

HYPERION CAMERA LINE

PL-D729

GENERAL DESCRIPTION

The Hyperion family of USB 3.0 cameras link together the benefits of high resolution CMOS technology with the high speed data throughput of USB 3.0 technology. PL-D729 monochrome camera provides low noise images for outstanding value in a broad range of industrial applications. The camera features a 9.5 megapixel (3840 x 2484) resolution imager capable of 22 fps at full resolution.

The PL-D729 model is based on a ON Semiconductor CMOS Rolling shutter sensor with a 2/3" 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 54dB in 10-bit mode.

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
- Parts inspection
- Metrology and biometrics
- 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.



CAMERA FEATURES

- 9.5MP (3840 x 2484) Resolution
- CMOS Rolling Shutter
- 22 fps at full resolution
- USB 3.0
- Flexible Region of Interest
- Great image quality
- Compact size
- Board level and Enclosed Models
- One common API for all cameras
- Free professional technical assistance
- Tethered sensor head option 6"/12" (*Board Level version only)
- Auto & manual exposure
- Programmable LUT
- Gain
- Gamma
- Binning and Decimation
- Image Flip & Rotate
- Callbacks (Image Filters)

Digital Imaging made simple

SENSOR

Sensor	ON Semiconductor CMOS
Type	CMOS Rolling Shutter
Resolution	3840(H) x 2484(V) 9.5 MP Mono
Pixel Pitch	2.4 μ m x 2.4 μ m
Active Area	9.22 mm x 5.96 mm - 10.98 mm diagonal
Peak QE	40% at 550 nm
Max Datarate	248 MHz

PERFORMANCE SPECIFICATIONS

FPN	<1% of signal
PRNU	<2% of signal
Dynamic Range	54 dB
Bit Depth	8 or 10-bit
Responsivity at 550 nm	4 LSB10 /nI/cm2
Mono Data Formats	Mono 8 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 and CS-Mount (Board Level)

INTERFACES

Interface / Data rate	USB 3.0/ 5Gbps
Board Level GPO/Strobe	2 outputs, 3.3V

FRAME RATES

Resolution	Free Running
3840 x 2484	22
1920 X 1080	88
1280 X 1024	123
640 X 480	385

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 No Connection
- 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

POWER REQUIREMENTS

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

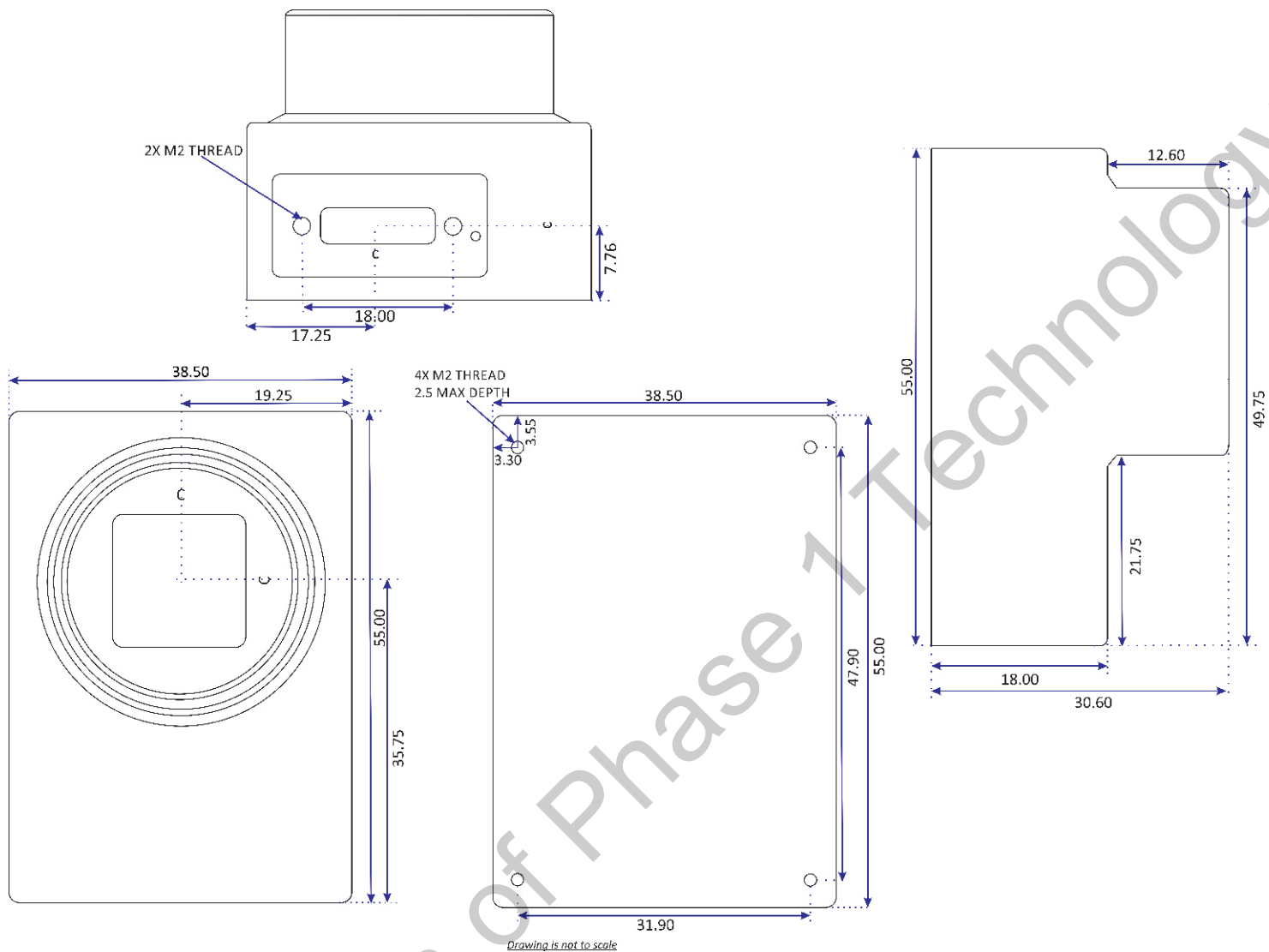
PixeLINK Capture OEM	Free Download (www.pixelink.com)
DirectShow	Bundled with PixeLINK Capture OEM
TWAIN	Bundled with PixeLINK Capture OEM
SDK	API, sample code and LabVIEW wrappers

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



ORDERING GUIDE

Board Level Model

Enclosed Model

PL-D729MU-BL

PL-D729MU