

CAMERA SOLUTIONS

MACHINE VISION • MICROSCOPY • CUSTOM DESIGN

PL-X Series

High Performance 10 GigE Machine Vision Cameras

Our PL-X Line of cameras are ideal for those applications that require high resolution images with fast data transfer rates. These 10GigE cameras offer significant flexibility and will maximize your throughput.



10GiGE
VISION

High Speed 10 GiGE Interface

10 gigabits per second transfer rates support 4K60 (12-bit) and full duplex point-to-point links.

10 Times Faster Than GigE
2 Times Faster Than USB3

Preferred by Integrators

Clock synchronization across multiple devices and long cable lengths up to 100 meters.

Power Over Ethernet (PoE)
Trigger Over Ethernet (ToE)

Reliable Performance

Pixelink offers unmatched support for the selection and use of our machine vision cameras. Our imaging software will provide the functionality and control you require.

Software Development Kit - SDK
Pixelink Capture
Pixelink Autofocus

Model	Resolution	Sensor Diagonal	Pixel Pitch	Sensor	Sensor Size	Frame Rate	Color Space	Bit Depth	Mount Option	Shutter Type
1.2" SENSORS										
PL-X9524 (HDR)	24 MP (5328 x 4608)	19.3 mm	2.74 µm	Sony IMX530	1.2"	44 fps	C - M	12	TFL - C	Global
1.1" SENSORS										
PL-X9520 (HDR)	20 MP (4512 x 4512)	17.5 mm	2.74 µm	Sony IMX531	1.1"	52 fps	C - M	12	C	Global
PL-X9512	12 MP (4096 x 3000)	17.6 mm	3.45 µm	Sony IMX253	1.1"	65 fps	C - M	12	C	Global
PL-X957 (HDR)	7 MP (3216 x 2200)	17.6 mm	4.5 µm	Sony IMX420	1.1"	154 fps	C - M	12	C	Global

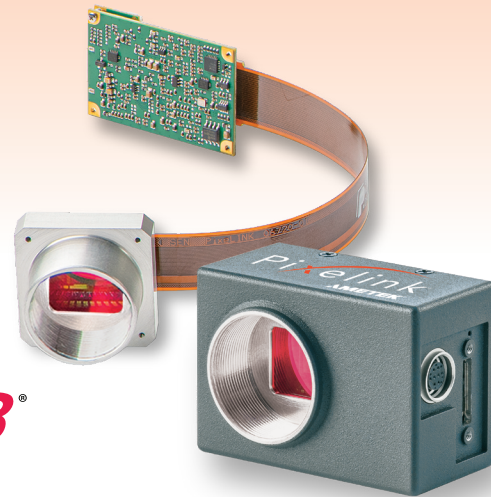
PL-D Series

High Performance USB 3.0 Machine Vision Cameras

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.

- Resolutions up to 24 Megapixels
- Wide Range of CMOS Image Sensors
- Fast Frame Rates
- Low Noise Images

USB[®]
VISION



Model	Resolution	Sensor Diagonal	Pixel Pitch	Sensor	Sensor Size	Frame Rate	Color Space	Bit Depth	Mount Option	Shutter Type
1.2" SENSORS										
PL-D7924	24 MP (5328 x 4608)	19.3 mm	2.74 µm	Sony IMX540	1.2"	16 fps	C - M	12	C - CS	Global
1.1" SENSORS										
PL-D7920	20 MP (4512 x 4512)	17.5 mm	2.74 µm	Sony IMX541	1.1"	17 fps	C - M	12	C - CS	Global
PL-D7512	12 MP (4096 x 3000)	17.6 mm	3.45 µm	Sony IMX253	1.1"	33 fps	C - M	12	C - CS	Global
PL-D7912	12 MP (4096 x 3000)	17.6 mm	3.45 µm	Sony IMX304	1.1"	23 fps	C - M	12	C - CS	Global
PL-D757 (HDR)	7 MP (3208 x 2200)	17.6 mm	4.5 µm	Sony IMX420	1.1"	57 fps	C - M	12	C - CS	Global
PL-D797	7 MP (3208 x 2200)	17.6 mm	4.5 µm	Sony IMX428	1.1"	51 fps	C - M	12	C - CS	Global
1" SENSORS										
PL-D7620	20 MP (5472 x 3648)	15.9 mm	2.4 µm	Sony IMX183	1"	20 fps	C - M	12	C - CS	Rolling
PL-D759	9 MP (4096 x 2160)	16.1 mm	3.45 µm	Sony IMX255	1"	45 fps	C - M	12	C - CS	Global
PL-D799	9 MP (4096 x 2160)	16.1 mm	3.45 µm	Sony IMX267	1"	32 fps	C - M	12	C - CS	Global
PL-D725	5 MP (2592 x 2048)	15.8 mm	4.8 µm	onsemi VIta5000	1"	76 fps	C - M	10	C - S	Global
PL-D734	4 MP (2048 x 2048)	15.9 mm	5.5 µm	CMOSIS CMV4000	1"	90 fps	C-M-NIR	10	C - CS	Global
1 / 1.2" SENSORS										
PL-D752	2 MP (1920 x 1200)	13.4 mm	5.86 µm	Sony IMX174	1/1.2"	167 fps	C - M	12	C - S	Global
2 / 3" SENSORS AND SMALLER										
PL-D7718	18 MP (4912 x 3680)	7.67 mm	1.25 µm	onsemi AR1820	1/2.3"	14 fps	C	12	C - S - CS	Rolling
PL-D755MU-POL (Polarized)	5 MP (2448 x 2048)	11.1 mm	3.45 µm	Sony IMX250MZR	2/3"	36 fps	M	12	C	Global
PL-D755	5 MP (2448 x 2048)	11.1 mm	3.45 µm	Sony IMX250	2/3"	80 fps	C - M	12	C - S - CS	Global
PL-D795	5 MP (2448 x 2048)	11.1 mm	3.45 µm	Sony IMX264	2/3"	36 fps	C - M	12	C - S - CS	Global
PL-D753 (HDR)	3 MP (1936 x 1464)	11.0 mm	4.5 µm	Sony IMX421	2/3"	141 fps	C - M	12	C - S - CS	Global
PL-D782	2.4 MP (2048 x 1200)	9.5 mm	4.0 µm	Gpixel GMAX4002	1/1.7"	159 fps	C - M	12	C - S	Global
PL-D732	2.0 MP (2048 x 1088)	12.7 mm	5.5 µm	CMOSIS CMV2000	2/3"	170 fps	C-M-NIR	10	C - S	Global

Autofocus Systems

Fast, Durable Autofocus Cameras

Pixelink's Autofocus Systems bring together the speed and durability of Pixelink's machine vision cameras and state-of-the-art autofocus liquid lenses.

- One-Push Autofocus
- Fully Integrated Liquid Lens
- Near Infinite Focal Range
- On-Camera Focus Processing
- Seamless Integration with Pixelink SDK



US3
VISION

Extensive Optical Variation

Displacing a liquid interface allows for larger phase shift variations.

Ruggedized Design

Our lenses have been tested for over 100 million cycles showing zero performance degradation.

Extreme Speed

Refocus in less than 20 milliseconds.

Low Power Consumption

Our liquid lens consumes 15mW, a tenth of what other systems require.

Model	Resolution	Sensor Diagonal	Pixel Pitch	Sensor	Sensor Size	Frame Rate	Color Space	Bit Depth	Mount Option	Shutter Type
1.2" SENSORS										
PL-D7924AF	24 MP (5328 x 4608)	19.3 mm	2.74 μ m	Sony IMX540	1.2"	16 fps	C - M	12	C - CS	Global
1.1" SENSORS										
PL-D7920AF	20 MP (4512 x 4512)	17.5 mm	2.74 μ m	Sony IMX541	1.1"	17 fps	C - M	12	C - CS	Global
PL-D757AF (HDR)	7 MP (3208 x 2200)	17.6 mm	4.5 μ m	Sony IMX420	1.1"	57 fps	C - M	12	C - CS	Global
1" SENSORS										
PL-D7620AF	20 MP (5472 x 3648)	15.9 mm	2.4 μ m	Sony IMX183	1"	20 fps	C - M	12	C - CS	Rolling
2 / 3" SENSORS AND SMALLER										
PL-D7718AF	18 MP (4912 x 3680)	7.67 mm	1.25 μ m	onsemi AR1820	1/2.3"	14 fps	C	12	C - S	Rolling
PL-D755AF	5 MP (2448 x 2048)	11.1 mm	3.45 μ m	Sony IMX250	2/3"	80 fps	C - M	12	C - S	Global
PL-D753AF (HDR)	3 MP (1936 x 1464)	11.0 mm	4.5 μ m	Sony IMX421	2/3"	141 fps	C - M	12	C - S	Global
PL-D782AF	2.4 MP (2028 x 1200)	9.5 mm	4.0 μ m	Gpixel GMAX4002	1/1.7"	159 fps	C - M	12	C - S	Global
PL-D732AF	2 MP (2048 x 1088)	12.7 mm	5.5 μ m	CMOSIS CMV2000	2/3"	170 fps	C-M-NIR	10	C - S	Global

Liquid Lens Specifications

	Varioptic C-Mount			Edmund Optics Liquid Lens Cx Series				Varioptic S-Mount			Edmund Optics Liquid Lens S-Mount			
EFL	16 mm	16 mm	25 mm	12 mm	16 mm	25 mm	35 mm	2.6 mm	7.5 mm	9.6 mm	6 mm	8 mm	12 mm	16 mm
Format	1.1"	1/3" - 2/3"	1/3" - 2/3"	1/2"	2/3"	2/3"	2/3"	1/2.5"	1/4" - 1/2.5"	1/4" - 1/1.8"	1/2"	1/2"	1/2"	1/1.8"
F#	f/3.8	f/2.8	f/4-22	f/6	f/5	f/5	f/7	f/2.5	f/2.9	f/3.7	f/2.4	f/2.4	f/2.4	f/2.4
Focus Range	150 mm	110 mm	120 mm	100 mm	100 mm	150 mm	225 mm	4 mm	70 mm	70 mm	100 mm	150 mm	150 mm	220 mm
	to Infinity			to Infinity				to Infinity			to Infinity			

M Series

High Performance Microscopy Cameras

Designed to offer consistent, high-quality image acquisition and performance, and backed by industry leading customer support, Pixelink M-Series cameras combine large field of view, high speed live previews, simple sample manipulation and superb color reproduction.

- High-Resolution Imaging for Laboratory Use
- Ideal for Bright Field and Dark Field Microscopy
- High Quality Image Acquisition
- Excellent Color Reproduction
- 2 Megapixel to 20 Megapixel Resolutions
- μ Scope Microscopy Software Suite Available

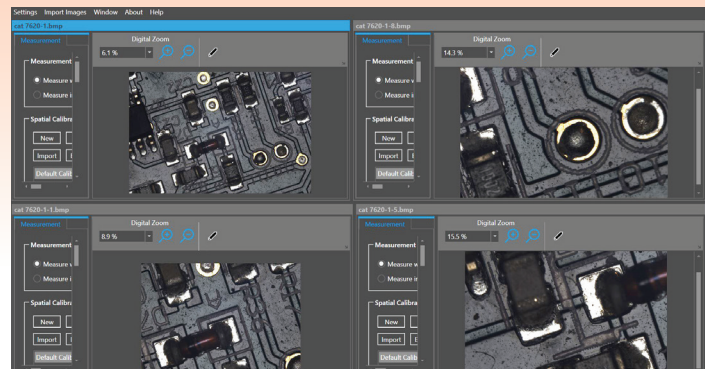


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Model	Resolution	Sensor Diagonal	Pixel Pitch	Sensor	Sensor Size	Frame Rate	Color Space	Bit Depth	Mount Option	Shutter Type
1.1" SENSORS										
M12-CYL	12 MP (4096 x 3000)	17.6 mm	3.45 μ m	Sony IMX253	1.1"	33 fps	C - M	12	C	Global
M12B-CYL	12 MP (4096 x 3000)	17.6 mm	3.45 μ m	Sony IMX304	1.1"	23 fps	C - M	12	C	Global
M7-CYL (HDR)	7 MP (3208 x 2200)	17.6 mm	4.5 μ m	Sony IMX420	1.1"	57 fps	C - M	12	C	Global
1" SENSORS										
M20-CYL	20 MP (5472 x 3648)	15.9 mm	2.4 μ m	Sony IMX183	1"	20 fps	C - M	12	C	Rolling
M9-CYL	9 MP (4096 x 2160)	16.1 mm	3.45 μ m	Sony IMX255	1"	45 fps	C - M	12	C	Global
M4-CYL	4 MP (2048 x 2048)	15.9 mm	5.5 μ m	CMOSIS CMV4000	1"	90 fps	C - M	10	C	Global
2 / 3" SENSORS AND SMALLER										
M18-CYL	18 MP (4912 x 3680)	7.67 mm	1.25 μ m	onsemi AR1820	1/2.3"	14 fps	C	12	C	Rolling
M5D-CYL	5 MP (2448 x 2048)	11.1 mm	3.45 μ m	Sony IMX250	2/3"	80 fps	C - M	12	C	Global
M3-CYL (HDR)	3 MP (1936 x 1464)	11.0 mm	4.5 μ m	Sony IMX421	2/3"	141 fps	C - M	12	C	Global
M2-CYL	2 MP (2048 x 1088)	12.7 mm	5.5 μ m	CMOSIS CMV2000	2/3"	170 fps	C - M	10	C	Global

Pixelink Capture

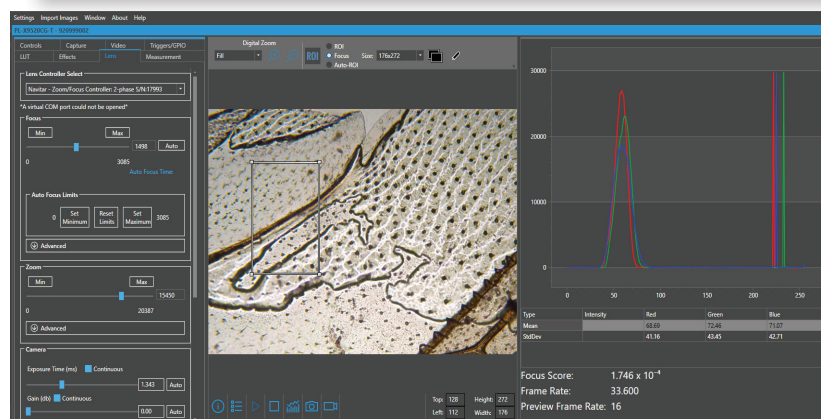
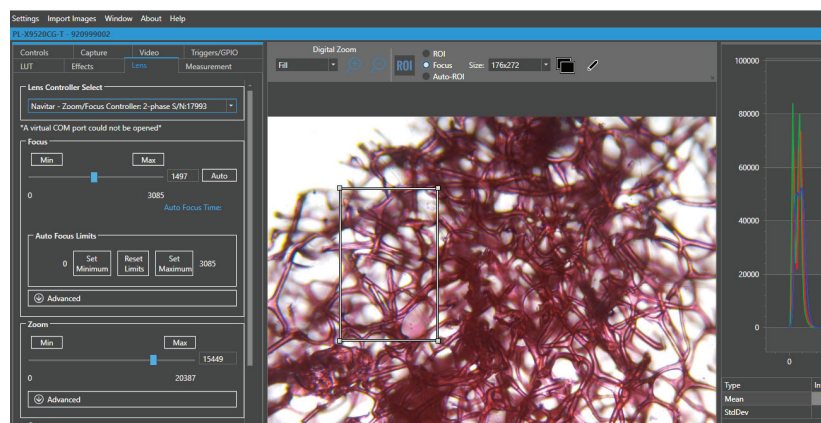
- Captures Images and Video
- Real-Time Video Streaming
- Full Control of All Camera Features
- Control of Trigger and GPIO Functions
- Resizable Region of Interest (ROI)
- Customizable Multi-Camera View
- Integrated Zoom and Focus Control
- Measurement Export In Excel Format
- Autofocus for Navitar, Varioptic and Edmund Lenses
- Accurate Measurement of Dimensions and Pixel Location



Four Camera Layout

Pixelink Capture is a real-time, interactive, image preview and acquisition program included with all Pixelink cameras. Users have the ability to adjust all camera features, including region of interest, frame rate, exposure, gain, and color, through an easy to use GUI, prior to image or video clip capture. The multi-window environment includes a preview window, a configuration window, and a real-time histogram, that can be displayed for up to four cameras at a time. The program also includes built-in measurement tools and autofocus applications.

Pixelink Capture offers tremendous flexibility and power, providing the ability to configure and run a single camera, or multi-camera, vision application seamlessly.



Software Development Kit (SDK)

- Powerful, Easy to Use Interface
- Seamless Integration
- Free Technical Support
- U3V and GEV Compliant

Providing full control of all camera functions, the Pixelink SDK is the software package of choice for developers and system integrators. The SDK facilitates the faster creation of customer applications. It presents complex standards based features as easy to understand concepts, and includes a rich set of sample applications for reference/use.

Compliance Standards

U3V compliant on all USB 3.0 cameras. GEV compliant on all GigE and 10 GigE cameras.

Common API

Same API used for all camera types & operating systems (application code is re-usable)

Compatible Languages:

C, C++, Python and Microsoft.NET

Available Drivers:

USB 3.0, USB 2.0, GigE, Direct Show and TWAIN

Third Party Software Compatibility to Include:

LabVIEW, MATLAB, GenICam GenTL, Halcon, Norpix, Micro-Manager and Matrox

Camera Lens Solutions

High-Resolution, Low-Noise, Digital Imaging Solutions



We've simplified the lens and camera selection process by pairing proven high-speed USB 3.0 Pixelink industrial camera models with Navitar® high magnification imaging lens systems to meet the needs of your most demanding machine vision application.

Navitar's Resolv4K, 12X Zoom and Zoom 6000 product lines seamlessly integrate with Pixelink CMOS cameras. Advanced lens system functionality, such as motorized zoom and focus control, and autofocus fine-focus adjust, is achieved with Pixelink Capture software (included with all Pixelink camera purchases).

Contact a Navitar account representative or visit navitar.com for more details.



Available Interfaces



Visit navitar.com/products/pixelink-cameras to view our full line of products.

Camera Customization

Unique Solutions for Innovative Applications

- Custom Sensor-Lens Integration and Alignment
- Fault Tolerant Firmware and Software
- Connection Distances up to 100 meters
- Superior Engineering and Support
- Custom Design and Manufacturing
- 4K HDR Lenses for Maximum Stray Light Rejection



Pixelink offers camera formats ranging from 1/3" to 35mm, resolutions from 2 MP – 31+ MP, USB3 and 10 GigE interfaces, board level and enclosed, tethered sensor boards, and off-the-shelf or custom configurations. All base product models can be modified to meet unique performance and physical requirements.

Customized Solutions

Custom Firmware / FPGA

Custom Software Functionality

Multi-Camera Synchronization

Replacing IR filters or Clear Glass

Cover Glass, Sensor Glass & Micro-Lens Removal

Custom Sensor Board Mechanicals

Mount Removal and Re-Design

Application Specific GPIO / Trigger Integration

Custom Sensor-Lens Integrations

Custom Sensor Calibrations

Custom Interfaces Between I / O and Connectors

Remote Sensors with Custom Length Flat Flex Cables

These are only a few of the custom solutions we've been able to provide for our clients. Our engineers are ready to tackle your unique imaging requirements and develop sound alternatives to off-the-shelf components.

Lenses & Components

Additional Product Offerings From Our Navitar Companies

LENSES

Industrial Zoom | Fixed Machine Vision | Large Format | 4K HDR

COMPONENTS

Illumination | Beam Expanders | Microscope Objectives | F-THETA Lenses

CUSTOM

Lens / Sensor Integration | Lens & Camera Design | System Analysis | Custom Optical Design

