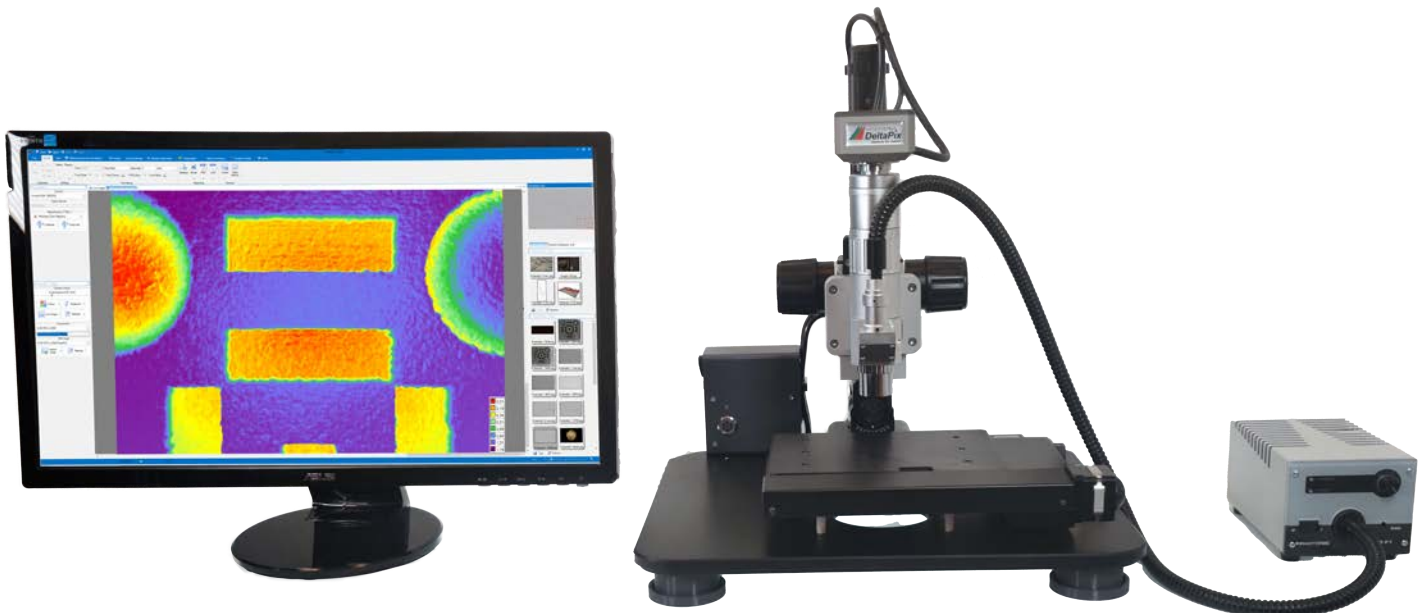


DeltaPix

Digital Microscopes



- Super high resolution
- 3D topography / 3D measurement
- 2D measurements
- Roughness
- Super depth of field
- Auto stitching and scanning
- Flexible and modular



About DeltaPix

DeltaPix is a pioneer in the digital microscopy industry for more than 20 years. The first innovative product to be released by DeltaPix back in 2003, was the groundbreaking Infinity X, with 21 million real color pixels, setting new standards for microscopy cameras at that time. Since then, many innovative technologies and solutions have been developed and marketed.

DeltaPix develops and markets a wide range of digital imaging solutions for various industrial, forensics and biomedical microscopy applications, and has established a very deep and broad expertise in digital image capturing, image handling, and processing.

It is the primary strategy of DeltaPix to create innovative new products to be marketed and sold internationally through a network of trusted partners.



Product Range

Cameras

DeltaPix's camera range is intended for all types of microscopy users, from routine use, to advanced professional researchers, with the requirement to manipulate the camera settings and control every detail. The Invenio camera range is a series of easy-to-use cameras, with high resolution, high sensitivity, and very low noise.

All DeltaPix cameras are manufactured to scientific standards with an extreme focus on the details; assembled in a dust-free environment, high-quality IR filters, high-grade sensors, low-temperature design, and long durability. All DeltaPix cameras are equipped with the newest high-quality CMOS and Exmor™ sensors.



DeltaPix Digital Microscopes

Digital microscopes are a vital part of any well-equipped laboratory.

DeltaPix aims to provide high-quality digital microscopes for a wide variety of industries and research labs, with a focus on reliable 2D and 3D measurements and material information like roughness, depth, and height profiles.

Digital microscopes offer a flexible solution for virtually any application and budget, ranging from a fully automatic 2D/3D microscope to a simple inspection microscope.



Accessories

To support our range of microscope cameras, and digital microscopes, DeltaPix offers several accessories such as light sources, microscope stands, manual stages, motorized stages, calibration sliders, mechanical adapters, and much more.

A highly skilled and experienced team carefully selects every item offered, to ensure high and reliable quality.

High-resolution Inspection and Super Accurate Results

Inspection/ Still images

Inspect the samples in full resolution and capture all the details for documentation with just a click of the mouse.

The images can be saved in various compressed or uncompressed formats like JPEG, JPEG2000, Tiff, and BMP

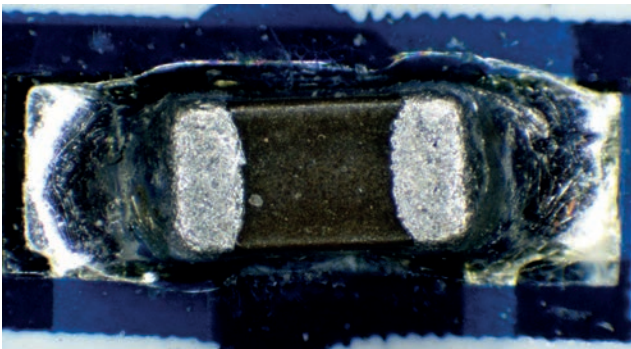
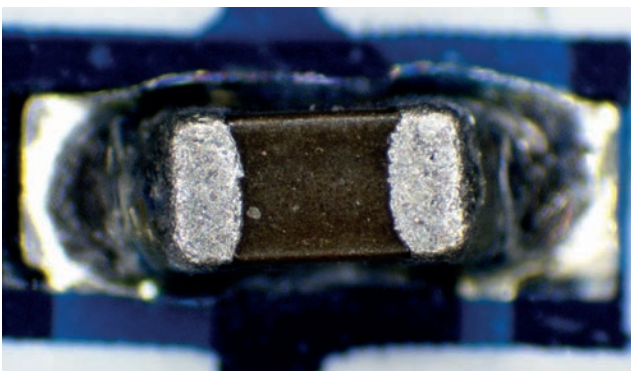
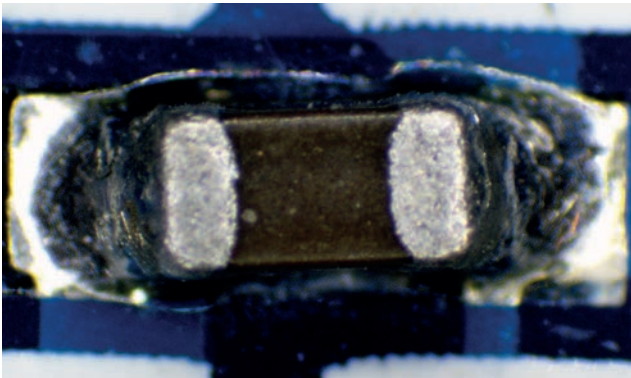
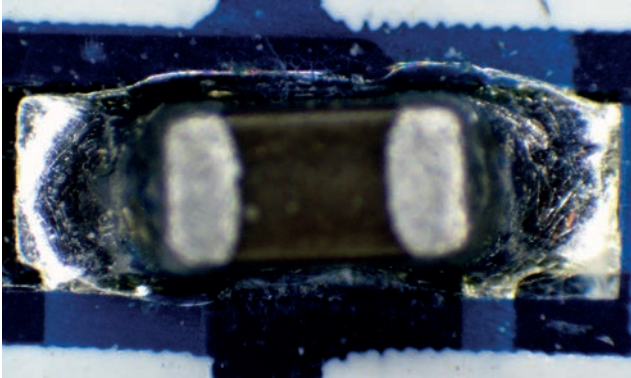


2D Measurements

DeltaPix microscopes offer accurate measurements on real-time video, or captured images. The software offers many powerful measuring tools including length, area, angle, diameter, and much more. In addition, the actual dimension and measurement results can be saved on the captured image or exported to Excel, CSV, or PDF files.

Export to Excel or PDF using the included templates or design a custom template.

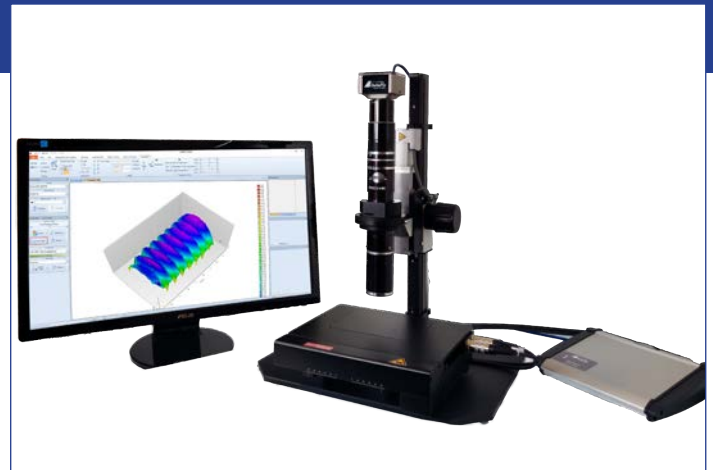
Measurements on multiple specimens can be exported to one CSV file for statistical purposes.



Super Depth of Field

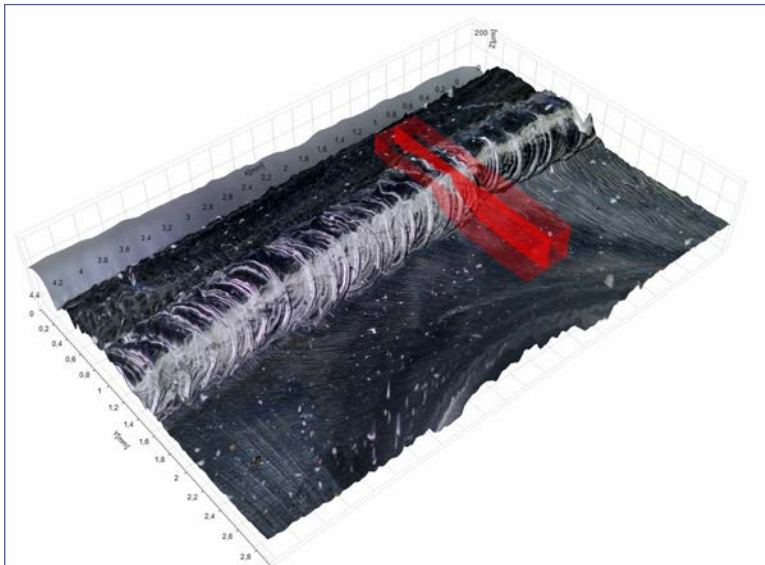
DeltaPix microscopes can produce “Super depth of field”, this extends the standard focal depth of the objective, by capturing images at different focal planes and using the state of the art algorithms. this technique also works on stereo microscopes.

The number of images required for each extended focus capture, is automatically calculated from the depth of focus at a given magnification.



3D Topography

Extend the visualization and measurement from 2D to 3D.



3D image of a welding

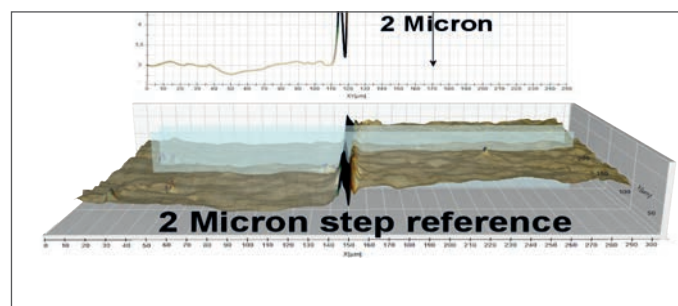
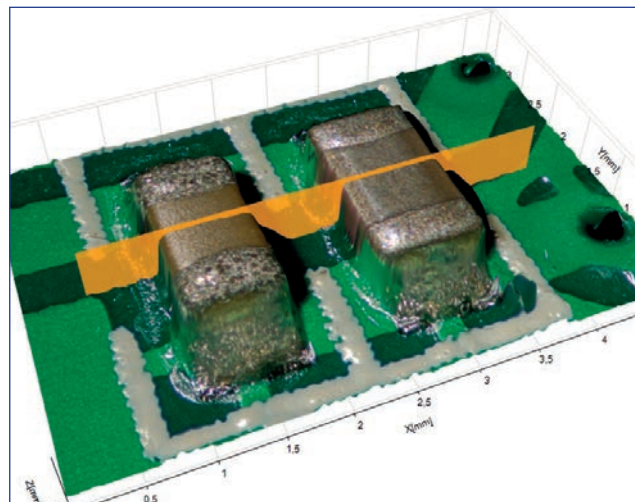
With the 3D module in „InSight“, it is possible to display a 3D model of the specimen under observation.

Displaying the 3D model in its true color, or pseudo color to better illustrate the height difference in the specimen against a height scale.

3D Measurements

Comprehensive and intuitive 3D measurements.

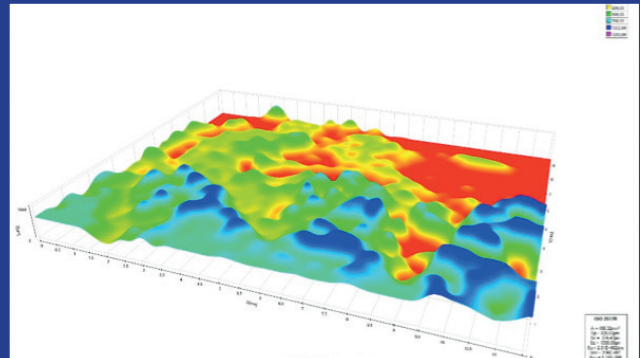
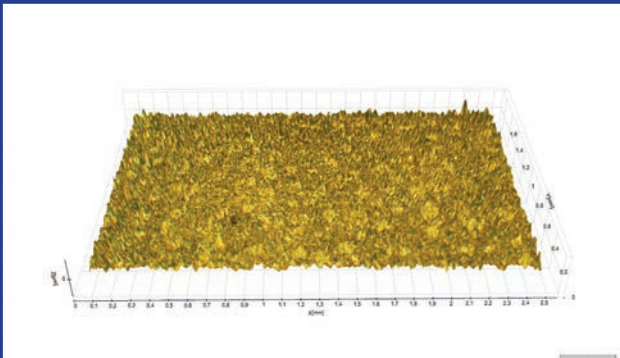
DeltaPix Digital Microscope system is a fully capable 3D, surface analysis, and measurement system. 2D parameters like angle, distance, and area can easily be visualized and measured in 3D. Multiple light source options, in combination with high-resolution long working distance optics allow visualization of image surfaces with ease. Traditional 3D systems like confocal and scanning microscopes can struggle with complex surface topography, but, the DeltaPix Modus 3D systems, display all complex details in true color. The 3D capabilities are also available in the XY-scanning mode, so detailed 3D images can be captured automatically at pre-saved XYZ-positions for later analysis.



Roughness Measurement

DeltaPix InSight offers a non-contact roughness measurement according to ISO 25178-2:2012.

The software can be applied in various applications where surface textures need to be analyzed. The implementation of surface roughness measurement is based on the data collected from topography analysis thus the need for third party add/on software is eliminated for most applications.



Measurement data shown in a panel in the lower right corner is the results of the Roughness 3D calculations. Data can also be exported to an Excel spreadsheet.

Sq: Root mean square height of the scale-limited surface

Ssk: Skewness of the scale-limited surface

Sku: Kurtosis of the scale-limited surface

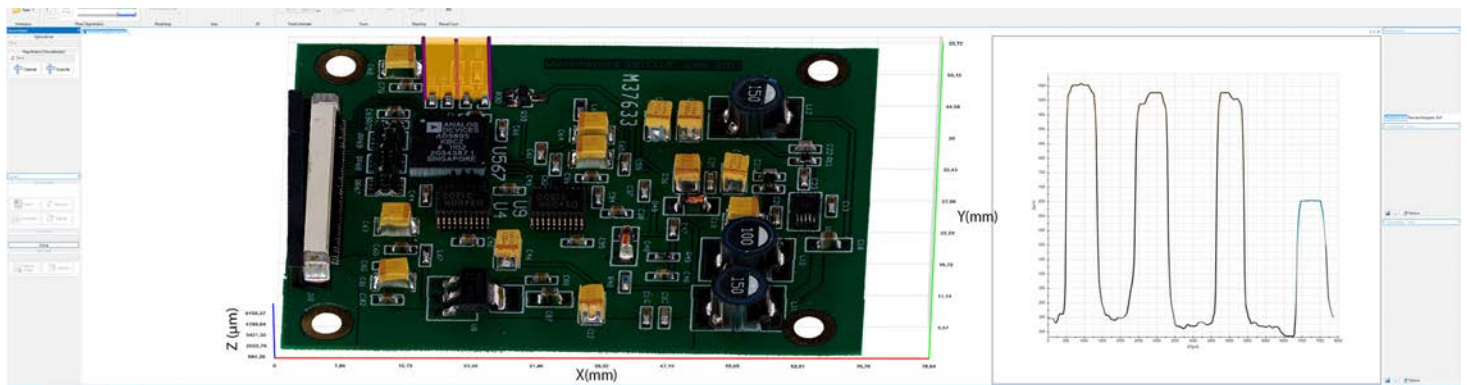
Sp: Maximum peak height of the scale limited surface

Sv: Maximum pit height of the scale limited surface

Sz: Maximum height of the scale-limited surface

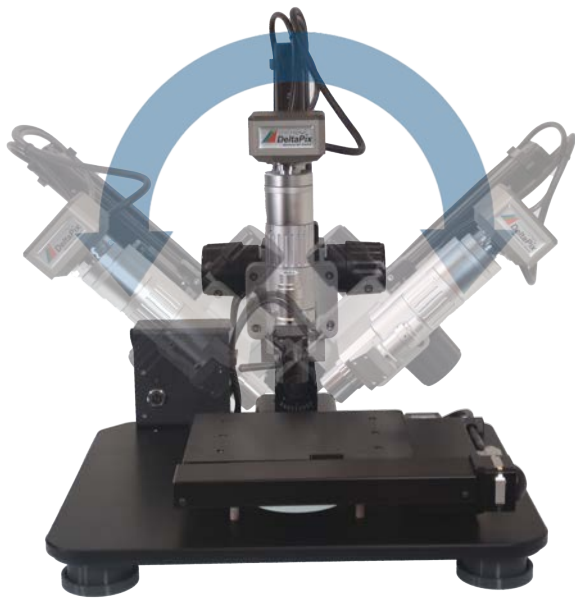
NEW 3D Stitching

Full automatic 3D stitching with motorized XYZ movement. Now it is possible to capture all the details in the sample in super high resolution and up to 16000 pix x 16000 pix 3D images.



3D stitching of PCB board 70mm x 55mm

New Improved Microscope Base



Now featuring a new and improved stand for DeltaPix digital microscopes to provide tilting function, an integrated controller for ease of installation, and anti-vibration feet.

Small environmental vibrations from surrounding machines, trains, transport, cooling, heating, and other sources, can often cause the specimen under observation to vibrate with several microns, which will make the image look unsharp, and make measurements unprecise, especially at high magnification.

These artifacts are dramatically reduced by the new anti-vibration feet, thus increasing the usability of the microscope in “real-life” environments.

Sustainable Microscope Upcycling

A simple and easy solution to upcycle a good old microscope to a modern 3D microscope

DeltaPix provides solutions for automation of microscopes of all kinds, like adding motorization of focus and motorization of the XY axis. With DeltaPix automation solutions, it is possible to turn most old microscopes into a modern 3D microscopes.

Capture extended focus images with up to 250 Slides with ease, create a 3D topography of the sample surface, and perform roughness measurements.

With the DeltaPix automation solution, there is no need for a new microscope, reuse the old microscope, and achieve the same results as with a new 3D microscope.



Microscope Ergonomics

Finding the right working posture and working comfortably is what ergonomics is about. Ergonomics has proven to play a key role in the operator's job satisfaction, stress level, and productivity in general.

DeltaPix is innovating the way operators and lab professionals work with microscopes, without the need for costly investments in new microscopes.

DeltaPix offers an ergonomic solution for most existing microscopes.

DeltaPix ErgoFocus – Controller

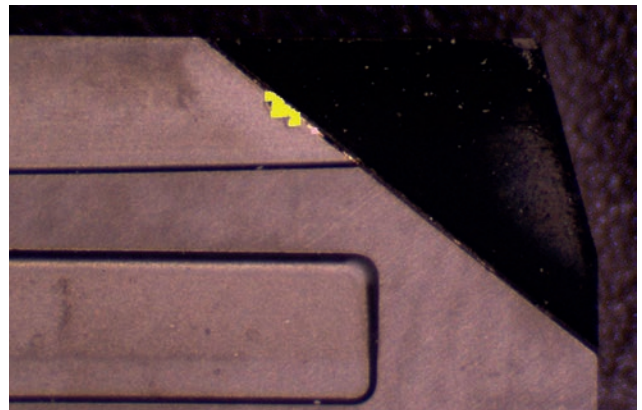
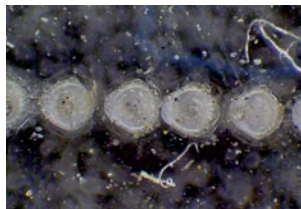
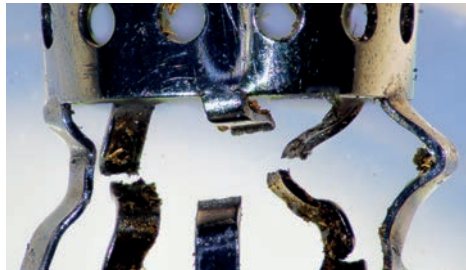
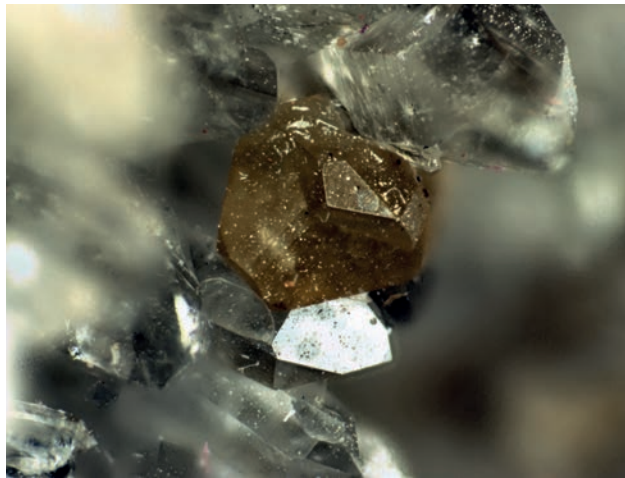
This focus controller from DeltaPix offers a high-quality ergonomic solution for microscope focus automation. The design of the ErgoFocus is based on feedback from end-users and physiotherapists for the best working ergonomics possible. Since the ErgoFocus has a very compact design of only 134 x 135 x 80 mm, the ErgoFocus takes up only a little space.

The ErgoFocus has USB connections, increasing its versatility and two ultra-accurate focus encoders giving the user the option to use the controller with the right and left hand. The controller also has an OLED screen offering an easy, and accurate position readout.



Gallery

Various images from DeltaPix image library.



Specifications

DPX M12000 zoom Specifications

Camera model	Function	M12Z-0 .42	M12Z-1.25	M12Z-2.5	M12Z-4.16
	NA range	0.01-0.07	0.03-0.2	0.06-0.36	0.1-0.45
	Resolution	33.55-4.79mu	<1.5-11mu	<0.9-5.5MU	<0.7-3.4mu
	Focal depth	+ -2750-56.12mu	7-300mu	2-77MU	1.4-27mu
	Working Distance	45mm	46.2mm	35.25MM	14mm

Invenio 8EIV	Magnification	29x-344x	83 - 1560x	166 - 3120x	305-5740x
	Field of View	21mm-1.772mm	7.2mm-384mu	3.6mm - 192mu	2mm-208mu

Invenio 12EIII	Magnification	27.7x-329.5x	157 - 2964x	315 - 5928x	579-10906
	Field of View	22mm-1.85mm	7.2mm - 384mu	3.6mm - 192mu	2mm-208mu

DPX M7000 Specifications with Lens

Camera model	Function	0.5x	0.75x	1x	1.25x	1.5x	2x
	*NA	0.048	0.071	0.095	0.119	0.142	0.190
	Resolution	7.06mu	7.41mu	3.53mu	2.83mu	2.35mu	1.77mu
	Focal depth(mm)	1.85-0.22	0.82-0.10	0.46-0.055	0.30-0.035	0.20-0.025	0.116-0.014
	Working Distance	173mm	110mm	90mm	72mm	46.5mm	32.3mm

Invenio 10EIII	Magnification	18x-136x	27x-187x	35x-250x	44x-311x	53x-374x	71x-500x
	Field of View(mm)	34.4-4.5	22.9-3.3	17.2-2.4	13.7-1.9	11.4-1.63	8.6-1.22

Invenio 20EIII	Magnification	12x86x	18x-129x	24x-171x	30x-214x	37x-257x	49x-343x
	Field of View(mm)	50-7.11	33.3-4.7	25-3.6	20-2.8	16.7-2.4	12.50-1.8

DPX M7000 Specifications with objectives

Camera model	Function	5x	10x	20x
	*NA	0.140	0.280	0.420
	Resolution	2.4mu	1.20mu	0.80mu
	Focal depth(mu)	74-25	18.5-6.4	4.6-2.8
	Working Distance	34	33	20

Invenio 10EIII	Magnification	127x-622x	254x-1244x	508x-2540x
	Field of View(mm)	4.8-0.98	2.4-0.71	1.2-0.24

Invenio 20EIII	Magnification	127x429x	254x-1244	508x-1693x
	Field of View(mm)	4.8-1.142	2.4-0.71	1.20-0.36

DPX M6000 zoom Specifications with lens

Camera model	Function	0.5x	0.75x	1x	1.5x	2x
	*NA	0.035	0.053	0.069	0.106	0.142
	Resolution(mu)					
	Focal depth (mu)					
	Working Distance	194.5mm	125	90	62	39.8

Invenio 8EIV	Magnification	25x-152x	41x-244x	52x-313x	72x-458x	100x-610x
	Field of View(mm)	24.4-4	15-2.5	11.7-1.95	8.46-1.33	6.1-1

Invenio 12EIII	Magnification	25x-152x	41x-244x	52x-313x	72x-458x	100x-610x
	Field of View(mm)	24.4-4	15-2.4	11.7-1.95	8.46-1.33	6.1-1

DPX M6000 zoom Specifications With objective

Camera model	Function	5x	10x	20x	50x
	*NA	0.16	0.23	0.35	0.4
	Resolution(mu)	2.1	1.5	1	0.8
	Focal depth (mu)	53-10	14-5.2	3.5-2.2	1.7
	Working Distance	32.5mm	38.6mm	22.2	18.3

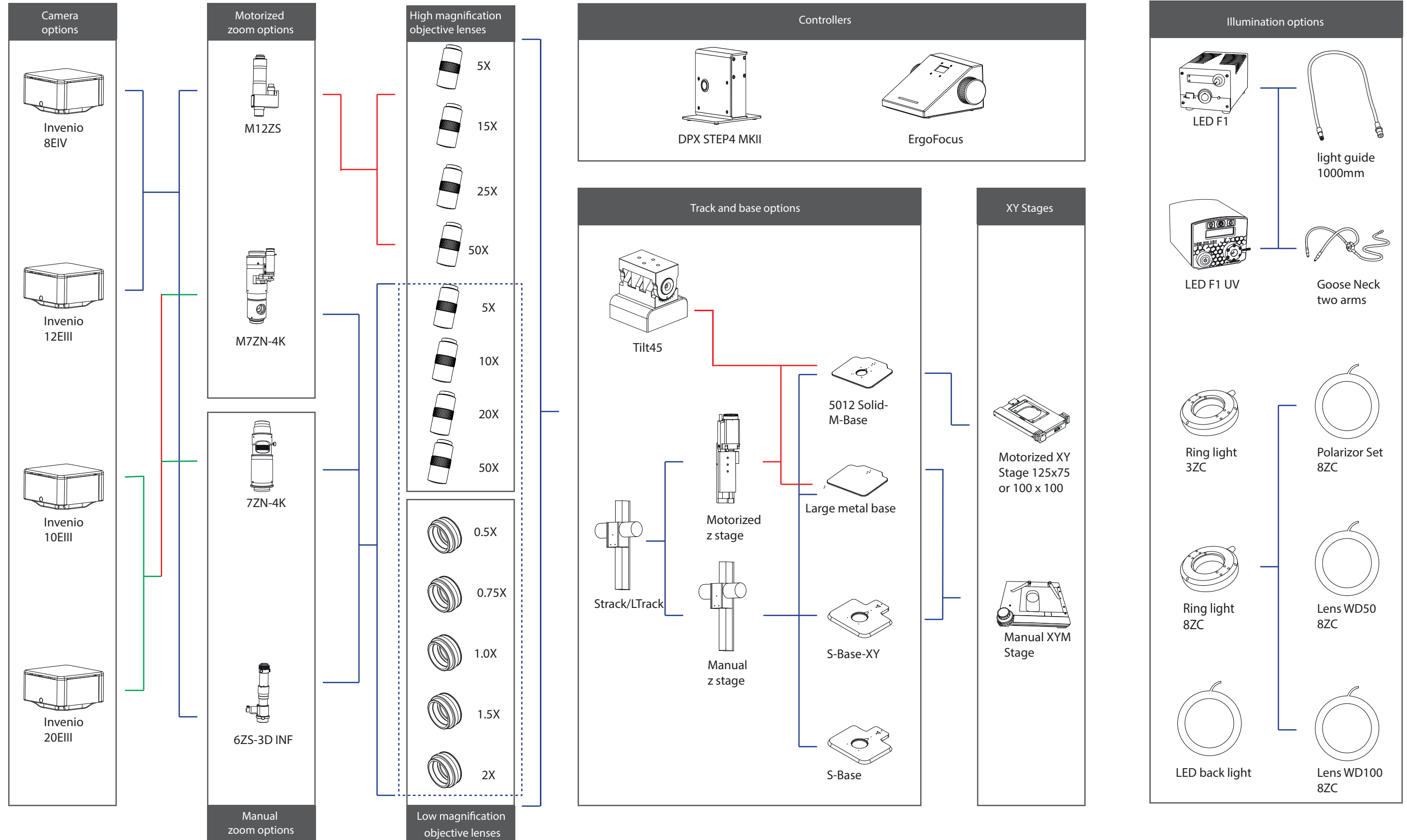
Invenio 8EIV	Magnification	63x-381x	250x-1524x	500x-3048x	1270x-7526x
	Field of View(mm)	9.7-1.6	2.44-0.4	1.22-0.20	0.48-0.081

Invenio 12EIII	Magnification	63x-381x	250x-1524x	500x-3048x	1270x-7526x
	Field of View(mm)	9.7-1.6	2.44-0.4	1.22-0.20	0.48-0.081

Note:

1. Maximum magnification and minimum FOV are calculated based on a 24" monitor with 1920x1080 pixels, at 100% zoom at maximum still image camera resolution.
2. *NA at high highest magnification. NA varies with zoom settings

Microscope diagram





Head Quarter & Sales

Hassellunden 16
DK 2765 Smorum, Denmark

☎ +45 4676 0205
✉ info@deltapix.dk

Development

Jacob Petersens Vej 11
DK 9240 Nibe, Denmark

☎ +45 4676 0205
✉ info@deltapix.dk