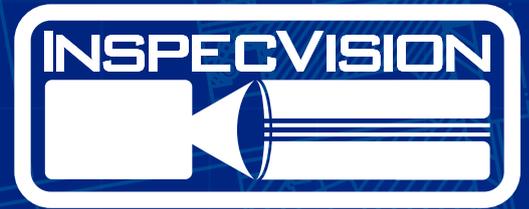


# ACCUTY



High Speed Automated 2D & 3D Optical Gauging  
Single Click Setup and Inspection



Speed, accuracy & reliability

# AUTOMATED 2D & 3D INSPECTION

The InspecVision Accuity is the most automated optical gauging system on the market. The system has certified accuracies from 6 microns, and can scan up to 119mm wide.

Setup times and user input are reduced to zero by importing dimensions and tolerances from the CAD file. The total setup and inspection time for a new part is unrivalled, at around 4 seconds.

3D scanning is included as standard, allowing inspection of each feature in both 2D and 3D. Parts can then be compared to both 2D and 3D CAD models, or inspected without a CAD model. The system has no moving parts making it shop floor friendly.

18MP cameras and HD projectors produce accurate measurements traceable to ISO10360-4. Ensuring fast inspection times at high resolutions with minimal setup.

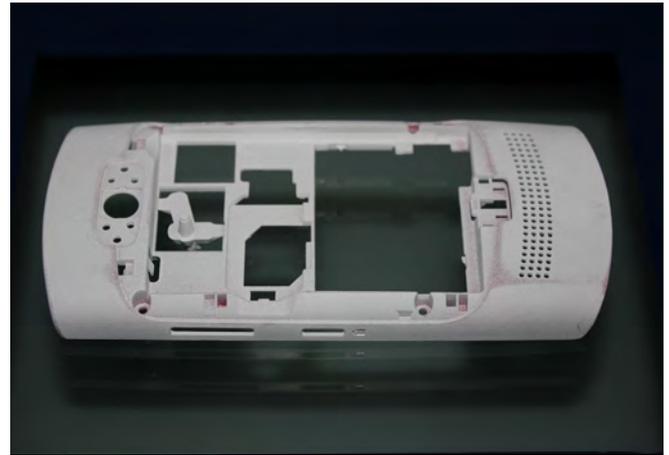


Figure 1: Part on Table

## 2D KEY FEATURES

- 18 MP camera as standard
- No moving parts
- Scans entire field of view with each scan
- 4 second setup and inspection time
- Wide depth of field 60mm
- Automatic report generation, zero setup
- Automatic alignment, no fixtures required
- Identification of bad parts and features
- Extensive support features for off site system analysis
- Traceable results, ISO 10360-4
- Temperature compensation
- Inspect multiple parts at once
- High speed reverse engineering
- Repositioning and merging of scan data

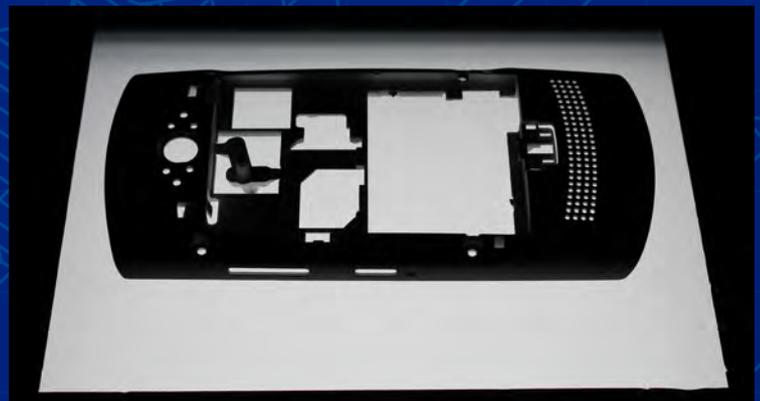


Figure 2: Part with 2D Back Light

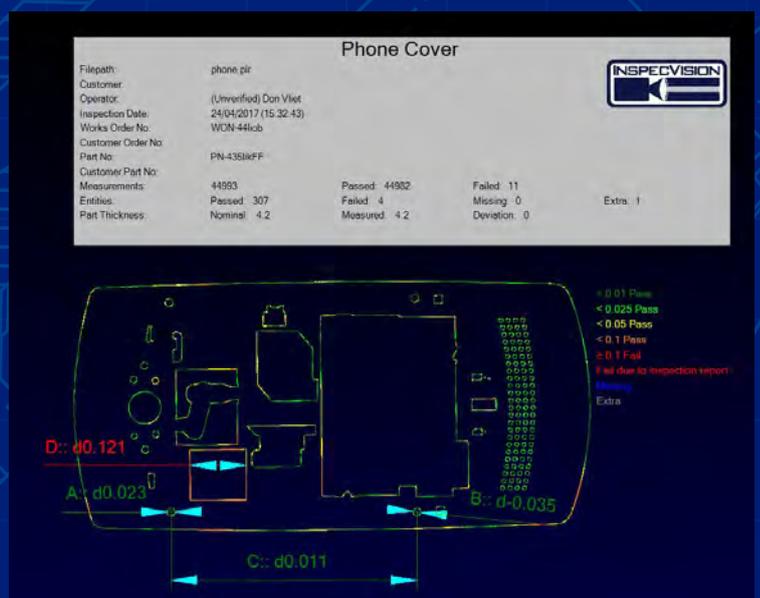


Figure 3: 2D Inspection with Deviation Map

## APPLICATIONS

- Lathe processing and cutting
- Stamping
- Injection molding
- Sintering
- Forged parts
- Molded object (profile tolerance)
- Electronic parts
- Rubber, seals and gaskets
- Micromechanics
- Printing

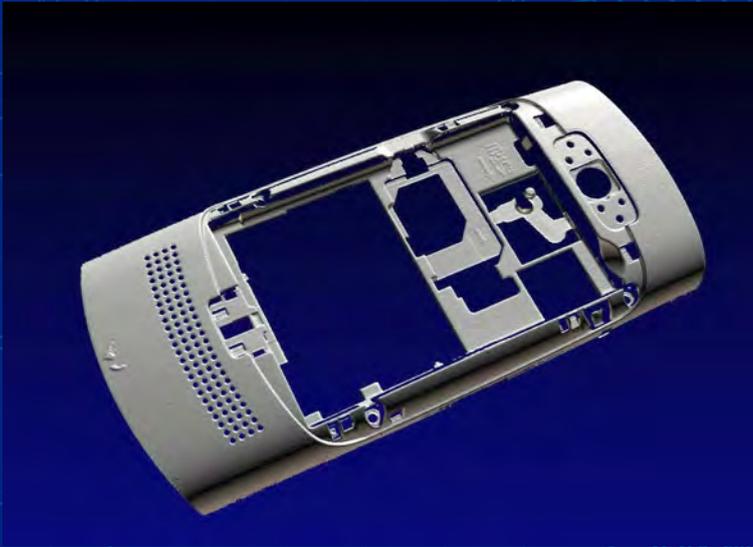


Figure 4: 3D Scan Data

## 3D KEY FEATURES

- Captures color, texture and 3D shape
- Scans entire field of view in less than 10 seconds
- Check angles, heights and cross-sections
- Measure edges in 3D
- Compatible with free 3D inspection software
- Comparison with 3D Solid Model
- GD & T inspections in 3D
- Projection of flatness deviation onto part
- 10 second scan time
- Augmented reality projection of failed features onto parts
- HDR scanning for reflective and high contrast components

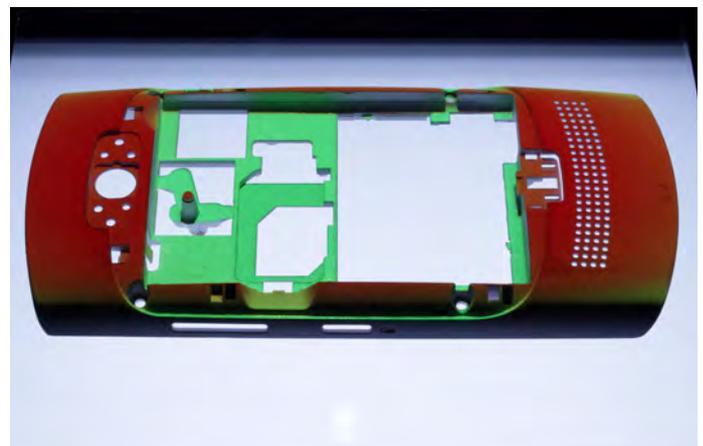


Figure 5: Projected Augmented Reality Deviations

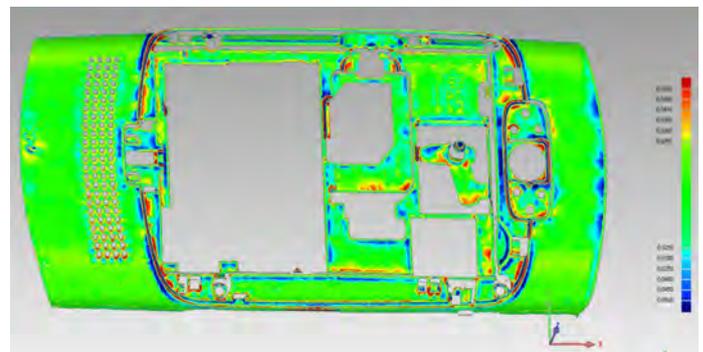


Figure 6: Comparisons to 3D CAD Model



# SPECIFICATION AND SCOPE OF SUPPLY OF ACCUITY A150.6

DESCRIPTION	SPECIFICATION/SCOPE OF SUPPLY
Max Single scan area	119mm (X) x 90mm (Y)
Max Single scan depth	60mm (Z)
Camera	>18 megapixels
Lens	Telecentric
2D Single Point Repeatability 1	1.5 microns
2D Accuracy 2	6 microns
3D Single Point Repeatability 3	1.8 microns
3D Accuracy 4	10 microns
2D Scanning time	0.1 seconds
3D Scanning time 5	10 seconds
Peripheral equipment	Table lighting controller, Standard Computer Interface
Required Operating System	Windows 7 64bit
Software included	3D scanning, automated repositioning, texture map acquisition, 3D color rendering, creation of cross-sections, creation of 3D edges, reverse engineering of 3D edges to DXF/DWG, comparison of 3D edges to DXF/DWG, reverse projection of colored deviation reports onto part, creation of 3D point clouds in PLY, STL, VRML, ASCII formats, creation of texture mapped point clouds, calibration software, 2D inspection software using silhouette and light from above, SPC output, automatic alignment, dimension importing, tolerance importing, tolerance tables, 3D repositioning, 2D repositioning, 2D reverse engineering.
Free 3D Inspection Software	"Fully compatible with off the shelf free 3D inspection software.
	Functionality includes comparison to 3D solid models, dimensioning, GD&T, cross-sections, full surface deviation inspection, merging of scans, customizable reports, automatic alignment of scan to CAD, point cloud meshing, processing and filtering, extraction of nominal data from CAD model, comparison of 2 scans."
Advanced 3D inspection software option (Geomagic Control X)	Available on request. Comparison to 3D solid models, GD&T, SPC, cross-sections, full surface and edge inspection, creation of report templates, automated merging of point clouds, automatic alignment of scan to CAD, automatic point cloud processing and filtering, automatic detection of repositioning spheres, macro creation for full automation, automatic extraction of nominal data from CAD model, comparison of 2 scans.
3D reverse engineering (advanced package)	Available on request. Creation of 3D solid models from scan data
Calibration Kit	Included as standard, retro-reflective reference markers mounted onto steel plate with repositioning frame
3D Accuracy Verification Object	Included as standard, calibrated hardened steel ball bar
Accuity construction	Frame with removable sheet metal cladding
Projection source	Full HD 1080p 1920x1080 native resolution LED projector
Data cables	HDMI and USB3
Power supply	110-240V 50/60/Hz
Power consumption	2 Amp maximum at 230 Volt, 4 Amp max at 110 Volt
EC directives	Compliant with Machinery, Low voltage and EMC Directives
Paint colour	Frame and Outer canopy: RAL5013 Blue
Ambient operating conditions	5-35 degree C
Approx Footprint width/ depth/ height/ weight	710mm (W) x 963mm (D) x 2005mm (H) 225kgs
Standard packing	Export crate suitable for sea shipping
Warranty	One year limited warranty on hardware and software
Optional extended warranty	Two or three year extended warranty (requires software upgrade option)
Software support option	Annual support contract provides free software upgrades

1. Tested using multiple scans of ISO10360-4 reference object in single position
2. Tested on ISO1036-4 reference object by applying ISO10360-4 to 2D scanning system across > 80% of scanning area
3. Tested using distance between ball bar spheres in single position
4. Tested by measuring distance between ball bar spheres throughout the measuring volume
5. Typical scanning time, may vary according to object surface finish and size

Actual measuring accuracies achieved will depend on operating environment, user input, quality and condition of materials  
 Due to our policy of continuous improvement specifications are subject to change without notice, please contact factory or your InspecVision dealer



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