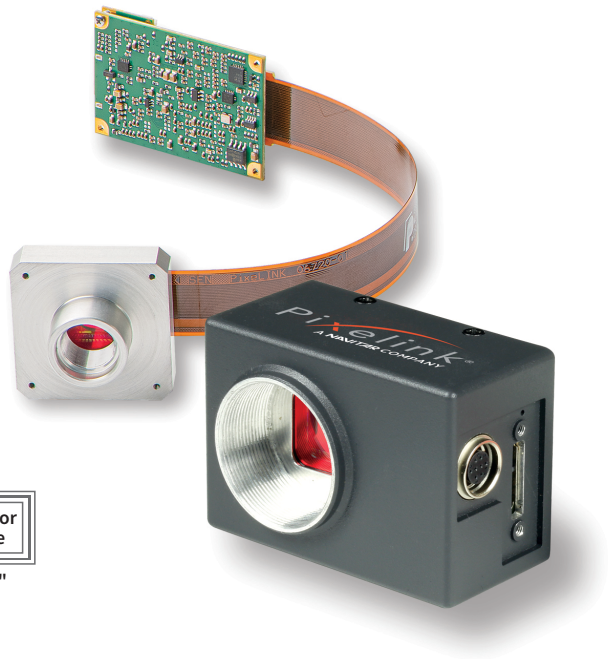
Pixelink®

A NAVITAR COMPANY

PL-D729

CMOS | ON SEMI MANO 9600 | ROLLING SHUTTER

The PL-D family of cameras links together the benefits of high frame rate CMOS technology with the high speed data throughput of USB 3.0 technology. The PL-D729 camera provides low noise images for outstanding value for a broad range of industrial applications.



KEY FEATURES

- 9.5MP CMOS
- 22 FRAMES Per Sec.
- 2.4µm
- 10.98mm
- Sensor Size 2/3"
- 10 BIT
- MONO
- USB 3
- USB3 VISION

TYPICAL APPLICATIONS

Parts inspection
Strength Testing
Metrology
Biometrics
Medical Imaging
PCB & Flat Panel Display Inpsection

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TECHNICAL SPECIFICATIONS

SENSOR

Sensor	ON Semi MANO 9600
Type	CMOS Rolling Shutter
Resolution	9.5 MP (3840 x 2484)
Pixel Pitch	2.4 µm x 2.4 µm
Active Area	10.98 mm diagonal
Peak QE	25% @ 650nm

PERFORMANCE SPECIFICATIONS

FPN	<1% of signal
PRNU	<2% of signal
Dynamic Range	54 dB
Bit Depth	8 or 10-bit
Color Data Formats	Not Applicable
Mono Data Formats	Mono 8, Mono 12 Packed & Mono 16

FRAME RATES

Resolution	Free Running
3840 x 2484	22 fps
1280 x 1024	124.1 fps
640 x 480	389.7 fps

Frame rates will vary based on host system and configuration

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	Not Supported
Board Level Trigger Input	Not Supported
Enclosed Trigger Input	Not Supported
Board Level GPO/Strobe	2 outputs, 3.3V
Enclosed GPO/Strobe	2 outputs, 3.3V and 1 optically isolated max 40V DC, max 15mA
GPI	1 input, 3.3V (with internal pullup resistor)

MECHANICALS

Dimensions (mm)	55 x 38.5 x 30.60
Weight (g)	35.8 (Board level without optics)
Mounting	C-Mount and S-Mount

POWER REQUIREMENTS

Voltage Required	5V DC (from USB connector)

PIN NAME & FUNCTION

1	3.3V power output
2	GPI 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 OEMs)
7	Data, 3.3V (I2C access for OEMs)
8	No connection

Board connector: Molex (8-pin, 1.25mm pitch, vertical); Cable receptacle: Molex 51021-0800; Cable crimp terminals: Molex 50079-8100

ENCLOSED GPIO INTERFACE PIN OUTPUT DESCRIPTION

1	VBUS (Power output from USB3 cable)
2	GPI + (optically isolated)
3	GPI - (optically isolated)
4	GPO1 + (optically isolated)
5	GPO1 - (optically isolated)
6	GPO1, 3.3V HCMOS output (I2C - SCL for autofocus)
7	GPO2, 3.3V HCMOS output (I2C - SDA for autofocus)
8	Ground (logic and chassis ground)

ENVIRONMENTAL & REGULATORY

Compliance	FCC, CE & RoHS
Shock & Vibration	300 G & 20 G (10Hz - 2KHz)
Operating Temperature	0°C to 50°C
Storage Temperature	-45°C to 85°C

SOFTWARE

Pixelink Capture	Control & operate multi-camera
Pixelink SDK	Software Development Kit
Pixelink µScope	Acquisition, analysis & reporting
3rd. Party U3V Vision Applications	

COMPUTER & OPERATING SYSTEM

	Windows	Linux x86	Linux ArmV7	Linux ArmV8
Processor	Intel i5 or better	Intel i5 or better	Arm7 (32 bit)	Arm8 (64 bit)
Memory	4GB recommended	4GB recommended	2GB	2GB
Hard Drive Space	150 MB	150 MB	50 MB	50 MB
Operating System	Windows 7/8/10	Ubuntu 14.04/16.04 Desktop	Ubuntu 14.04/16.04	Ubuntu 14.04/16.04

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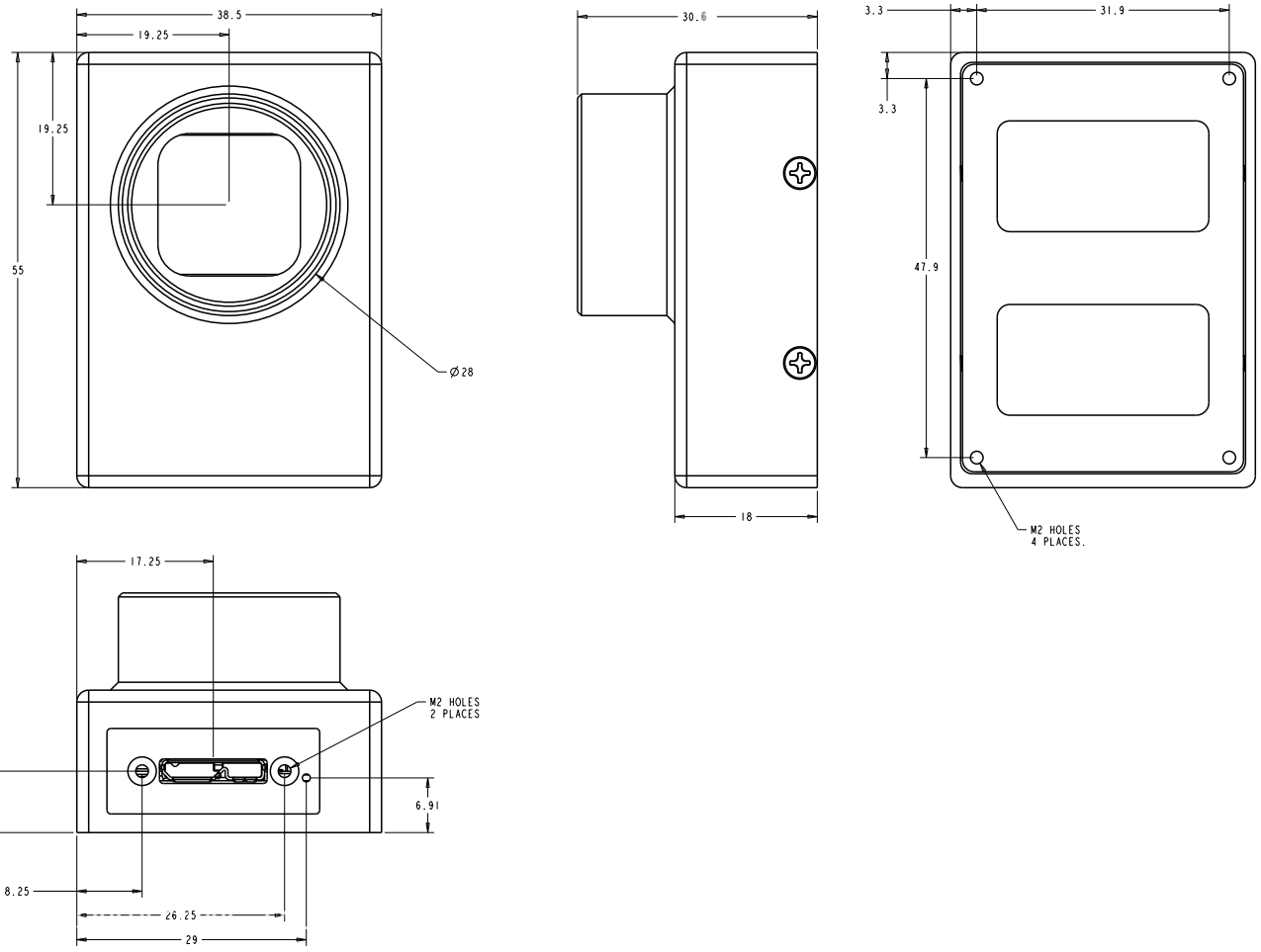
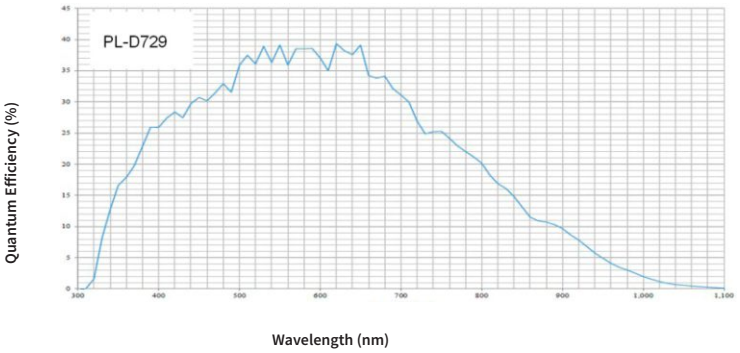
MECHANICAL DRAWINGS & RESPONSIVITY CURVES

MECHANICAL DRAWINGS



RESPONSIVITY CURVE - MONO



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PIXELINK'S INDUSTRY LEADING SOFTWARE

PIXELINK CAPTURE

Pixelink Capture is powerful multi-camera software application designed to configure "n" number of cameras and stream "n" number of cameras simultaneously in real-time high-quality video viewed in a multi-window environment. It offers options for complex image enhancements such as exposure control and filtering, in addition to multi-camera application testing and configuration.

Pixelink Capture features allows you to measure supporting point, line, circle, rectangle, polyline and polygon measurements while determining pixel location. The user can review and adjust data before exporting the findings to an Excel spreadsheet for further analysis.

Pixelink Capture also has integrated lens control (zoom & focus) for Navitar motorized lenses and accurate autofocus options for Navitar motorized fine focus mechanisms.

PIXELINK SDK

Providing full control of all camera functions, the Pixelink Software Development Kit (SDK) is the software package of choice for developers and system integrators who are integrating Pixelink cameras into their applications. The Pixelink SDK provides access to the full Pixelink Application Programming Interface (API) and provides sample applications, wrappers for many 3rd party controls, such as LabVIEW, along with full documentation.

The Pixelink SDK is compatible with Microsoft Windows and popular Linux platforms. When using the Pixelink SDK, developers can integrate Pixelink cameras into their applications with ease.

AVAILABLE CONFIGURATIONS

PL-D729MU
PL-D729MU-BL
PL-D729MU-AF16
PL-D729MU-AF25
PL-D729MU-BL-16
PL-D729MU-BL-25
PL-D729MU-S-BL
PL-D729MU-S-BL-AF2.6
PL-D729MU-S-BL-AF7.5
PL-D729MU-S-BL-AF9.6

Color Space
C = Color
M = Mono
NIR = Near Infrared

Interface
F = Firewire
G = GigE
U = USB

Housing
CS = CS Mount
S-BL = S Mount Board Level
BL = Board Level
T = Trigger

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