Introduction to iWorks

Professional Image Analysis Software

For Pixera Pro D/DM Series Cameras

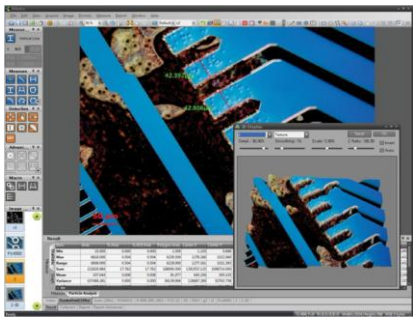
pixera

iWorks Series

Professional Image Analysis Software

iWorks is the microscopy application software for Pixera ProD/DM cameras with advanced technology. Measuring, analyzing images under a dynamic user-friendly interface, multi lingual support with most advanced biological, metallurgical imaging solutions. iWorks makes it easy to acquire images, count, measure, fluorescence imaging, image tiling, time lapse, 3D display, grain analysis, classify objects, and automate your work.

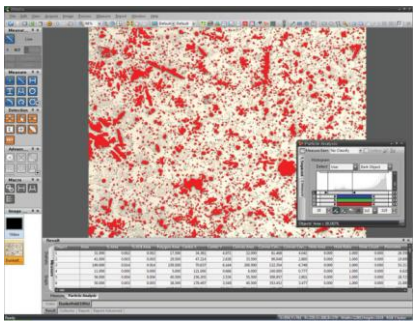
iWorks Material M



iWorks Material is the premium software program of the iWorks series, including all functions found in the iWorks Series.

- Auto Edge-Detecting Tools
- Extended Image Tiling, Multi-Focus
- Cast Iron Analysis
- Non-metallic Inclusion Rating Analysis

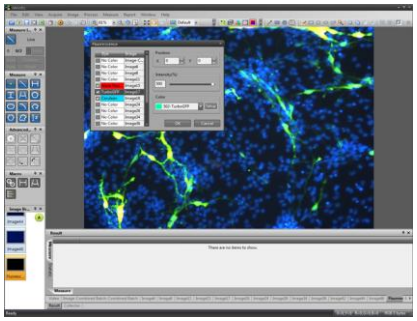
iWorks FG FG



iWorks FG is the conversion version of iWorks FX with Grain Size Measurement.

- Grain Analysis (Intercept Line, Planimetric Counting, and Overlay Chart)
- Extended Measurement Tools

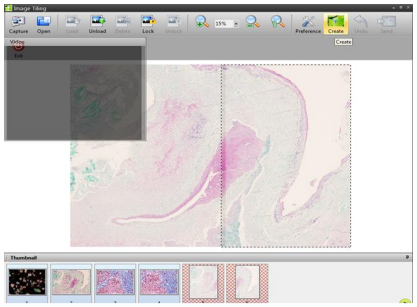
iWorks FX FX



iWorks FX is outstanding software for high-end biological specialists to perform digital-imaging.

- Auto Count/Measure objects
- Object editing/sorting with limit value
- Auto Calibration with Interactive Scale Marker
- Advanced AOI (Area-of-Interest) Manager
- Advanced Fluorescence Manager
- Pre-defined dye list
- Optional plug-ins available

iWorks Lite LT



iWorks Lite is the perfect solution for manual measurement with a high performance-price ratio.

- Basic measurement tools
- Export data to Excel, CSV
- Moderate imaging progress filter with 3D plot
- Image stitching, multi-focus
- AOI, Annotation, Scale Markers, etc.
- Time-lapse capture and movie recording

Plug-in Module

- Report Manager: Advanced report generator
- Automatic merging system: XYZ-axis image composition with motorizing stage
- Phase analysis: Measuring multi-segmentation images
- Motorized stage control, heating stage control, illuminator control

Applied Standards

* Grain Size Measurement Standards: ASTM E112(2000)
* Graphite Analysis Standards: ASTM A247, ISO945-1(2008), JIS G 5502(1995), KS D 0204(2007)
* Non- metallic Inclusion Rating Standards: ASTM E45-97(2002), ASTM E1122(11996), DIN50602(1985), ISO4967(1988), KS D 0204(2007)

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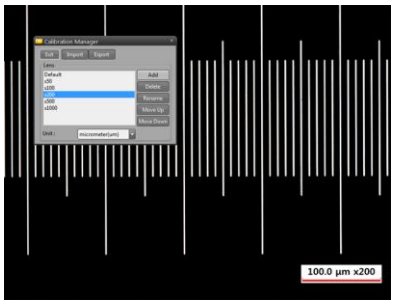
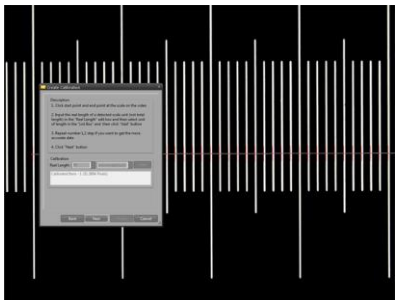
Basic Specification

Auto/Manual Calibration

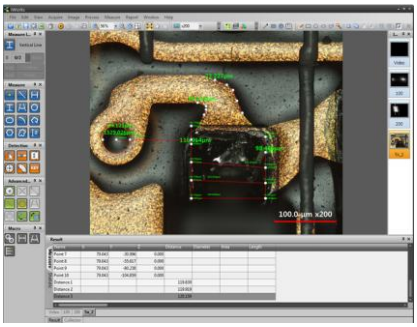
The basis of measurement is accurate calibration. Auto-calibration functionality allows the software to calculate the pixel per unit value automatically. Manual calibration is easily applied. All calibration settings can be saved as files to easily recover from unexpected calibration changes. Scale markers can be added to each image with customizable fonts, colors, sizes and background colors.





Live Measurement with Interactive Measurement Tools

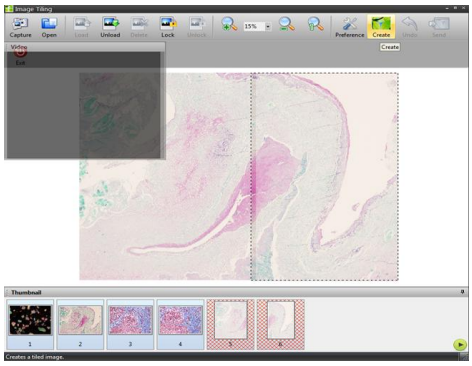
Using live measurement, you can measure an object without capturing an image. This feature saves time, as each data result automatically updates in the result window.

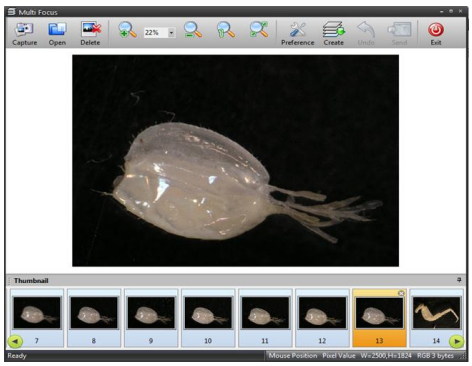


Twelve basic interactive tools assist with measurement. These tools can be customized by the user using macro tools or advanced measuring tools.

Advance Image Stitching & Focus Enhancement

With the image stitching feature, you can automatically or manually composite images to capture a wide field-of-view objects.



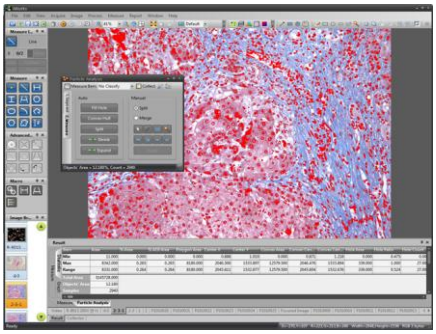


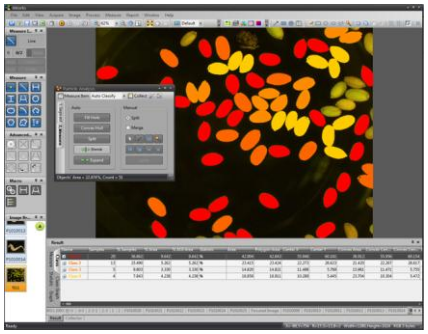
For thick objects with a deep focal depth, you can create images that are clear at any depth with the multi-focus function. Depending on your software version, iWorks may support stereoscopic multi-focus.

Advanced Specification

Auto Counting & Measuring Objects

Using iWorks software you can automatically detect specific objects within an image. With this simple process, you can detect over 30 geometrical figures and gather statistical data. For an exact data result, you can use the object editing function with multiple limit values.

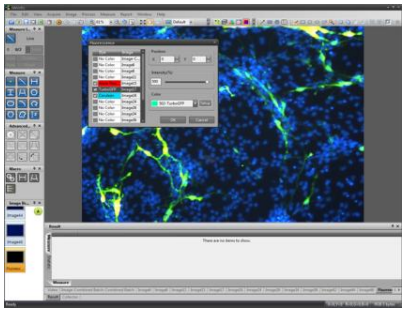


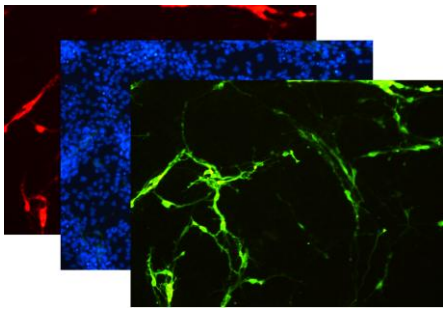


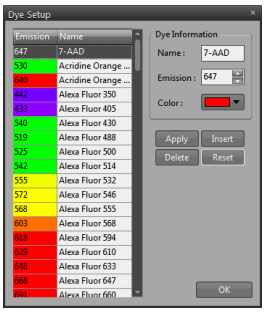
After measuring an image, you can classify each object with statistical data.

Advanced Fluorescence Image Manager

The fluorescence image composition tools come with a pre-defined dye list. You can shift the location of each channel and change the intensity values.

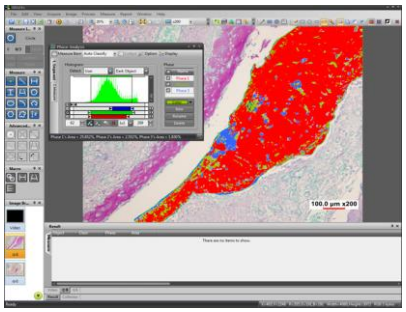


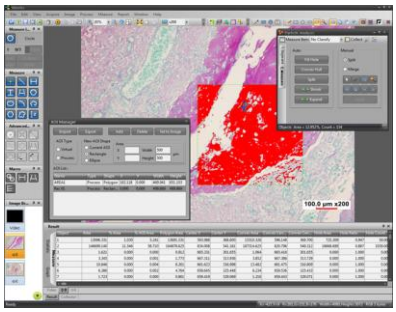


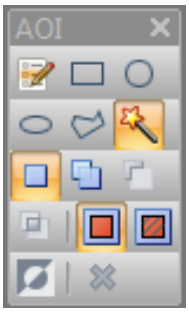


Phase Analysis & AOI Manager

iWorks supports phase analysis or particle counting of the whole image or within a specific area with the Area-of-Interest manager.

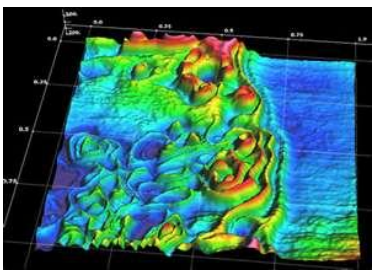






3D Visualization

Three-dimensional images are created based on luminance intensity levels. 3D images can be rotated 360 degrees. When captured with a motorized stage that provides XYZ-data output, iWorks can associate accurate measurement data with the 3D image.



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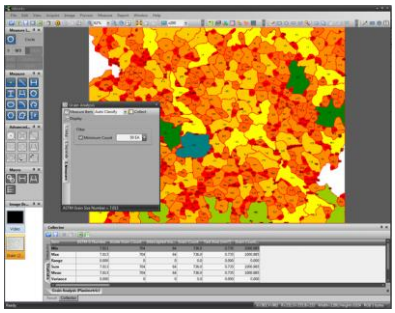
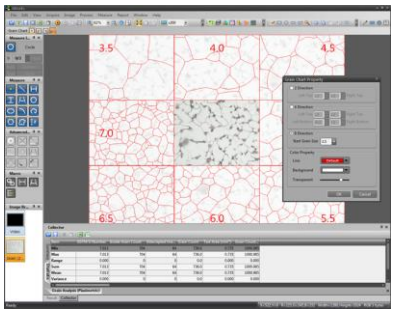
Plug-in Specification

Grain Size Analysis

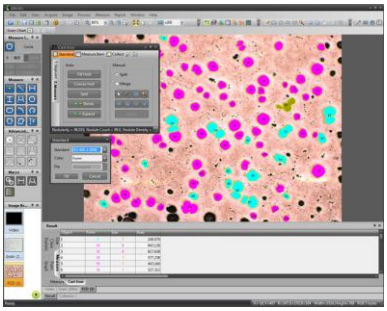
This function assists you with measuring a structure analysis based on the ASTM E112 (2000) standard. There are three types of grain size measurement methods: Intercept Line, Planimetric Counting, and Grain Chart Navigator. These three functions facilitates getting data from each structure or standard grain numbering from the whole image.

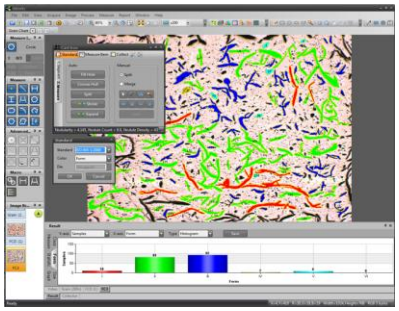


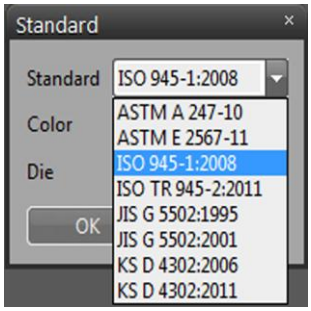


Ferrite in Cast Iron & Graphite Analysis in Nodular Cast Iron

The percentage of ferrite & pearlite area is easily calculated by using the auto-measuring function. Furthermore, iWorks supports the ASTM A247, ISO94501 (2008), JIS G 5502 (1995), and KS D 0204 (2007) standards for analyzing graphite types, shape, size nodularity, and distribution of graphite inclusion in cast iron.







AMS Systems with Motorized XYZ Control

iWorks AMS control an XYZ-motorized stage for analyzing large objects. This function provides continuous automatic analysis with a macro setting in the software. iWorks supports AMS(Automated Motorized System) with XYZ control. (e.g. Prior, Marzhauser).

iWorks M Series & H Series

iWorks M Series are specially designed for measuring microscopes. We support various microscopes (e.g. Nikon, Olympus, Mitutoyo). All hardware that provides an RS-232C communication port is compatible. iWorks H Series are specially designed for Micro-Vickers Hardness Testers.

iWorks Feature List

Model	EX	LT	FX	FG	Material
Model Description	Basic Version	Multi Function Version	Biomedical Advanced Version	Industrial Advanced Version	Metallurgical Analysis Version
Applicable Users	All types of users	All types of users	Users who need fluorescence imaging and auto measurement	Users who need auto measurement, custom measurement, and grain analysis	Metallurgical specialists in a university or company
Functions	Basic Measurement	Basic Measurement	Basic Measurement	Basic Measurement	Basic Measurement
				Advanced Measurement	Advanced Measurement
	Manual Calibration	Manual Calibration	Auto Calibration	Auto Calibration	Auto Calibration
	Scale Marker	Scale Marker	Scale Marker	Scale Marker	Scale Marker
	Fixed Macro	Fixed Macro	Fixed Macro	Custom Macro	Custom Macro
		Reflected Light		Reflected Light	Reflected Light
			Back Ground Correction	Back Ground Correction	Back Ground Correction
			Overlay	Overlay	Overlay
	Time Lapse	Time Lapse	Time Lapse	Time Lapse	Time Lapse
		Excel Report	Excel Report	Excel Report	Excel Report
		Split/Merge Planes	Split/Merge Planes	Split/Merge Planes	Split/Merge Planes
			FL Merge		
		Multi-Focus	Multi-Focus	Multi-Focus	Multi-Focus
			Stereoscopic Multi-Focus	Stereoscopic Multi-Focus	Stereoscopic Multi-Focus
		Image Stitching	Image Stitching	Image Stitching	Image Stitching
			AOI Manager	AOI Manager	AOI Manager
			Auto Counting	Auto Counting	Auto Counting
			Object Editing	Object Editing	Object Editing
				Grain Analysis	Grain Analysis
					Cast Iron
					Phase Analysis

Pixera Pro D/DM cameras

iWorks software is designed for the Pixera ProD/DM cameras.

Pro300D/Pro500D/1000D/1400D (color digital microscope cameras with 3M/5M/10M/14M pixels)

Pro300DM/500DM/1000DM/1400DM (monochrome microscope cameras with 3M/5M/10M/14M pixels)

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