

OMNI 3

DIGITAL MICROSCOPE SYSTEM



AshCal™ Technology



Automatic Lens Distortion Correction



Set User Privileges



Interchangeable Lighting

Intuitive Software Interface Simplifies Operation & Controls



Repeatable Measurements



On Screen Preset Buttons



Save to Network



Image Stamping

Key Features

The new Omni 3 is the latest evolution in Digital Imaging Systems. Ergonomic, fully integrated full HD (1080p) digital microscope and measurement system that operates without a PC.

The GUI (Graphical User Interface) provides intuitive and efficient operation and control of the Omni 3's full application suite with only a mouse (included) and monitor (not included).

The Omni 3 platform has a powerful image processing and control engine that delivers superb full HD live video image quality at 60 frames per second enabling it to be used as a solution in a broad range of quality control, testing, rework, assembly, inspection and documentation tasks across many industries.

INCREASED PRODUCTIVITY: The intuitive software interface simplifies operation and controls increasing productivity and efficiency. AshCal™ calibration technology tracks and adjusts to zoom changes — no need for time-consuming zoom change re-calibrations. With the on-screen or optional keypad preset buttons, users have quick access to pre-configured, part-specific system settings.

QUALITY ASSURANCE: User privileges offer control of system-related operations to ensure standardized inspection. Rapidly check parts against customized overlays with tolerance limits.

CUSTOMIZABLE: Choose from a variety of optional apps to customize your Omni 3 for your application. Test drive all optional apps for 30 clicks before committing to the apps that work best for you. Add apps as your needs evolve — your Omni 3 is practically future proof!

The Omni 3's cable-free interchangeable illumination ensures shadow-free illumination, glare reduction and can be directly controlled via the on-board software.



Removable USB Image Capture



Save & Recall Images Internally



Transfer Images To PC Via USB



Intuitive Graphical User Interface



No PC Required

Specifications

Camera Resolution	HD 1080p; 1920x1080 pixels; 60fps
Magnification Range	2.5-68 optical; 69-136.5 digital; with included 5D lens
Basic Functions	Auto/Manual focus, brightness adjustment, magnification adjustment, snapshot, overview, high contrast mode, height adjustable
Optional Apps	2D measurement, DXF import and export, image stacking, side-by-side comparator, overlay comparator, color analysis, Z-height measurement, object counting
Monitor (not included)	HDMI output; HD ready, full HD recommended
Input / Output	HDMI Output • USB 2.0 port x 4 • Mini USB port General purpose IO port x 3 • DC 24v power jack
Storage	16GB internal storage; removable USB image storage
Power Supply	110/240v; 50/60Hz; 24w power consumption
Dimensions / Weight	216mm X 125mm X 136mm (LWH) / 1.5kg
Temperature	Storage: 10°C to 60°C Operating: 5°C to 40°C

Magnification

Lens Diopter (mm)	Working Distance (mm)	OPTICAL Magnification Range	OPTICAL X-Axis FOV (mm)	OPTICAL Y-Axis FOV (mm)	DIGITAL Magnification Range	DIGITAL X-Axis FOV (mm)	DIGITAL Y-Axis FOV (mm)
+5	195	2.5 — 68	200 — 7.5	112 — 4.2	69d — 136.5d	7.5 — 3.75	4.2 — 2.1
+10 Plan 1x	78	4.8 — 136	76 — 3.8	59.5 — 2.1	137d — 272d	3.8 — 1.9	2.1 — 1.1
+25	36	54.7 — 336	9.3 — 1.5	5.4 — 0.85	337d — 673.3d	1.5 — 0.75	0.85 — 0.425
+50	24	109.4 — 673	4.6 — 0.76	2.6 — 0.43	674d — 1346d	0.76 — 0.37	0.43 — 0.22

Design, features and specifications are subject to change without notice.



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OMNI 3

Smarter Inspection



Powerful, flexible and intuitive HD digital microscope for simpler, ergonomic and efficient inspection.

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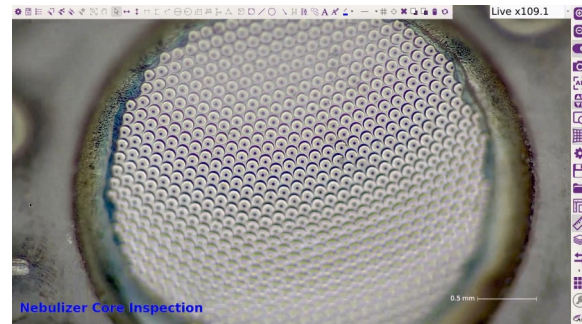
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Powerful, flexible & intuitive HD digital microscope.



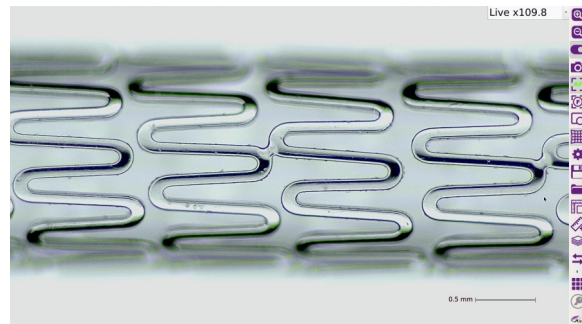
Superb Image Quality

Experience unrivalled Full HD video imaging never seen before in an Ash system. The Omni 3 offers an enhanced, vibrant, crystal clear image for even the most demanding inspection applications.



Manual Rocker Focus

Save time by quickly adjusting the focus using the rocker icon to inspect the area of interest on a sample part when in manual focus mode.



Superfast Auto-Focus

Place any part under the camera and it instantly adjusts the focus position allowing you to 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. Improve accuracy and reduce human error with the capabilities of Spot Focus*.

**Global patent applied for by ASH.*

Omni 3 is the latest evolution from Ash incorporating the AshCam™ module with a wide range of additional and improved capabilities.

AshTruColour™ — True Color Reproduction

View true color reproduction of your sample with the Omni 3. Replicate real and accurate colors as seen with the naked eye for true color representation.

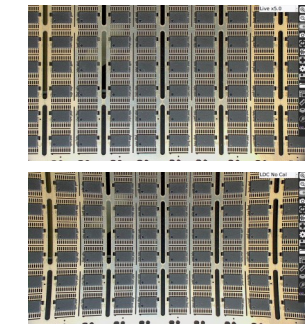


RTLDC™

Real-Time Lens Distortion Correction*.

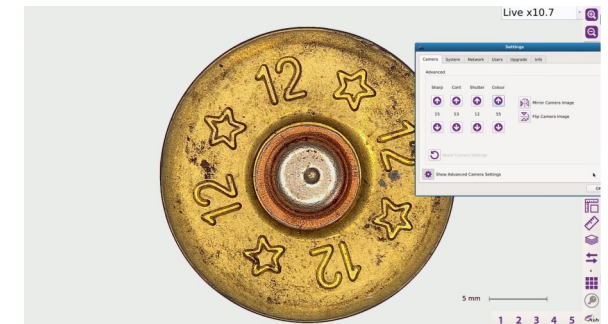
Lens distortion is inherent in all microscopes. Image distortion at the outer edges of large samples is automatically corrected by the Omni 3.

**Global patent applied for by ASH.*



Advanced Camera Settings

The new Advanced Camera Settings gives the user more power to enhance the image for a wide range of inspection and measurement capabilities. Tailor sharpness, contrast, saturation and camera shutter speed to suit your particular application.



No Video Latency

The video from the Omni 3 has zero delay. It's 3-times faster than previous systems. View parts in real time with no video lag, allowing you to comfortably inspect, rework, modify and assemble any part. There is no delay between movement under the camera and what you see on the screen.



Out of the Box Optimal Productivity!

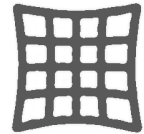
**PLUGIN
AND GO!**

An assortment of standard features and benefits included with every Omni 3!



AshCal™

Omni 3 is factory calibrated before shipping. Calibrated to ISO 17025 standard — no need to calibrate! 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.



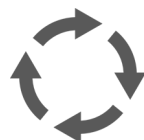
Interchangeable Lighting

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



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.



Repeatable Measurements

Automatic edge detection for repeatable and reproducible patented measurements that reduce variability between users.



Customizable Workflows

Create custom workflows to standardize and control inspection processes from user to user.



Internal & External Storage

USB and internal storage of images or graticule files for off network saving.



On-screen Preset Buttons

On-screen preset buttons allow quick access to pre-configured part-specific system settings.



Intuitive Interface

Intuitive mouse and keyboard GUI for simple and familiar user experience.



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.



Save to Network

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



Email

Save time by emailing directly from Omni 3.

APPLICATIONS

- Research & Development
- Quality Control
- Large Scale Inspection
- Final QC Release Inspection

INDUSTRIES

- Medical Device Manufacturing
- Pharma
- Precision Engineering
- Aerospace
- Automotive

Customize & Add Features Anytime for Ultimate Productivity!



Experience the full power of the Omni 3 with risk-free access to ASH apps!

Each Omni 3 system offers 30 free trial clicks of all apps. This allows the user unrestricted access to experience each app 30 times before purchasing the full app license.

An assortment of optional features let's you customize for your needs today and tomorrow!

It's future proof!

Test Drive the Full Suite of Advanced ASH Apps With Up to 30 FREE Clicks of All Apps!



2D Measurement, Annotation & Graticules

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



Image Stacking

View a sample with different layers all in focus at the same time. Omni 3 automatically captures from 2 to 12 images at different focus positions and creates a single image based on the sharpest regions from each of these separate captures. The result is one image with all features of the 3-dimensional sample in focus at the same time.

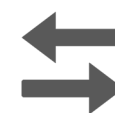


Image Comparator Side-by-Side

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



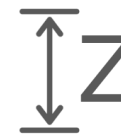
Image Comparator Overlay

Create an image overlay of a master image (gold sample) 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.



DXF Import & Export

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



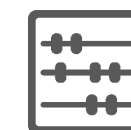
Z-Height Measurement

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.



Color Analysis

Advanced algorithms automatically calculate the color value of any sample. Identify contaminants 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.



Object Counting

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.



Measurement Bundle

Convenient combination of the popular 2D Measurement app and new Z Height Measurement app. Apply measurements in three dimensions and create graticules for visual comparison against an on-screen digital template.