



GENERAL DESCRIPTION

The PL-C721-C color and PL-C721-M monochrome compact cameras provide high resolution, low noise images for outstanding value in a broad range of industrial applications. The camera features a 1.3 megapixel (1280 x 1024) resolution imager capable of 30 fps at full resolution.

The PL-C721 series of cameras are based on a ON Semiconductor CMOS global shutter sensor with a 1/2" optical format. The extensive built-in image processing possibilities (image pre-processing) result in outstanding image quality, less load on the system and higher performance. These cameras provide the user choice of 8-bit or 10-bit digitization and a dynamic range of 53dB in 10-bit mode. The external hardware trigger and 2 general-purpose outputs ensure users have the flexibility to synchronize the camera with their processes and illumination.

PixelINK's industry leading SDK uses a common API for all cameras regardless of the chosen interface. Software code developed for one camera is easily transferred to other PixelINK models without the need to recompile. Overall system costs are reduced and camera integration is simplified.

The flexible Region of Interest (ROI) control allows users to operate at higher frame rates by placing a lower resolution "window" on the imager at any location.

Typical Applications

- medical
- high performance security & surveillance applications
- parts inspection
- metrology and biometrics
- welding inspection
- PCB and flat panel display inspection.

Customization - The products listed here are standard offerings. PixelINK® also provides an extensive list of customized cameras to OEM customers around the world. We may already have what you need. If not, we can certainly design and build it for you.

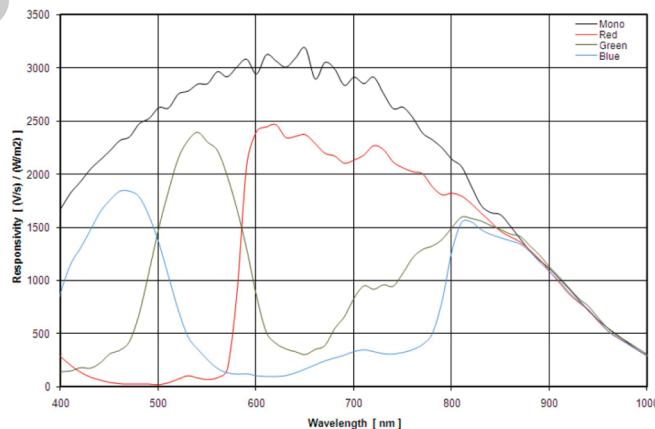
FEATURES

- 1.3MP (1280 x 1024) Resolution
- CMOS Global Shutter
- Monochrome and Color
- 30 fps at full resolution
- USB 2.0 (micro USB connector)
- Flexible Region of Interest (32 pixel H x 8 pixel W granularity)
- Format_7 support
- 1 trigger input, 2 general purpose outputs (3.3V)
- Great image quality
- Compact size
- C-Mount
- Board level
- One common API for all cameras
- Free professional technical assistance
- Extended shutter mode

Camera control options:

- Auto & manual exposure
- Programmable LUT
- Auto & Manual White Balance
- Color Temperature
- Gain
- Gamma
- Saturation
- Histogram
- Binning, Averaging, Resampling, Decimation
- Image Flip & Rotate
- Callbacks (Image Filters)

RESPONSIVITY CURVE



SENSOR

Sensor	ON Semiconductor CMOS
Type	CMOS Global Shutter
Resolution	1280(H) x 1024(V) 1.3 MP Color & Mono
Pixel Pitch	4.8 μ m x 4.8 μ m
Active Area	6.144 mm x 4.92 mm - 7.87 mm diagonal
Peak QE	53 %
Max Datarate	100MHz

PERFORMANCE SPECIFICATIONS

FPN	<1 % of signal
PRNU	<2% of signal
Dynamic Range	53 dB
Bit Depth	8 & 10-bit
Color Data Formats	Bayer 8, Bayer 16 and YUV422
Mono Data Formats	Mono 8 and Mono 16

MECHANICALS

Dimensions	32 x 48 x 11 mm (without lens mount)
Weight	TBD
Mounting	Holes for 0-80 hardware
Lens Mount	C & CS-Mount

INTERFACES

Interface / Date rate	USB 2.0 / 480 Mbps
Trigger Connector	8-pinMolex 1.25mm pitch
Trigger Modes	Software and hardware
Trigger Input	1 input, 3.3V (with internal pullup resistor)
GPO/Strobe	2 outputs, 3.3V

FRAME RATES

Resolution	Free Running
1280 x 1024	30
1024 x 768	50
800 x 600	83
320 x 240	518

Frame rates will vary based on host system and configuration

GPIO INTERFACE PIN OUTPUT DESCRIPTION

Pin Pin Name & Function

- 1 3.3V power output
- 2 nTRIGGER, 3.3V HCMOS input
- 3 Ground
- 4 GPO1, 3.3V HCMOS output
- 5 GPO2, 3.3V HCMOS output logic and chassis ground
- 6 Clock, 3.3V (I2C access for OEM's)
- 7 Data, 3.3V (I2C access for OEM's)
- 8 No connection

Board connector: Molex 53398-0871 (8-pin, 1.25mm pitch, vertical)
Cable receptacle: Molex 51021-0800
Cable crimp terminals: Molex50079-8100

POWER REQUIREMENTS

Voltage Req.	5V DC (from USB connector)
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SOFTWARE

PixeLINK Capture OEM	Free Download (www.pixelink.com)
DirectShow (exl. GigE)	Bundled with PixeLINK Capture OEM
TWAIN	Bundled with PixeLINK Capture OEM
SDK	API, sample code and LabVIEW wrappers

ENVIRONMENTAL & REGULATORY

Compliance	RoHS
Shock & Vibration	300 G & 20 G (10Hz - 2KHz)
Operating Temp.	0°C to 50°C (non-condensing)
Storage Temp.	-45°C to 85°C

COMPUTER & OPERATING SYSTEM

Processor	2.0 GHz or better
Memory	512 MB min. 1 GB recommended
Operating System	XP, Vista (supported) Windows 7 (recommended)
Hard Drive Space	75 MB