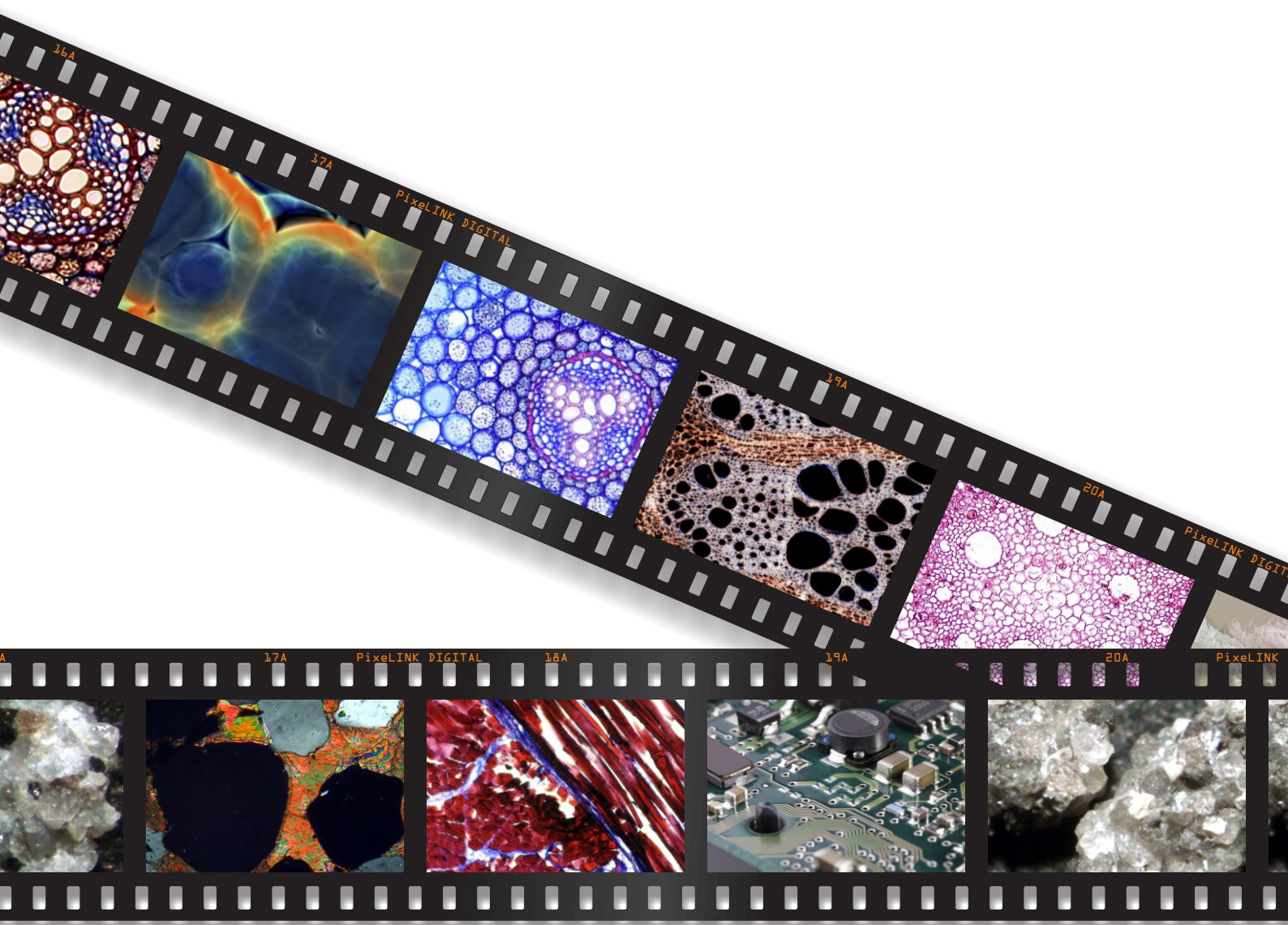# PixeLINK®

PixeLINK® Digital-Microscopy Camera Solutions

SEE, CAPTURE, MEASURE

PixeLINK® for Microscopy Applications

PixeLINK® will work with you to choose and integrate the optimal camera for your microscopy project. Ideal for use in any laboratory setting, PixeLINK® cameras let you capture high-quality images with your existing microscope equipment. Our microscopy cameras and associated software are designed to offer consistent, high-quality image acquisition and performance.

PixeLINK® μScope software offers professional image analyses and features the latest in acquisition, analysis and reporting functionality. Some of these features include: Auto & Semi-Auto Calibration, Line Profiling, Image Processing, Image Stitching to create a mosaic of the "Big Picture", 3D Visualization, Auto Trace, Reflected light subtraction and Measurement and Annotation just to name a few.

Our drivers and software for your host computer enable advanced camera functionality.

PL-B CCD

PL-B CMOS

PL-D CMOS

PL-E CMOS

CAMERA FEATURES

- Exposure Time
- Gain
- Frame Rate
- Spot White Balance (CMOS only)
- Manual & Auto White Balance (Color only)
- Pixel Addressing
- Gamma

- Saturation
- Color Temperature
- Time Lapse Capture
- Image Flip
- Image Rotate
- Adjustable ROI (CMOS only)
- Capture Full Resolution (CMOS only)

- Pixel Format
- Manual, Auto & Continuous Auto Exp.
- Saturation(Color Cameras only)
- Brightness (PL-B681M only)
- Frame Rate Control
- Sharpness (PL-B686)

Bright to Moderate Illumination	Bright to Low Illumination Moderate Fluorescence
PL-B600 CMOS Cameras **PL-E400 CMOS Cameras** **PL-D600 CMOS Cameras**	**PL-B800 CCD Cameras**

CMOS USB 3.0 - PL-D600 Series

The all new PixeLINK® PL-D600 series USB 3.0 CMOS cameras have been designed to provide quality and versatility with its smaller form factor. The PL-D600 cameras are available in 1.3 MP to 15.0 MP resolutions and are Ideal for use in any laboratory setting. Our microscopy cameras are designed to offer consistent, high-quality image acquisition and performance.

Some suitable Microscopy applications include:

- Petrology
- Parts Inspection
- Live Cell Imaging
- Pathology

- Metrology
- Histology
- Palynology
- Microbiology

- Orthopantomography
- Elastography
- Projectional radiography
- Fluoroscopy

	Color/Mono	Resolution	Mega-Pixel	FPS @ Full ROI	Lens Format	Pixel Pitch	Sensor diagonal	Bit Depth	Dynamic Range	Shutter Type
PL-D672	C/M	2048 x 1088	2.2	170	2/3"	5.5 µm	12.75 mm	8 or 10	60 dB	Global
PL-D674	C/M	2048 x 2048	4.2	90	1"	5.5 µm	15.93 mm	8 or 10	60 dB	Gloval
PL-D681	C/M	1280 x 1024	1.3	150	1/2"	4.8 µm	7.87 mm	8 or 10	53 dB	Global
PL-D682	C/M	1920 x 1200	2.3	93	2/3"	4.8 µm	10.87 mm	8 or 10	53 dB	Global
PL-D683	C/M	2048 x 1536	3.2	120	4/5"	4.8 µm	12.29 mm	8 or 10	53 dB	Global
PL-D684	C/M	2048 x 2048	4.2	90	4/5"	4.8 µm	13.9 mm	8 or 10	53 dB	Global
PL-D685	C/M	2592 x 2048	5.3	75	1"	4.8 µm	15.86 mm	8 or 10	53 dB	Global
PL-D624	Color	2048 x 1944	16.6	8.3	1/3"	2.2 µm	6.21 mm	8 or 12	60 dB	Rolling
PL-D625	Color	2592 x 1944	14	7	1/2.5"	2.2 µm	7.13 mm	8 or 12	60 dB	Rolling
PL-D628	Color	3840 x 2160	8.3	22.9	1/2.6"	1.4 µm	6.09 mm	8 or 12	65.3 dB	Rolling
PL-D6210	Color	3872 x 2768	10.7	18	1/2.6"	1.4 µm	6.60 mm	8 or 12	65.3 dB	Rolling
PL-D6212	Color	4096 x 3072	12.6	15.5	1/2.4"	1.4 µm	7.11 mm	8 or 12	65.3 dB	Rolling
PL-D6215	Color	4608 x 3288	15	13	1/2.2"	1.4 µm	7.87 mm	8 or 12	65.3 dB	Rolling

Cost Effective CMOS USB 2.0 - PL-E400 Series

1.0 to 5.0 Megapixel

	Color/Mono	Resolution	Mega-Pixel	FPS @ Full ROI	Lens Format	Pixel Pitch	Sensor diagonal	Bit Depth	Dynamic Range	Shutter Type
PL-E421MU	Mono	1280 x 1024	1.3	30	1/2"	5.2 µm	8.52 mm	8 or 10	68.2 dB	Rolling
PL-E421CU	Color	1280 x 1024	1.3	28	1/3"	3.2 µm	5.25 mm	8 or 10	61 dB	Rolling
PL-E422CU	Color	1600 x 1200	1.9	20	1/2.5"	3.2 µm	6.40 mm	8 or 10	61 dB	Rolling
PL-E423CU	Color	2048 x 1536	3.1	12	1/2"	3.2 µm	8.19 mm	8 or 10	61 dB	Rolling
PL-E424CU	Color	2400 x 1800	4.1	8	1/2.5"	2.2 µm	6.60 mm	8 or 12	70.1 dB	Rolling
PL-E425CU	Color	2592 x 1944	5	7	1/2.5"	2.2 µm	7.13 mm	8 or 12	70.1 dB	Rolling

Highlights
- 1 to 5 Megapixel resolutions
- Dynamic region of interest
- Fast frame rates

CMOS FireWire & USB 2.0 - PL-B600 Series

1.3 to 5.0 Megapixel

	Color/Mono	Resolution	Mega-Pixel	FPS @ Full ROI	Lens Format	Pixel Pitch	Sensor diagonal	Bit Depth	Dynamic Range	Shutter Type
PL-A662	Color	1280 x 1024	1.3	12	1/2"	6.0 µm	9.83 mm	8 or 10	54 dB	Rolling
PL-B621M	Mono	1280 x 1024	1.3	30	1/2"	5.2 µm	8.52 mm	8 or 10	68 dB	Rolling
PL-B623C	Color	2048 x 1536	3	12	1/2"	3.2 µm	8.19 mm	8 or 10	61 dB	Rolling
PL-B625M	Mono	2592 x 1944	5	7	1/2.5"	2.2 µm	7.13 mm	8 or 12	70.1 dB	Rolling
PL-B625C	Color	2592 x 1944	5	7	1/2.5"	2.2 µm	7.13 mm	8 or 12	70.1 dB	Rolling
PL-B686M	Mono	3000 x 2208	6.6	5	1 "	3.5 µm	13.1 mm	8 or 12	60 dB	Rolling

Highlights
- 1 to 6.6 Megapixel resolutions
- Dynamic region of interest
- Fast frame rates

CCD FireWire & USB 2.0 - PL-B800 Series

1.4 and 2.0 Megapixel

	Color/Mono	Resolution	Mega-Pixel	FPS @ Full ROI	Lens Format	Pixel Pitch	Sensor diagonal	Bit Depth	Dynamic Range	Shutter Type
PL-B871M	Mono	1392 x 1040	1.4	10	1/2"	4.65 µm	7.96 mm	8 or 12	60.9 dB	ILT
PL-B871C	Color	1392 x 1040	1.4	10	1/2"	4.65 µm	7.96 mm	8 or 12	61.9 dB	ILT
PL-B872M	Mono	1392 x 1040	1.4	15	2/3"	6.65 µm	11.2 mm	8 or 12	61.7 dB	ILT
PL-B872C	Color	1392 x 1040	1.4	15	2/3"	6.65 µm	11.2 mm	8 or 12	61.0 dB	ILT
PL-B873M	Mono	1600 x 1200	2	15	1/1.8"	4.4 µm	8.92 mm	8 or 12	47.5 dB	ILT
PL-B873C	Color	1600 x 1200	2	15	1/1.8"	4.4 µm	8.92 mm	8 or 12	48.2 dB	ILT

Highlights
- 1 and 2 Megapixel resolutions
- High dynamic range
- Low noise imaging

* Frame rates will vary based on host system variables and configuration

Common Microscopy Applications

Digital microscopy cameras have a broad range of uses and the illustrations below only provide a small sample of the available deployments for PixeLINK® microscopy cameras. Our goal is to successfully integrate a PixeLINK® camera into your microscopy project – no matter the application.
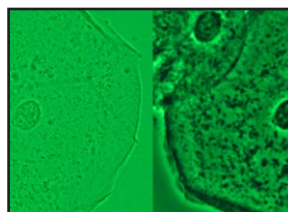
Common PixeLINK® microscopy camera applications include:
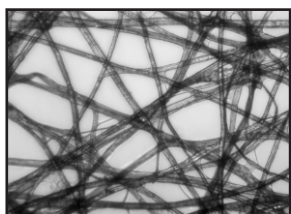
Brightfield

Suggested Camera:
PL-D685

Petrology

Suggested Camera:
PL-E420

D.I.C.

Suggested Camera:
PL-B873
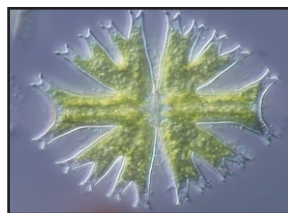
Pathology

Suggested Camera:
PL-D685

Phase Contrast

Suggested Camera:
PL-B872

Histology

Suggested Camera:
PL-D625
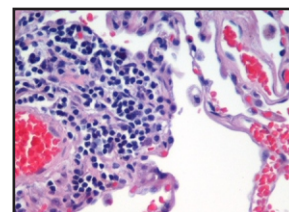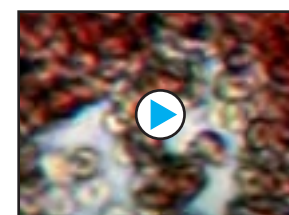
PCB and Semicon

Suggested Camera:
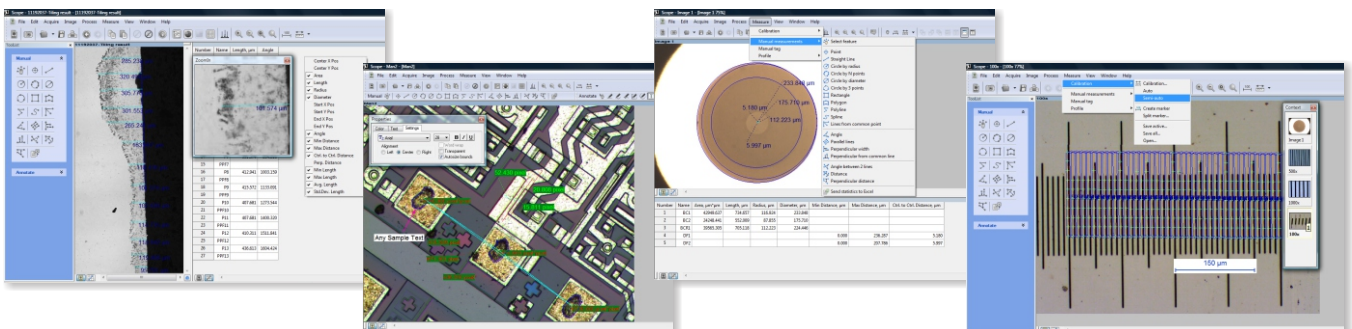PL-D683

Live Cell Imaging

Suggested Camera:
PL-E425

MICROSCOPY SOFTWARE Features

PixeLINK® μScope Essentials Software is released with the PL-E400 camera family and offers a highly productive image capture tool for microscopy users that only need the essentials.

PixeLINK® μScope Standard Software is released with the PL-B600, PL-B800 & PL-D600 series and offers a highly productive, professional image capture tool for microscopy.

PixeLINK® μScope Pro Software is available for users requiring a more advanced toolset for their microscopy application. This feature rich application includes tools such as z-axis extended focus imaging, shading correction and reflected light subtraction.

Software Features	μScope Essentials	μScope	μScope Pro
PixeLINK® APIcontrol	✓	✓	✓
Time lapse capture and movie file production - crosshair on live preview	✓	✓	✓
Save in multiple image file formats - jpg, jpeg, tif, tiff, bmp, gif, pcx, tga, mpg, mpeg, avi, mov, img, rpt, txt...	✓	✓	✓
Overlay - crosshair, grid mask, image, marker, time stamp	✓	✓	✓
Image- mode change, clone, crop, resize, rotate	✓	✓	✓
Multiple ROI. shapes & copy, paste, crop ROI	✓	✓	✓
Grayscale, RGB, HSB, YUV	✓	✓	✓
Image sequence control	✓	✓	✓
Zoom control - 100% to 1600% and fit to window options	✓	✓	✓
Annotation - line, arrow, polyline, spline, rectangle, ellipse, text	✓	✓	✓
Image editing: undo, redo, copy, paste, paste new, delete, delete all, annotate, image information	✓	✓	✓
Image processing - manual brightness, contrast, gamma, background subtraction, histogram, clone, crop, roi, resize, rotate, split, image mode change, grayscale, rgb, hsb, yuv pseudo color view		✓	✓
Multiple window configuration options	✓	✓	✓
Manual measurement tools - 3-point circle functionality, n-point circle measurement functionality, parallel line distance measurement, perpendicular distance measurement and object distance measurement. In addition, zoom-in window	✓	✓	✓
Export to excel® - images with measurement, calibration, annotations, measurement data, statistics, and chart	✓	✓	✓
Report generator - create, insert images and OLE objects			✓
Auto and semi auto calibration		✓	✓
Manual calibration	✓	✓	✓
Measurement parameters - area, max length, line length, center x and y, angle	✓	✓	✓
Measurement data	✓	✓	✓
Profile - straight line, polyline, parallel line, select and change		✓	✓
Line profiling - single, multiple, parallel and polyline commands provide gray/red/green/blue intensity values for specific lines within an image. the profile data of each pixel on the line can be exported to Microsoft® Excel		✓	✓
Calibration marker (scale bar) can be placed on the live preview image, and burned in automatically	✓	✓	✓
Live Measurement and Overlay Settings: perform measurements on the live preview image, using the crosshair or grid masks to center and count. The grid masks include calibration data	✓	✓	✓
Dynamic user interface	✓	✓	✓
Omage stitching			✓
Z-axis extended focus imaging with displacement compensation			✓
3d visualization to clearly view complex structures			✓
Auto trace using automatic edge detection			✓
Fluorescent image composition			✓
Fast and perfect focus enhancement			✓
Shading correction			✓
Reflected light subtraction			✓

About PixeLINK®

PixeLINK® is a global provider of industrial cameras for the machine vision and life sciences markets. Since 1992, PixeLINK® has designed, manufactured and supported the hardware and software requirements of machine vision, OEM and microscopy customers around the world. Offering unmatched customer support and service, PixeLINK® designs and manufactures reliable industrial cameras and microscope cameras for any machine vision project or microscopy application.

Based in Ottawa, Canada, PixeLINK® combines reliable industrial camera hardware with industry-leading software to offer unmatched off-the-shelf, OEM and custom industrial imaging solutions to customers.

Our Mission & Vision

We believe that the integration of industrial imaging products into new and existing environments should be a quick and painless endeavour. Our vision is to provide customers with the best machine vision camera and microscopy camera imaging hardware, software and expertise possible to help them achieve their business goals.

At PixeLINK®, we make sure to understand "the big picture" when helping clients select the best industrial digital camera for their application. We help customers select, optimize, and integrate the machine vision camera or microscope camera that best meets their imaging requirements in a timely, cost-effective manner to reduce costs and improve profitability.

PixeLINK® helps:

• Machine vision manufacturers select and integrate the optimal industrial camera for their machine vision application
• OEM customers integrate reliable industrial camera systems into their applications in a cost-effective manner. Our cameras are ideal for large-volume OEM customers
• Microscopy customers obtain high-quality life sciences and other microscopy imagery with their existing microscope equipment

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Proudly Canadian

To see the full detailed line of PixeLINK® cameras or to speak to us about your unique requirements, please visit us at:

WWW.PIXELINK.COM