



OMNI
VANTAGE **4K**
ULTRAHD

4K ULTRA HD DIGITAL MICROSCOPE SYSTEM

OMNI VANTAGE



SEE MORE. DISCOVER MORE.

THE NEW STANDARD IN **PRECISION INSPECTION**

Omni Vantage revolutionises quality control processes with ultra high definition 4K imaging and intuitive software, empowering professionals in electronics, medical device manufacturing, aerospace and precision engineering to detect minute defects and inconsistencies with absolute confidence.

Omni Vantage delivers faster, more reliable inspections, improved operator efficiency without the need for complex training.

SOLVING INSPECTION CHALLENGES WITH

OMNI VANTAGE

CHALLENGE 1:

Limited Image Resolution Obscures Fine Details

Lower-end microscopes often lack the clarity to reveal fine features or surface defects, leading to missed issues and reduced inspection accuracy.

SOLUTION 1

4K Ultra-High Definition Imaging:

Ultra-clear 4K imaging reveals the smallest defects and surface inconsistencies with exceptional clarity and detail.

CHALLENGE 2:

Slow or Manual Detection Delays Decision Making

Manual image analysis delays issue detection, increasing the risk of errors, scrap, and costly rework.

SOLUTION 2

Real-Time Processing:

Immediately detect irregularities. This empowers users to take swift, informed action before problems escalate.





CHALLENGE 3:

Fragmented Software Tools Complicate Workflow

Using multiple, disconnected tools for inspection and reporting creates inefficiencies, risks errors, and reduces productivity.

SOLUTION 3

Smart, Integrated Software Apps

Purpose-built apps unify inspection, measurement, and reporting streamlining workflows and reducing friction.

CHALLENGE 4:

Poor Ergonomics Lead to Operator Fatigue and Inconsistency

Strained posture and repetitive tasks lead to operator fatigue, discomfort, and less reliable inspections.

SOLUTION 4

Ergonomically Designed Workflow

Ergonomic design and intuitive controls reduce strain, speed up tasks, and improve inspection consistency.



*Until now, inspection meant limits.
Now you see everything.*



WHY CHOOSE **OMNI VANTAGE**

Omni Vantage transforms quality control with ultra-high-definition 4K imaging and intuitive, integrated software, empowering professionals in electronics, medical device manufacturing, aerospace, and precision engineering to detect even the smallest defects with confidence.

Designed for speed, accuracy, and ease of use, it enables faster, more consistent inspections and boosts operator efficiency without the need for complex training.

01 **Exceptional Clarity. Superior Accuracy** *Bottlenecks in fast-paced production environments.*

With true 4K resolution, capture ultra-fine detail for highly accurate measurements and outstanding inspection quality.

02 **Calibrated Precision at Every Zoom** *No Setup. No Recalibration. No Drift.*

Unlike traditional systems, Omni Vantage is factory-calibrated and certified at every magnification level. Adjust zoom levels without manual setup and trust your measurements every time.

03 **60fps Real-Time 4K Ultra HD Imaging** *See Clearly. Act Instantly.*

Experience live imaging without lag or delay with 60 fps, empowering fast, confident inspections and decision-making.

04 **Plug & Play Performance** *Standalone. Instant-On. PC-Free.*

Works right out of the box. No PC, no drivers, no delays. This fully integrated system reduces validation effort, minimises IT dependency, and accelerates deployment.

05 **Designed for Operators. Built for Comfort** *Ergonomics Meets Efficiency.*

Engineered for all day use, it supports operator comfort and reduces fatigue. Intuitive interface, access controls, and customisable presets streamline workflows and enhance productivity.

THE INNOVATION BEHIND EVERY **OUTCOME**

4K Ultra HD Visual Clarity

Detect micro-defects that are invisible to standard systems with uncompromising 4K precision. Enhanced image quality also enables up to 5x more accurate measurements than standard ASH HD imaging systems.

Factory-Calibrated Precision

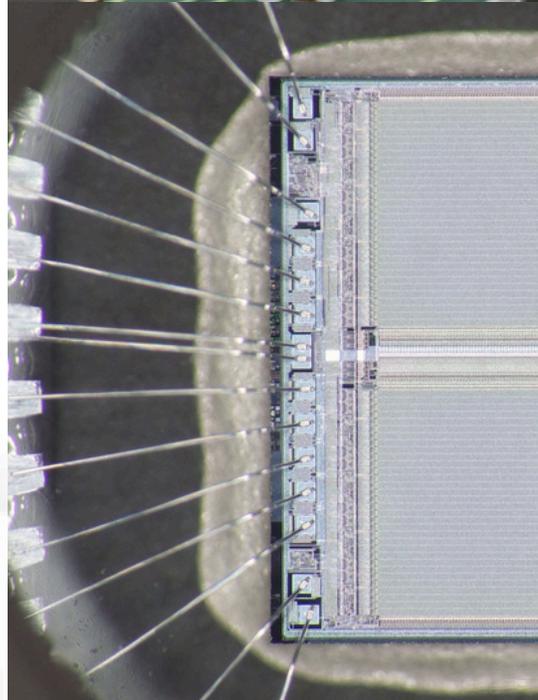
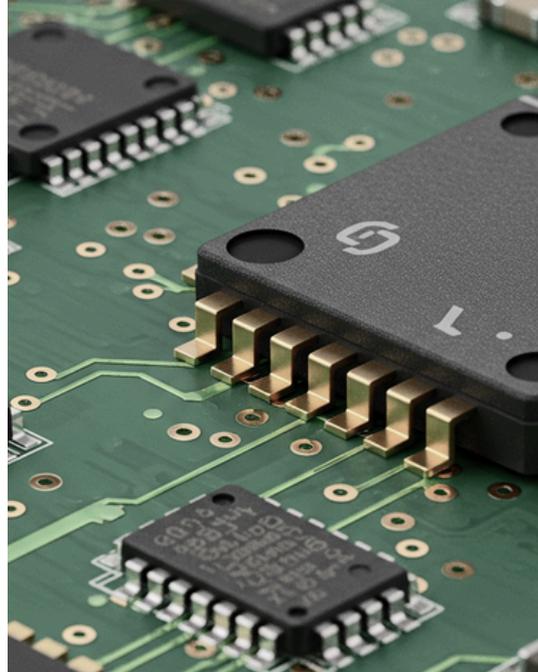
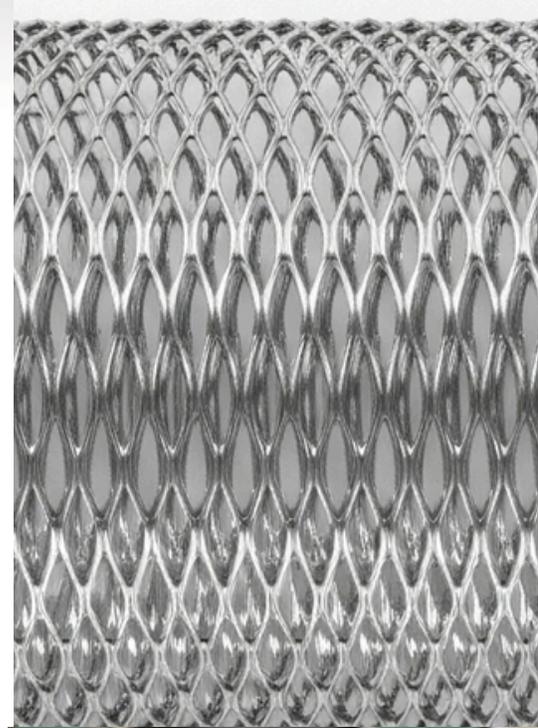
Certified accuracy at every magnification level - no recalibration needed, reducing setup time, and eliminating measurement drift ensuring instant reliable measurements.

Zero Video Latency

Instant visual feedback enables precise hand-eye coordination, allowing operators to rework and assemble components faster, with greater accuracy and confidence, reducing errors and fatigue.

Real-Time Lens Distortion Correction

Delivers accurate, distortion-free imaging from edge to edge - essential for inspecting large parts, minimising errors due to distorted visuals and enabling reliable on screen measurement.





Smart, Integrated Software Apps:

2D Measurement & Graticules

Accurately and repeatably measure critical dimensions using the edge detection feature, eliminating manual cursor error. Create go/no go templates for quick reliable verification of dimensional tolerances, reducing decision-making time.

DXF Import/Export for Fast Workflows

Streamline inspection by overlaying DXF templates directly onto live images enabling quick go/no-go checks against standard part geometries.

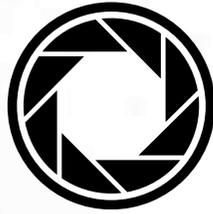
Overlay & Side-by-Side Comparators

Instantly highlight deviations from master sample images - helping prevent costly errors before they escalate.

Image Stacking

Captures fully focused images of multi-layered or curved surfaces in a single pass, eliminating the need for manual refocusing and improving throughput.

MODULAR.
FLEXIBLE.
BUILT FOR YOU



LENSES

+10 plan 1x, +25, +50 Magnification
Polarised Lens Options



LIGHTING

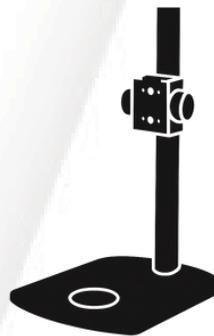
Intergrated/Swapable Standard,
UV & Polarised Ringlights





CONTROLLERS

Wireless Keypads &
Footswitches



STANDS & STAGES

Track Stand (with and without illumination),
Tilting Stage
Dual Arm Boom, XY Precision Stage

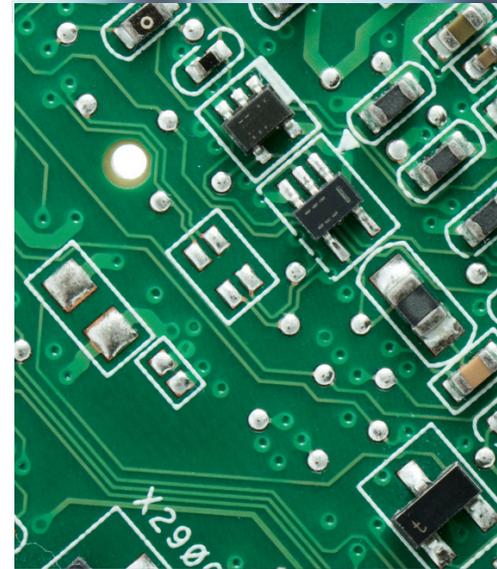
PRECISION ACROSS INDUSTRIES

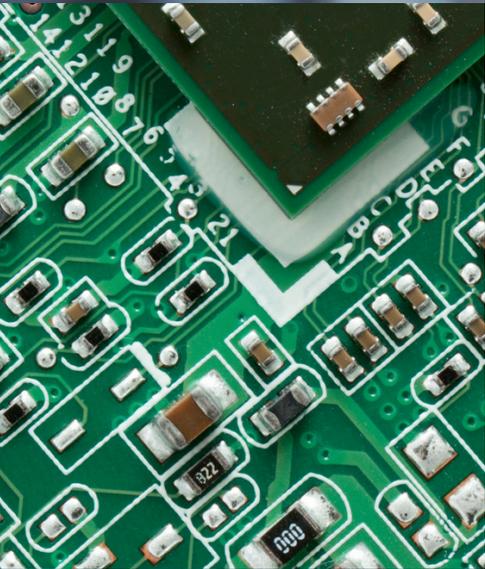
Medical Device

High-precision inspection, dimensional measurement, and failure analysis across a wide range of medical devices including stents, braids, catheters, balloons, and syringes. Designed to meet the strict demands of the medical industry, it helps ensure product quality, performance, and compliance at every stage.

Electronics

High-accuracy inspection and dimensional measurement of electronic components on Printed Circuit Boards (PCBs) and Surface-Mounted Devices (SMDs). It enables reliable detection of defects such as solder balls, solder bridges, and other critical failures, helping ensure product integrity, performance and manufacturing efficiency.





Automotive

Detailed inspection and measurement of automotive components including seals, valves, screws and joints. Easily detect defects, ensure dimensional conformity and maintain high-quality standards across both functional and aesthetic parts.

Aerospace

High-resolution inspection and measurement of critical aerospace components, including compressor turbine and mechanical parts. It supports the detection of micro-defects and dimensional variances to ensure safety, reliability and compliance with strict industry standards.

Precision Engineering

Omni Vantage provides advanced imaging and analysis for materials science and micro-engineering applications. Ideal for studying surfaces at the micro level, it supports detailed sample inspection, structural analysis and quality assessment across a wide range of high-precision components.

OMNI VANTAGE ADVANTAGE

Uncompromising Precision And Accuracy

4K UHD imaging and advanced optics deliver enhanced edge clarity and dimensional accuracy, providing up to 5x more precise measurements than standard ASH HD imaging systems making it ideal for applications where accuracy is non-negotiable.

Lightning-Fast, Zero-Latency Workflow

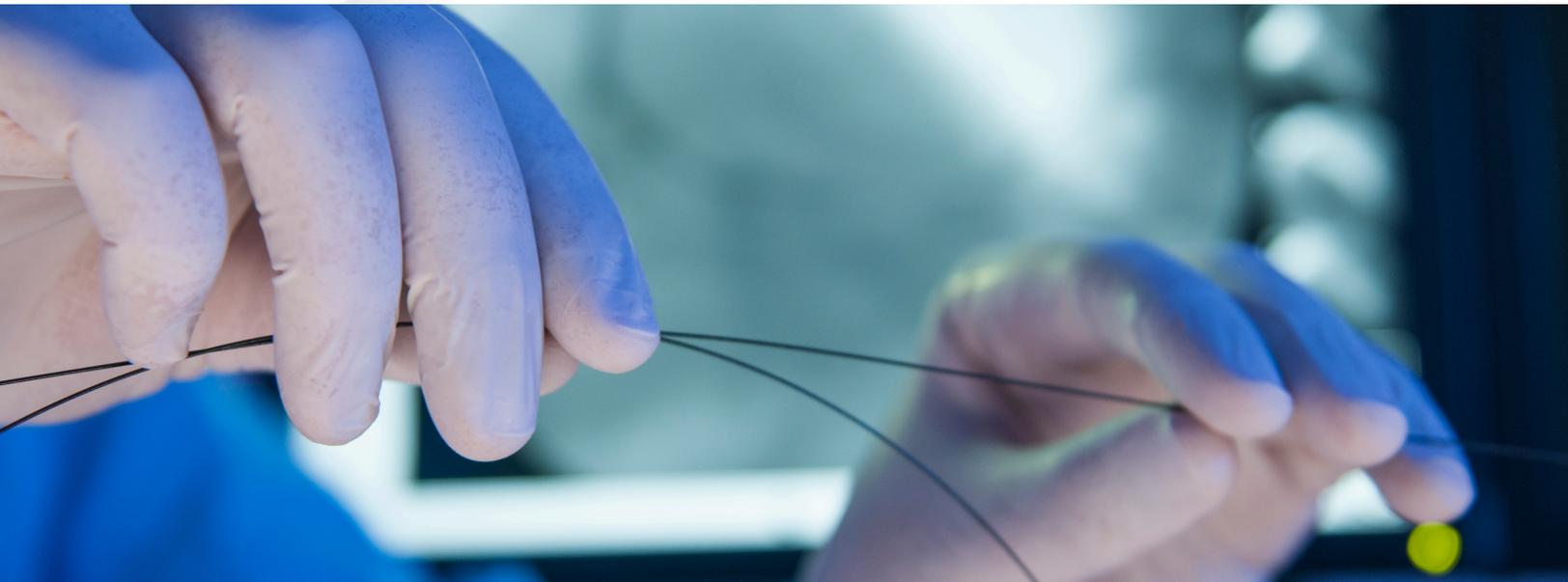
60 fps live imaging, real-time comparisons, and no video lag empower faster decisions and higher throughput.

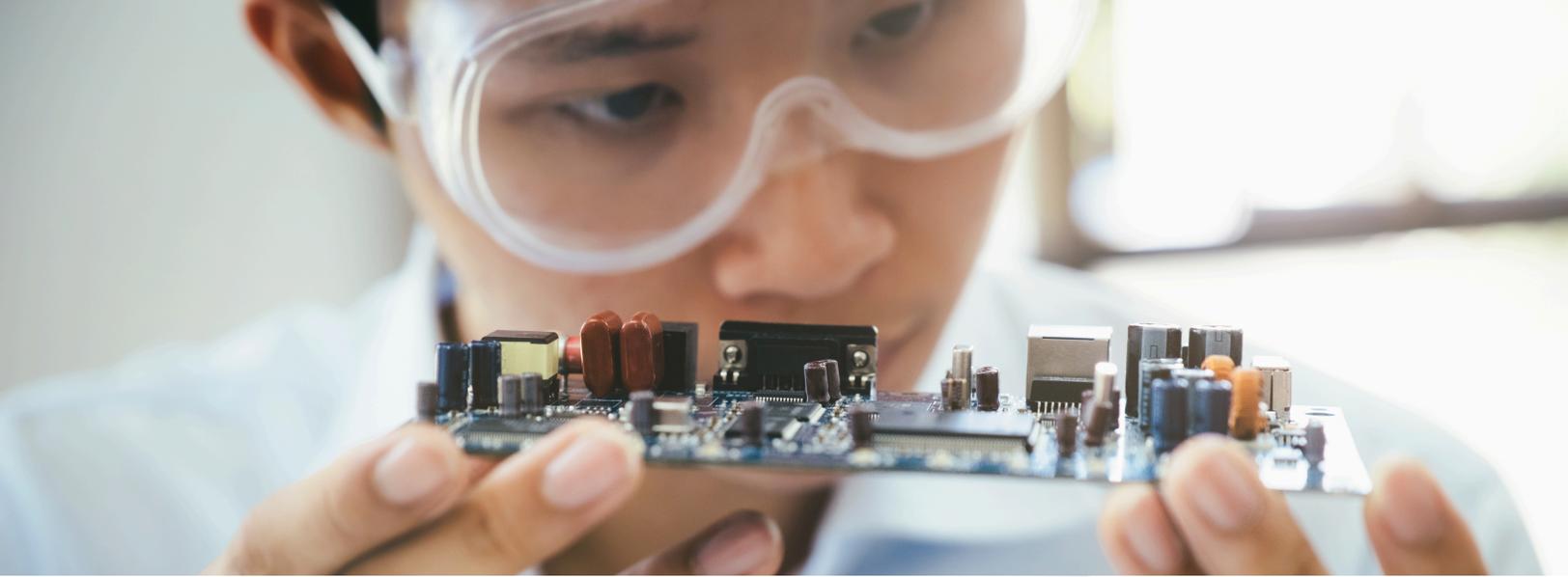
Operator-Centric, Ergonomic Design

Intuitive controls, customisable presets, and fatigue-reducing ergonomics ensure consistency and comfort.

“The Omni Vantage system transformed our inspection process improving first-pass yield and reducing defect escapes.”

Quality Manager, Top 5 Medical Device
Manufacturer





Compliance-Ready Traceability

Built-in image capture with timestamping and user access control ensures traceable documentation of every inspection. Saved images provide proof of process for customers, support regulatory compliance, and serve as a reliable reference for resolving batch issues or customer complaints reinforcing quality assurance.

“Transitioning to the Omni Vantage 4K system has completely transformed our inspection workflow. We’ve reduced inspection times by 40% and achieved significantly higher defect detection accuracy and confidence throughout our production line”

Quality Manager, Leading Medical Device Manufacturer



OMNI SEE VANTAGE IN ACTION



Experience the full capabilities of the Omni Vantage digital microscope system with a live demonstration tailored to your specific industry and inspection needs.

Whether you're in electronics, medical device manufacturing, aerospace, automotive, or precision engineering, our experts will walk you through how Omni Vantage can transform your inspection process, delivering ultra-high definition imaging in real-time, and seamless software integration. We go beyond standard demos.

Our dedicated team of experts is located internationally, ready to meet with you virtually or on-site. We're happy to visit your facility, understand your challenges and discuss how we can tailor the Omni Vantage system to fit your workflow and quality control goals.

Book Your Personalised Demo Today

See how smarter, faster, and more accurate inspection is not just possible, but ready when you are.

CONTACT ASH

Whether you're a quality manager, engineer, or industry partner, our team is ready to answer your questions and guide you in finding the right digital microscope solution for your needs. Don't hesitate to get in touch. We're here to support you every step of the way.



Contact Information



Phone

Ireland: +353 (0) 45 882 212
UK: +44 (0) 1604 300 001



Email

sales@ashvision.com



Website

www.ashvision.com

Office Information

Office Hours

Monday to Friday: 8:00 AM – 5:00 PM

ASH HQ

Unit B5, M7 Business Park, Naas, Co. Kildare,
W91 P684, Ireland

ASH UK

Covert Farm, Long Lane, East Haddon,
Northamptonshire, NN6 8DU, United Kingdom





ASH

Digital Inspection Redefined



ASH HQ

Unit B5, M7 Business Park, Naas,
Co. Kildare, W91 P684, Ireland

Phone

Ireland: +353 (0) 45 882 212
UK: +44 (0) 1604 300 001

Website

www.ashvision.com