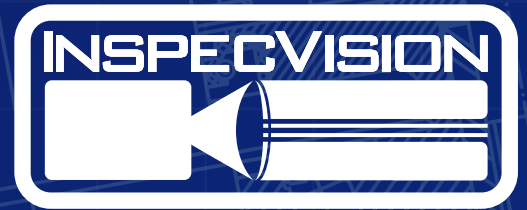


OPTI-SCAN 3D



3D White Light Scanning System

3D Inspection and Reverse Engineering



Accuracy in every dimension

Opti-Scan3D

Opti-Scan 3D is the world's first 3D inspection system that can measure surfaces and edges in 3D. This non-contact white light scanning system uses a high speed, high resolution camera and an LED DLP projector to scan the surfaces of an object.

Patterns of light are beamed from the projector onto the part, these patterns are recorded by the camera and used to create a 3D point cloud of the scanned surface.

The Opti-Scan 3D outputs the ultra high resolution point clouds into a number of different file types which can be used in virtually any 3D inspection or reverse engineering software package.

Opti-Scan 3D can be used as a stand alone system or added to existing Planar systems transforming Planar into a complete 2D and 3D measurement system.



3D INSPECTION & REVERSE ENGINEERING

Scans are generated by projecting patterns of light onto the part. The patterns are recorded by the camera and our innovative software then analyses the data to produce a 3D point cloud of the scanned surface. Each scan can contain up to 40 million edge measurements and 20 million surface measurements. Any area of the part that can be seen by the camera can be measured.

The point cloud data can be outputted into a number of different file types which can be used in virtually any 3D inspection or reverse engineering software package allowing the user to:

- Compare the measurements to the nominal CAD model and create a colour coded deviation map of the errors in 3D
- Measure and compare the size of 2D and/or 3D positions of features such as holes, slots and cylinders against CAD nominals
- Measure bend angles in sheet metal parts and lengths of folded tabs etc.
- Create and analyse cross sections of the part
- Perform GD&T analysis
- Create customised formatted inspection reports
- Reverse engineer free-form surfaces and geometric entities from the point cloud data back to a variety of native CAD formats.



SOFTWARE COMPATIBILITY

Opti-Scan 3D is software neutral. It outputs a variety of universally compatible file formats that can be used by any 3D inspection or reverse engineering software packages such as:

- Geomagic Control X
- Polyworks
- GOM Inspect
- Solidworks Scan to 3D

SPECIALISTS IN EDGE MEASUREMENT

InspecVision are specialists in edge measurement and hold the patent for edge measurement using a backlight. Other 3D scanning systems can scan surfaces but they cannot effectively measure edges. Therefore they are unable to measure parts such as sheet metal components, whose shape is defined by their edges rather than their surface.



AUTOMATION AS STANDARD

With the Opti-Scan 3D a part can be measured and inspected with the click of a button or the scan of a bar code. Within 3-4 minutes the system can automatically:

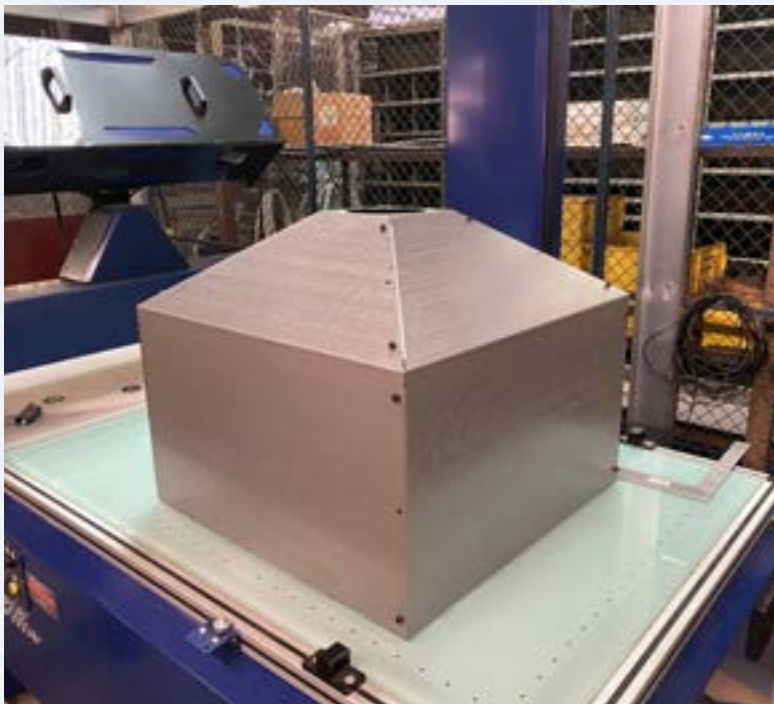
- Convert bar codes into CAD file locations
- Scan the part from multiple viewing angles within the viewing hemisphere
- Output the scan data as point clouds
- Align the point clouds to the CAD model
- Create and print a colour coded deviation map
- Create and print an inspection report containing GD&T data and user defined critical dimensions.



MOBILE LARGE VOLUME SCANNING

The Opti-Scan 3D can also be used as a portable 3D scanner by placing the scanning head on a tripod.

Large objects can be measured by attaching repositioning markers to the surface of the part or to a measuring bench or area. These markers are then used to automatically stitch the scans together. In this configuration almost any size of object can be measured.



WHAT OUR CUSTOMERS HAVE TO SAY.....

"We have been very pleased with our experience with both the machine and customer service at InspecVision. It has been a talking point of shop tours and customers have been very impressed."

**Meredith Barnes, Marketing Manager,
US Metal Crafters**

"The Opti-Scan has a good price to performance ratio and it is very fast to check the dimensional quality of a component."

**Thomas Duell, Measurement Engineer
Auto Heinen (Scherer Group)**