INSPEX 3

SMART DIGITAL
MICROSCOPE SYSTEM

ASH

INSPEX 3

SMART DIGITAL MICROSCOPE SYSTEM

Powerful, flexible and intuitive HD digital microscope incorporating our new 30x HD Camera module. Ideal for industries such as medical device, pharmaceuticals, precision engineering and electronics.

Unique, patented, high-speed image processing algorithms for exceptional image quality. Super-fast focus speed and smooth digital zoom. Simpler, easier, more efficient inspection.

FEATURES & BENEFITS

Instantly transform your manufacturing process with Inspex 3

Superb Image Quality

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

Super Fast Auto-Focus™

Place the sample under the Inspex 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.

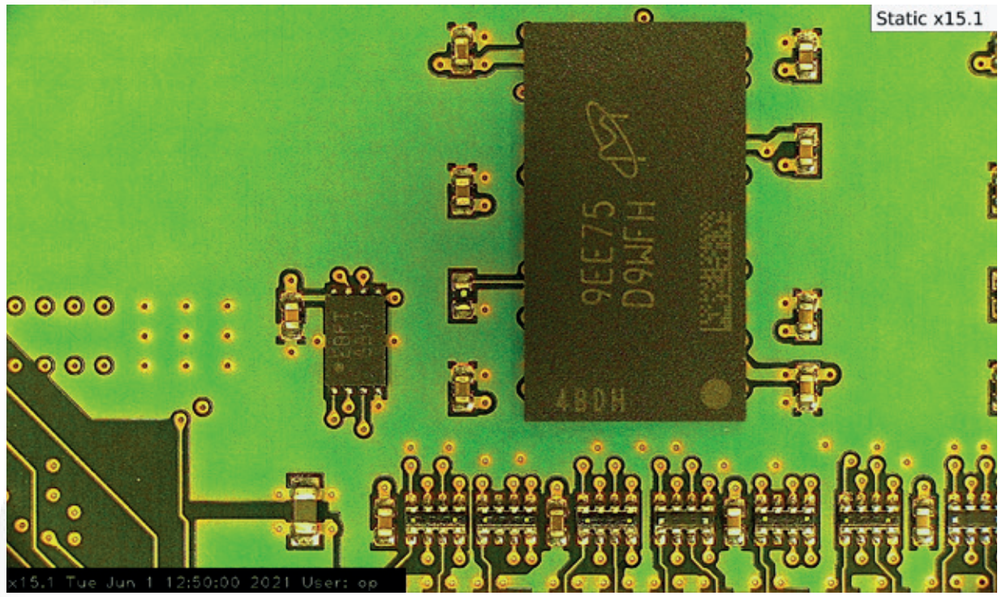
Manual Rocker Focus™

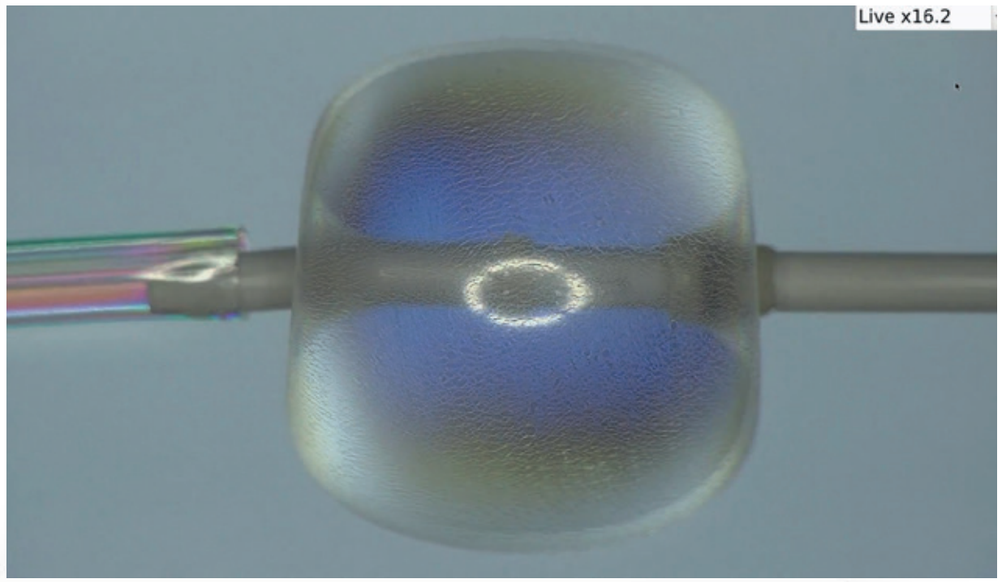
Use Manual Rocker Focus™ to accurately adjust the focus level to your region of interest. Save time by quickly adjusting the focus level using the rocker icon to inspect specific regions on an object when in manual focus mode.

SpotFocus™

Quickly focus on the area of interest by simply using the mouse pointer. Increase speed, improve accuracy and reduce human error with the capabilities of SpotFocus™.*

* Patent Pending





FEATURES & BENEFITS

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AshCal™

Save time with AshCal™. Factory calibration tracking for all lenses. No recalibration when changing magnification levels, giving consistent, accurate measurement with every zoom.

Image Stacking

Inspex 3 automatically captures several images at different focal depths to create a fully focused, sharp, clear image for easy inspection. Save time by removing the need to adjust the camera height or manual focus.

2D Measurement & Graticules

Point to point measurement and annotation of samples and creation of graticules.

Presets & Graticules

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. This improves efficiency in high-volume sample through-put inspection. Presets can be customised to store and easily recall specific system settings and measurement detail.

FEATURES & BENEFITS

Instantly transform your manufacturing process with Inspex 3

AshTruColour™ – True Colour Reproduction

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

Networking

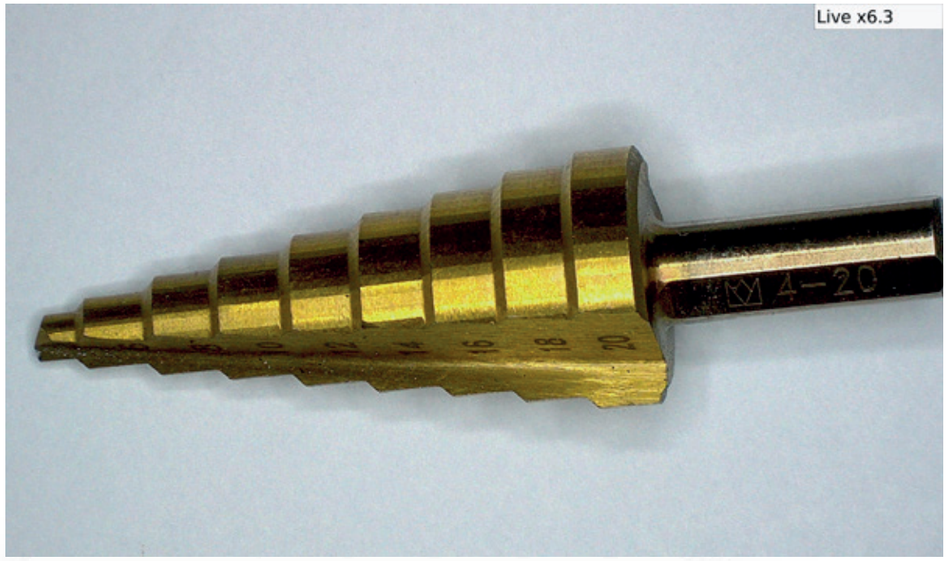
Networking enables direct saving to the server or cloud for increased workflow efficiency.

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.

RTLDC™

Real-Time Lens Distortion Correction™ (Patent Pending). Lens distortion is inherent in all microscopes. Image distortion at the outer edges of large samples is automatically corrected by the Inspex 3.



FEATURES & BENEFITS

Instantly transform your manufacturing process with Inspex 3

No Video Latency

The video from the Inspex 3 has zero delay. It's 3x times faster than our 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.

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.

Improved DoF

The Inspex 3 has improved depth of field, making inspection much faster and more efficient without the need for changing focus positions or adjusting camera height. Image distortion at the outer edges of large samples is automatically corrected by the Inspex 3.

EXPLORE AI INSPECTION WITH THE AI APP

AI visual inspection uses deep learning to automate the analysis of images and videos to detect patterns, anomalies, and defects. A crucial technology for quality control used in a wide range of industries, AI inspection can reduce costs, remove subjectivity, improve efficiency and decrease cycle time.

The AI APP enables you to trial AI inpsection. The app comes free of charge with your Omni 3 system and enables you to experience how easy it is to create a project, label data and train an inspection model without needing programming expertise. Follow the steps below to get started

SIGN UP TO THE ASH CLOUD

Visit www.ashcloud.ai to access your free trial version of the AI APP.

CREATE YOUR RECIPE

The ASH Cloud will host your inspection models trained with multiple classes using multiple images.

INSPECT

Once an inspection model is trained, it can be deployed to the ASH microscope system to test your samples, outputting a PASS/FAIL decision or a sample counts using multiple images.

WHAT OUR CUSTOMERS SAY

30X FASTER INSPECTION & IMPROVED QUALITY FOR NATEC

Challenge

Digitise Process to Improve Quality and Save Time

Natec required a shift from manual magnifiers to a digitised solution. They wished to increase the quality of their products and identify defects faster and more accurately. Moreover, they wished to improve the overall wellbeing of their operators through an ergonomic solution.

Solution

Digitised Solution. Improved Operator Ergonomics & Product Quality!

Natec has integrated many Inspex and Omni solutions into their cleanroom over the past three years. These solutions provide a streamlined process for visual inspection and final dimension control.

Result

30% Faster Inspection. Improved quality.

Guillaume Balland, title, Natec explains the impact "inspection time has been reduced by 30% since shifting from manual magnifiers to ASH. More importantly, we have been able to increase the overall quality of our products. ASH solutions are extremely reliable and precise, and are accessible for all operators. Incorporating their technology into our process has allowed us to exceed our daily operations, providing faster qualitative root cause analysis on daily defects, permitting us to better characterise our defects and establish workmanship standards. We can now perform precise investigations with the OMNI and Inspex. This was not possible with a manual magnifier. We look forward to further innovations from ASH – helping to continuously impove our manufacturing and quality expertise in the medical device industry.

TRANSFORMED PROCESS. PROJECTS 4X FASTER. FLY EVIDENCE

Challenge

Faster, accurate classification of biological samples.

FlyEvidence provide an insect identification service. They were using manual inspection which involved using a drawing tube on an optical microscope. Inspection was tedious. The user was required to trace around the sample using pencil and paper before being reduced or magnified on a standard photocopier. The user was then required to manually trace the sample again with permanent ink. The process took hours and days to complete. FlyEvidence wanted to solve this problem with a fast, reliable and accurate digital solution.

Solution

Transformation to Digital. Streamlined inspection and automated reporting.

Ash provided a digital solution to solve this application. This enabled high-quality research output due to advanced algorithms and capabilities. Customer reports are now streamlined and projects are executed in a satisfactory timeframe.

Result

4X faster project delivery

Andrew Whittington, title, FlyEvidence talks about the impact: "Omni 3 has reduced our inspection timeframe by 75%. Omni 3 provided a rapid, digital inspection solution which removed human subjectivity and sped up overall inspection time. This has also strengthened relationships with customers and improved company reputation. Previously, projects would take three-to-four months to complete. With the power of Omni 3, the same project now takes less than one month."

Included System Components

INSPEX 3

FI 806-001

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

XY Stage
AI 100-010

Large XY Stage
AI 100-057

Oblique Tilting Stage
AI 801-414

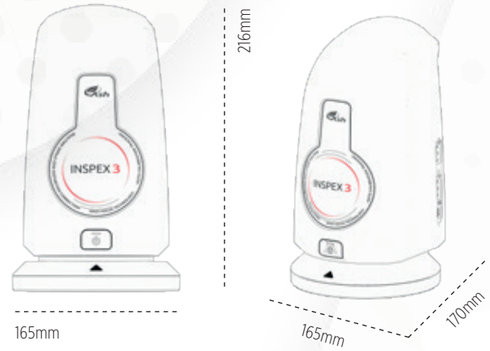
Illuminated Track Stand
AI 100-036

Track Stand
AI 100-037

Articulated Arm Stand
AI 100-039

Dual Arm Boom Stand
AI 100-038

Technical Specifications



Magnification

	Lens Type	+5	+10 Plan 1x	+25	+50
Optical	Magnification Range (X)	2.1 - 65.6	4.1 - 130	51.7 - 323.4	97.7 - 628
	X-axis FOV (mm)	240 - 8.34	80 - 4.1	3.5 - 1.75	2.1 - 1
	Y-axis FOV (mm)	135 - 4.69	71 - 2.2	1.75 - 0.9	2 - 0.6
Digital	Magnification Range (X)	66.1d - 131.6d	130.5d - 259.9d	325d - 646.7d	631.2d - 1256.1d
	X-axis FOV (mm)	8.34 - 4.13	4.15 - 2.08	1.65 - 0.85	1.2 - 0.44
	Y-axis FOV (mm)	4.69 - 2.32	2.32 - 1.16	0.9 - 0.5	0.7 - 0.26
	Working Distance (mm)	195	79	49	36
	Depth of Field (mm)	80 - 0.5	42 - 0.2	0.3 - 0.015	15um - 4um
	Video Latency (milli seconds)	20 (50Hz)/ 17 (60Hz)	20 (50Hz)/ 17 (60Hz)	20 (50Hz)/ 17 (60Hz)	20 (50Hz)/ 17 (60Hz)

Technical Specifications

	INSPEX 3
Zoom Range (with supplied +5 Lens)	2.1 - 131.6x
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

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THE IRISH TIMES
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All systems are now multilingual.

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