# EVIDENT™

OLYMPUS

Take Control of Your Microscope
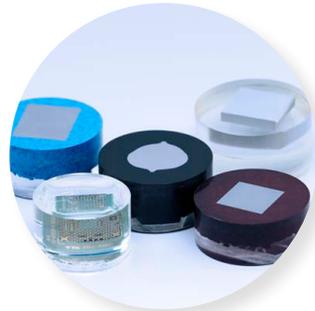
PRECiV™

## A Comprehensive Imaging and Measurement Platform

Simple-to-use PRECiV™ software gives you control over your microscope so that you can perform precise, repetitive 2D measurements during production, quality control, and inspection operations. Obtain results that comply with the latest industrial standards and create professional reports that can be easily exported to your company's network. With robust data sharing and security features, PRECiV software makes your workflow faster and more efficient.

Flexible, Easy-to-Use Imaging and Measurement Tools

Intuitive and Collaborative

The user interface is simple and easy to use, so you can start taking advantage of the software's powerful tools with minimal training. The navigation tab makes it easy to access the software's functions—such as observation, acquisition, and measurement—via large, clearly labeled buttons to quickly capture precise 2D measurements.
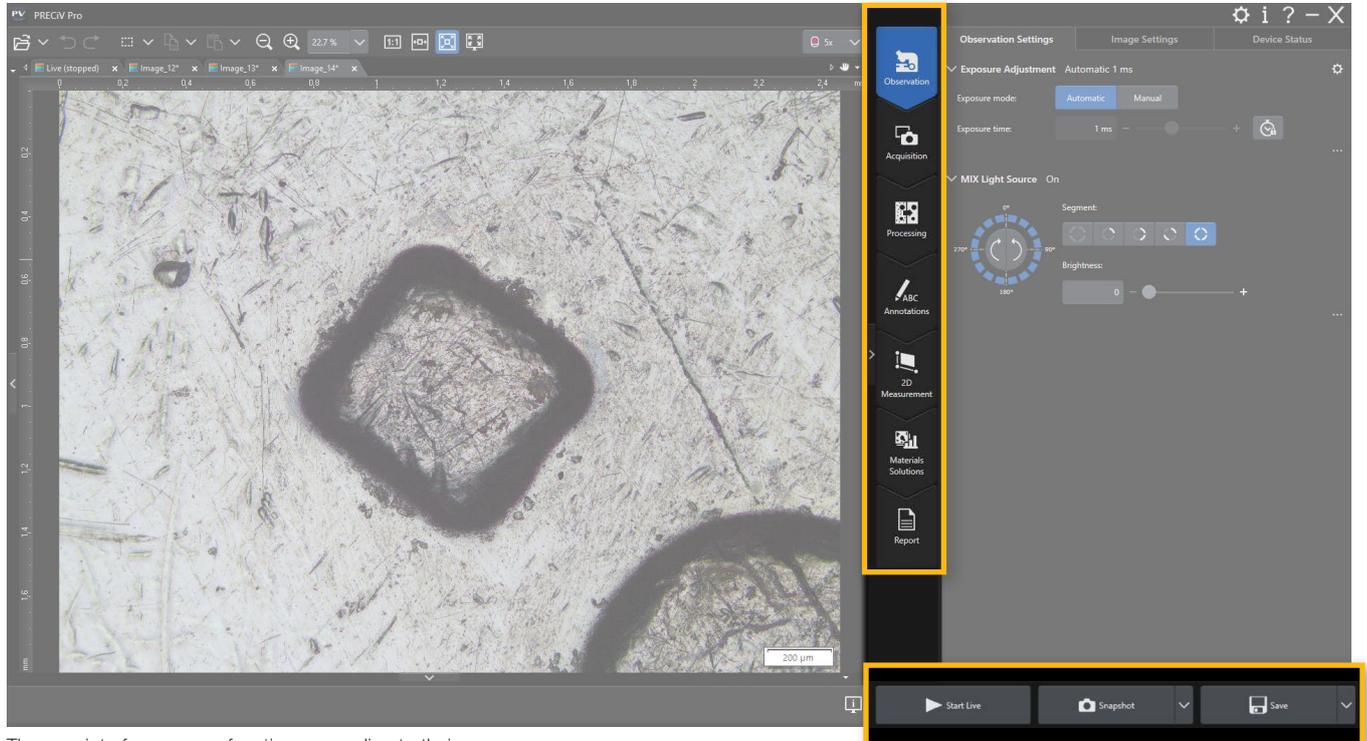
The user interface groups functions according to their purpose

Connectivity that Enables Efficiency

With a connected workstation, you can easily save images and configuration files to OneDrive or a network drive, receive automatic software updates and security patches, use a floating license, and upgrade to new versions. You can save and load images in multiple formats or save JPEG images with the calibration information for traceability. Sharing methods and configuration files—such as measurements, image processing settings, and materials solutions settings—between connected workstations makes it possible to get the right information in front of the right person quickly and easily.

Olympus can provide a Manufacturer Disclosure Statement for Medical Device Security (MDS²) that focuses on the NIST Framework for cybersecurity.

Save imaging conditions with the image

Save measurement parameters, files, and other settings (processing, materials solutions, annotations, etc)

Define user rights

Load the imaging conditions with the image

Load measurement parameter files and other settings (processing, annotations, materials solutions, etc)

Only authorized users can modify system parameters

Sharing results and methods over your network improves results and reproducibility

Simple to Use for Imaging and Measurement

Designed for Material Science

Don't compromise by using software designed for life science or other non-industrial applications. PRECiV™ software is designed to work the way that you do with optional Materials Solutions that will guide you through a succession of steps—from image acquisition to standard compliant measurements and reports—in most popular materials science applications.

Powerful Imaging Tools

The software supports brightfield, darkfield, MIX (directional darkfield), polarization imaging, and differential interference contrast (DIC), while its robust color rendering and resolution provide the high-quality images required for industrial applications. It also has convenient tools that enable you to optimize the live image, including live high-dynamic range (HDR) imaging, anti-glare, a digital reticle, and a focus aid.
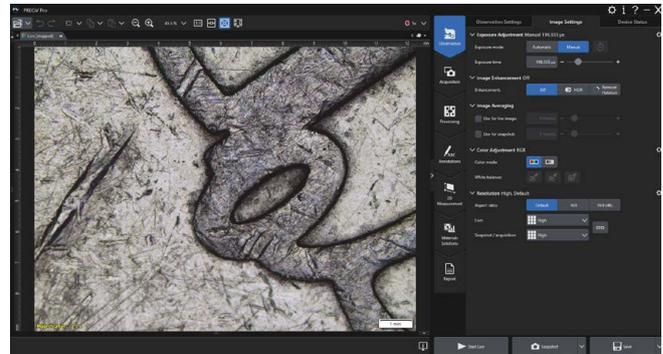
Control the live observation conditions for outstanding images

Requires Minimal Training

For new users, the advanced settings remain hidden, keeping the interface uncluttered. Experienced users can press the 'more' button to access all available features and functions. The home screen can be customized, enabling you to quickly access the functions that you use most often.
When you turn on the software, the live image starts automatically, so you can get right to work.
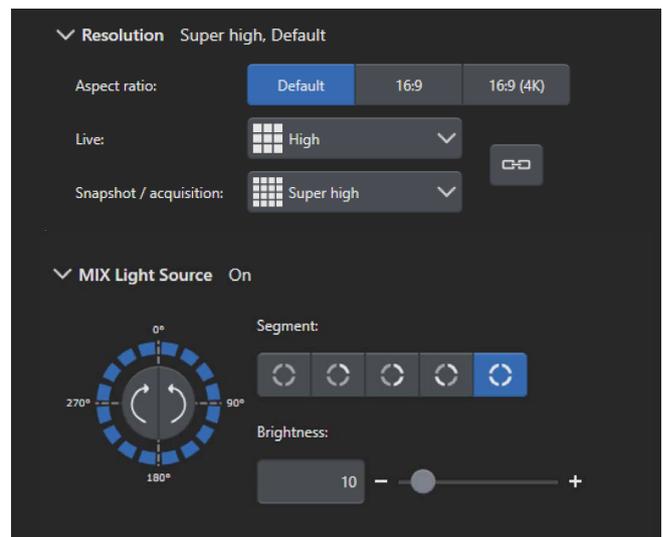
Easy-to-use functions make controlling the live image conditions simple and efficient

Acquire Combined Panorama and EFI Images with a Manual Microscope

The extended focal imaging (EFI) function enables you to obtain fully in-focus images by serially acquiring multiple images at different focal planes. The panorama function enables you to acquire images larger than the microscope's field of view by moving the stage across the sample. Using PRECiV software, you can now combine the instant EFI and panorama functions while keeping both hands on the microscope. A colored frame indicator shows the quality of each image being stitched together, while a split screen shows the live image and stitched image side by side.
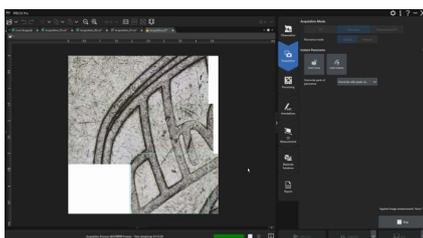
Easily access instant panorama mode to manually acquire panoramic images
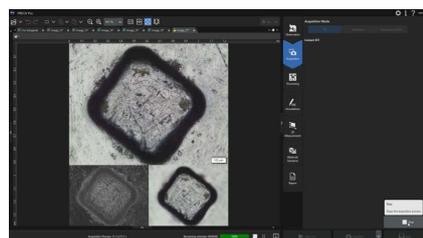
Instant EFI enables you to quickly acquire all-in-focus images manually
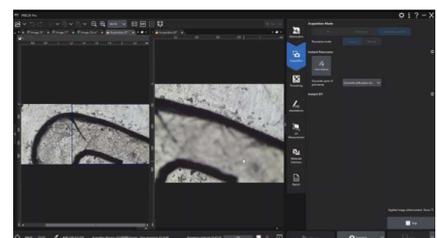
Combine the panorama and EFI functions to obtain large, fully in focus images

Repetitive 2D Measurements

PRECiV™ software enables precise, repetitive two-dimensional measurements on a live or recorded image through a combination of a simple user interface and powerful functions like auto edge detection,* which makes it easy to reliably measure the distance between points. Other helpful measurement features include:

• Edge-detected circles*

• Magic wand for automatic area detection

• Auxiliary lines* to easily make complex geometric measurements

• The ability to link objects to connect existing measurements

Measurement results can be compiled in a workbook and easily exported to Excel.
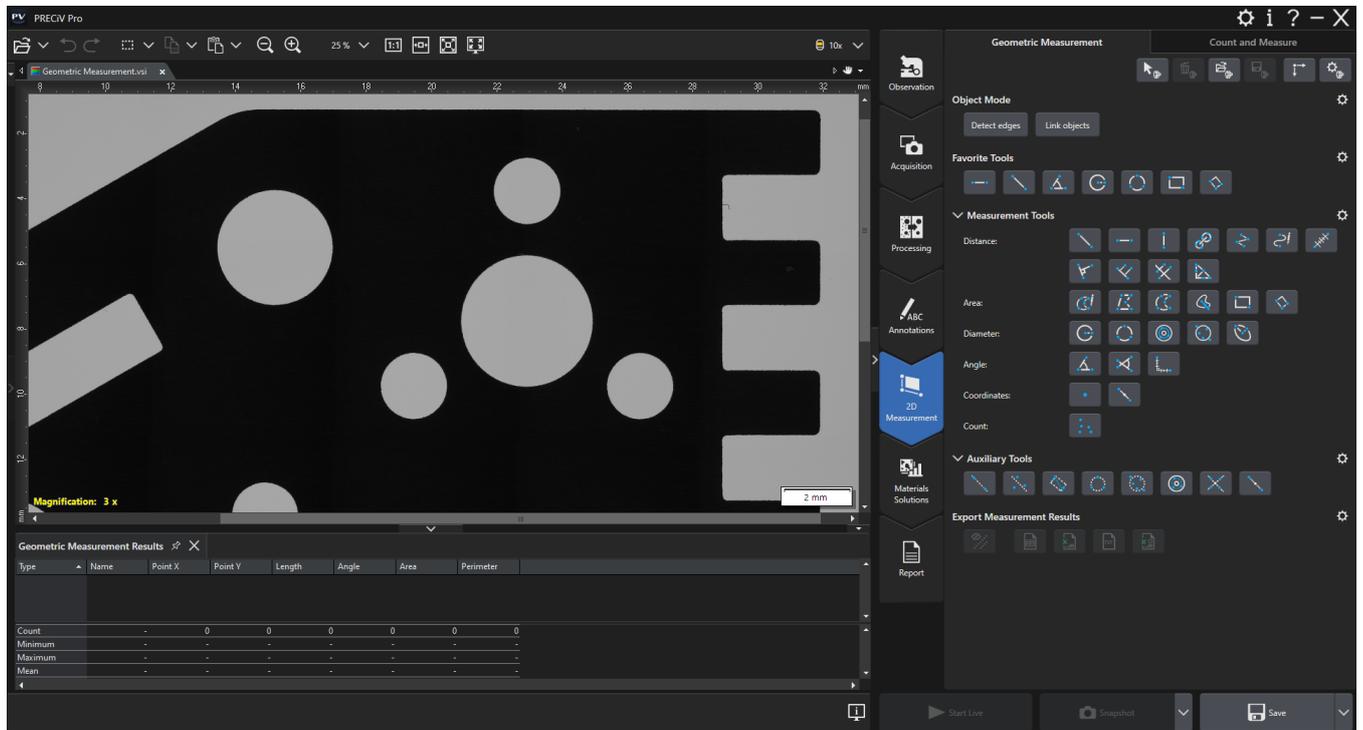

Helpful measurement functions include auto edge detection, edge-detected circles, and auxiliary lines

Guided Workflows for Compliant Measurements

Materials Solutions workflows for applications like grain sizing and non-metallic inclusions guide users through the steps required to acquire measurements that comply with the latest international standards, including ISO, ASTM, and JIS.


Materials Solutions guide users through each step, from image acquisition to creating reports that comply with international standards
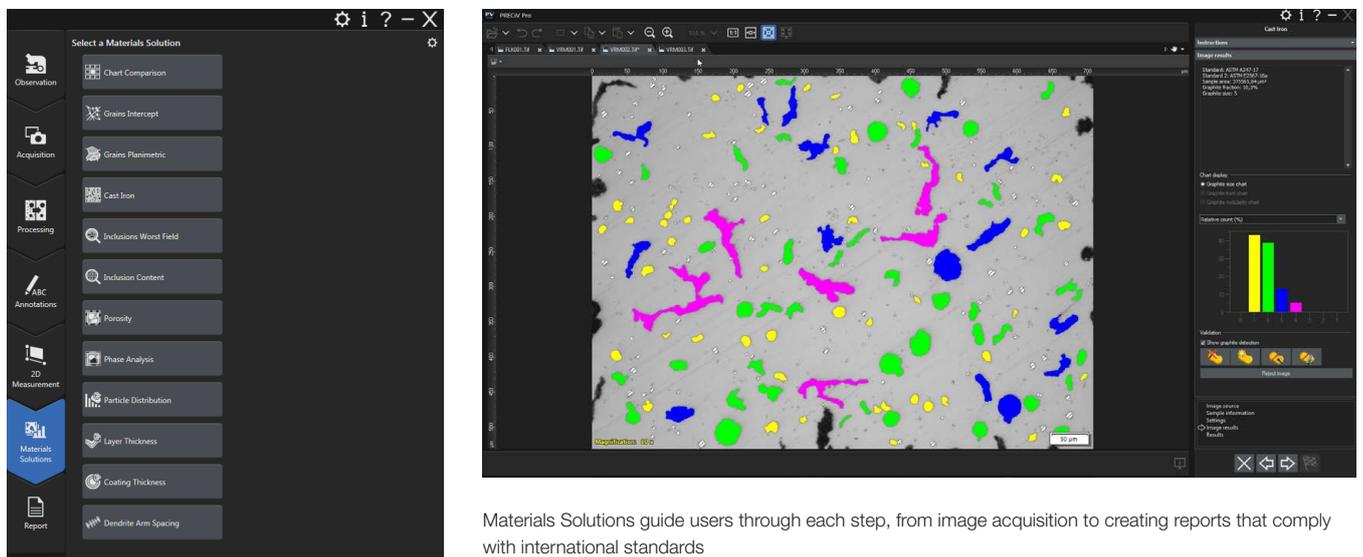
Modular and Versatile: Works with a Range of Imaging Conditions

Extend Your Microscope's Capabilities

The software is a comprehensive imaging and measurement solution for your microscopy lab no matter the brand or age of your microscopes. PRECiV™ software controls all Olympus conventional industrial microscopes, their coded functions, Olympus motorized nosepieces, and Olympus digital microscope cameras.

Stereo microscope

Optical microscope
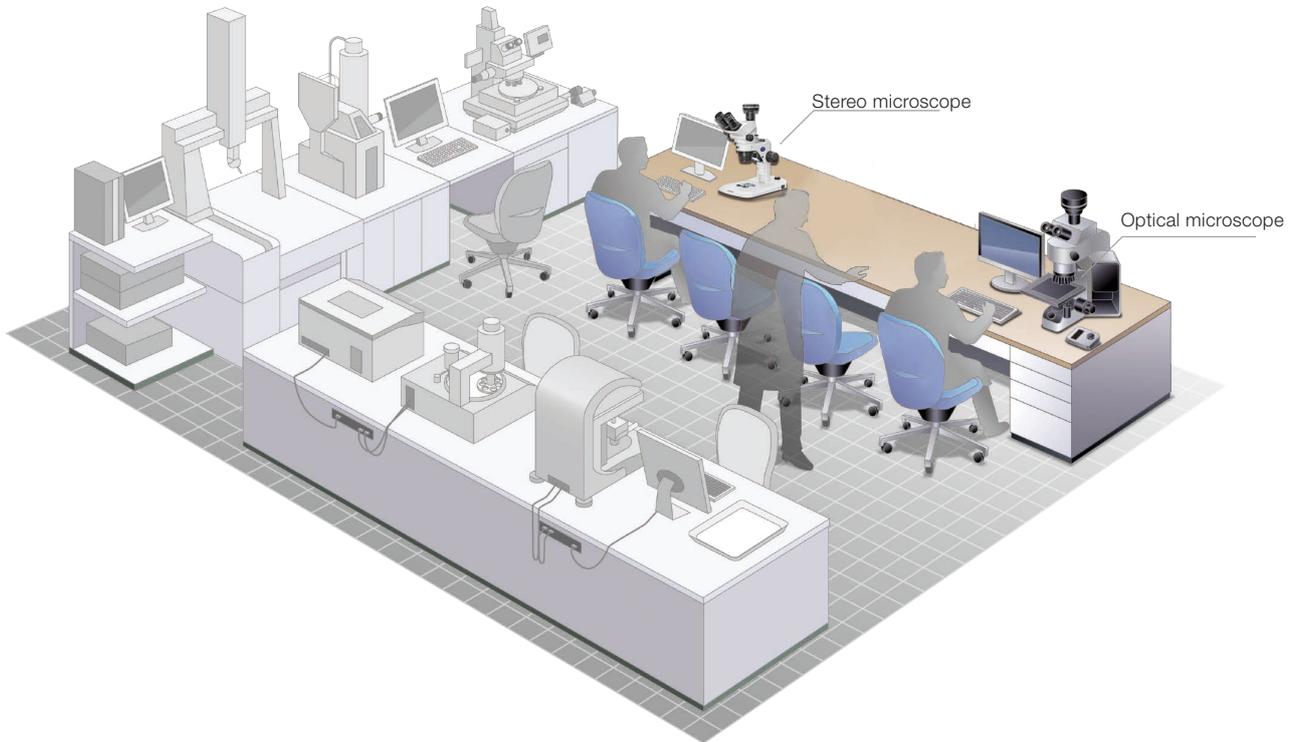
When your sample arrives in the lab, choose the right imaging instrument, perform imaging and measurement with PRECiV software, store your results, recall your measurements on other PRECiV workstations, create reports, and share your results

Easy Set Up

The software seamlessly integrates your microscope, Olympus camera, and accessories. When you install PRECiV software, all the necessary drivers are also installed, making it easy to change which Olympus microscope camera or accessory you're using.

Pick a microscope frame		Pick a camera	Pick an accessory	Pick a software solution
				Capture
				Desktop
Conventional	**Stereo**	• DP74	• U-MIXR	Core
• BX53M	• SZ61	• DP23	• C12741-03*1	
• GX53	• SZX7	• DP28	• VisiLED-RL	
• MX63	• SZX10	• SC180	Microscopy	
	• SZX16		Illumination*2	

Many combinations of hardware and cameras are available
*1 Made by HAMAMATSU PHOTONICS K.K.
*2 Made by SCHOTT

PRECiV Packa-

PRECiV™ software is scalable—different departments in your company can purchase a license for the level of software they require.

PRECiV Capture

PRECiV Capture is our entry-level package for customers who want to acquire digital images and make basic 2D measurements using their existing microscope, such as incoming goods inspection.

PRECiV Capture

| Observation	Processing	2D Measurements
Data Sharing		

PRECiV Core

Ideal for customers in QA labs and inspection rooms with a strong focus on images, PRECiV Core balances cost and features, adding extended focus images and measurement export capabilities for an excellent value.

PRECiV Core

Observation	Processing	2D Measurements
Advanced Acquisition	Data Sharing	

PRECiV PRO

PRECiV Pro has the complete set of features and functions, making it the most powerful and versatile version of the software. The Pro version has the tools required for customers in QA/QC, failure analysis, and anyone who needs to produce analytical reports and measurements to validate a sample or production lot.

PRECiV Pro

| Observation	Processing	2D Measurements
Advanced Acquisition	Collaboration	

PRECiV Desktop

The desktop version of PRECiV software is made for customers who want to post-process their data away from the microscope with all the available measurement and analysis capabilities, but without the camera and image capture controls.

PRECiV Desktop

Processing	2D Measurements	Collaboration
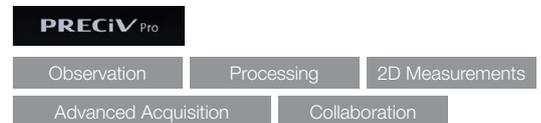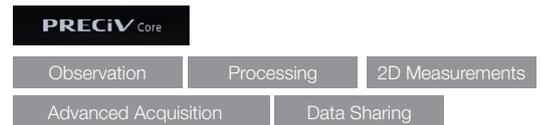
PRECiV™ Version 1.1 Specifications

	Capture	Core	Pro	Desktop
Image Acquisition				
Basic image acquisition from Olympus cameras, including auto calibration	O	O	O	X
Extended image acquisition, including HDR, and Live HDR/position navigator (with the DP74)	O	O	O	X
Halation removal using the MIX slider (microscope) or LED ring light (stereo microscope)	O	O	O	X
Extended Focal Image (EFI) using manual or instant mode	X	O	O	X
Large-size image acquisition (panorama) using manual or instant mode	X	◇	O	X
Combined EFI and panorama using manual mode	X	◇	O	X
Image and Customization Tools				
User interface with functions grouped by purpose	O	O	O	O
Overlay information layer (scale bar, cross hair, digital reticle)	O	O	O	O
Live zoom and annotations	O	O	O	O
Measurements / Image Analysis				
Basic interactive measurements (arbitrary line, circle-to-circle distance, polyline, freehand polyline, linear ruler, perpendicular line, freehand polygon, rectangle, rotated rectangle, 3-point circle, 3-point angle, 4-point angle, point coordinates, point counts)	O	O	O	O
Advanced interactive measurement, including auto-edge detection and auxiliary lines (arbitrary line, vertical line, horizontal line, circle-to-circle distance, polyline, freehand polyline, linear ruler, perpendicular line, multiple perpendicular lines, multiple parallel lines, throat thickness, freehand polygon, closed polygon, interpolated polygon, magic wand, rectangle, rotated rect-angle, 2-point circle, 3-point circle, edge detected circle, multipoint circle, rotated ellipse, 3-point angle, 4-point angle, angle ruler, point coordinates, midpoint, point count)	X	◇	O	O
Image enhancement filters (matrix filters, color and contrast adjustment)	X	O	O	O
Reporting				
Data export to an Olympus workbook	O	O	O	O
Data export to Microsoft Excel	X	O	O	O
Report and presentation creation in Microsoft 365 or Office 2019	X	◇	O	O
Device Support				
Olympus microscopes and Olympus cameras	O	O	O	X
3rd party SWIR camera	X	◇	◇	X
Optional Add-Ons				
Count and Measure for PRECiV	X	◇	◇	◇
Materials Solutions for PRECiV (e.g. Grain Sizing, Non-Metallic Inclusion, Cast Iron, Layer Thickness, Porosity, Particle Distribution, Coating Thickness, Phase Analysis, Dendrite Arm Spacing)	X	◇	◇	◇
Chart comparison on selected standards for grain size, graphite sizing, non-metallic inclusion, and hardened metals	X	◇	◇	◇

O Standard Feature; ◇ Optional Feature; **X** Not available

PC Requirements	
CPU	Intel Core i5, i7, i9
RAM / HDD	8 GB / 2.4 GB free space
Operating System	Windows 10 (64-bit); Editions: Pro. Pro for Workstations, Enterprise
.Net Framework	Version 4.6.2 or higher
Optimized resolution	1920 × 1080
License activation	By internet connection or code-based
Graphics card	64-bit graphics card with 2 GB RAM (compatible with CUDA 9.1 with special combinations)

Solutions for Manufacturing and Industrial Research

Olympus offers a comprehensive set of microscopy and software solutions for industrial applications, ranging from routine inspection to sophisticated analysis. Depending on your application, choose the microscope software that best fits your needs:

• PRECiV™ software: designed for manual microscopes and customers who primarily need to make 2D measurements
• OLYMPUS Stream™ software made for customers who utilize automated microscopy and advanced image analysis; optional TruAI™ deep-learning technology is also available to streamline repetitive analysis tasks

*Available in PRECiV Pro and PRECiV Desktop; optional in PRECiV Core

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