Digital Microscope and Measurement System

O M N I 3

Smarter Inspection

ASH

Live x33.2

ryf ag

Wir machen Qualität sichtbar
Nous rendons la qualité visible
Making quality visible

OMNI**3**

Smarter Inspection

OMNI **3**

Omni **3** incorporates the AshCam+™ zoom lens module with a host of new benefits for smart inspection and measurement.
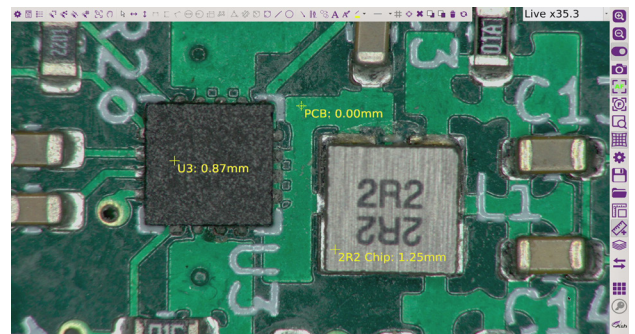
Powerful New Apps

Z Height Measurement App

Measure in **3D** on the new Omni **3**.

Now you can measure in the **Z axis**, in addition to the X and Y axes, bringing the Omni **3** capability to a whole new dimension.

Rapidly inspect your parts up to **five times quicker** when compared to outdated manual inspection methods.


Component Height Measurement on the Omni **3** Z Height App

Object Counting App

Automatically **identify** and **count** the number of objects within your region of interest.

Increase efficiency by 70% whilst eliminating human error.

Significantly reduce the time spent manually counting parts while reducing costly overheads. Report generation is quick and simple for easy documentation and traceability.
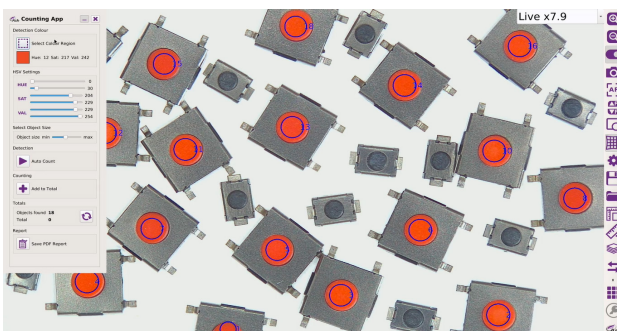
Omni **3** automatically counting objects

Colour Analysis App

Advanced algorithms **automatically calculate** the colour value of any sample.

Identify contaminents or foreign objects within your sample. **Eliminate human error and improve yield by up to 50%.**

Reports can be generated for easy documentation and traceability.

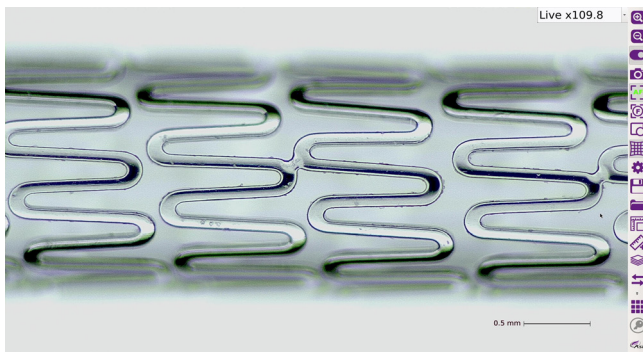Colour Analysis of rice on the Omni **3**

Powerful New Features and Benefits

Super Fast Auto-Focus

Place the sample under the Omni 3 and it will immediately focus on your part throughout the inspection process.

Inspect your parts up to three times faster.

Quickly and seamlessly inspect your part without having to adjust manual focus or change the height of the part.

SpotFocus™

Quickly focus on the area of interest by simply using the mouse pointer.

Increase speed, mprove accuracy and reduce human error with the capabilities of SpotFocus. *

Manual Rocker Focus

Use **Manual Rocker Focus** to accurately adjust the focus level to your region of interest.

Save time by quickly adjusting the focus level using the rocker icon to inspect specific regions on an object when in manual focus mode.
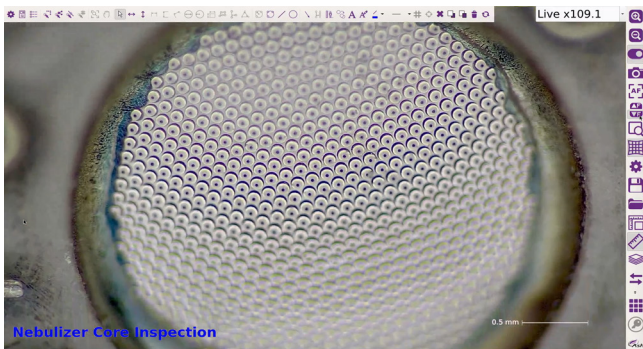
Superb Image Quality

Experience unrivalled Full HD video imaging never seen before in an ASH system.

AshCam+™ enables vibrant image quality ensuring true representation of your sample.

Omni 3 offers an enhanced, crystal clear image for even the most demanding inspection applications.

* Global patent applied for by ASH.

AshTruColour™ - True Colour Reproduction

View true colour reproduction of your sample with Omni 3.

AshCam+™ brings next generation colour reproduction to Omni 3.

Replicate real and accurate colours as seen with the naked eye for true colour representation. *
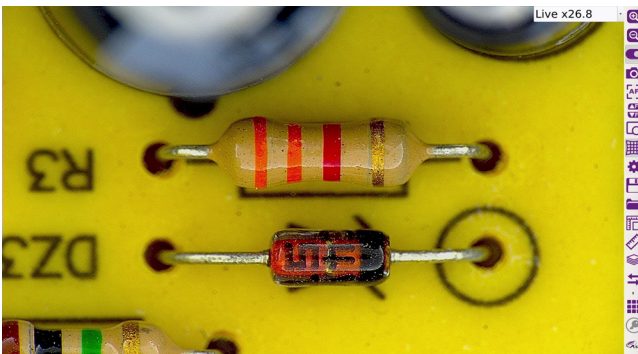
No Video Latency

There is zero delay between movement under Omni 3 and what you see on the screen, resulting in a more efficient inspection process.

Omni 3 is 3x times faster than our previous systems.

View parts in real time with no video lag, allowing you to comfortably inspect, rework, modify or assemble anything.


Advanced Camera Settings

The new Advanced Camera Settings gives the user more power and control to enhance the image for a wide range of inspection and measurement capabilities.
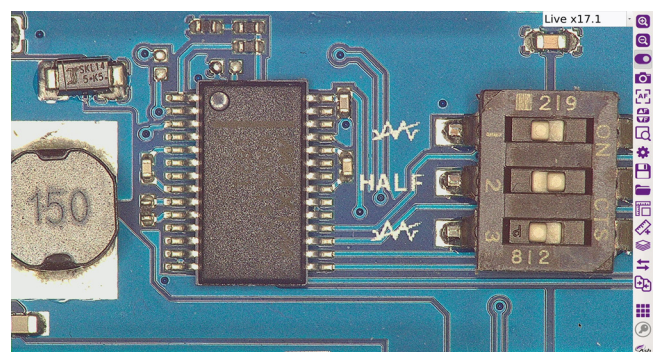
Ensure image quality exceeds your needs.

Unlock the full potential of Omni 3 by fine-tuning sharpness, contrast, saturation and camera shutter speed to suit your specific requirements.
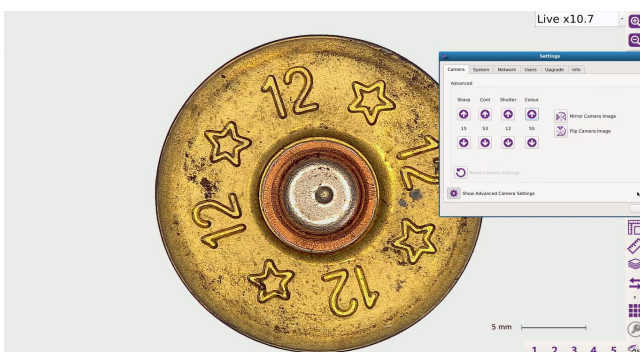
Improved DoF

The **Omni 3** has improved depth of field, making inspection **much faster and more efficient** without the need for changing focus positions or adjusting camera height..

OMNI 3

The Omni 3 maintains the following improved great apps introduced with the hugely successful Omni core app suite.

2D Measurement, Annotation & Graticules

Intuitive on screen full 2D patented measurement application. Point to point, diameter, angle, adjustable X-Y grid, shapes and annotation features to accommodate a multitude of samples specifications. Graticule creation allows samples to be analysed against on-screen digital templates with set tolerance limits. It also enables quick go/no-go defect analysis.

Image Stacking

View a sample with different layers all in focus at the same time. Omni automatically captures several images from 2 to 12 at different focal depths and creates an image based on the sharpest regions from each of these separate captures.

DXF Import & Export

Import a range of DXF files to create graticules for overlay comparison with parts. Imported DXF files can be edited and annotated on the Omni 3 system.

Image Comparator Side by Side

Visually compare your live sample image to a stored master image in the form of a split screen. Add notes through annotation and save the comparison image for documentation and traceability. Enables rapid identification of differences between gold sample and test samples.

Image Comparator Overlay

Create an image overlay of a master image to identify defects by overlaying and flashing the live sample image against the stored master image.

Enables rapid identification of differences between gold sample and test samples.

Image Stitching

Stitch multiple images together, increasing your field of view at high magnification.

Perform full measurements on the full image. Document and annotate for traceability.

OMNI3

The Omni 3 maintains the following improved great apps introduced with the hugely successful Omni core.

AshCal™

Omni 3 is factory calibrated before shipping. No time is wasted performing recalibrations between changing magnifications.

RTLDC™

Real-Time Lens Distortion Correction*.
Lens distortion is inherent in all microscopes. Image distortion at the outer edges of large samples is automatically corrected by the Omni 3. *

User Privileges

User privilege settings enables operational control and traceability. Assign multiple users with access to different settings and features, improving security and streamlining the inspection process.

Interchangeable Lighting

Multiple types of interchangeable lighting available, including Ring Light, DomeLight, Polarised Light and UV Light to address any inspection application.

Email

Save time by emailing directly from Omni 3.

Save to Network

Networking enables direct saving to the server or cloud for increased workflow efficiency.

On Screen Preset Buttons

On Screen Preset Buttons allow quick access to pre-configured part-specific system settings.

Image Stamping

Image Stamping with time, date, user and magnification level. Easy documentation & traceability for accurate quality control records using image capture to USB key.

* Global patent applied for by ASH.

O M N I **3**

is the latest evolution

AshCal™
Automatic Calibration
Tracking

Z Height Measurement App

Object Counting App

Colour Analysis App

Improved
Auto-Focus Speed

Spot Focus™

Manual Rocker Focus

No Video
Latency

Improved
Depth of Field

Improved
Sensitivity

Smooth
Magnification
Zoom

ASH
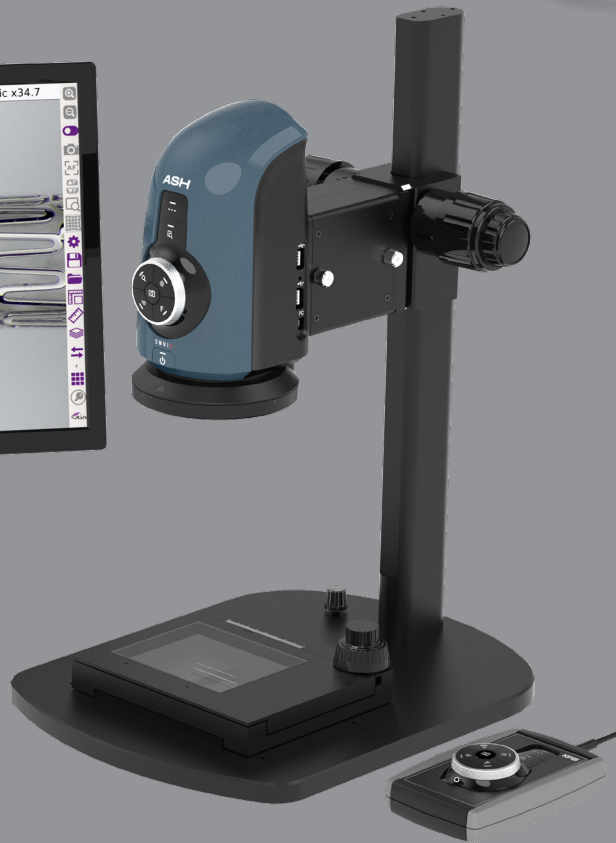
OMNI**3**

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Digital Microscope & Measurement System

Live x33.2

Applications

- Research and Development
- Quality Control
- Large Scale Inspection in a Production Environment
- Final QC Release Inspection

Industries

- Medical Device Manufacture
- Pharma
- Precision Engineering
- Aerospace
- Automotive
- Electronics

Steven Martin, Dakin Flathers

Dakin Flathers

"The ease of use has meant that we have had no issues with operator engagement and everyone who we asked insists it has taken away any degree of uncertainty that was always evident in analogue checks.

From a personal point of view, right from the initial demonstration through to the after-sales service, I cannot fault the staff at ASH, who have gone over-and-above to assist however they have been able. Possibly the greatest testament to the unit is that other sections within the factory have seen the potential it brings and have begun making their own case to me for the purchase of additional units. I have to say, it is only a matter of time!"

Pádraig McVeigh, Creganna - TE Connectivity

Conductix Wampfler

"ASH supplied a digital microscope system to help assessment of tube finishes without major impact to the overall cycle of production. ASH have provided excellent support from problem classification, through vision system development, right to fixturing and set-up support.

The speed of the response and ability to meet our tight timeline was very impressive.

The availability and assistance from team members of all levels, from Sales to Engineering, was invaluable to our team!"

Roland Rücker, Quality Engineer Optoelectronics, Germany

Heraeus Noblelight GmbH

"Our goal was to acquire a microscope with the smallest possible surface differences between 5 and 500 microns without fatigue. Likewise, we wanted to create sharp images with the abnormalities and these surveying. The implementation of these requirements has now been confirmed in practice by our employees. What also stands out

is the intuitive user interface our employees were able to use within a very short time. The support from their side for commissioning and technical questions is also to be positively emphasized. We can highly recommend this microscope because of our positive experiences and you as a partner."

OMNI 3

FI 805-003

System Components Included

LENSES
+5 Lens

LIGHTS
LED Ring Light

OTHERS
Wireless Keyboard and Mouse	USB Memory Stick	HDMI Cable

Optional System Components

LENSES

+5 Lens
AI 280-150

+10 Plan 1x Lens
AI 100-055

+25 Lens
AI 100-053

Ash 360 Rotating Viewer
AI 801-422

Polarising Lens (Analyser)
AI 100-041

Sub-Stage Polarising Film & Analyser
AI 801-835

Sub-Stage Polarising Film
AI 801-836

Polarised Ringlight & Analyser (58mm)
AI 801-423

LIGHTS

Diffused LED Dome Light
AI 100-045

UV Ring Light 367nm
AI 801-421

Polarised Ringlight & Analyser (58mm)
AI 801-423

CONTROLLERS

KPII External Keypad
FI 806-002

KIII External Keypad
FI806-003

OTHERS

Ash PC Capture
AI 100-052

24" Monitor
AI 801-416

Hard Carry Case
AI 801-563

STANDS & STAGES

XY Stage for Uplight AI 100-011	▶	Illuminated Track Stand AI 100-036
XY Stage AI 100-010	▶	Track Stand AI 100-037
Large XY Stage AI 100-057	▶	Articulated Arm Stand AI 100-039
	▶	Dual Arm Boom Stand AI 100-038

OMNI 3

Digital Microscope System

216mm

170mm
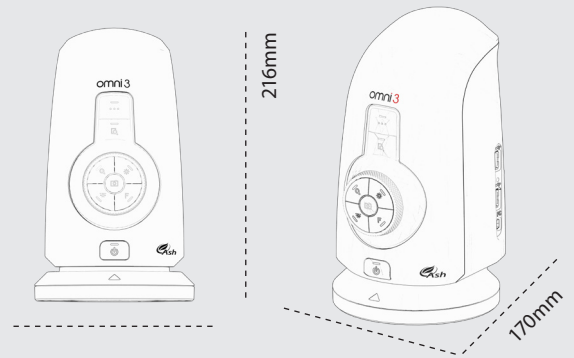
Camera Specifications

	Lens Type	+5	+10 Plan 1x	+25	+50
Optical	Magnification Range (X)	2.5 - 68	4.8 - 136	54.7 - 336	2.4 - 0.76
	X-axis FOV (mm)	200 - 7.5	76 - 3.8	5.4 - 1.5	2.4 - 0.43
	Y-axis FOV (mm)	112 - 4.2	59.5 - 2.1	5.4 - 0.85	109.4 - 673
Digital	Magnification Range (X)	69d - 136.5d	137d - 272d	337d - 673.3d	0.76 - 0.37
	X-axis FOV (mm)	7.5 x 3.75	3.8 x 1.9	1.5 x 0.75	0.43 - 0.22
	Y-axis FOV (mm)	4.2 x 2.1	2.1 x 1.1	0.85 x 0.425	674d - 1346d
	Working Distance (mm)	195	78	36	24
	Depth of Field (mm)	80 (min. zoom) / 0.5 (max. optical)	35 (min. zoom) / 0.1 (max. optical)	0.3 (min. zoom) / 0.1(max. optical)	0.1 (min. zoom) / 0.05 (max. optical)
	Video Latency (milli seconds)	20/17	20/17	20/17	20/17

2-D Measurement Accuracy

Lens Type	+5	+10 Plan 1x	+25	+50
Accuracy (%)	+/- 1	+/- 1	+/- 1	+/- 1

Z Height Range & Accuracy

Lens Type	Range	Accuracy
+5	0 - 25mm	50 µm

Technical Specifications

OMNI 3

Magnification Range (with supplied +5 Lens)	2.5 - 68 (Optical) 69d - 136.5d (Digital)
Camera Resolution	1920 x 1080 Pixels
Monitor Connections	HDMI / DVI
Monitor Requirements	HD Ready / Full HD (Recommended)
Input / Output	HDMI Output USB 2.0 (x4 Ports) Mini USB Port General Purpose IO (x3 Ports) DC Power Jack 24V
Internal Storage	16GB
Image Capture	Internal Storage Removable USB Image Storage USB on the Go (PC Connectivity)
Power	24W
Dimensions	216mm x 165mm x 170mm
Weight	1.5kg
Operating Temperature	Storage 10°C to 60°C Operating 5°C to 40°C

At ASH we design, develop and manufacture all our user centric solutions in-house and are proud of our award winning innovation process. We use creative Design Thinking to actively empathise with our customers to understand their real unmet needs and jobs to be done. We seek meaningful engagement and co-creation with our end users so we can develop the best possible solutions and services in the quality assurance industry resulting in cost savings, increased workflow efficiency, waste reduction and an overall improved quality process.

MICROSCOPY ✛ METROLOGY SERVICES
Suisse made.

ryf ag **ryf**

We show quality
Nous rendons la qualité visible
Wir machen Qualität sichtbar