

Pixelink®

A NANITAR COMPANY

PL-X9520

CMOS | 10GigE | SONY IMX531 | GLOBAL SHUTTER

The PL-X family of high performance machine vision cameras, with 10 Gigabit ethernet, offers speed, accuracy and reliability in a quick and easy set-up. The 10GBASE-T interface and packet resend capability provide high quality, reliable image transfer at cable lengths of up to 100m on CAT6A.

Additional features include Power over Ethernet (PoE), Trigger over Ethernet (ToE), and IEEE1588 clock synchronization (PTP).

The Pixelink PL-X9520 camera features the new Sony IMX531 20 MP Pregius S sensor which offers higher resolution and increased throughput in a compact package.



KEY FEATURES

20 MP
CMOS



52
FRAMES
Per Sec



2.74 µm



17.5 mm



1.1"



12-BIT



COLOR



MONO

10GBASE-T



TYPICAL APPLICATIONS

Precision Microscopy
Defect and Scratch Inspection
High Speed Inspection

Factory Automation
Image Recognition and Identification
Speed, Traffic and Transportation

SENSOR	
Sensor	Sony IMX531
Type	CMOS Global Shutter
Resolution	20 MP (4512 x 4512)
Pixel Pitch	2.74 μm x 2.74 μm
Active Area	17.5 mm diagonal

PERFORMANCE SPECIFICATIONS	
FPN	<0.03% of signal
PRNU	<0.7% of signal
Dynamic Range	72 dB
Bit Depth	8 or 12 bit
Color Data Formats	Bayer 8, Bayer 12 Packed, Bayer 16, YUV422, RGB 24, BGR 24
Mono Data Formats	Mono 8, Mono 12 Packed & Mono 16

FRAME RATES	
Effective Resolution	Free Running
4512 x 4512	52 fps
Frame rate will vary based on host system and configuration. * Above calculations based on fixed frame rate mode.	

INTERFACES	
Board Level Trigger Connector	8-pin Molex 1.25 mm pitch
Enclosed Trigger Connector	Hirose M12 (12-pin)
Trigger	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	1 optically isolated, 5-12V DC at 4-11 mA, 2 outputs, 3.3V
Board Level GPI Input	1 input, 3.3V
Enclosed GPI Input	1 optically isolated, 5-12V DC at 4-11 mA
10GBase-T Connector	M12 X-coded (8-pin)

MECHANICALS	
Dimensions (mm)	125 x 57 x 57
Weight (g)	560
Mounting	C-Mount

POWER REQUIREMENTS	
Voltage Required	5V (from USB Type-C connector), 48V (802.3bt PoE)

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 OEMs)
7	Data, 3.3V (I2C access for OEMs)
8	GPI, 3.3V HCMOS input

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

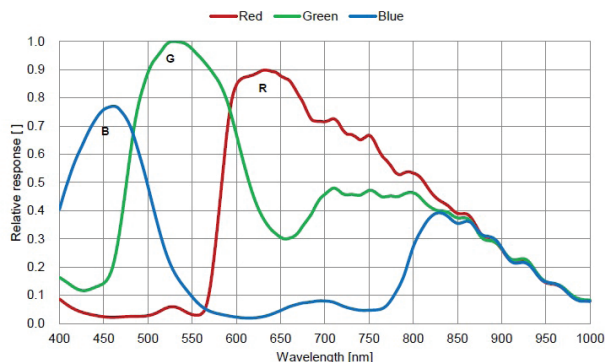
ENCLOSED GPIO INTERFACE PIN NAME & DESCRIPTION	
1	5.0V output
2	TRIGGER + (optically isolated)
3	TRIGGER - (optically isolated)
4	Data, 3.3V (I2C access for OEMs)
5	GPO1 + (optically isolated)
6	GPO1 - (optically isolated)
7	GPO1, 3.3V HCMOS output
8	GPO2, 3.3V HCMOS output
9	Ground
10	GPI+ (optically isolated)
11	GPI- (optically isolated)
12	Clock, 3.3V (I2C access for OEMs)

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

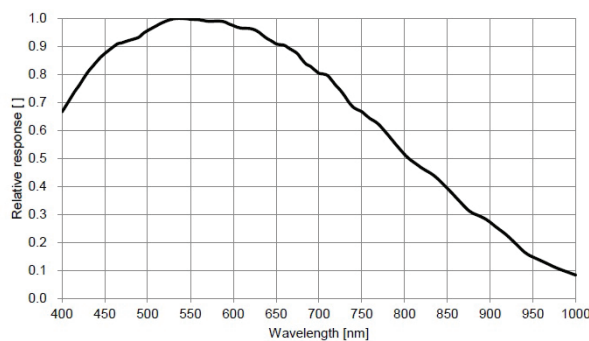
SOFTWARE	
Pixelink Capture	Control & operate multi-camera
Pixelink SDK	Software Development Kit

COMPUTER & OPERATING SYSTEM	
Processor	Intel Core i5 or better ARMv7 (32-bit) or ARMv8 (64-bit) - ARMv8 recommended
Memory	8GB RAM or more - 16 GB multi-channel DDR4 recommended
Hard Drive Space	200MB - SSD recommended
BUS	PCIe 3.0 (or better) with a slot supporting x8 transfers
Operating System	Windows 7/8/10 - Windows 10 recommended Ubuntu 16.04/18.04/20.04

RESPONSIVITY CURVE- COLOR



RESPONSIVITY CURVE- MONO



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 allow 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-X9520CG-BL PL-X9520MG-BL
- PL-X9520CG-T PL-X9520MG-T

COLOR SPACE

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

INTERFACE

- G= 10 GigE

HOUSING

- BL = Board Level
- T = Trigger