HYPERION CAMERA LINE

PL-D726

GENERAL DESCRIPTION

The Hyperion line 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-D726 monochrome cameras provide low noise images for outstanding value in a broad range of industrial applications. The camera features a 6.6 megapixel (2208 x 3000) resolution imager capable of 5.3 fps at full resolution.

The PL-D726 model is based on a ON Semiconductor CMOS rolling shutter sensor with a 1" 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 60dB 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.
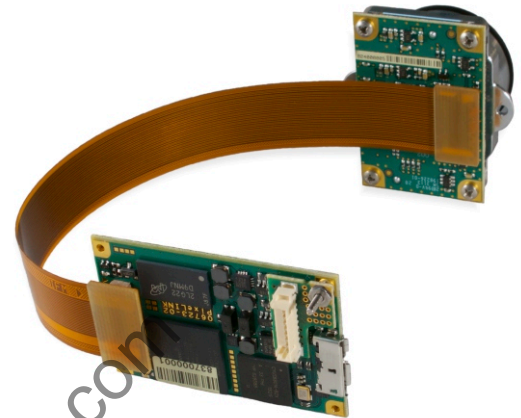
PixeLINK's industry leading SDK uses a common API for all cameras regardless of the chosen interface. Software code developed for one camera is easily transferred to other PixeLINK models without the need to recompile. Overall system costs are reduced and camera integration is simplified.

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

- High performance security & surveillance applications
- Parts inspection
- Metrology
- High resolution document archiving
- PCB inspection
- 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

- 6.6MP (2208 x 3000) Resolution
- CMOS Rolling Shutter
- 5.3 fps at full resolution
- USB 3.0
- Flexible Region of Interest
- Compact size
- One common API for all cameras
- Free professional technical assistance
- Tethered sensor head option 6"/12" (*Board Level version only)

- 1 trigger input, 2 general purpose outputs (3.3V)
- 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	2208(H) x 3000(V) 6.6 MP Mono
Pixel Pitch	3.5 µm x 3.5 µm
Active Area	7.73 mm x 10.5 mm - 13.1 mm diagonal
Peak QE	25 %
Max Datarate	40 MHz

PERFORMANCE SPECIFICATIONS

FPN	<0.20 % of signal
PRNU	<1.7 % of signal
Dynamic Range	60 dB
Bit Depth	8 or 10-bit
Sensitivity at 650 nm	411 V.m²/W.s - 4.83 V/lux.s (85 lux = 1 W/m²)
Fill Factor	35 %
Mono Data Formats	Mono 8 and Mono 16

MECHANICALS

Dimensions	32 x 48 x 11 mm (without lens mount)
Weight	46.2 g (without optics)
Mounting	Holes for 0-80 hardware
Lens Mount	C-Mount

INTERFACES

Interface / Date rate	USB 3.0/ Micro-B / 5Gbps
Board Level Trigger Connector	8-pinMolex 1.25mm pitch
Trigger Modes	Software and hardware
Trigger Input	1 input, 3.3V (with internal pullup resistor)
Board Level GPO/Strobe	2 outputs, 3.3V

FRAME RATES

Resolution	Free Running
2208 x 3000	5.3
1980 X 1020	17
1280 X 1024	25
640 X 480	88

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 logic
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)

SOFTWARE

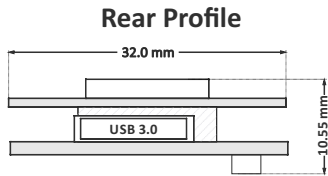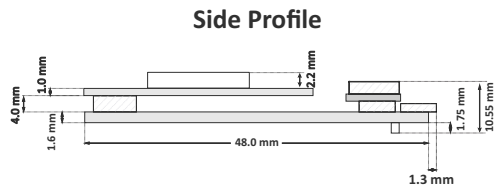|	
PixeLINK Capture OEM	Free Download (www.pixelink.com)
DirectShow	Bundled with PixeLINK Capture OEM
TWAIN	Bundled with PixeLINK Capture OEM
SDK	API, sample code and LabVIEW wrappers

ENVIRONMENTAL & REGULATORY

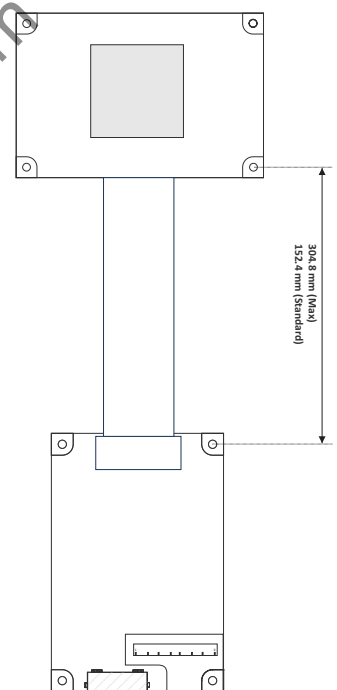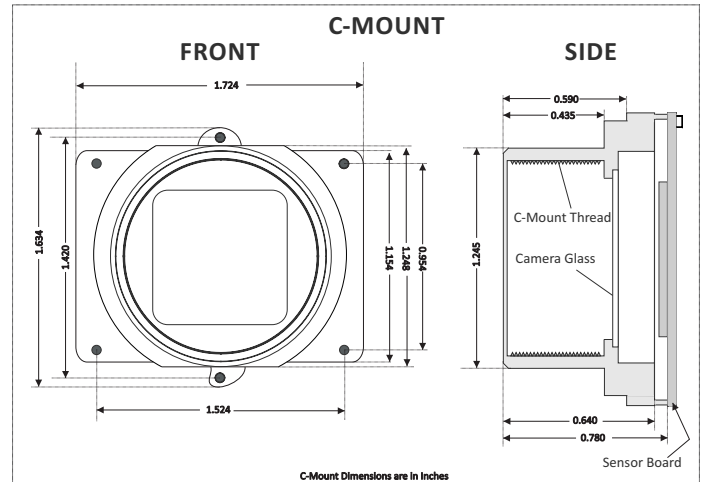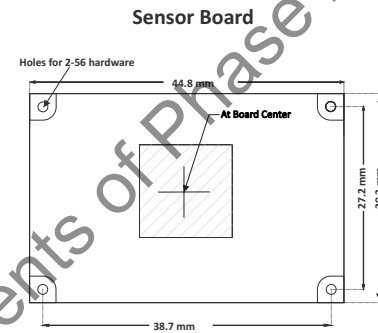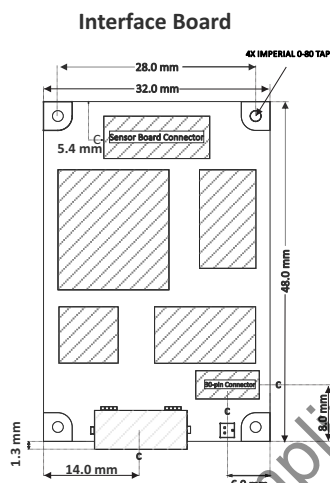|	
Compliance	RoHS
Shock & Vibration	300 G & 20 G (10Hz - 2KHz)
Operating Temp.	0°C to 50°C (non-condensing)
Storage Temp.	-45°C to 85°C

COMPUTER & OPERATING SYSTEM

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

PixeLINK®

Side Profile

2.2 mm
1.0 mm
4.0 mm
1.6 mm
1.75 mm
10.55 mm
48.0 mm
1.3 mm

Rear Profile

32.0 mm
USB 3.0
10.55 mm

Trigger/GPO Connector Adapter

17.0 mm
6.5 mm
12.0 mm
Connects to the 30-pin connector on the IFM
9.0 mm

Interface Board

28.0 mm
4X IMPERIAL 0-80 TAP
32.0 mm
Sensor Board Connector
5.4 mm
48.0 mm
30-pin Connector
1.3 mm
14.0 mm
6.0 mm
8.0 mm

C-MOUNT

FRONT

1.724
1.634
1.420
1.248
1.154
0.954
1.524

SIDE

0.590
0.435
1.245
C-Mount Thread
Camera Glass
0.640
0.780
Sensor Board

C-Mount Dimensions are in Inches

Sensor Board

Holes for 2-56 hardware
44.8 mm
At Board Center
27.2 mm
30.3 mm
38.7 mm

304.8 mm (Max)
152.4 mm (Standard)

Drawing is not to scale

Compliments of Phase1tech.com

RESPONSIVITY CURVE

QE 30%
QE 20%
QE 10%
Spectral response [A/W]
Wavelength [nm]

ORDERING GUIDE

Board Level Model	Enclosed Model
PL-D726CM-BL	PL-D726MU

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