Vision ENGINEERING

FOCUSED | QUALITY

EVO Cam II
High definition digital microscope

CLEAR | EASY | FLEXIBLE

Excellent optical performance makes EVO Cam II a powerful imaging solution, with a range of options to ensure exceptional clarity for any application. Intuitive design simplifies operation and minimizes training requirements, making EVO Cam II a powerful and flexible tool, ideal for multiple applications, users and a variety of environments.

EVO Cam II is an easy-to-use high definition digital microscope, with a range of configuration options which make it suitable for wide variety of applications.

EVO Cam II' s unique combination of high quality image, ease of use, and flexible configuration to meet the demands of a range of tasks, is commonly used for quality and inspection activities in multiple industries, including: Electronics, Medical Device manufacture, Aerospace, Automotive, and Life Science.

EVO Cam II – powerful, flexible and easy to use – all the tools you need to simply and quickly achieve your quality goals.

Easy user set up

EVO Cam II offers two levels of user settings to ensure operators have the correct level of function access.

Simple to understand display- the on screen function description gives users information about EVO Cam II's controls in any one of 10 pre-loaded languages.

Easy teams set up- Minimize team setup time and ensure all your systems are configured identically by exporting the settings from your master EVO Cam II and share with the team. Store your settings files for later recall.

Powerful and effective tools deliver consistency, efficiency and ease to your quality system

Improve operator throughput, consistency, and quality standards with the right range of simple, effective capabilities including:

Instantly compare the difference between a recorded sample and the sample being inspected.

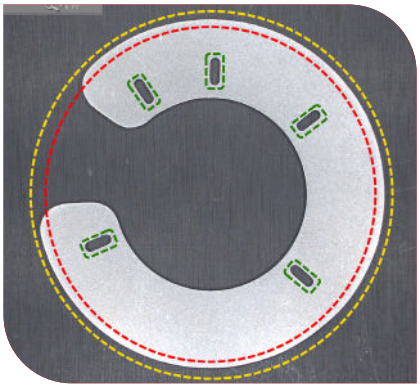
30:1 zoom ratio means magnifications from 10x to 300x can be accessed with a single objective lens.

Use hotkeys and shortcuts to quickly access functions.

Save the most commonly used camera settings with up to ten presets. Choose the optional remote control to improve user comfort and enable quicker access to preset system settings.

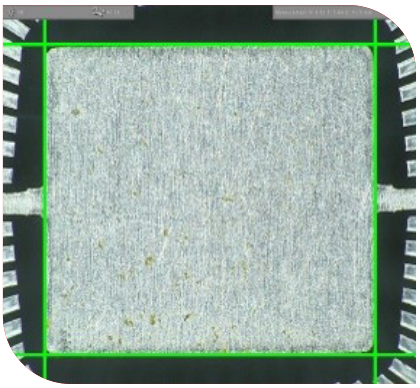
Use overlays for instruction, comparison or measurement by placing a partially transparent image over the top of the sample view.

Customize the zoom range to ensure the correct inspection settings.



Custom overlay example

Easily capture and share images using wi-fi - ideal for multiple users to quickly view and download images.



Calibration tracking example

EVO Cam II for simple measurements

Perform simple measurements with EVO Cam II's digital caliper or scaled grid. No need to transfer to a separate measurement station.

Calibration tracking through the zoom range enables measurement at different points in the zoom range without risk

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30x zoom — Large zoom range

HD — Outstanding image quality

Focus stacking

Overlay & image comparison

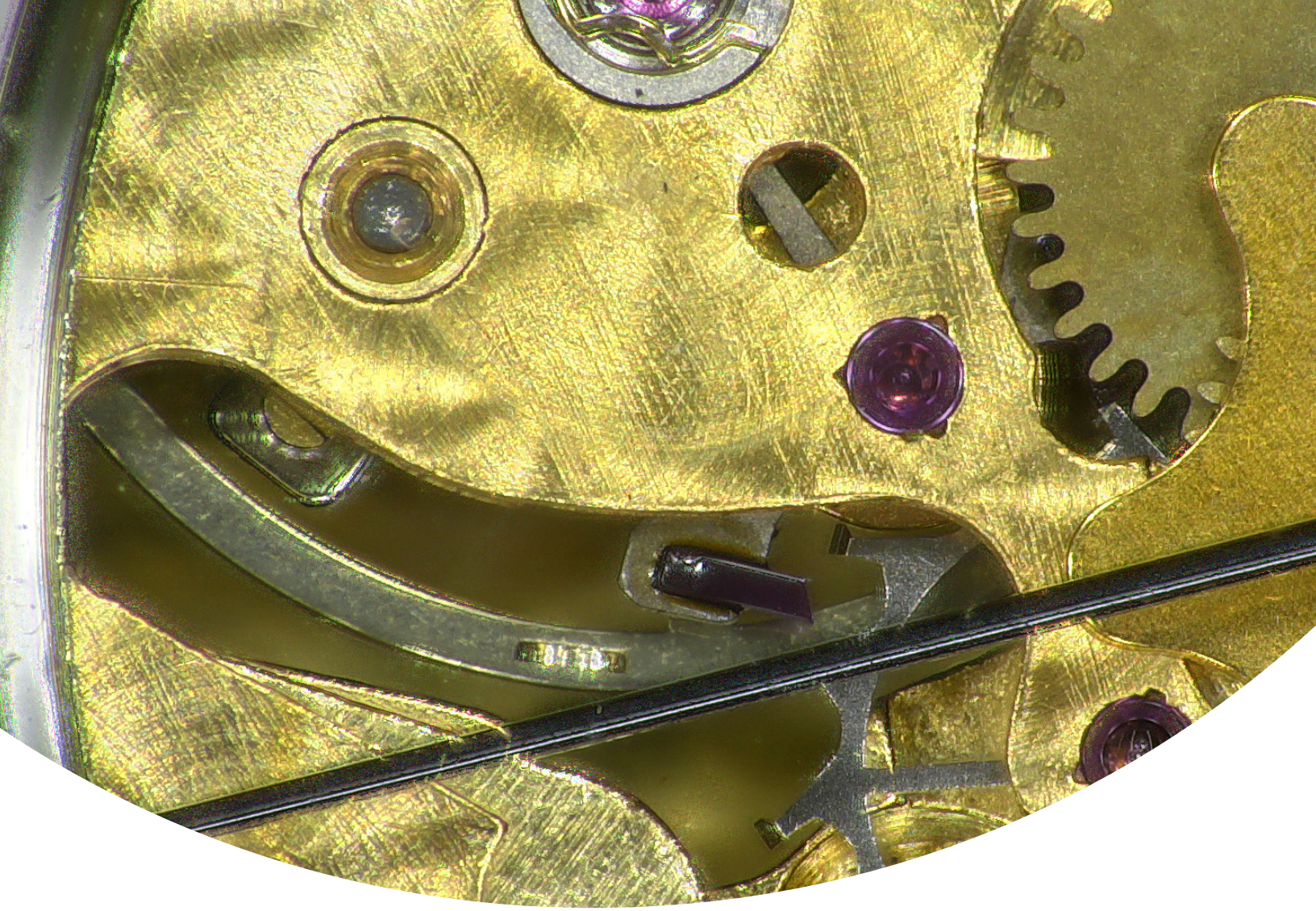
On-board measurement

WiFi image transfer

10 presets — Quick access settings

Calibration tracking with zoom

Import, export settings



EXCELLENT SUBJECT CLARITY

Exceptional image quality is delivered in full HD resolution with excellent clarity without latency.

Maximum image quality

EVO Cam II's wide range of precision objectives and wide-field lenses gives you the flexibility to customize your own application specific solution, enabling you to focus on the job.

Two auto and one manual exposure modes with depth of focus control, let you set how much of the subject should be in focus.

Brightness reference levels set the desired level for the auto exposure capability.

Auto white balance and dynamic range expansion digitally extend the ability of the system.

Achieving maximum image clarity is additionally supported utilizing the latest back-illuminated sensor technology, dedicated image processing and noise management.

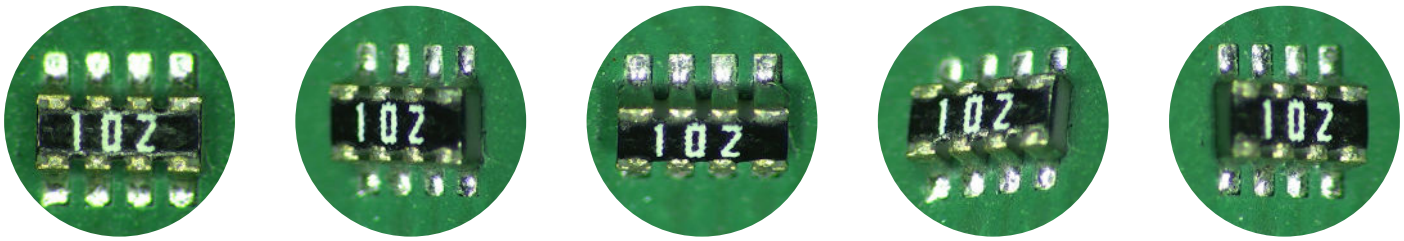
Focus stacking

Focus stacking gives you the capability to see an in-focus image in a single view even when the subject has features (depth) beyond the depth of focus of a single exposure.

360° rotating viewer

Add an extra dimension to standard 2D imaging with direct and rotating oblique views of your subject. Utilize the power of motion to enhance three dimensional understanding by rotating the view around the centre of the image.

Including an integrated 8-point LED ring-light and objective lens, the 34° degree oblique view allows views around the inside of holes or around the sides of raised components and solder joints.



Flexible and reconfigurable solution

Quickly and easily repurpose your EVO Cam II for a range of tasks by selecting performance enhancing tools from the comprehensive range of options and accessories.

FLEXIBLE ENOUGH FOR TODAY AND TOMORROW

Perfect for today's quality requirements, and as your inspection needs evolve, so does your EVO Cam II.

Objective lenses

A range of objective lens options ensure optimum results for any application, whether for high magnification, high precision detailed inspections, or for manipulation, re-work and assembly tasks requiring an extra long working distance.

Precision objective lenses

Ultra-high resolution and contrast, optimized for precision magnification work with definition excellence.

Wide-field objective lenses

Wide field of view, provides maximum flexibility and large zoom range. Suitable for large area subjects.

Micro objective lenses

High optical magnification of very small subject areas and details.

ILLUMINATION FOR ALL APPLICATIONS

EVO Cam II gives you access to a wide range of lighting options to meet the need of your specific application.

Illumination – get the right light for the right task

Better control of your lighting gives better control of your results.

Select the right lighting options to exactly meet your illumination needs – whatever your task.

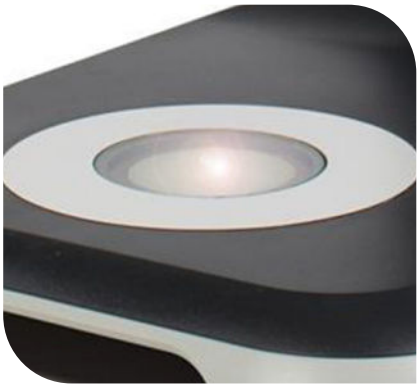
Episcopic (EPI) illuminator

Inspection of any item requires light. Delivery of light down small bores, between tightly packed or tall components can be difficult. The EPI illuminator delivers light along the optical axis, meaning if the camera can see a subject it can be illuminated

Ideal for even the smallest of holes. The swing in/swing out design means it can be called on at a moments notice without affecting normal operation.

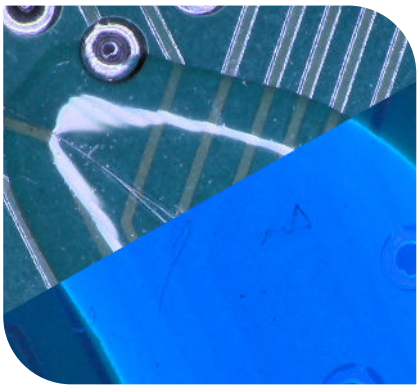
Substage illumination

Light your subject from beneath, particularly useful for inspection of translucent materials, including plastics and optics.



Ultra Violet ring-light

Commonly used in electronics, aerospace and forensics, quadrant white and UV illuminators are used for inspection of UV fluorescing coatings, dyes and security features.



Light Filters

Choose exactly the filter you need from the range of objective and ring-light filters available, to enhance details not easily seen by the human eye. Colour temperature and polarised filters help to enhance details and contrast. Selectable colour filters simulate light from different light sources.

Flexible illuminators

Optimize light to highlight components, enhance depth perception or control reflections. Ideal for large area reflective subjects.

Keep it compact - Mini monitor mounts

For use when desk space is at a premium – mount a 10” or 12” monitor simply and directly to an Ergo stand and view images inline.

Wifi dongle

For use when transferring images from EVO Cam II to a computer. Allows the user to quickly view and download images and videos, and is ideal when access for multiple users is required

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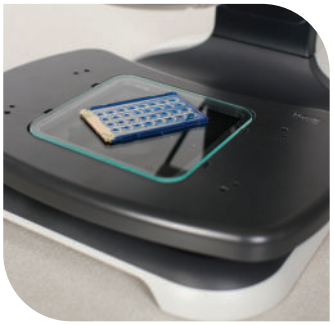
Remote control

For hand-held camera control; improves user comfort and includes quick access to pre-sets.



Floating stage

Ideal for checking uniformity of components or inspecting sensitive samples, use EVO Cam II’s floating stage in conjunction with your choice of ERGO or Bench stand to provide smooth and precise control.

EVO Cam II offers six stand configurations that can be fully adapted to your needs

Multi-axis stand

- Integrated gas strut making operation quick and effortless.
- Available with platform base, or mounted directly to the work surface.

Ergo stand

- Exceptional stability for high magnification use.
- Transmitted substage illumination option.
- Floating stage option.
- Coarse and fine focus control for high magnification subjects.

Double-arm boom stand

- Extended reach, without compromising stability.
- Easy adjustability allows precise positioning and alignment.
- Available with platform base, or with clamp.

Single-arm boom stand

- High stability boom stand, ideal for larger specimens.
- Robust stand option, complete with heavy duty platform base and focus module.

EVOTIS advanced inspection workstation

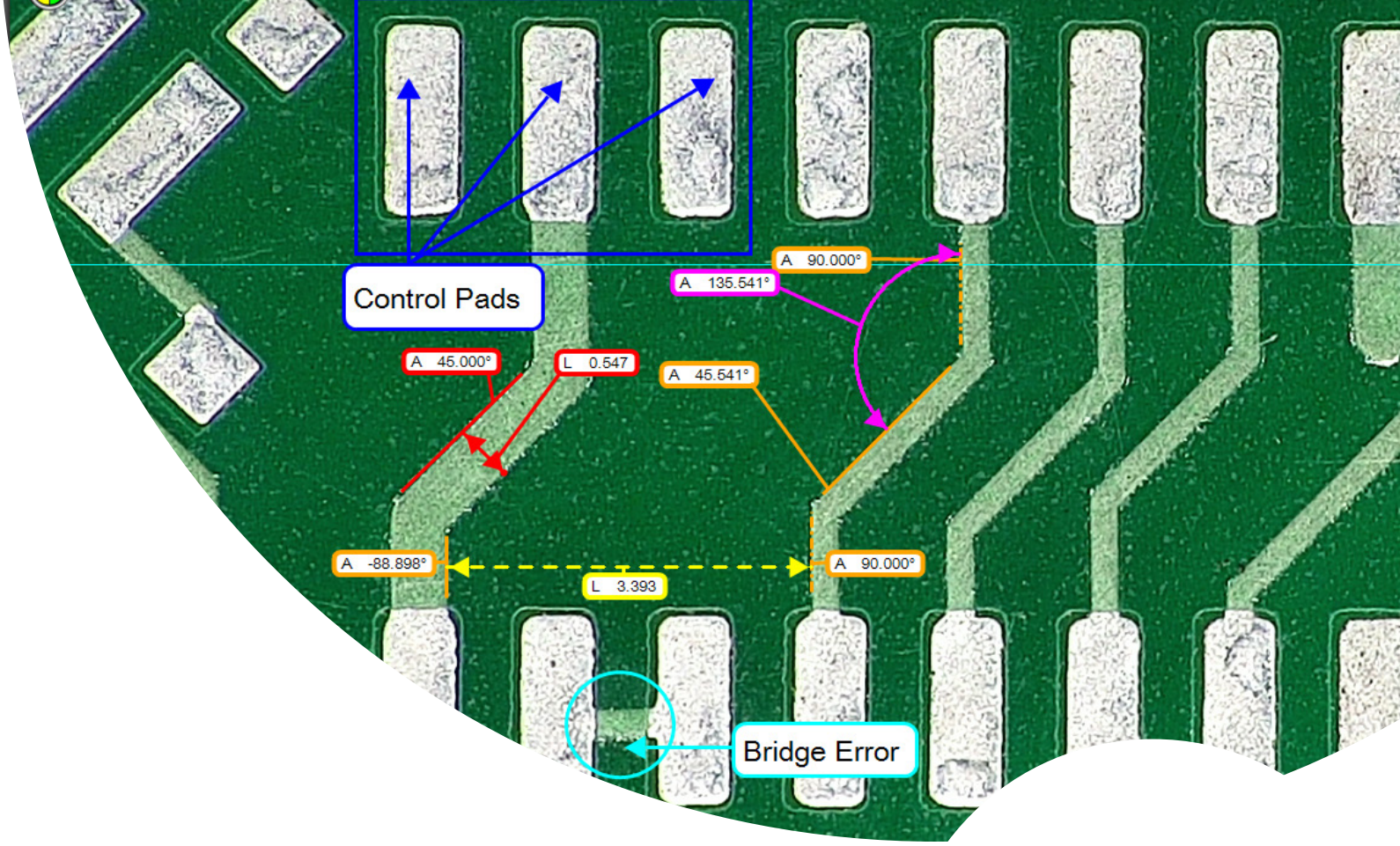
Enables EVO Cam II to quickly and efficient inspect fine details on large area subjects such as PCBs and multi- layer components. Available in 3D and 2D configurations, EVOTIS features an independently lockable X-Y stage for methodical inspection along rows of component characteristics

Bench stand

- Compact unit with low-profile base and integral transmitted substage illumination.
- Floating stage option.
- For use with 1.0x objective.

Articulated arm stand

- Designed for applications requiring extended reach, with ultimate flexibility.
- Multi-point adjustability allows precise positioning and alignment.



SOFTWARE OPTIONS

Tailor your EVO Cam II capability by integration with your choice of software.

A range of software for a range of applications

Select from a range of easy to use image capture and on-screen image measurement software where all of the necessary content has been refined for ultimate ease of use.

DimensionTwo

DimensionTwo is the ideal extension to EVO Cam II inspections. Quick, easy calibrated measurements allows capture and sharing of vital data with colleagues, customers and suppliers.

	ViCapture	DimensionOne	DimensionTwo	ViFoxEVO	ViPlus
Image capture	✓	✓	✓	✓	✓
Annotation	✓	✓	✓	✓	✓
On screen measurement		✓	✓	✓	✓
Overlays	✓			✓	✓
Reporting		✓	✓	✓	✓
Advanced functions				✓	✓
Focus stacking				✓	✓
Edge detection			✓	✓	✓
Shape detection					✓
X-Y image stitching				✓	

Ergonomics and detailed working

EVO Cam II overcomes the difficulties of conventional binocular eyepiece microscopes by preventing the need to lean over the system. Ergonomics extend to hand and arm position through the use of the external keypad.

If you require the benefits of the depth perception that come with a stereo microscope take a look at our range of ergonomic eyepiece-less stereo microscope systems.

TECHNICAL INFORMATION

There are several factors that are inseparable when selecting working magnification. As magnification increases, field of view and working distance decrease.

Objective lens	Magnification zoom range*	Working distance	Field of view at min.zoom	Field of view at max.zoom
Precision objective lenses				
0.45x	2.3x - 68x	6.30" (160 mm)	9.48" X 5.27" (241 mm x 134 mm)	0.31" X 0.17" (7.8 mm x 4.2 mm)
0.62x	3.1x - 93.7x	4.17" (106 mm)	6.81" x 3.78" (173 mm x 96 mm)	0.22" x 0.12" (5.5 mm x 3.1 mm)
1.0x	5x - 151.2x	3.35" (82 mm)	3.46" x 2.24" (88 mm x 57 mm)	0.14" x 0.08" (3.5 mm x 2 mm)
1.5x	7.6x - 226.8x	1.69" (43 mm)	1.77" x 1.41" (45 mm x 36 mm)	0.09" X 0.05" (2.3 mm x 1.2 mm)
2.0x	10x - 302.4x	1.14" (29 mm)	1.45" x 1.06" (37 mm x 27 mm)	0.06" x 0.04" (1.5 mm x 1.0 mm)
Wide-field objective lenses				
2 dioptre	0.8x - 24x	19.69" (500 mm)	25.98" x 14.56" (660 mm x 370 mm)	0.84" x 0.47" (21.5 mm x 12.0 mm)
3 dioptre	1.15x - 32.6x	12.99" (330 mm)	15.35" x 8.85" (390 mm x 225 mm)	0.57" x 0.33" (14.7 mm x 8.4 mm)
4 dioptre	1.71x - 51.41x	9.65" (245 mm)	11.53" x 6.73" (293 mm x 171 mm)	0.39" x 0.22" (10 mm x 5.5 mm)
5 dioptre	2.12x - 65.5x	7.76" (197 mm)	9.13" x 5.31" (232 mm x 135 mm)	0.31" X 0.18" (8 mm x 4.5 mm)
Micro objective lenses				
5x	250x - 378x	0.83" (21 mm)	0.08" x 0.05" (2.2 mm x 1.3 mm)	0.05" x 0.03" (1.4 mm x 0.8 mm)
10x	500x - 756x	0.83" (21 mm)	0.04" x 0.02" (1.1 mm x 0.65 mm)	0.02" x 0.01" (0.7 mm x 0.4 mm)

*Using a 24 inch screen

With 360° Optical Viewer

Setting	Zoom ratio	Zoom range	Working distance	Field of view at min. zoom	Field of view at max. zoom	Viewing angle
360° rotating view	5.3:1	19x - 105x	1.39" (35.5 mm)	1.01" x 0.87" (25.7 mm x 22.1 mm)	0.10" x 0.08" (2.6 mm x 2.2 mm)	34° from vertical
Direct view	5.3:1	28x - 151x	2.22" (56.5 mm)	0.77" x 0.44" (19.7 mm x 11.2 mm)	0.06" x 0.03" (1.6 mm x 0.9 mm)	-

MAIN SPECIFICATION	
Camera	Full HD
Surface illumination	8-point ring light. Colour temperature 5,500K (adjustable with filter options)
Sub-stage illumination	Optional
Front panel control	On/Off, zoom in, zoom out, overview, surface illumination level, sub-stage illumination level, image capture, menu
Remote control	Optional
Interfaces	HDMI, USB3 (PC connection), USB2 (stand alone image capture), WiFi (optional)
CAMERA SPECIFICATION	
Camera zoom	30:1
Digital zoom	12:1
Camera resolution	1920x1080
Sensor	1/2.8” CMOS back-illuminated
Frame rate	50fps & 60fps (switchable)
Saved file type	PNG, JPEG+,JPEG,JPEG-
FEATURES	
Premium licence	Focus stacking (max.depth 110mm)
Inspection features	Image comparison, overlay, supervisor settings lock, customisable zoom range, save/import/ export settings
Reporting features	Image capture, time stamp
Measurement features	Virtual caliper (x-axis separation, y-axis separation, diagonal - point-to-point), scaleable grid, overlays, calibration tracking
General features	Image capture, image playback, noise reduction, light control
Exposure control	Auto, aperture priority, manual
Focus control	Auto, manual
Keypad shortcuts	Presets, white balance, front panel lock, AE/ME switching, AF/MF switching
Features retained in supervisor mode	Image capture, zoom, lighting control, overlay on/off, caliper on/off, grid on/off, recall presets 1-10, image comparison on/off, image playback, focus stacking (all other settings locked)
Features retained in front panel lock mode	Image capture
User programmable presets	10 (Save, import/export)
Image capture	USB memory stick or via PC connection
Languages	English, French, German, Spanish, Italian, Portuguese, Russian, Chinese, Japanese, Korean
Image mode	Auto white balance, black and white, wide dynamic range, noise reduction, infrared mode, capture button action

Vision ENGINEERING

VISION ENGINEERING + OUR DIFFERENCE

Vision Engineering Ltd. has been designing and manufacturing high quality ergonomic microscopes, digital instruments, inspection and non-contact measuring systems for over 60 years.

Innovation

With a philosophy of design innovation, Vision Engineering holds world patents for a number of optical/digital techniques, significantly improving viewing ergonomics and enabling customer quality and productivity improvements.

Quality

Vision Engineering prides itself on quality products, electronics, mechanics and optics and is certified for the quality management system ISO 9001:2015 and calibration accreditation ISO 17025:2017. Quality is as important to us as it is to our customers. Our systems have proved themselves many times over and are chosen by the world's leading companies.

Global

Vision Engineering has manufacturing and design facilities in the UK and USA, plus sales and support offices throughout Europe, the Americas, the Far East, and Asia. We support our customers with close technical and service support anywhere in the world.

To see our focused quality, please contact your Vision Engineering branch, local authorised distributor, or visit our website: visioneng.com

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Vision Engineering Ltd. has been certified for the quality management system ISO 9001:2015 and calibration accreditation ISO 17025:2017.

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