

GENERAL DESCRIPTION

The Prometheus family of USB 3.0 cameras links together the benefits of high frame rate CMOS technology with the high speed data throughput of USB 3.0 technology. PL-D752 color and monochrome cameras provide low noise images for outstanding value in a broad range of industrial applications. The camera features a 2.3 megapixel (1920 x 1200) resolution imager capable of 165 fps at full resolution in 10-bit mode and 129 fps in 12-bit mode.

The PL-D752 model of cameras are based on a Sony CMOS global shutter sensor with a 1/1.2" 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 can be ordered either in 10-bit digitization or 12-bit digitization and has a dynamic range of up to 75db with the 12-bit version. 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 Imaging
- Parts inspection
- Metrology
- Biometrics
- PCB and flat panel display inspection.
- Microscopy

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.



CAMERA FEATURES

- 2.3MP (1920 x 1200) Resolution
- CMOS Global Shutter
- Monochrome and Color
- 165 fps at full resolution in 10-bit
- 129 fps at full resolution in 12-bit
- USB 3.0
- Flexible Region of Interest (8 pixel H x 16 pixel W granularity)
- 1 trigger input, 2 general purpose outputs (3.3V)
- Great image quality
- Compact size
- Board level and enclosed models
- One common API for all cameras
- Tethered sensor head option 6"/12" (*Board Level version only)
- Auto & manual exposure
- Programmable LUT
- Auto & Manual White Balance
- Gain
- Gamma
- Saturation
- Binning and Decimation
- Image Flip & Rotate
- Callbacks (Image Filters)

SENSOR

Sensor	Sony CMOS
Type	CMOS Global Shutter
Resolution	1920(H) x 1200(V) 2.3 MP Color & Mono
Pixel Pitch	5.86 μm x 5.86 μm
Active Area	11.25 mm x 7.03 mm - 13.27 mm diagonal
Peak QE	Mono 76 % @ 525nm

PERFORMANCE SPECIFICATIONS

FPN	TBD
PRNU	TBD
Dynamic Range	Up to 75db with the 12-bit version
Bit Depth	8 and 10-bit or 8 and 12-bit
Color Data Formats	Bayer 8, Bayer 12 packed and Bayer 16
Mono Data Formats	Mono 8, Mono 12 packed and Mono 16

MECHANICALS

Dimensions	32 x 48 x 11 mm (without lens mount)
Weight	35.8 g (without optics)
Mounting	Holes for 0-80 hardware
Lens Mount	C-mount, CS-mount and S-mount

INTERFACES

Interface / Date rate	USB 3.0/ Micro-B / 5Gbps
Board Level Trigger Connector	8-pin Molex 1.25mm pitch
Enclosed Trigger Connector	Hirose round 8-pin
Trigger Modes	Software and hardware
Board Level Trigger Input	1 input, 3.3V (with internal pullup resistor)
Enclosed Trigger Input	1 optically Isolated, 5-12V DC at 4-11 mA
Board Level GPO/Strobe	2 outputs, 3.3V
Enclosed GPO/Strobe	2 outputs, 3.3V and 1 optically isolated max 40V DC, max 15mA

FRAME RATES

Resolution	10-bit Free Running	12-bit Free Running
1920 x 1200	164.5	129

Frame rates will vary based on host system and configuration

BOARD LEVEL GPIO INTERFACE PIN OUTPUT DESCRIPTION

Pin	Pin Name & Function
1	3.3V power output
2	TRIGGER, 3.3V HCMOS input
3	Ground
4	GPO1, 3.3V HCMOS output
5	GPO2, 3.3V HCMOS output
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: Molex 50079-8100

ENCLOSED GPIO INTERFACE PIN OUTPUT DESCRIPTION

Pin	Pin Name & Function
1.	VBUS (Power output from USB3 cable)
2	TRIGGER + (optically isolated)
3	TRIGGER - (optically isolated)
4	GPO1 + (optically isolated)
5	GPO1 - (optically isolated)
6	GPO1, 3.3V HCMOS output
7	GPO2, 3.3V HCMOS output
8	Ground (logic and chassis ground)

POWER REQUIREMENTS

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

SOFTWARE

PixelINK Capture OEM	Free Download (www.pixelink.com)
DirectShow	Bundled with PixelINK Capture OEM
TWAIN	Bundled with PixelINK Capture OEM
SDK (Sold Separately)	API, sample code and LabVIEW wrappers

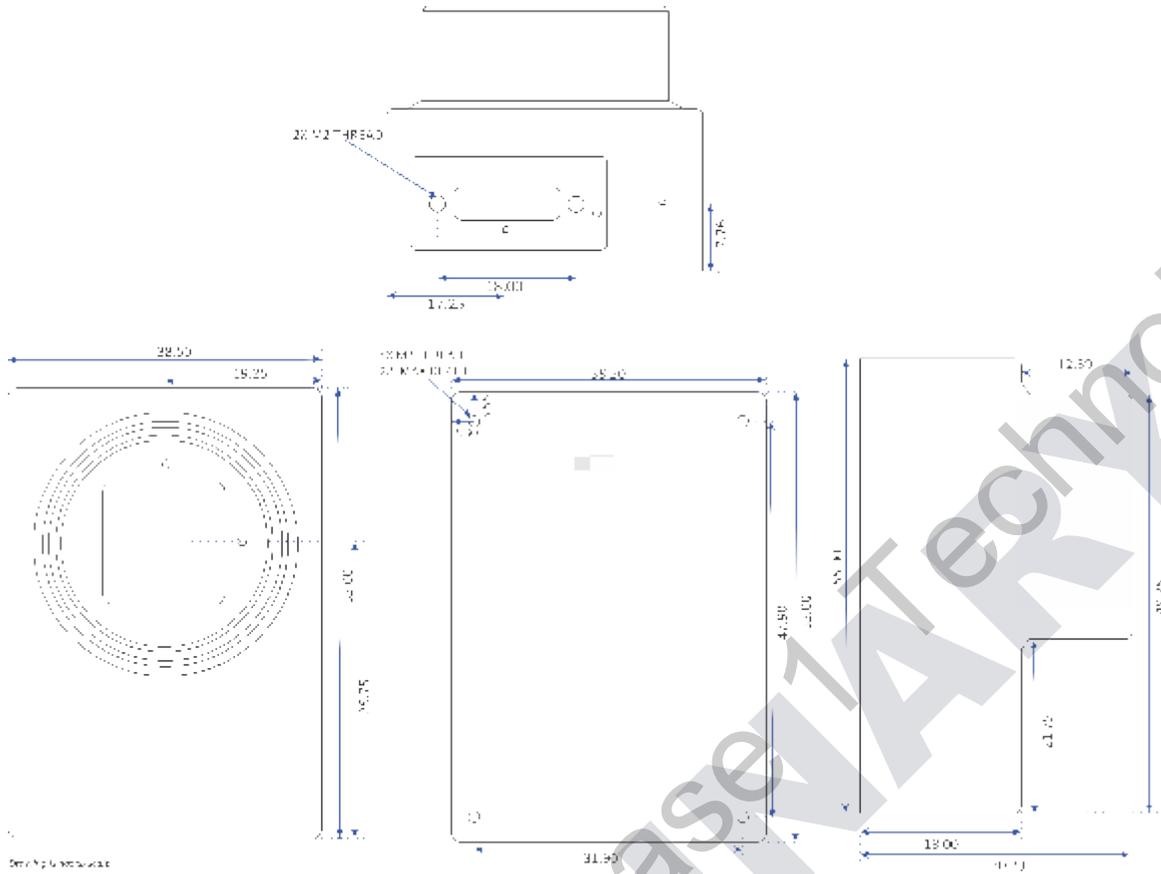
ENVIRONMENTAL & REGULATORY

Compliance	FCC Class B, CE & 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

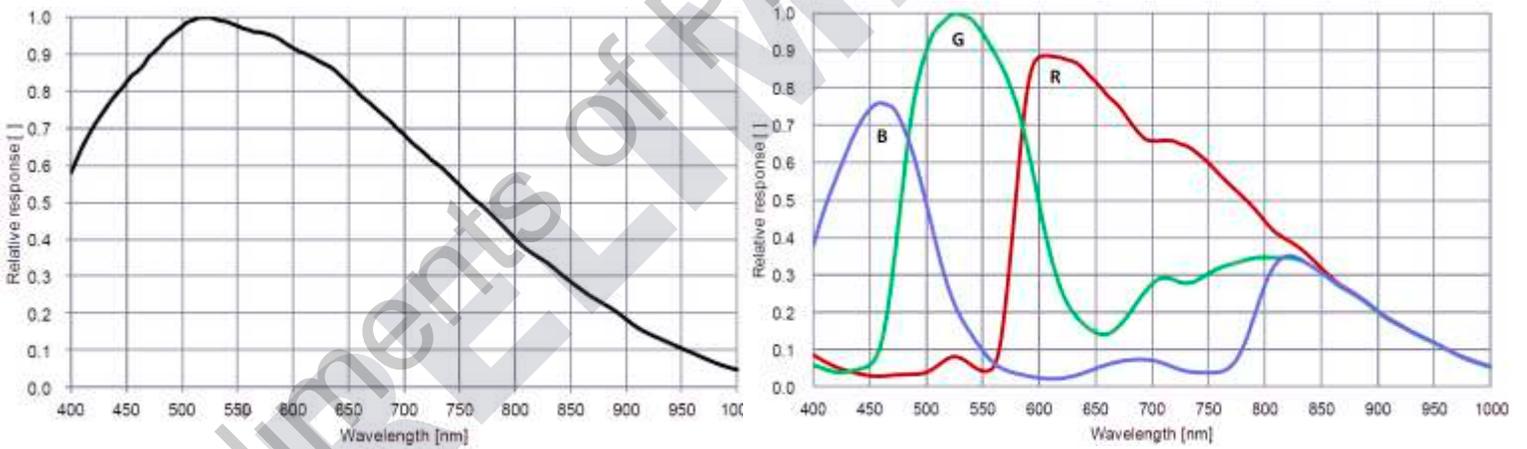
COMPUTER & OPERATING SYSTEM

Processor	Intel i5 or better
Memory	4 GB recommended
Operating System	Windows 7 / Windows 8
Hard Drive Space	75 MB

MECHANICAL DRAWINGS



RESPONSIVITY CURVE



ORDERING GUIDE

	Color	Mono
12-bit Board Level	PL-D752CU-BL	PL-D752MU-BL
12-bit Enclosed Model	PL-D752CU	PL-D752MU
12-bit GPIO Enclosed Model	PL-D752CU-T	PL-D752MU-T
10-bit Board Level	PL-D752ACU-BL	PL-D752AMU-BL
10-bit Enclosed Model	PL-D752ACU	PL-D752AMU
10-bit GPIO Enclosed Model	PL-D752ACU-T	PL-D752AMU-T