



CNC Leaders 3D Scanning System





Introduction of CNC Leaders 3D Scanner

We develop 3D Scanner sales, as well as offering professional services such as 3D scanning, products designing and training course of reverse engineering.

The 3D scanning systems of CNC Leaders series are easy to be operated with fast scanning speed and advanced accuracy and data quality in worldwide.

The characteristics of CNC Leaders series 3D scanning systems :

CNC Leaders series 3D scanning system adopts the experience of a world leader in the Grating Photographing Technology. It can access to objects on the surface of three-dimensional data. It is extensively used for molding design, reverse engineering, quality inspection and control, medical measurement, etc.

The characteristics of CNC Leaders series of three-dimensional scanning system as follows:

1) The perfect combination of the speed and precision of scanning

The time of single-sided scanning is less than 5 seconds; Adopting the auto registration technology and the precision of registration reaches 0.04mm/m.

2) Non-contact scanning

With non-contact grating scanning technique, has avoided affecting accuracy when the scanning head wears away, had the very good stability.

Apply to scan the object that its outside is yielding, such as rubber, leather & etc.

3) Simplicity of operation

Interface is concise, so beginner can handle easy, & get operating skills in short time.

4) Adopt safe structure light source

CNC Leaders series 3D scanner adopt safe structure light source, no harm to body .And the demand of environment isn't sensitive , not need to handle in the darkroom.

5) Auto registration

In the scanning process, it doesn't need to jamming, due to the markers registration technology. Many times shoots to large-scale object, many angles scan to complicated object, may get the entire, accurate 3D point data.

6) High Registration accuracy

Adopt the unique modified **ICP** (Iterative Closest Point) technology, carries out the best match arithmetic for the data in the common part. This kind of arithmetic has the best accuracy & quick speed. It can control the work piece's overall error, and eliminate data delaminating that may possibly appear in the registration.

7) Automatic boundary detection

The point data at the work piece's border will appear a round angle, so the engineer is hard to detect boundary accurately in drawing. CNC Leaders 3D scanners have the unique function of boundary detection, it can detect boundary automatically which facilitates drawing process, and raises working efficiency.

8) Auto-repair function

During the process of registration, it requires to paste many marks at the work piece surface, being not have a data's closely to the location indicating point in scanning the point data, such is able to have being bound to affect during the period of later stage builds a model. Therefore, CNC Leaders 3D scan system provides an auto-repair function, it can repair the holes, parts that lacks data, according to rule of curvature change. Greatly cut down work amount of later stage drawing.

9) Data compatibility is strong

Scanned data can be output as many formats, for .asc, .ply, .iges. They are able to be directly used in software such as ImageWare, UG, Pro/E, CATIA, GeoMagic, PolyWorks & etc.

Product Type

Leaders Body Scan	Leaders II		Leaders I			Type
Leaders CB-D	Leaders XS	Leaders XB	Leaders NL	Leaders NS	Leaders NB	
400x300 To 800x600	150x100 To 200x150	200x150 To 400x300	800x600 To 1000x750	150x100 To 200x150	200x150 To 400x300	Single scan area (mm ²)
0.1 ~ 0.2	0.01 ~ 0.02	0.02 ~ 0.03	0.1	0.015 ~ 0.03	0.03 ~ 0.04	Precision (mm)
1280x1024 Pixel Colorful	1280x1024 Pixel		800x600 Pixel			Camera pixel
0.35 ~ 0.7	0.1 ~ 0.15	0.15 ~ 0.30	1 ~ 1.5	0.15 ~ 0.25	0.25 ~ 0.5	space of point to point(mm)
<10S	<10S		<5S			Single scan speed
Manual registration And ICP Module	Auto registration					Registration
asc, stl, wrl	asc, stl					Data format

Samples of application



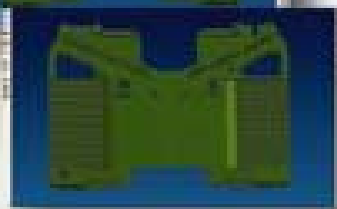
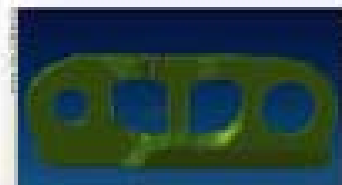
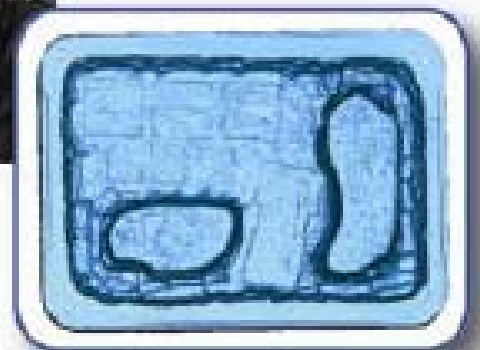
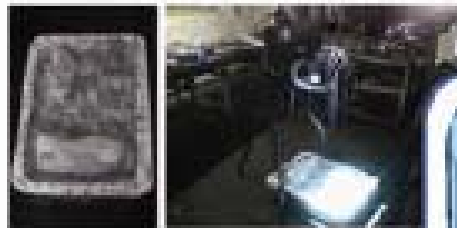
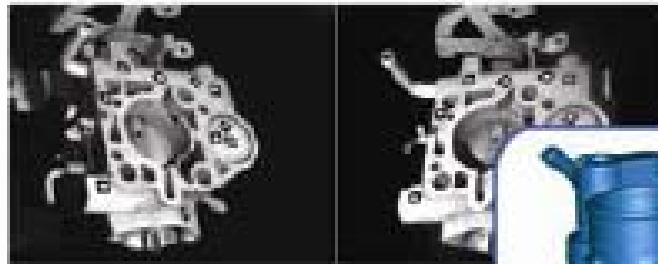
3D Scanning



Surface Reconstruction



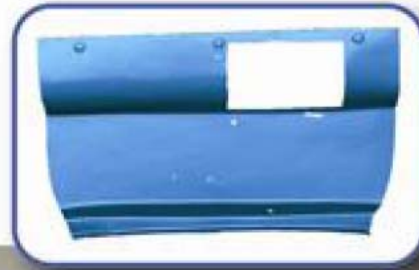
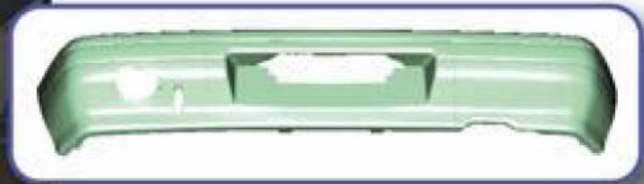
Rapid Prototyping



CNC Leaders 3D Scanner

While 3D scanning vehicles
Scanning sheet metal or plastic parts are common
There are some large parts need to be scanned
Such as vehicle shells
To scan the car interior parts
Scanning should be done when they're installed

Small and lightweight portable
Parts can be measured without being moved
But only move the scanner
Scanner can be carried into the car
To scan and get surface data





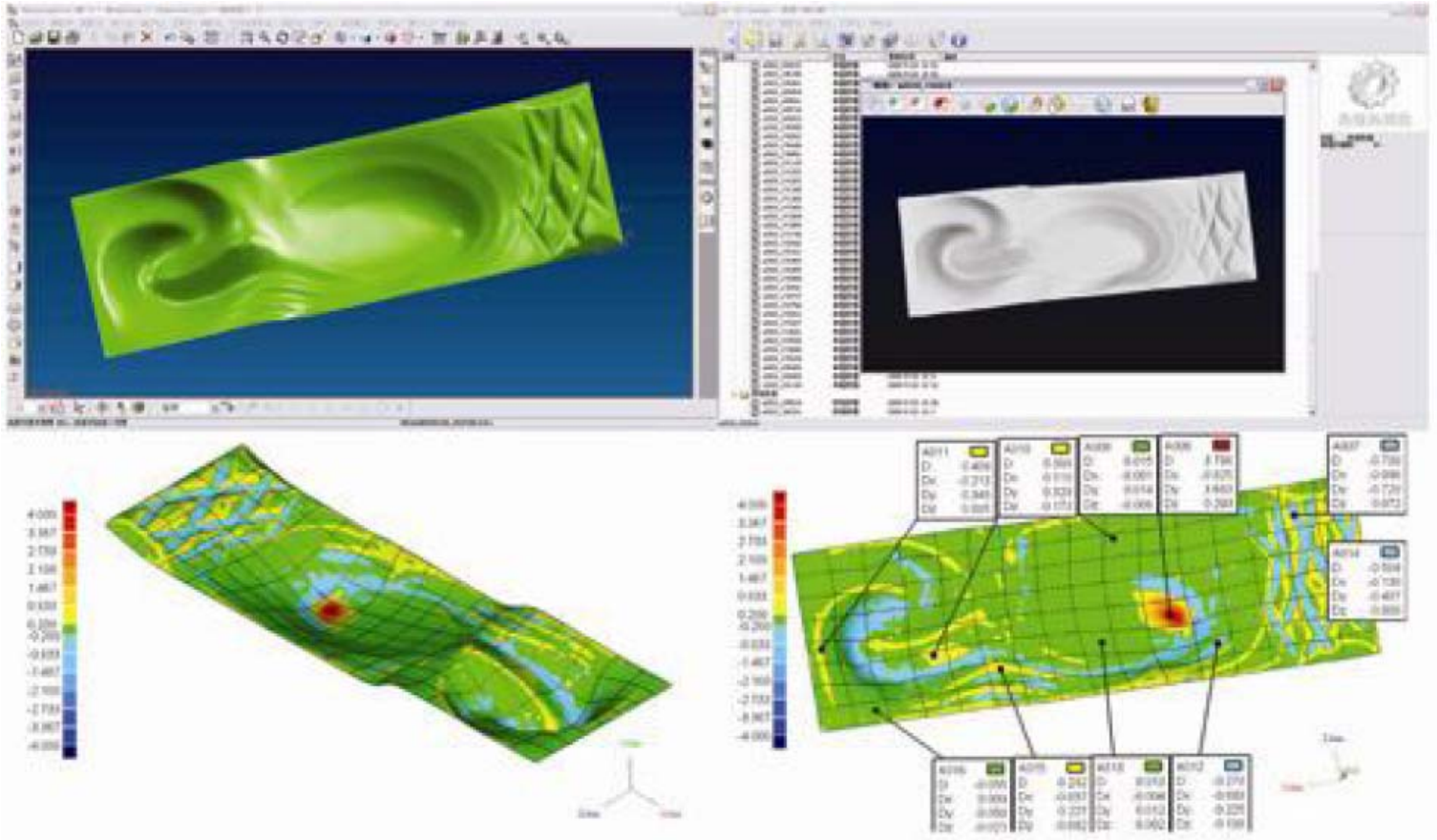
Carving crafts handily makes lower productivity
Large-scale production requires more efficient methods
Craftworks have lots of small surface features
CNC machine requires very precise 3D models



CNC Leaders 3D Scanner

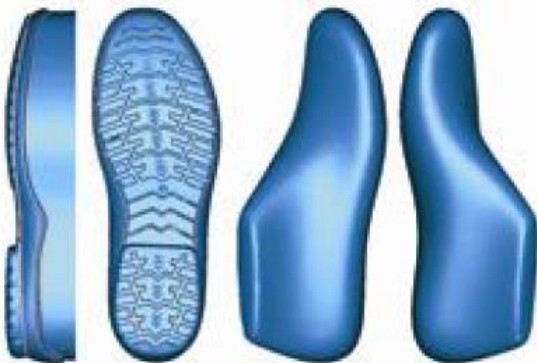
Precision is crucial for quality
 Every production process must be examined
 Fast and sophisticated equipment is needed
 Scientific & convenient way for evaluation is needed

Scan accuracy reaches 0.015mm
 Registration accuracy reaches 0.04mm/m
 Output data can be contrasted with CAD model



Traditional manual measurement is not accurate
 Repeated tryout is time-consuming

Fast and accurate
 Detect boundary automatically
 Extract module boundary lines and patterns rapidly



CNC Leaders 3D Scanner

Human organ scanning is applied
in orthopedic medical
in clothing footwear industry
in computer games
Target registration
is not possible or difficult
simplified and texture mapped
polygon data are needed

Can obtain surface color
With resolution of 0.1mm
Do no harm to the body
Do refined registration
Based on point cloud and no marker
UV extraction and texture generation
Can be done automatically

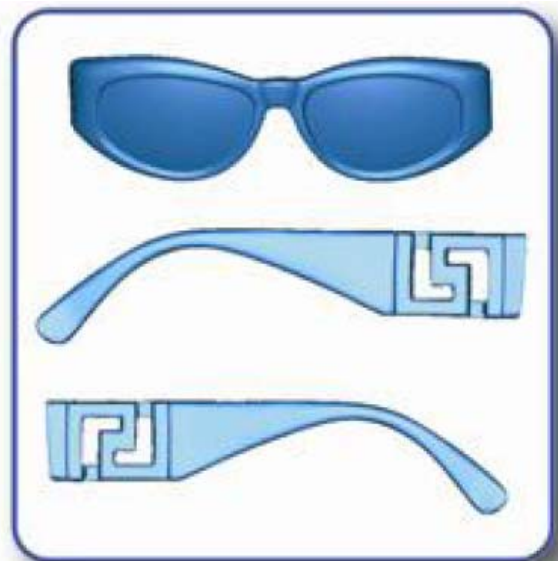
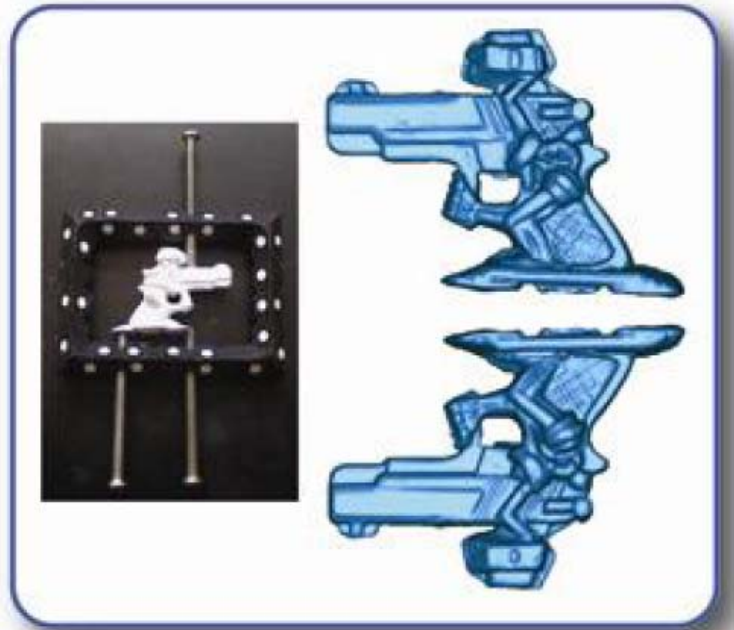
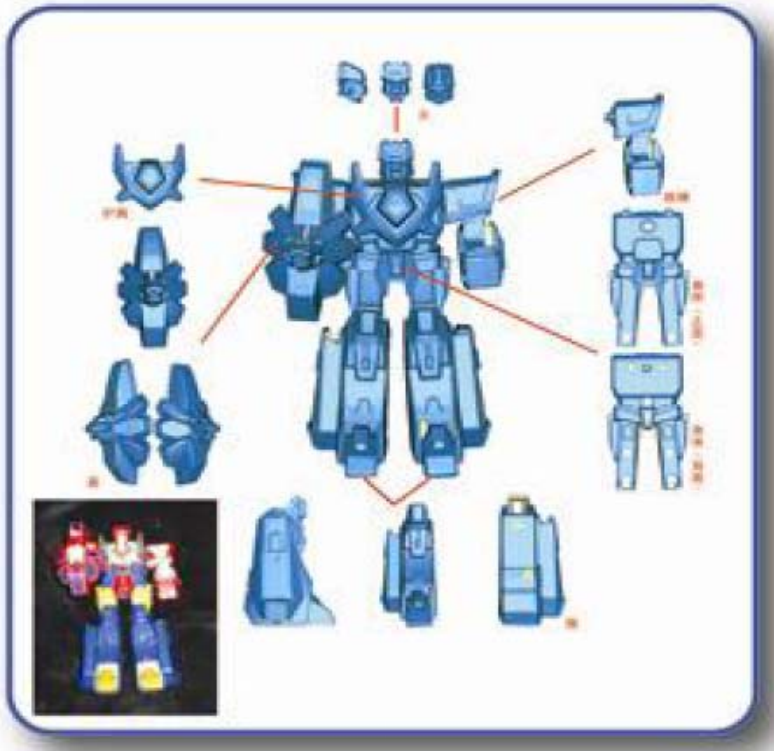


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Small Object Scanning



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