Vision ENGINEERING

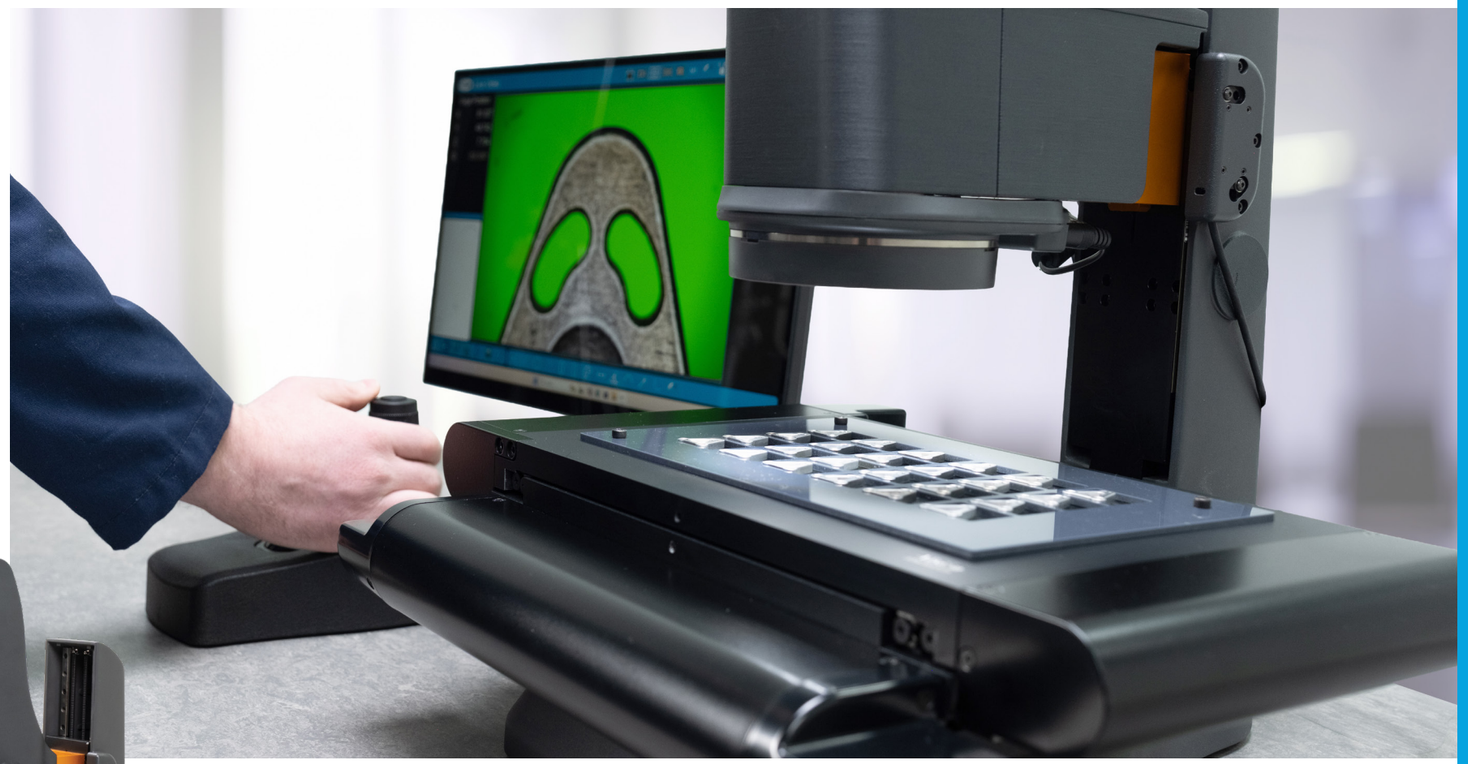
EDGE

COMPACT PRECISION METROLOGY

FOCUSED | QUALITY

EDGE

COMPACT AUTOMATION. REPEATABLE PRECISION.



Edge Series offers three compact video measurement systems for production environments and the dimensional verification of small precision components.

Edge Series supports repeatable dimensional verification where throughput and consistency are critical. Compact systems enable shop-floor measurement, keeping dimensional inspection close to the manufacturing process and providing faster feedback to production and quality control operations.

The series offers three levels of automation, from flexible manual inspection through to full 3-axis CNC measurement. This structure allows manufacturers to select the inspection capability suited to their workflow while maintaining measurement reliability and consistent control of critical dimensions.

REPRODUCIBILITY ENSURES CONSISTENT MEASUREMENT RESULTS, HELPING MANUFACTURERS MAINTAIN HIGH QUALITY AND EFFICIENCY.

EDGE SERIES ADVANTAGES:

01

Compact Production-Ready Footprint

Designed for shop-floor measurement, the compact footprint allows dimensional inspection to take place close to the manufacturing process. Integrating measurement directly within production areas enables faster response to variation and clearer communication between production and quality teams.

02

Repeatable Measurement

Consistent measurement results are essential for reliable quality control. Edge Series provides repeatable measurement across operators, shifts and production batches, helping maintain dependable dimensional verification and reducing the risk of variation passing downstream.

03

Three Levels of Automation

Three defined levels of automation are available: manual measurement, automated 2-axis inspection and full 3-axis CNC measurement. This structure allows manufacturers to select the level of automation suited to their inspection tasks and production workflow.

04

Metrology Expertise and Partnership

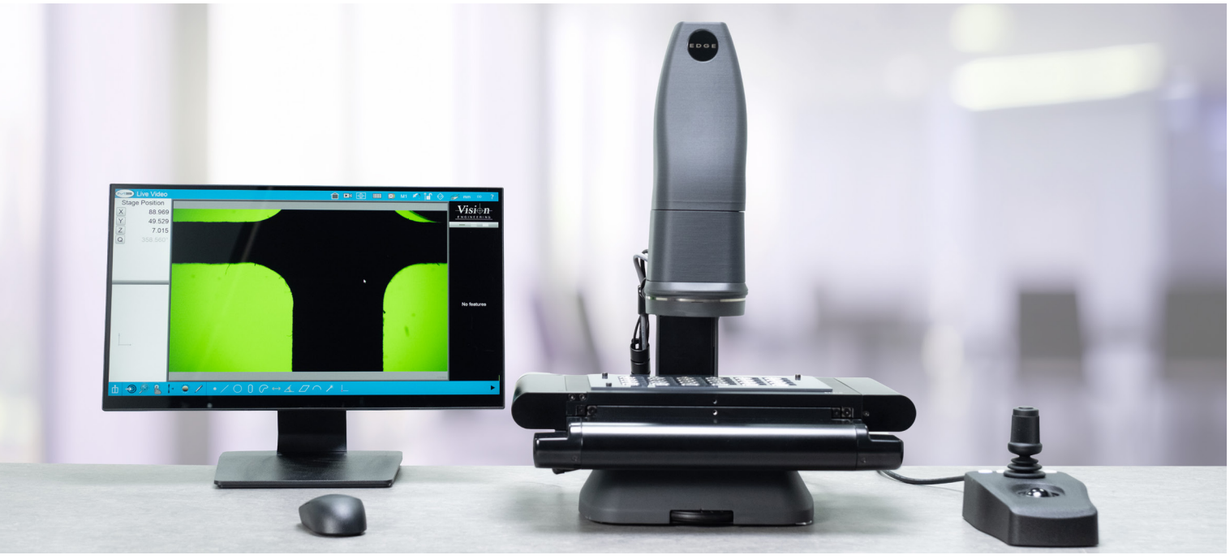
Successful and consistent measurement processes depend on more than equipment alone. Vision Engineering works closely with manufacturers to ensure systems are correctly specified, installed and integrated into existing inspection workflows. Training, application guidance and ongoing technical support help organisations maintain reliable dimensional verification as production requirements evolve.

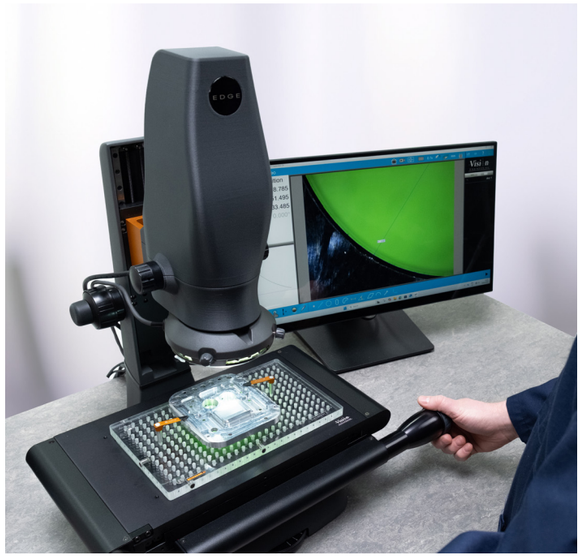
For more information, visit visioneng.com

Vision ENGINEERING

THREE SYSTEMS.
YOUR INSPECTION CHOICE.

Video measurement systems designed to deliver repeatable dimensional verification for different inspection requirements.





DESIGNED FOR HIGH-THROUGHPUT INSPECTION WHERE AUTOMATION AND MEASUREMENT FLEXIBILITY ARE ESSENTIAL.

EDGE APEX

Full 3-axis CNC measurement for controlled production inspection

APEX delivers automated dimensional verification for production environments where repeatability and inspection throughput are critical. Full 3-axis CNC control and motorised zoom optics support programmed inspection routines and consistent measurement across production batches.

Key features

- Full 3-axis CNC control and measurement
- Motorised 6.5:1 zoom optics
- Motorised focus
- Adjustable sub-stage iris control for flat and turned parts
- Programmable LED illumination
- Pattern recognition for automated feature detection
- Image stitching capability
- GD&T measurement capability
- Structured reporting and data export
- M3 measurement software

EDGE VISTA

Rapid 2-axis automated measurement for repeat inspection

VISTA delivers automated dimensional verification for production environments where repeated inspection of consistent parts is required. 3-axis automated movement for the fast, reliable measurement of three dimensional parts. Large field of view for faster inspections.

Key features

- 3-axis CNC control, 2-axis measurement
- Telecentric optical measurement capability
- Motorised focus
- Collimated sub-stage illumination
- Programmable LED illumination
- Pattern recognition for automated feature detection
- Image stitching capability
- GD&T measurement capability
- Structured reporting and data export
- M3 measurement software

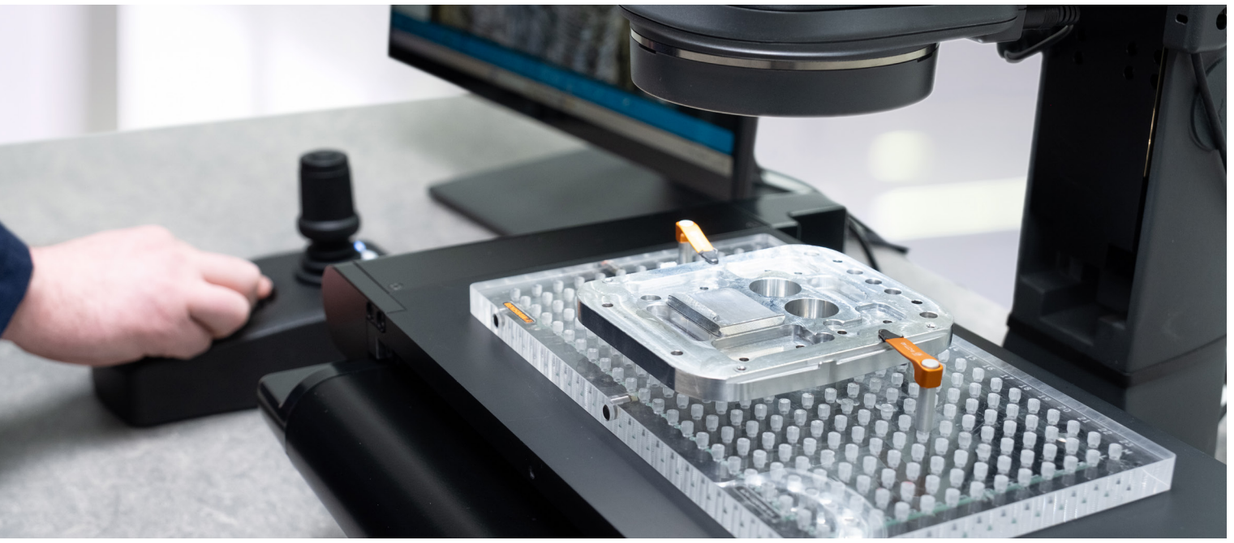
EDGE CORE

Flexible manual measurement for production verification

CORE delivers reliable dimensional verification for production environments where flexibility and ease of use are important. Manual stage control supports quick inspection tasks and dependable dimensional checks during setup and production.

Key features

- Manual stage control for flexible inspection
- Manual 6:5:1 zoom optics
- Iris-controlled substage illumination for flat and turned parts
- Programmable LED illumination
- Pattern recognition for automated feature detection
- Image stitching capability
- GD&T measurement capability
- Structured reporting and data export
- M3 measurement software



MULTIPLE APPLICATIONS. RELIABLE VERIFICATION.

Edge Series supports dimensional verification of small precision components across production-driven industries.

Precision Engineering

Where tight tolerances and repeat inspection are common, Edge Series provides dimensional verification of machined parts. Features such as threads, gears, shafts, shoulders and grooves, and small machined housings can be measured while maintaining consistent control of critical dimensions across production batches. Automated inspection routines maintain measurement repeatability and identify process variation earlier, while reducing reliance on manual measurement techniques.

Electronics

Miniaturised components and dense PCB layouts require reliable dimensional verification during manufacturing and quality control. Edge Series provides measurement capability for features such as connector pins, solder pads, component spacing and small PCB features. Automated measurement routines support repeat inspection of consistent layouts while maintaining reliable measurement performance across operators and shifts.

Precision Plastics and 3D Printing

Injection moulded and additively manufactured parts often include thin walls, fine edge features and cavity-to-cavity variation. Edge Series enables non-contact optical measurement of components such as moulded connectors, plastic housings and small structural parts, allowing manufacturers to verify part geometry and identify flash, shrinkage, warpage or distortion. Image stitching extends the measurement field for larger or complex plastic components.

Medical Device

Medical components frequently include micro-features and fine tolerances that require reliable dimensional verification. Edge Series supports inspection of parts such as catheter components, stent features, surgical device elements and miniature moulded parts used in medical assemblies. Repeatable measurement and structured reporting help maintain traceability while supporting consistent quality control across production batches.

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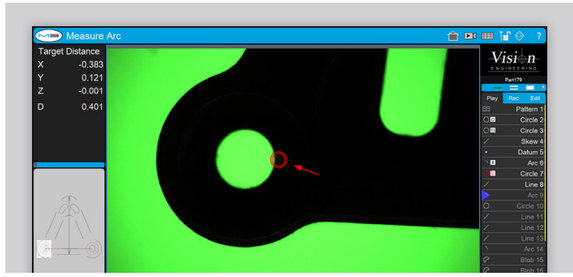
M3 MEASUREMENT SOFTWARE

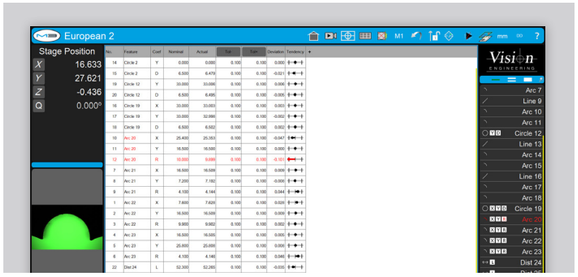
M3 measurement software delivers repeatable dimensional verification in production environments through programmed inspection routines, automated feature detection and structured reporting.



Program

Create and run programmed inspection routines for repeat parts.

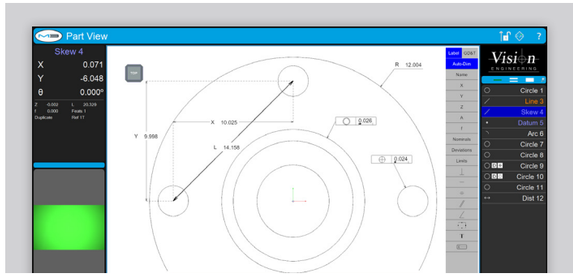
- Create programmed inspection routines
- Store and recall measurement programs
- Pattern recognition for automatic feature location
- Batch inspection of multiple components



Reporting

Clear documentation and traceable measurement results.

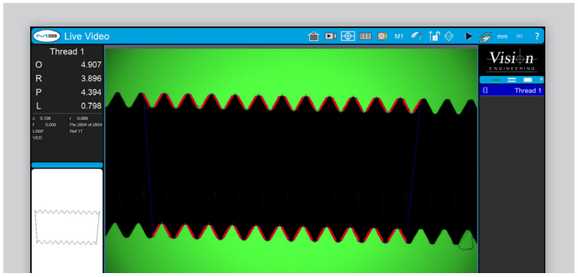
- Structured measurement reports
- DXF import and digital comparison
- Data export for SPC and quality systems
- Stored inspection results for traceability
- Supports integration with digital manufacturing and Industry 4.0 environments.



Measurement

Dimensional measurement tools for simple and complex features.

- Measure points, lines, circles and arcs
- Feature construction and geometric relationships
- GD&T evaluation
- Image stitching capability



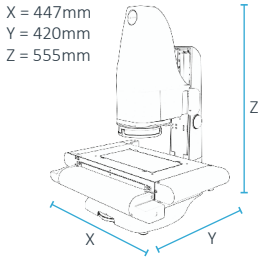
Tailored Features

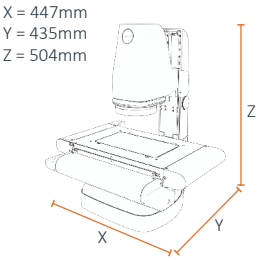
Adapt measurement capability to specific inspection tasks.

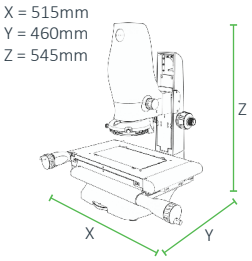
- Additional software modules
- Custom measurement routines
- Configurable inspection workflows
- Expand capability as requirements evolve

INSPECTION WORKFLOWS CAN BE CONFIGURED TO SUIT SPECIFIC MEASUREMENT TASKS.

Technical specification







EDGE	APEX	VISTA	CORE
Measuring capacity (X / Y / Z)[1]	200 x 100 x 95/100 mm	200 x 100 x 95/100 mm	200 x 100 x 95/100 mm
Lens	6.5:1 motorised optical zoom (7 positions)	Low distortion telecentric lens	6.5:1 indexed manual optical zoom (6 positions)
Field of View - Max	12.4 x 7.8 mm	35 mm diagonal (28 mm / 21 mm)	15.5 x 10.0 mm
Field of View - Min	2.8 x 1.8 mm	Fixed lens	2.5 x 1.5 mm
Magnification range[2]	27x - 117x	10.3x	20x - 117x
Lens control	Motorised zoom and focus	Motorised focus	Manual zoom and focus
Camera	2.3 MP (11.251 mm X 7.032 mm) CMOS	5.0 MP (5.702 mm X 4.277 mm) CMOS	2.3 MP (11.251 mm X 7.032 mm) CMOS
Control	3-axis CNC	3-axis CNC	Manual
Maximum load	10Kg	10Kg	10Kg
Standard foot print (X / Y / Z) + PC and monitor	800 x 520 x 570 mm	800 x 520 x 550 mm	550 x 650 x 580 mm
Working volume X,Y Z = PC and Monitor	1000 x 520 x 670 mm	1000 x 520 x 620 mm	720 x 690 x 670 mm
Encoder resolution	X,Y 1 micron Z axis 1/2 micron	X,Y 1 micron Z axis 1/2 micron	X,Y 1 micron. Z axis 1/2 micron
Measurement uncertainty (X - Y axes)[1]	5 + (6.5L/1000) µm[3]	5 + (9.54 L/1000) µm / 4 µm in FOV mode	5 + (6.5L/1000) µm[3]
Measurement uncertainty (Z axis)[1]	15 + (7L/1000)[4]	N/A	15 + (7L/1000)[4]
Surface illumination	Bright white LED ring-light with 4 sectors and optional diffuser	Bright white LED ring-light with 4 sectors and optional diffuser	Bright white LED ring light with 4 sectors and diffuser
Substage (Transmitted) illumination	Green LED back light, and iris adjustment	Collimated green LED illumination	Green LED back light, and iris adjustment
Light control	Fully programmable	Fully programmable	Fully programmable
Measurement software	M-Series Software and PC	M-Series Software and PC	M-Series Software and PC
Software options (modules)	Spur gear inspection, Profiling, Wire insulation, Image stitching, Thread measurement		

[1] Measurement uncertainty is determined in accordance with ISO-10360 Part 7
[2] Based on a 22" monitor, fit to screen
[3] L = length in mm, using controlled conditions with maximum magnification at the standard measuring plane
[4] Using controlled conditions with maximum magnification

For more information and sales support, please contact your Vision Engineering branch, local authorised distributor, or visit our website: visioneng.com

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Vision Engineering Ltd. has been certified for the quality management system ISO 9001:2015

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