

# Pixelink®

A NANITAR COMPANY

## PL-X9512

### CMOS | SONY IMX253 | 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. Its 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) and IEEE1588 clock synchronization.



### KEY FEATURES

12.3MP  
CMOS

64.6  
FRAMES  
Per Sec.

3.45µm

17.6mm

Sensor  
Size  
1.1"

12 BIT

COLOR

MONO

10GBASE-T

**GiGE**  
VISION

### TYPICAL APPLICATIONS

Automated Inspection  
Sports Analysis  
VR and AR Applications  
Multi-Camera Synchronization

Broadcasting  
3D Mapping  
Research

## TECHNICAL SPECIFICATIONS

### SENSOR

|             |                       |
|-------------|-----------------------|
| Sensor      | Sony IMX253           |
| Type        | CMOS Global Shutter   |
| Resolution  | 12.3 MP (4096 x 3000) |
| Pixel Pitch | 3.45 μm x 3.45 μm     |
| Active Area | 17.6 mm diagonal      |

### PERFORMANCE SPECIFICATIONS

|                    |  |
|--------------------|--|
| FPN                | < 0.03% of signal  |
| PRNU               | < 0.4% of signal   |
| Dynamic Range      | 70 dB  |
| Bit Depth          | 8 or 12-bit  |
| Color Data Formats | Bayer 8, Bayer 12 Packed, Bayer 16 & YUV422 RGB 8, BGR 8 |
| Mono Data Formats  | Mono 8, Mono 12 Packed & Mono 16                         |

### FRAME RATES

|             |              |
|-------------|--------------|
| Resolution  | Free Running |
| 4096 x 3000 | 64.6 fps     |

Frame rates will vary based on host system and configuration  
\*Above calculations based on fixed frame rate mode

### INTERFACES

|                               |  |
|-------------------------------|--|
| Board Level Trigger Connector | 8-pin Molex 1.25mm 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) | 113 x 57 x 57 |
| Weight (g)      | TBD           |
| Mounting        | C-Mount       |

### POWER REQUIREMENT

|                  |   |
|------------------|---|
| Voltage Required | 5V (from USB Type-C connector)<br>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 & 20 G (10Hz - 2kHz) |
| Operating Temperature | 0°C to 50°C                |
| Storage Temperature   | -45°C to 85°C              |

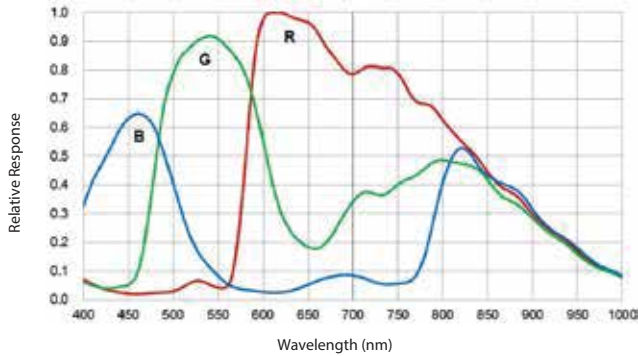
### SOFTWARE

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

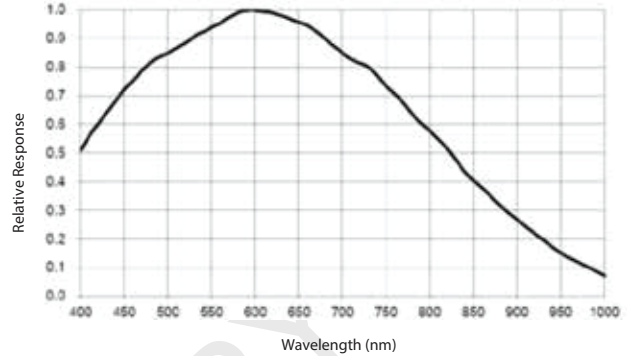
### COMPUTER & OPERATING SYSTEM

|                  |   |
|------------------|---|
| Processor        | Intel Core i5 or better (Core i7 recommended)<br>ARMv7 (32-bit) or ARMv8 (64-bit) |
| Memory           | 8GB RAM or more   |
| Hard Drive       | 200MB   |
| Operating System | Windows 7/8/10<br>Ubuntu 16.04/18.04  |

**RESPONSIVITY CURVE - COLOR**



**RESPONSIVITY CURVE - MONO**



**PIXELINK'S INDUSTRY LEADING SOFTWARE**

**PIXELINK CAPTURE**

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

Pixelink Capture also provides features to measure supporting; point, line, circle, rectangle, polyline and polygon measurements while determining pixel location. After creating spatial calibration, the user can then review and adjust 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 Developers 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 custom applications with ease.

Visit [pixelink.com](http://pixelink.com) for more detailed information.

**AVAILABLE CONFIGURATIONS**

PL-X9512CG-BL  
PL-X9512CG-T

PL-X9512MG-BL  
PL-X9512MG-T

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

**Interface**  
G = 10 GigE

**Housing**  
BL = Board Level  
T = Trigger