Discover highest image quality

IMT Scan cooled (12.5MP) / IMT 7 / IMT 5 cooled / IMT 3 cooled
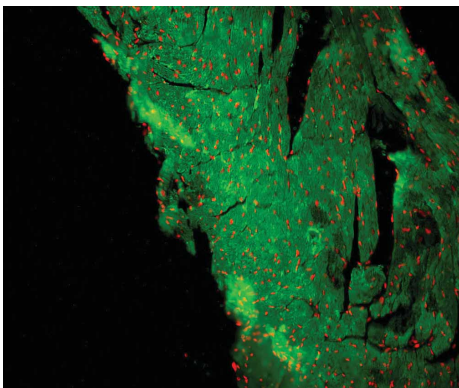
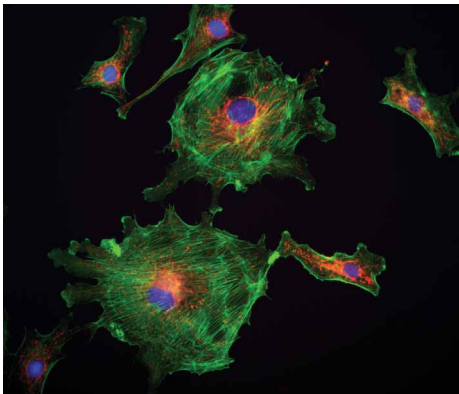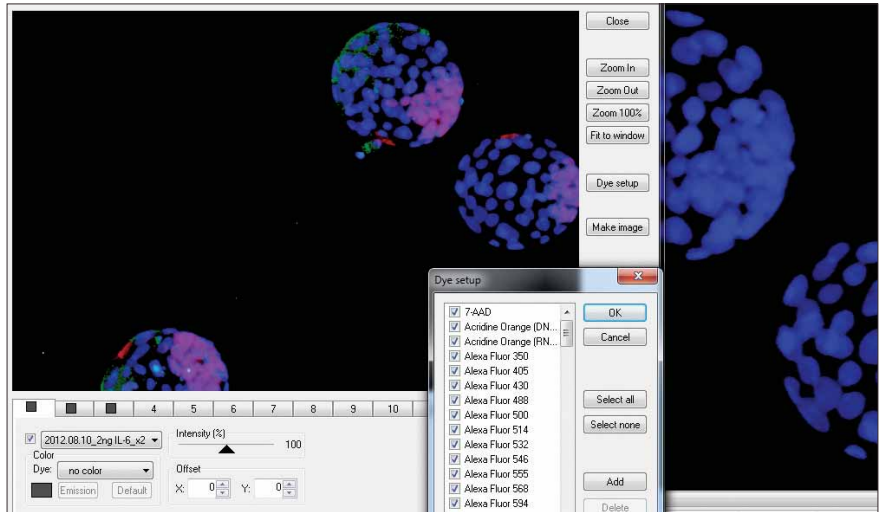### Made in Germany, by Jenoptik Optical Systems GmbH

Superior image quality and highest sensitivity

The color IMT CCD Research cameras meet challenging requirements in scientific applications, not only in fluorescence microscopy.
The high sensitivity warrants brilliant images at high resolutions, especially when working with low-light specimens.

The active peltier cooling consists of a nitrogen flushed sensor capsule, a peltier element and a fan.
For exact image analysis of finest details and informative image documentation, the Microscanning technology provided in the scanning IMT Scan cooled CCD Research cameras allows for capturing images of first-class quality with a resolution of up to 12.5 megapixel.

Specifications	IMT Scan cooled (12.5)MP	IMT 3 cooled	IMT 5 cooled	IMT 7
Image sensor	2/3 ″CCD	1/1.8 ″CCD	2/3 ″CCD	1/2.5 ″CCD
Color / Monochrome	Color	Color	Color	Color
Sensor resolution (max)	1360 ×1024 pixel (1.4-12.5 Mpix)	2080 ×1542 pixel (3.2 Mpix)	2580 ×1944 pixel (5.0 Mpix)	3072 ×2300 pixel (7.1 Mpix)
Active sensor size (H ×V)	8.8 mm ×6.6 mm	7.58 mm ×6.54 mm	9.04 mm ×7.86 mm	5.71 mm ×4.29 mm
Pixel size (W ×H)	$6.45\mu m \times 6.45\mu m$	$3.45\mu m \times 3.45\mu m$	$3.4\mu m \times 3.4\mu m$	$1.86\mu m \times 1.86\mu m$
A / D conversion	14bit	12 bit	12 bit	12 bit
Dynamic range	67 dB | 69 dB	61 dB	61 dB | 60 dB	60 dB
Exposure times	94 μs.. 300 s | 600 s	270 μs.. 180 s	90 μs.. 180 s	170 μs.. 5 s
Analog gain	1x ... 8x	1x ... 12x (SDK)	1x ... 16x (SDK)	1x ... 16x (SDK)
Max. frame rate (image size in pixel)	13 fps (1360 ×1024) / 51 fps (680 ×512)	6 fps (2080 ×1542) / 12 fps (1040 ×770)	6 fps (2580 ×1944) / 21 fps (646 ×488)	18 fps (1228 ×920)
Cooling	yes	yes	yes	no
Digital interface	FireWire a	FireWire a	FireWire a	FireWire a
Optical connection	C-Mount (0.63 TV pref	C-Mount (0.5 ×or 0.63 ×TV pref., depends from the type of microscope)	C-Mount (0.63 ×TV pref.)	C-Mount (0.5 ×TV pref.)
Trigger In / Out	no	no	no	yes
Voltage supply	FireWire powered	FireWire powered	FireWire powered	FireWire powered
Power consumption	approx. 8 W	approx. 6 W	approx. 6 W	approx. 6 W
Microscan	4080× 3072 | 2720× 2048	no	no	no
Ambient conditions	Temperature: 0 °C ... +35 °C / Humidity: 5 % ... 80 %, non condensing			
Storage conditions	Temperature: -20 °C ... +70 °C			
Dimensions (L ×W ×H)	110 mm ×102 mm ×98 mm			
Weight	approx. 700 g			
Application software	IMT iCamera			
External camera driver	www.IMT-Solution.com			
Requirements	Microsoft Windows XP / Vista / Windows 7 (32 & 64 bit for FireWire- and USB cameras) I CPU: 3 GHz or 2 GHz multicore I RAM: min. 1 GB I graphics: min. 256 MB I interface: IEEE1394 Firewire a (OHCI Standard), USB 2.0 or USB 3.0			

iSolution FL / Auto Features of included application software as standard
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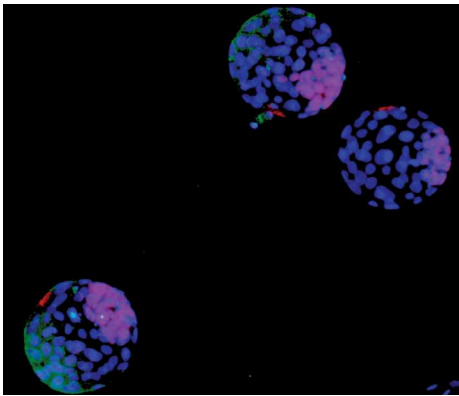Made in Germany, by Jenoptik Optical Systems GmbH

Fields of Application

Image analysis, documentation and archiving in micro- and macroscopy in the fields of:

- Fluorescence microscopy
- Macroscopy
- Life science, diagnostics
- Pathology & cell biology
- Phase contrast microscopy
- Material science, geology & mineralogy
- Quality control
- Forensics

Live Fluorescent Image Composition

Fluorescent Image Composition is done on Live. Camera settings are defined taking pictures for each filter combination. User can simply take pictures by the pre-defined camera. The fluorescent image composition result is seen with no time. It is really time saving work

Advanced Fluorescent Image Composition

There is rich list of 134 pre-defined dyes with the customized Adding Dye option together. The color also can be corrected with standard Windows color dialog box. Dye emission dialog box allows choosing desired emission wavelength in nanometers and correspondent color will be calculated automatically. Window size is adjusted by simple mouse drag. Intensity control allows specifying weight strength of the image in the final merged images.Offset controls are to correct disposition of one image relatively another.

Z-Axis Extended Focus Imaging (EFI), with displacement compensation for stereo microscopes by sub-pixel accuracy

Samples with curves or of varying heights are difficult to bring into focus under highly magnified conditions. And more a stereomicroscope takes images with tilting due to its own structural characteristics. Thus, each image is out of its supposed position when you move microscope to the Z-axis getting the right focus. Our displacement compensation function allows you to rearrange these images automatically and manually. Software can combine a stack of images sequentially captured at different levels of focus and combine them into a single in-focus image. You can count on our software not to leave any trace of the composites. There are two different focus enhancement menus, fast and perfect using different theory each other. Sub-pixel accuracy focus enhancement gives better result with a little longer processing time.

Live image stitching

Without motorized control stage, you can have the same performance.
Simply moving X/Y manual stage by hand, you can have the same performance result. There is no need capturing images at all. All are done on Live and Manual.

Auto and Manual Image Stitching... create a mosaic of the Big Picture

By Adjust Resolution option in calibration menu, all camera capture resolution may be used regardless of the image resolution which was used for calibration. Even different cameras can be used on the basis of the same calibration. All calibration is adjusted automatically even with different camera models and captured image resolution.

Time Lapse Capture and Movie File Production

Software features a Time Lapse Capture function that supports TIF, BMP and JPG file formats. The Time Lapse Capture function also includes an Auto Save feature by yyyy / mm / dd / hour / minute / second. You can save video movie recordings in AVI, MPG, MPEG, and MOV formats.

Shading Correction

The edge parts of captured image by low magnification have background shading frequently, which can be removed by the shading correction function. The color of the original image remains the same though. A standard image is acquired from a blank space on the slide glass, or from an out of focus image in a metallurgical specimen. Such a standard image is used to correct the background shading of all other captured images.

Annotation Line, arrow, polyline, spline, rectangle, ellipse, text

Automatic Calibration Adjustment

By Adjust Resolution option in calibration menu, all camera capture resolution may be used regardless of the image resolution which was used for calibration. Even different cameras can be used on the basis of the same calibration. All calibration is adjusted automatically even with different camera models and captured image resolution.

Intensity measurement

Cells having irregular form with congregation can be counted automatically. By a simple mouse click all cells are counted with intensity measurement..

Count and Size

With IMT software you can auto-detect specific objects within an image in order to find the total number of objects in the image and extract the data. By dragging the mouse, you can detect objects and generate a wide variety of data. With IMT software the timeconsuming Count function has been refined to a simple mouse click, with unparalleled speed and accuracy for data output. IMT software offers a variety of measurement tools that allow you to easily measure an object's area and perimeter. IMT software measurement tools include equal circle diameter, ribbon length, line length, Circle SF and Ellipse SF. In addition, IMT software feature automatic output of statistics, sorting of measured data objects, creation of data tables for images, auto revision of extracted objects, auto separation of composite objects, auto image and data import to Excel.

Live Measurement and Overlay Settings

One pixel control measurement for the best accuracy

Measurement accuracy is enhanced remarkably. One pixel accuracy is guaranteed.
Using keyboard arrow key, user can move the mouse point one pixel by one pixel.

Manual Measurement Tools - Including Various Perpendicular Distance

Export Into Excel - with one mouse click

A single mouse click exports the original image with measurement, calibration, annotation overlay, measurement data, statistics, and chart.