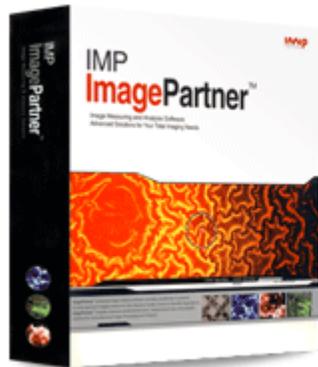


ImagePartner Features

ImagePartner™



ImagePartner™ Image Measuring & Analysis

ImagePartner™ is an advanced Image measuring and processing software providing powerful easy-to-use solutions for Image Analysis. With ImagePartner™, you can process various unique solutions in Image Measuring, Processing, Analyzing, and Managing.

Specific functions such as Auto Count function are provided in plug-in module types for more professional and diverse Imaging Solutions.

Minimum | Pentium II 750Mhz, 128Mb RAM, 8Mb High Color(16Bit)
Maximum | Pentium IV, 512Mb RAM, 32Mb True Color (24 or 32Bit)
OS | Windows NT/2000, Windows XP, Windows 7

Imagepartner_Lite™

- All TWAIN / WDM Supporting devices
 - Analogue CCD Camera, Digital Camera and etc.
 - Full screen mode
 - Live video recording
 - Multi frame capture
-

- Open images from local disks and other applications
 - Basic editing functions - copy, paste, undo/redo, cut and etc
-
- User convenient environment with component window system
 - Measurement tool, Annotation tool, Navigator / zoom / thumbnail / measurement report windows
 - Zooming dialog : simple zoom function by one touch wheel scroll
 - Insert text : Insert and flatten text on the captured image
 - AOI Selections : Flexible AOI(Area of interest) settings for copy & paste



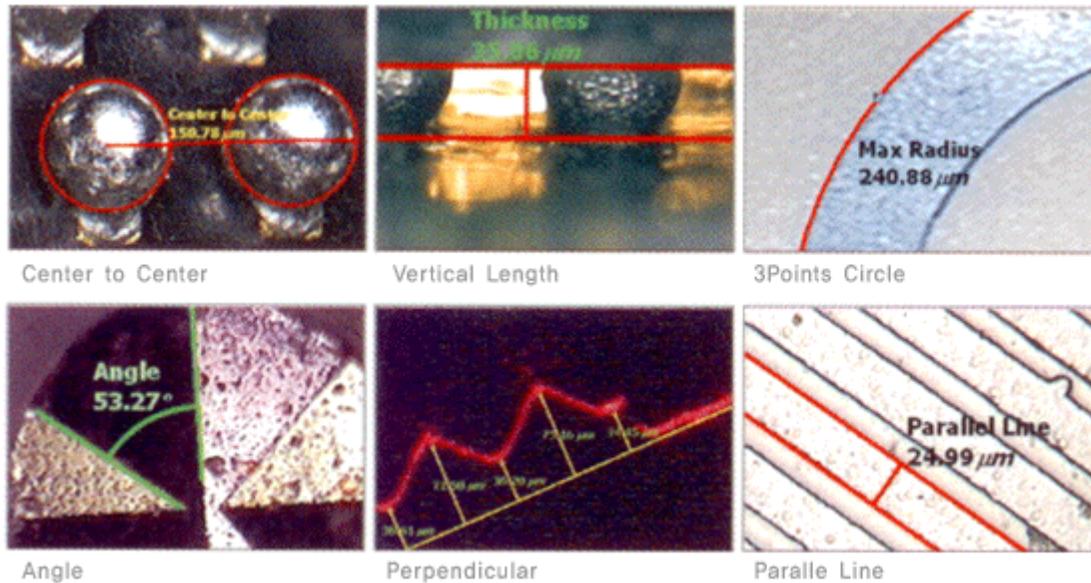
Zooming dialogue



Insert text

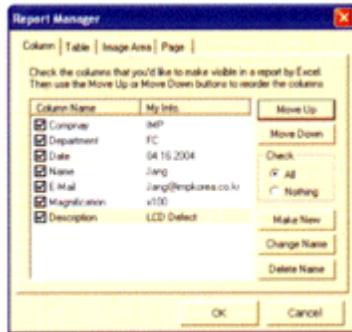
- Length : Line, Point to point, Point to point, Perpendicular, Das, Poly line, Center to Center, Best fit, Diagrams tools to measure objects in the Image Length, Height, Width, Area, Angle, Location
 - Circle: Circle, Center circle, 3 Points Circle
 - Angle: 2 line angle, 3 points angle, Curvature(굴곡률)
 - Area : Arc, Rectangle, Polygon

- Etc : Target, Point
- Support Auto-color rotation
- Modify text, line style format

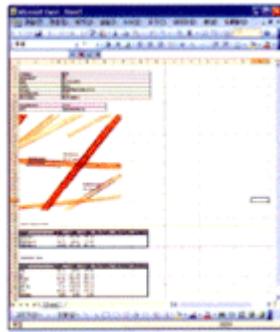


- Support send to excel
 - Statistic mode : Max, Min, Average and etc
 - Backup sheet window for important data insure
 - Send to clipboard / Notepad : Measurement data
 - Report manager : transfer statistics data, text and images to excel

- Send email : image with or without flattened measurement data

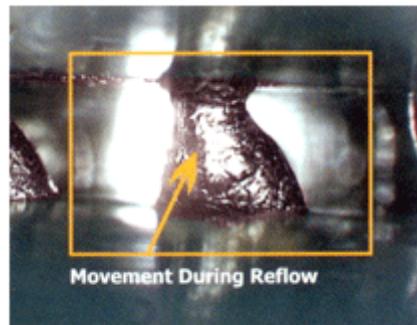


Report Manager



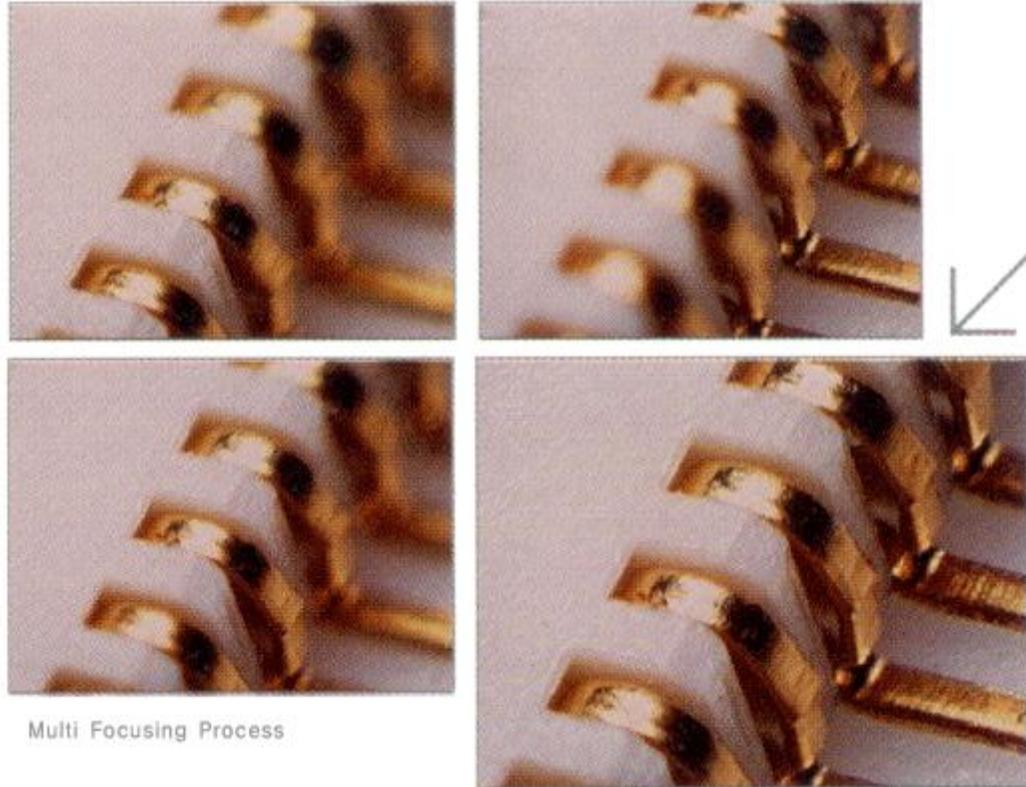
Excel Export

- Describes image with various text and others tools.
 - Live overlay for X-Y cross-line indicator
 - Position / Box / Marker / Area
 - Grid for pixel or calibrated unit



An Image with Line and Text annotations

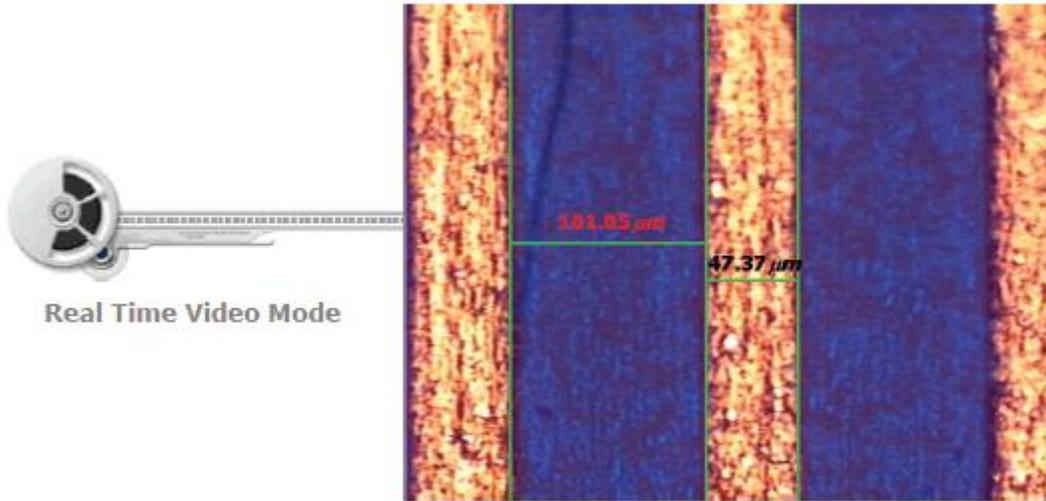
- Overcomes the focal-depth problem and provides one clear multi-focused image
 - Combines different focal-depth images into one multi-focused image

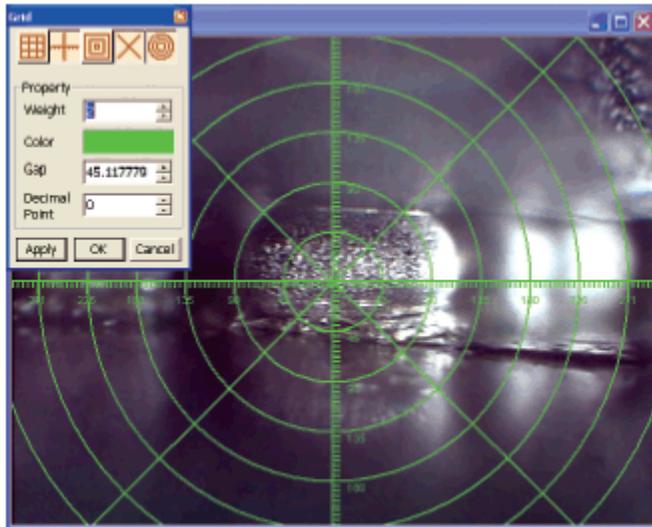


- Display Scale-Bar over the image.
-
-

Imagepartner_Standard™ (Includes Imagepartner_Lite™ functions)

- You can measure real-time on Live video

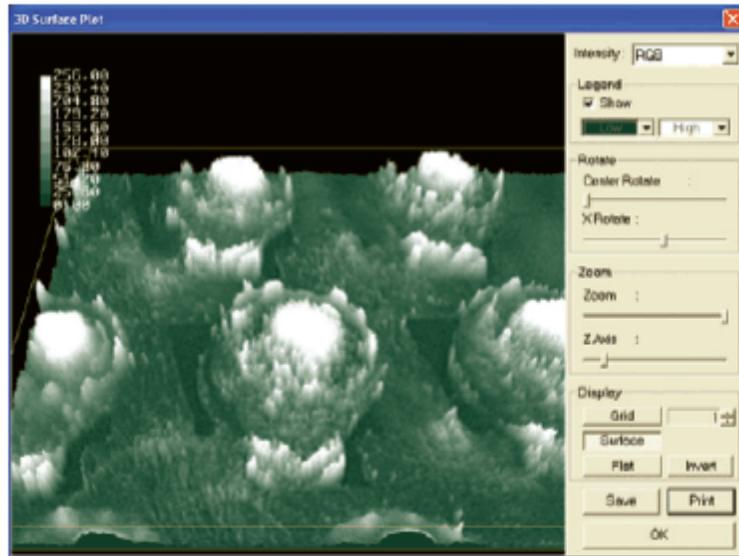




Combination of plural grids

-
- **3-Dimensional feature of image**
 - Luminance intensity level
 - Intensity : RGB planes based
 - Legend : Intensity level / Color
 - Rotate : Center / X axis
 - Zoom : Whole size / Z axis

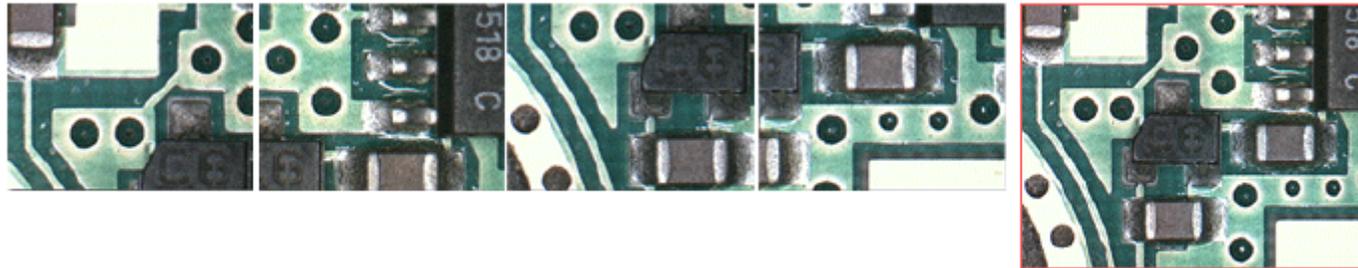
- Display : Grid / Surface / Flat / Invert



3D Surface Plot Window

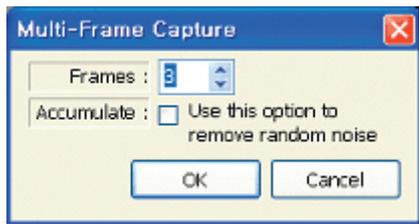
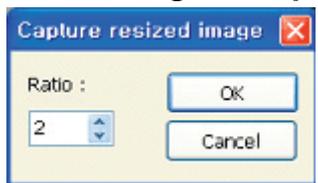
- Overcomes the visible size limitation in high magnification
 - Provides one large image in high resolution
 - Tiling small captured are into one large image
 - Supports both captured image mode / real-time video mode

- Mmanual tiling / Auto tiling

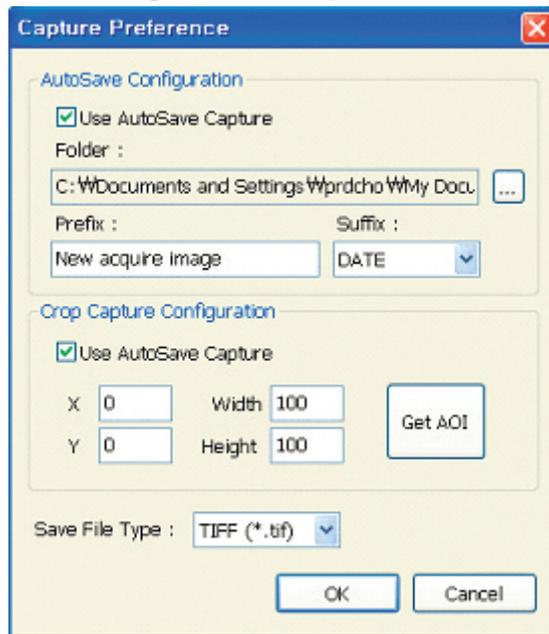


[All mosaiced image]

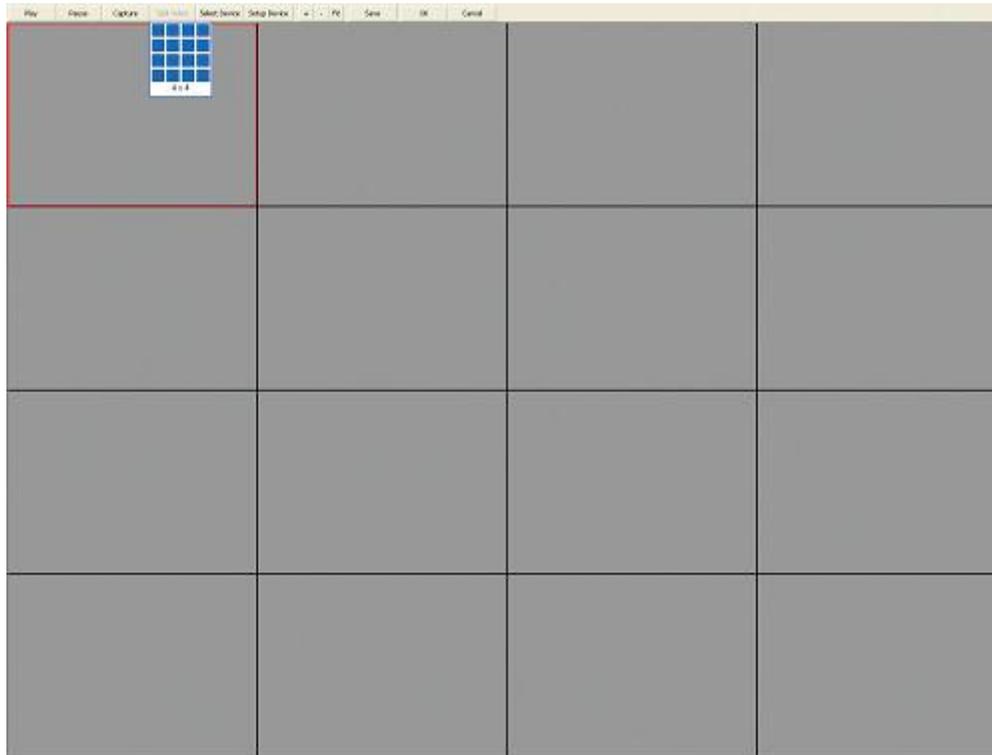
- Resize image at captured automatically



- Save image file at captured automatically.

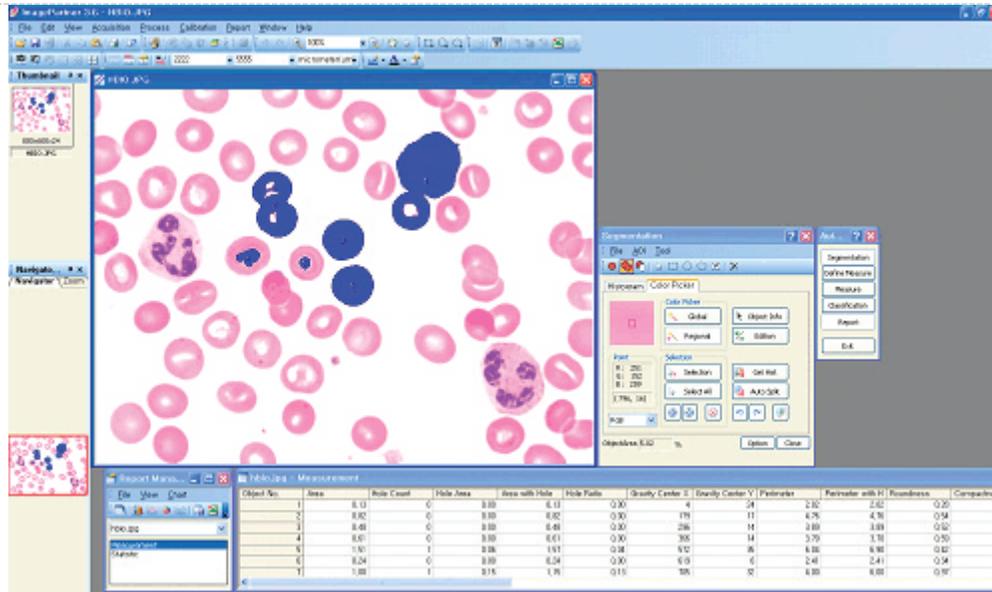


- **Allows multi-view with live video.**



- **Supported record video.**
 - **Color Enhance**
 - **Split Planes, Image Filters, Merge Planes**
-

Imagepartner_Auto™ (Includes Imagepartner_Standard™ functions)



- Auto count
- Various Analysis chart
- Microsoft excel support

hb10.jpg - [100%]

Classification

Target: Measurement
Criterion Item: Area

Color: Default

Auto Count: 7
 Manual Count: >

Intelligent Adjustment

Classify Close

hb10.jpg - Measurement

Object No.	Class No.	Area	Hole Count	Hole Area	Area with Hole	Hole Ratio
1	1	0.71	0	0.00	0.71	0.00
2	2	0.59	0	0.00	0.59	0.00
3	3	0.48	0	0.00	0.48	0.00
4	4	1.30	2	0.14	1.44	0.10
5	5	0.22	0	0.00	0.22	0.00
6	6	0.12	0	0.00	0.12	0.00
7	7	0.99	1	0.21	1.09	0.19

Report Manager

hb10.jpg - Classification

Class No.	Object C	Object S	Area S	AGS S
1	12	4.12	1.59	15
2	9	16.19	0.90	16.5
3	5	16.12	0.41	6.4
4	2	4.01	2.91	2.8
5	1	1.69	1.21	1.2
6	1	1.19	1.14	1.7

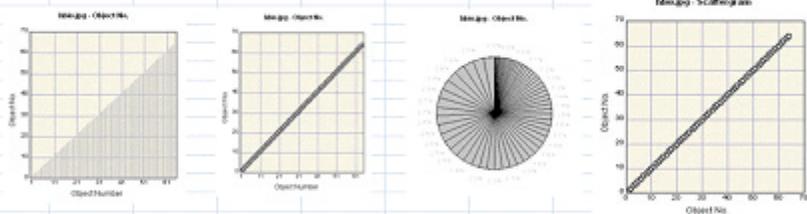
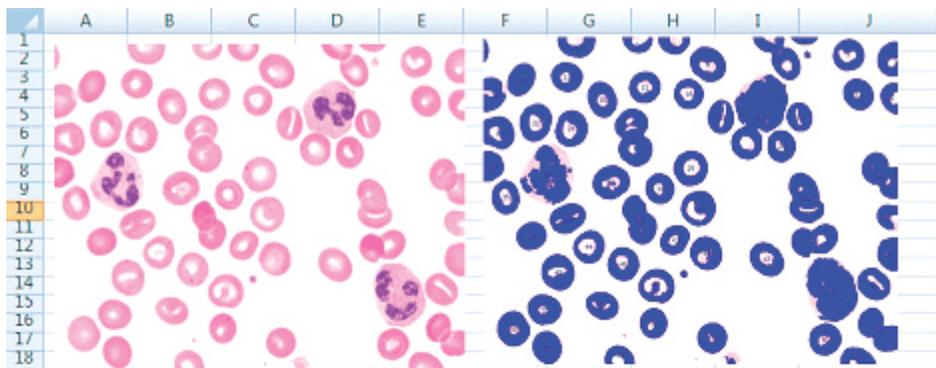
hb10.jpg - Histogram

Criterion: Class No.

hb10.jpg - Histogram

Weight - Class No.

Search Close



Measure Sheet

Object No.	Area	Hole Count	Hole Area	Area with Hc Hole Ratio	Gravity Centri	Gravity Centri	Perimeter	Perimeter with Hole
1	0.71	0	0	0.71	0	179	18	4.36
2	0.39	0	0	0.39	0	296	14	3.49

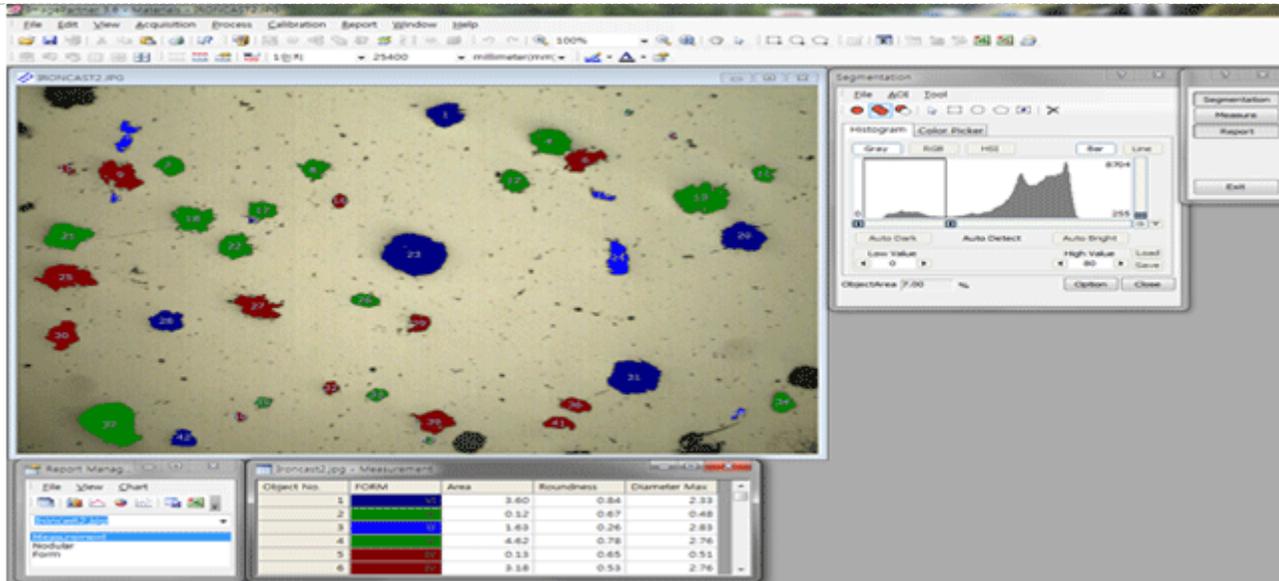
Classification Sheet

Class No.	Object Count	Object %	Area %	ACL %	Mean Value	Min Value	Max Value
1	12	4.73	1.59	1.59	0.25	0.02	0.52
2	38	55.19	18.5	18.5	0.9	0.62	1.09

Statistics Sheet

Statistic	Area	Hole Count	Hole Area	Area with Hc Hole Ratio	Gravity Centri	Gravity Centri	Perimeter	Perimeter with Hole
Min Value	0.02	0	0	0.02	0	3	5	0.46
Max Value	3.83	12	0.35	4.07	0.28	783	593	10.87

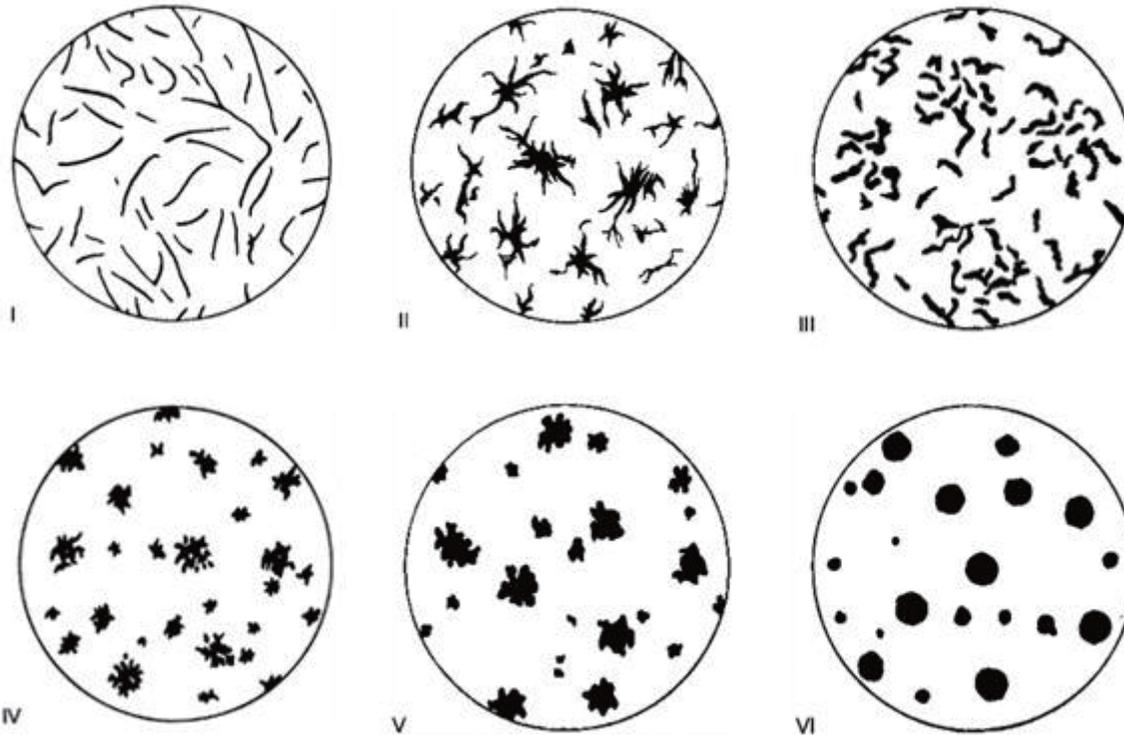
ImagePartner_Materials™ (Includes ImagePartner_Auto™ functions)



According to the standard of ASTM, JIS, KS, ImagePartner-Materials™ measure Nodular-graphite analysis through a microscope image analysis.

- >>> Main features of Nodular-graphite analysis
- Graphite roundness and size measurement

- Nodularity measurement
- Six step Standard Formclassification automatically



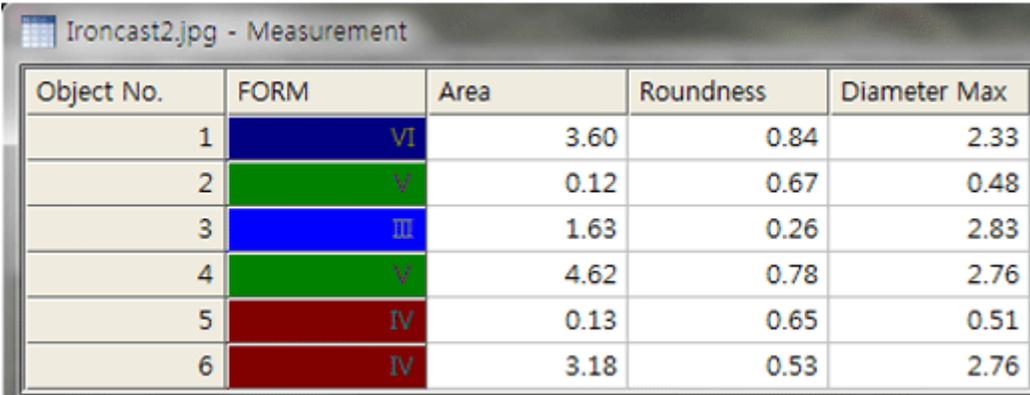
>>> Simple measurement method

1. Prepare the sample
2. Obtain a cast-iron image on the ImagePartner

3. From the tool bar, click cast-iron icon
4. Segmentation task: Use the section automatically assigned or you can select properly
5. Click [Measurement] button
6. Results for Measurement / Nodular / Form is generated

>>> [Measurement] Result

- Displays the object detection and the number of gigits written about it
- Display and classify standard shape classification of I~VI step by different color at each step
- Displays the area, roundness, maximum diameter of each of the object



Object No.	FORM	Area	Roundness	Diameter Max
1	VI	3.60	0.84	2.33
2	V	0.12	0.67	0.48
3	III	1.63	0.26	2.83
4	V	4.62	0.78	2.76
5	IV	0.13	0.65	0.51
6	IV	3.18	0.53	2.76

>>> [Nodular] Result

- Displays the ratio(%) and area of Nodular, Ferrite, Perlite
- Ratio of Nodular are highlighted in yellow because it is the most important factor
- In image, Ferrite area is a gray-area which is not nodularized and Perlite area is the other

Ironcast2.jpg - Nodular

	Ratio(%)	Area
Nodular	76	120.64
Ferrite	93.00	1601.92
Perlite	7.00	120.64

>>> [Form] Result

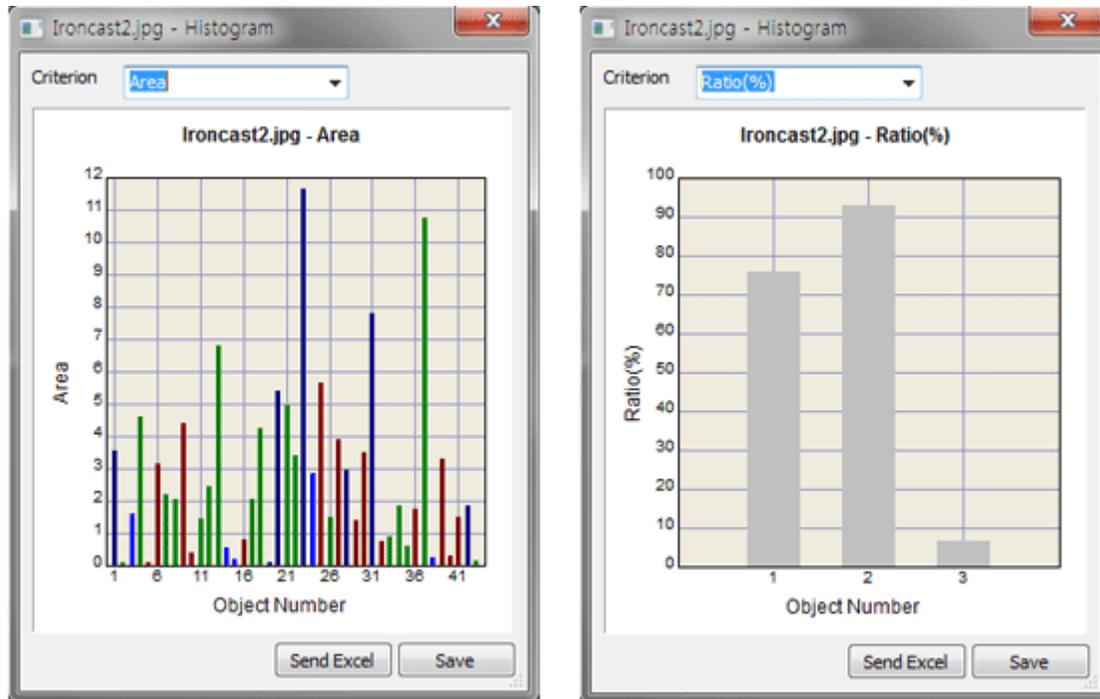
- Displays item count and ratio(%) of each form from I to VI steps

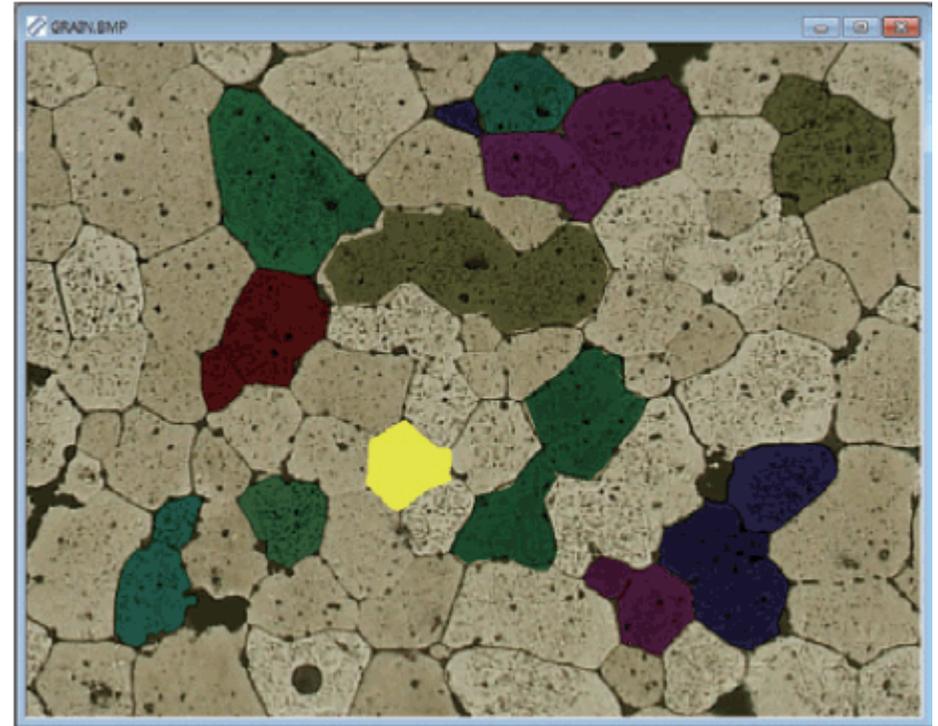
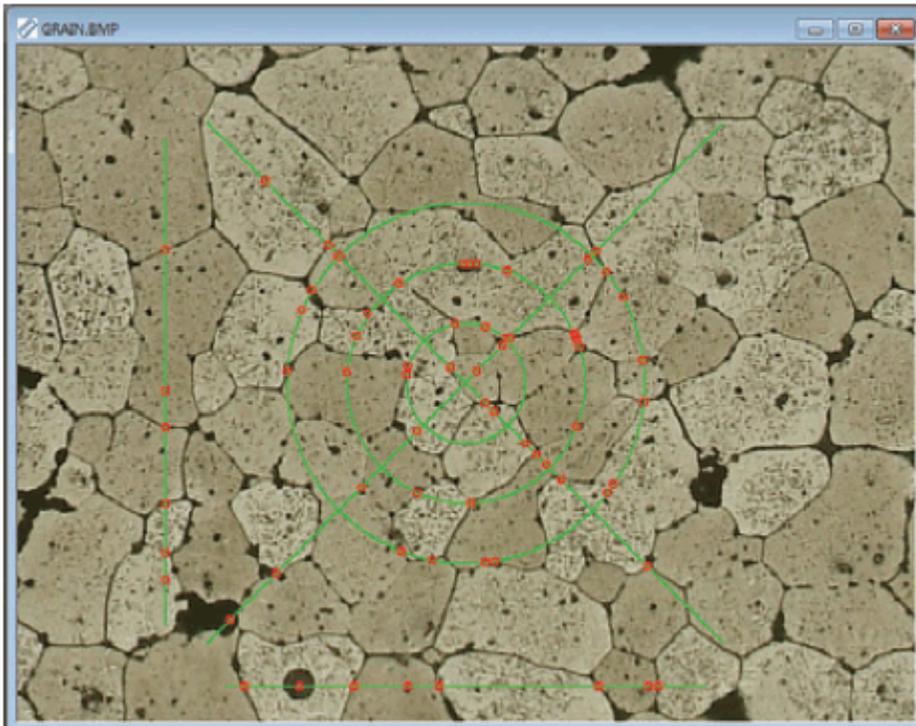
Ironcast2.jpg - Form

FORM	Item Count	Ratio(%)
I	0	0
II	0	0
III	5	6.01
IV	14	28.99
V	17	43.47
VI	7	21.54

>>> Display chart

You can get histogram graph as below





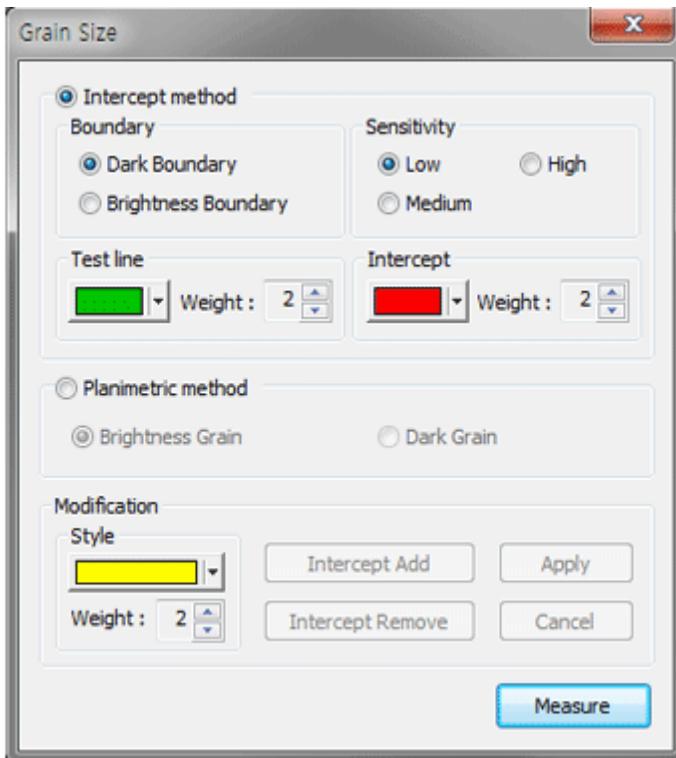
According to the standard of ASTM, JIS, KS, ImagePartner-Materials™ can measure Grain size and grain size Number. You can select one method out of intercept method or planimetric method.

>>> Main features of Grain size analysis

- You can measure easily and quickly through the most intuitive and simple user interface
- Provides Intercept method : ries can be calculated as the average lot is a way to use the Intercept,

as the number of detected crossing the line by the length of the ASTM test to measure the degree of grain

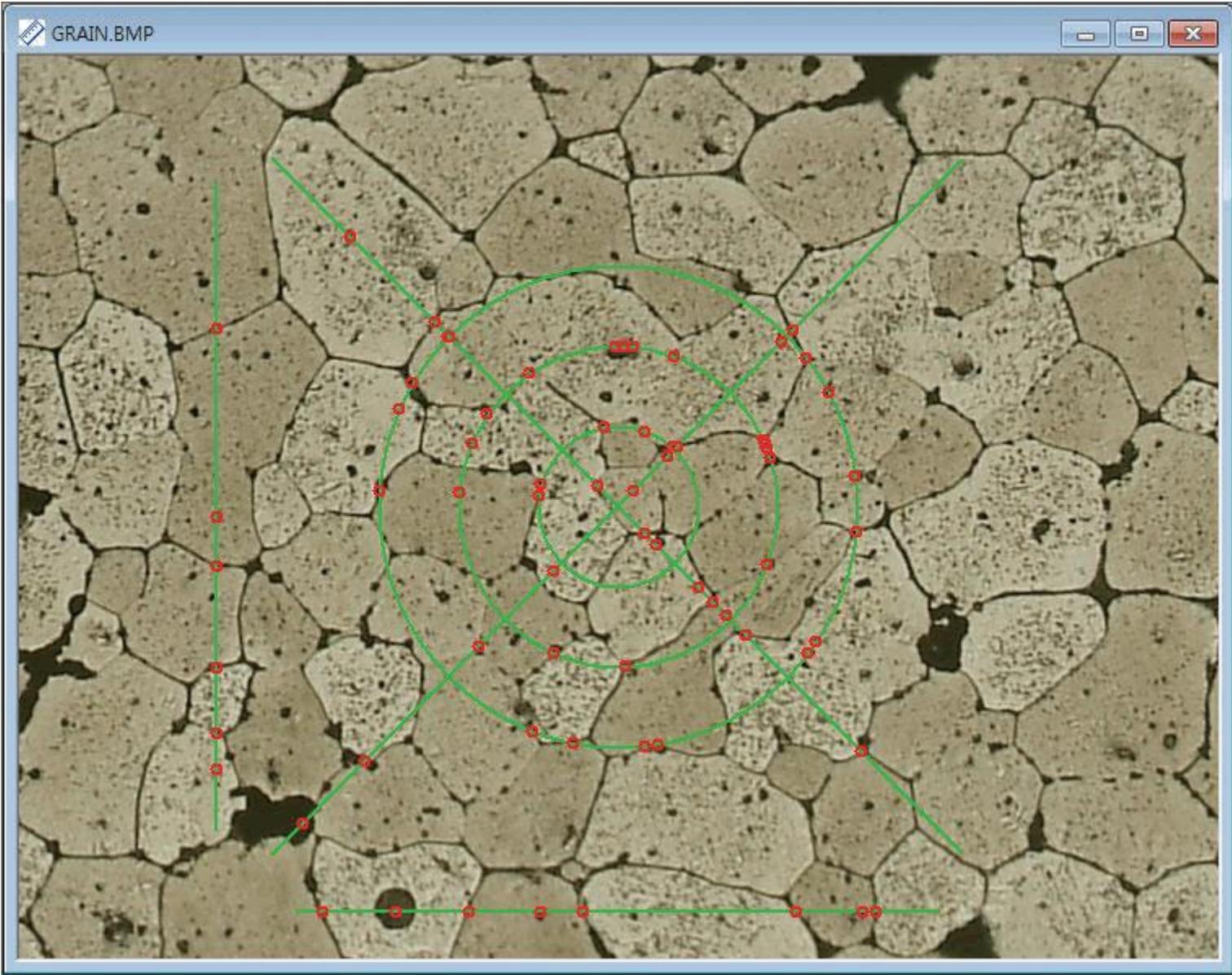
- Intercept method can be calculated directly, and is most commonly used.
- ASTM grain size number is measured by the length of the line and the number of the detected intersection point
- Provides Planimetric method : since using the average grain size and in accordance with ASTM E 112 standard, so you can easily and quickly measure without boundary reconstruction procedures.
- You can select one method out of Intercept method or Planimetric method.
- Automatic measurements can be modified.
- Provides Report Manager: measurement results and chart can be sent to Excel.



>>> Intercept method

- Auto extraction of Intersection point: automatically extracts Test line and the intersection point of grain boundaries
- Select the type of grain boundary (A dark border, bright boundaries) to be extracted.
- Select Sensitivity: Depending on the status of your image, select one of three kinds of sensitivity.

- **Display of Test Line : Test Line was established by ASTM .**
- **Three circles and four lines is automatically displayed in the range 90% of the image.**



ASTM Grain size number	Total grain cross sectional area(mm ²)	Number of grains	Mean grain area(mm ²)
00	355.79	15	23.72

>>> Planimetric method

- In accordance with ASTM , calculate ASTM Grain size Number through the average size of grain.
- Select type of boundary: [light boundary / dark boundary]
- Displays extracted Grain in a translucent color .

