



**INSPEX 4K**

DIGITAL MICROSCOPE SYSTEM





# INSPEX 4K

## DIGITAL MICROSCOPE SYSTEM

### Simply sharper.

The Inspex 4K is an inspection solution that delivers four times the resolution of full HD inspection systems. Experience crystal clear ultra-high definition video imaging, allowing you to see more detail than ever before.

A simple, intuitive interface empowers the end user to inspect parts with ease, simplicity and comfort.

Speed up your inspection process by identifying defective parts faster, easier and in super high resolution. The Inspex 4K offers features such as high-magnification, auto-focus, manual focus, auto-exposure and white balance.

# FEATURES

## Ultra HD resolution 3840 x 2160 pixels

Inspect your parts in even greater detail and precision, with our highest resolution camera yet - 4 times greater than our full HD inspection systems.

## 3x-71x optical zoom

Experience a wide range of magnification.

## Higher colour depth and superb image quality

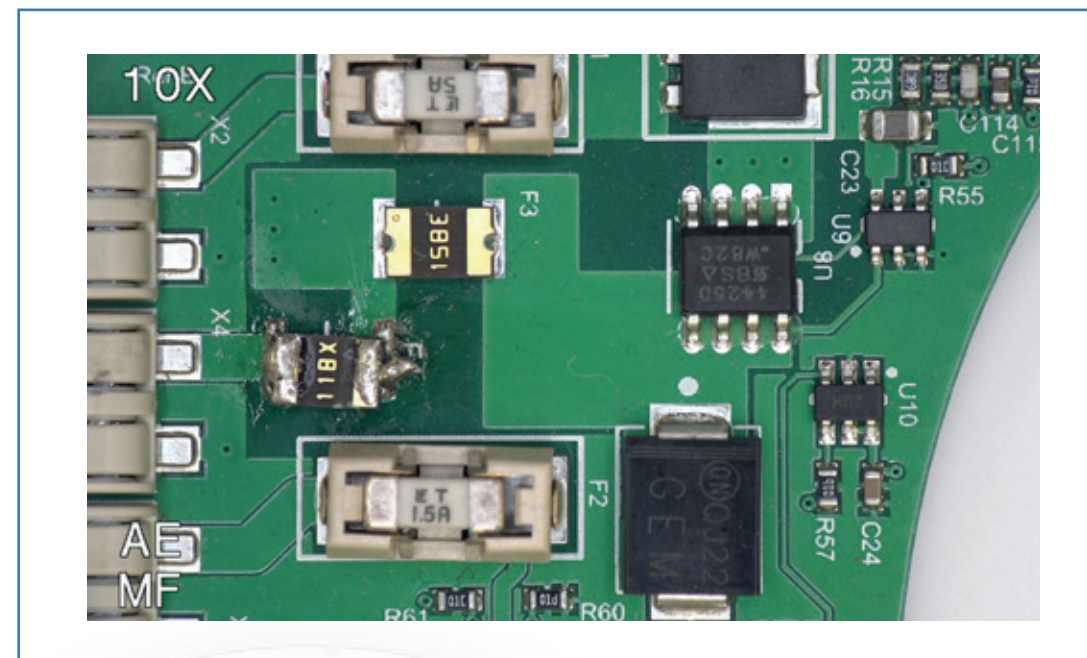
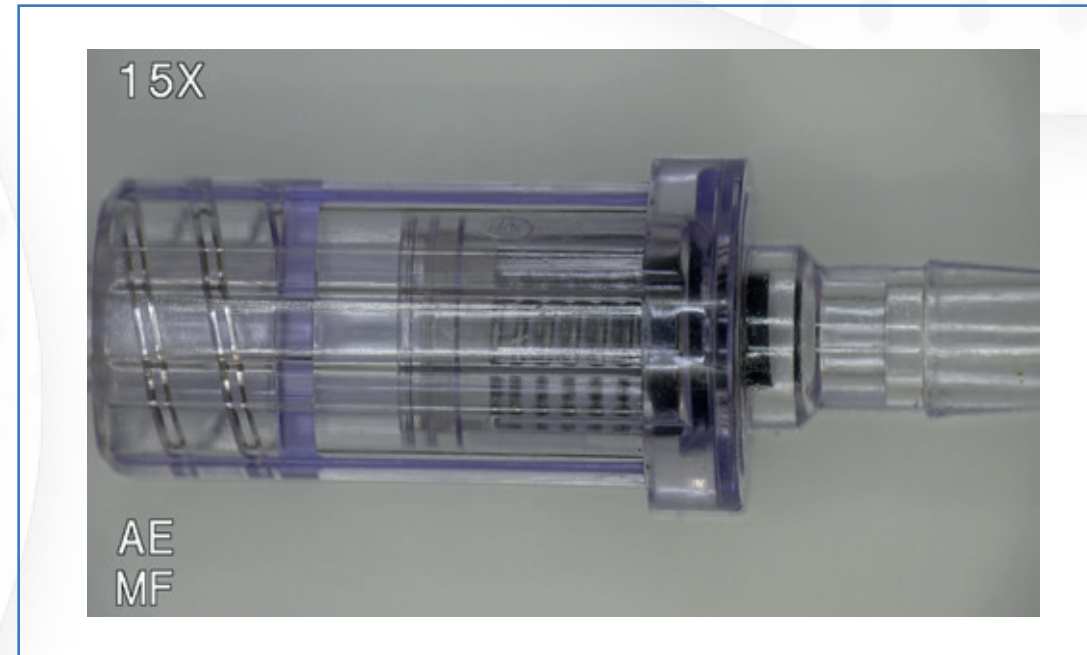
Excellent image quality ensures an accurate and true representation of your sample.

## Autofocus

Place the sample under the Inspex 4K and it will immediately focus on your part throughout the inspection process. Quickly and seamlessly inspect your part without having to adjust manual focus or change the height of the part.

## Image & video capture

Document your inspection process with image and video capture, using Windows or OXB PC capture software.



# BENEFITS

## Improve inspection quality

High-quality resolution ensures defects are clearly visible and easily identified.

## Ergonomic digital solution

The Inspex 4K is ergonomically designed to minimise strain to the eyes, neck and back for the end user, as they carry out inspection or rework of parts with comfort and ease.

## Faster image response for rework & observing moving parts

Experience a faster image response for rework and observing moving parts with low video latency.

## Easily adjustable working height

Adapt your microscope height to accommodate the inspection of a wide variety of sample heights and dimensions.

# Included System Components



INSPEX 4K  
FI806 - 006

# Technical Specifications

## Camera Specifications

|         | Lens Type                     | +10 Plan 1x                         |
|---------|-------------------------------|-------------------------------------|
| Optical | Magnification Range (X)       | 10x - 71x                           |
|         | FOV at min (mm)               | 51 x 29                             |
|         | FOV at max (mm)               | 7.5 X 4.25                          |
| Digital | Magnification Range (X)       | 72Dx - 142Dx                        |
|         | FOV at min (mm)               | 7.25 X 4.1                          |
|         | FOV at max (mm)               | 3.75 x 2.25                         |
|         | Working Distance (mm)         | 55                                  |
|         | Depth of Field (mm)           | 11 (min. zoom) / 0.2 (max. optical) |
|         | Video Latency (milli seconds) | 20/17                               |
|         |                               |                                     |

# Optional System Components

## Technical Specifications

| LIGHTS              | CONTROLLERS  | STANDS & STAGES | OTHERS         |
|---------------------|--------------|-----------------|----------------|
| Polarised Ringlight | KPIII Keypad | Track Stand     | 27" 4K Monitor |
| AI 801-423          | FI 806-002   | AI 100-043      | MR 100-071     |
| UV Lighting         |              |                 |                |
| AI 801-421          |              |                 |                |

|                       | INSPEX 4K                                                                                               |
|-----------------------|---------------------------------------------------------------------------------------------------------|
| Zoom Range            | 3x -142x*                                                                                               |
| Camera Resolution     | 3840x2160 Pixels                                                                                        |
| Monitor Connections   | HDMI / DVI                                                                                              |
| Monitor Requirements  | 4K Monitor                                                                                              |
| Input / Output        | HDMI Output<br>USB 2.0 (x1)<br>Mini USB Port(x1)<br>General Purpose I/O (x3 Ports)<br>DC Power Jack 24V |
| Internal Storage      | N/A                                                                                                     |
| Image Capture         | Capture Card to PC                                                                                      |
| Power                 | 24W/110W                                                                                                |
| Dimensions            | 216mm x 165mm x 170mm<br>*with a 27" monitor                                                            |
| Weight                | 1.75kg                                                                                                  |
| Operating Temperature | Storage 10°C to 60°C<br>Operating 5°C to 40°C                                                           |

# WHAT OUR CUSTOMERS SAY ABOUT US

## 30X FASTER INSPECTION INCREASES PRODUCTION THROUGHPUT FOR PFIZER

### Challenge

To ensure the safety of pharmaceutical packaging, Pfizer required a sophisticated solution that was reliable and fast. The production process requires inspection and measurement of all pharmaceutical packaging to identify defects or anomalies. This process must be quick and accurate to ensure production levels are maintained. To date, this process was performed on an outdated machine that could not save or share images or reports detailing any findings or defects. In addition, the machine was stored in a facility outside of their department and could not be moved. This created unnecessary additional operator time for each sample. The previous system also took thirty minutes to start up.

### Solution

The Omni 3 was the ideal solution for Pfizer. It provided a digitised, capable solution within their department for quick accessibility. This allowed for rapid inspection and measurement of defects. Reports are automatically generated and stored within Omni or an external USB, streamlining reporting for documentation and traceability. The ASH solution has also complimented their ability to work with international departments through live sharing results from the Omni via video meetings.

### Result

Originally, Pfizer's process, from start to finish, took thirty minutes, it's now down to less than one minute. And all aspect of the process are improved – better identification, capture, reporting and sharing. The footprint of the new solution is minimal relevant to the previous system, and is sited alongside the production line.

## 11X FASTER. 3X MORE ACCURATE. A SWEET RESULT FOR BRITISH SUGAR

### Challenge

In order to meet quality and food safety requirements, British Sugar continually complete a lab test where they count live and dead yeast cells. To date this process has been done manually. A laborious process that, by its nature, is prone to human error. The operator, using a microscope, manually counting the white and blue cells on screen, manually inputting the data into spreadsheets, and applying some calculations. British Sugar had been searching for a way to improve this process for a long time.

### Solution

Paul Wrathmall from British Sugar presented our Technical Sales Manager in the UK with their cell counting challenge. Our R&D department began to explore possible solutions. British Sugar provided test samples and we set about building a working model in-house to solve the problem. We used our Acumen AI system, a customised APP, and a custom mechanical jig to ensure lighting consistency, with a camera to automatically count white and blue cells. The system automatically applied the required algorithms, automatically saved the data, and automatically created a PDF report. We presented the solution to British Sugar, they were surprised and delighted with the speed, accuracy and completeness of the system and implemented it immediately.

### Result

Our solution, so far, has reduced average task time from 17 minutes to 90 seconds. As the AI bot gets smarter task time will further reduce. With the task largely automated the possibility for human error was greatly reduced. The solution also streamlined the cell counting documentation and reporting process for British Sugar.



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**reddot award**  
product design  
winner



All systems are now multilingual.

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