

# P i x e L I N K

## Megapixel FireWire Cameras

PL-A661 – MONOCHROME

PL-A662 – COLOR

### Highlights

PixeLINK™ PL-A661 and PL-A662 Cameras offer high-resolution megapixel capability with the convenience of FireWire (IEEE 1394) to capture low latency video streams and digital still images. Available in a Camera Kit for operation "out of the box," and a Developer's Kit that includes all of the software and hardware necessary for customized application development. The PL-A661 and PL-A662 are encased in a rugged yet lightweight magnesium housing.



### Features

- All-in-one megapixel FireWire C-mount cameras
- Stream uncompressed video or capture still images
- FireWire digital interface simplifies installation and eliminates the need for framegrabbers
- Flexible and full-featured CMOS image sensor with high resolution 1.3-megapixel array (1280 × 1024 pixels)
- Up to 12.7 fps at 1280 × 1024 resolution, 60 fps at 640 × 480
- FireWire cable carries video data, control signals and power—no additional cables required.
- Application Programming Interface (Developer's Kit only)
- Includes application (*PixeLINK Capture*), providing controls for:
  - Gamma correction, signal gain, exposure time
  - Imager subwindow size and position
  - Image flip and mirror
  - Choice of 8-bit or 10-bit data and data rate
- Supports 3rd party software applications via industry-standard interface protocols:
  - DirectShow®
  - TWAIN™

### Suggested Applications

- Microscopy
- Medical and biometric imaging
- Video conferencing systems
- Surveillance and security cameras
- Webcasting systems
- Photo ID systems



### General Description

The PL-A661 and PL-A662 Cameras use the FireWire (IEEE 1394) digital bus protocol to streamline the capture, digitization and processing of megapixel video streams. These Cameras are designed to simplify real-time uncompressed video streaming and digital still image acquisition while maintaining uncompromising video and digital still-image quality.

One FireWire cable can manage power distribution, PC-based control and real-time video streaming capabilities of the Camera.

The Developer's Kit offers an extensive Application Program Interface (API). This API is designed to simplify the most common tasks associated with configuring and controlling the Camera. Software developers can easily adapt existing programs or develop new imaging applications quickly.

The PL-A661 and PL-A662 are compatible with Windows® 98 SE, Windows® 2000 and Windows® XP.

## Configurations

### Camera Kit (PL-A661-KIT, PL-A662-KIT)

- PL-A661 or PL-A662 Megapixel FireWire Camera (no lens provided)
- FireWire adapter card
- FireWire cable
- Quick Start installation card
- Camera Kit software
  - Windows® 98 SE, 2000 and XP Drivers
  - TWAIN interface
  - Application: *PixLINK Capture*
- Online User's Manual
- Warranty card

### Developer's Kit (PL-A661-DEV, PL-A662-DEV)

- All contents of the Camera Kit, plus:
- All necessary software and documentation to create custom applications
    - Extensive API
    - Source code examples of applications (upon request)
    - Access to technical support
  - ¼–20 Mount

### Accessories

A wide variety of accessories are available with these cameras including cables, adapter cards, FireWire repeaters, lenses, tripods and mounts. Contact your Authorized PixelINK Reseller for details.

## Specifications

### Imaging Chip

Type..... 1/2" Kodak KAC-1310 1.3-megapixel CMOS  
 Resolution..... 1280 × 1024 active pixels  
 Pixel Size ..... 6.0 µm × 6.0 µm, square  
 Array Dimensions ..... 7.68 mm × 6.14 mm  
 Frame Rate, in frames per second (fps), 8-bit pixels

	@ 16 MHz	@ 24 MHz (Dev Kits only)
32 × 32		>2500
320 × 240	176	246
640 × 480	48	60
800 × 600	31	42
1024 × 768	20	23
1280 × 1024	11.4	12.7

Color Mosaic ..... RGB Bayer with standard microlenses (PL-A662)  
 Shutter ..... Continuous and single frame rolling shutter capture  
 Gamma ..... Software programmable  
 Optical Fill-Factor..... 40% mono / 64% color  
 Saturation Signal ..... 40,000 electrons  
 Quantum Efficiency .. 38% peak RGB  
 Responsivity..... 0.6 V/Lux-sec peak RGB  
 Total Dark Noise ..... 70 e- rms  
 Dark Current ..... 6250 e-/pixel/sec  
 Dark Current Doubling Temperature ..... 9°C  
 Dynamic Range..... > 54dB

### Electrical

Voltage..... 8 V–30 V DC  
 Power ..... 3 W typ. (250 mA at 12 V, supplied by FireWire cable)

### Physical

Operating Temp. .... +5°C to +60°C  
 Lens mount..... C-mount lens adapter  
 Weight..... 175 g (without lens)  
 Compliance ..... FCC Class B; CE  
 Camera Housing ..... Magnesium

### Interface

Operating System..... Windows® 98 SE, 2000 and XP  
 Data Format ..... 8-bit or 10-bit, uncompressed  
 Interface Type ..... 2, 6-pin FireWire ports (400 Mbits/s)  
 Max. Data Rate ..... 24 Mbytes per second

## To Order Your PixelINK Camera

Contact:

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## System Requirements

- Microprocessor:  
 Minimum—450 MHz Pentium® III or equivalent  
 Recommended—1.5 GHz Pentium® 4 or equivalent
- 128 MB system RAM
- 25 MB hard drive free space
- Video card with 24 or 32 bit True Color graphics
- 8 MB of video memory