire and enabled by software, the PL-A782 provides 6.6 megapixel resolution in a cost-effective, easy-to-integrate package."

PL-A782 (Standard Configuration)









Features

Sensor
- 1" CMOS 2208 x 3000 resolution (7.73 mm x 10.50 mm - 13.1 mm diagonal)
- 3.5 µm square pixels
- Rolling Shutter

Frame Rate – frames per second

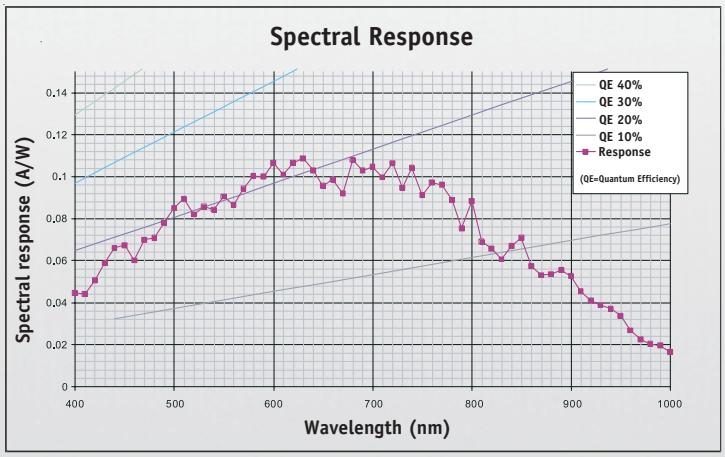
ROI Size	Max Frame Rate
2208 x 3000	5
1584 x 1200	17
1272 x 1008	25
648 x 480	88

Performance
- Spectral Range 400 – 1000 nm
- FPN – TBD
- PRNU – TBD
- Dynamic Range – 56 dB linear (TBD)

Triggering / Strobe / Flash
- S/W or H/W (external) trigger (TTL to 12V)
- Two user-programmable outputs that can be used stand-alone or synchronized to trigger

Controls
- Exposure (0.063 ms to 2 seconds)
- White balance and color gains
- Brightness (black level adjust)
- Gamma
- Frame Rate (2 fps to max)
- Trigger & Strobe Modes
- Region of Interest & Decimation
- Pixel format 8-bit or 10-bit

Other Features
- Programmable LUT
- On-camera configuration memory
- FPN and PRNU correction (gain/offset correction, flat field correction – per pixel)



Compatibility
- IIDC 1.31
  - ➜ Format 0, Modes 1, 3, 5 and 6
  - ➜ Format 7

Computer Interface
- Two FireWire (IEEE 1394) connectors allow daisy chaining of the camera

Optical Interface
- Standard C-mount 1" optics. (Compatible with most 2/3" optics.)
- IR cut-off protective filter

Mechanical Interface
- M3 threaded holes – 4 in front plate around C-mount and 4 in camera base

Trigger Interface
- 6 pin Hirose connector

Power Requirements
- Power supplied over the FireWire bus
- Max consumption – 5 W

Size and Weight
- Standard Configuration (PL-A782)
  H x W x L: 1.65" x 1.97" x 4.02"
  (41 mm x 50mm x 102mm)
  Weight (without lens): 200g

Environmental
- FCC Class B & CE
- Shock – 50 G
- Vibration – 10 G (20 to 200 Hz)
- Temperature – 0° C to 50° C (non-condensing)

Status LED
- Flashing red and green
- Signals indicate idle, operating, warning and failed status

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Ordering Information

PixeLINK 6.6 Megapixel Color Industrial camera.

PL-A781
PixeLINK 6.6 Megapixel Monochrome Industrial Camera. No accessories.

PL-A782
PixeLINK 6.6 Megapixel Color Industrial Camera. No accessories.

PL-A781-KIT
Camera Kit for the PixeLINK 6.6 Megapixel Monochrome Industrial Camera. Kit contains the PL-A781 camera and PixeLINK Developer' Application software. Interface accessories and cables must be ordered separately.

PL-A782-KIT
Camera Kit for the PixeLINK 6.6 Megapixel Color Industrial Camera. Kit contains the PL-A782 camera and PixeLINK Developer' Application software. Interface accessories and cables must be ordered separately.

PL-1394-LAPTOP-PCMCIA-ACC
Interface accessory pack for use with non-1394 enabled laptops. The pack contains a IEEE-1394 PCMCIA interface card with a "dongle", 4-pin to 6-pin FireWire cable and a universal power supply.

PL-1394-LAPTOP-ACC
Interface accessory pack for use with 1394 enabled laptops. The pack contains a universal power supply, 4-pin to 6-pin 2-meter Firewire cable and a 4-pin to 6-pin adapter. The laptop must already have a IEEE 1394 connection with a 4-pin or 6-pin jack available.

PL-1394-DESKTOP-ACC
Interface accessory pack for use with PC desktop computers. The pack contains a PCI bus 1394 interface card and a 4.5 meter 6-pin to 6-pin FireWire cable.

PL-SDK-VERSION-4
PixeLINK Software Developer's Kit including drivers, Application Programming Interface, sample code, and the PixeLINK Developers Application. Purchase includes free PixeLINK Technical Support.

PL-A700 CAMERA 1/4-20 MOUNT
PL-A700 Series camera mount 1/4"-20 UNC.

Visit the PixeLINK web site to download the latest PixeLINK demonstration software, firmware upgrades and tools for the PL-A782.

OEM board sets with remote heads are available on request.

Subject to change without notice

For more information, contact:

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