

NEXTENGINE 3D SCANNER



ARCHITECTURE

- **Measurement System:** NextEngine Patented MultiStripe Laser Triangulation (MLT) technology.
- **Source:** Twin arrays of four, Class 1M, 10 mW solid-state lasers with custom optics. 650 nm wavelength.
- **Sensor:** Twin 5.0 Megapixel CMOS image sensors.
- **Photo Surface:** Optically synchronous 7-color surface capture for precision-locked geometry correlation.
- **Photo Lighting:** Built-in spatially diverse LED whitelight texture illuminators with wide color gamut.
- **AutoDrive™:** High-precision rotary servo positioner, auto-incremented under scanner control. 20 lb capacity.
- **PartGripper™:** Universal part holder to adjust height, angle, and orientation of capture. 10 lb capacity.

SOFTWARE

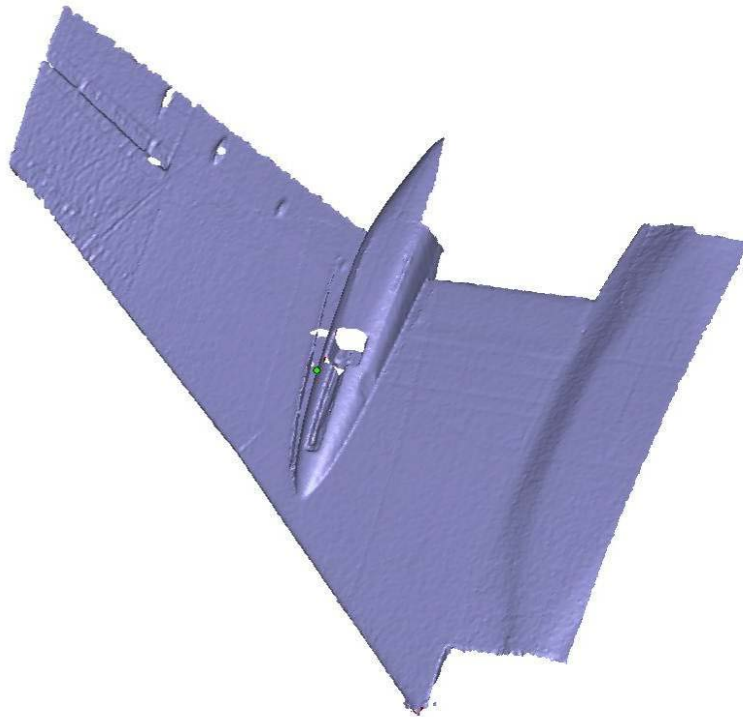
- **ScanStudio™:** Software to Scan, Align, Polish, and Fuse 30 Models. High-performance OpenGL 30 viewer.
- **Format Options:** Scan data can be output as mesh file formats: STL, OBJ, VRML, XYZ, and PLY files.
- **File Size:** 200MB for typical model, based on 10 facet scans.
- **Modeling Tools:** Assemble views into a model conveniently with built-in Smart Alignment and trim tools.
- **ScanStudio™:** Points-to-Mesh solution. Drives scanner and builds 30 mesh models.

PERFORMANCE

- **Object Size:** No preset limit. Objects larger than field can be composite-captured with supplied software.
- **Field Size:** 5.1" x 3.8" (Macro) and 13.5" x 10.1" (Wide). ("Soda can" and "shoebox" sizes, respectively.)
- **Capture Density:** Capture density on target surface is up to 268K points/in² (Macro) and 29K points/in² (Wide).
- **Texture Density:** 500 DPI on target surface in Macro Mode and 200 DPI in Wide Mode.
- **Dimensional Accuracy:** ±100 micron in Macro Mode and ±300 micron in Wide Mode.
- **Acquisition Speed:** 50,000 processed points/sec throughput. Typically 2 minutes per scan of each facet.
- **Typical Datasets:** Typical small models are a quarter-million points, after oversampling and optimization.
- **Environmental:** Desktop use under ordinary office lighting. No darkroom or special backgrounds required.

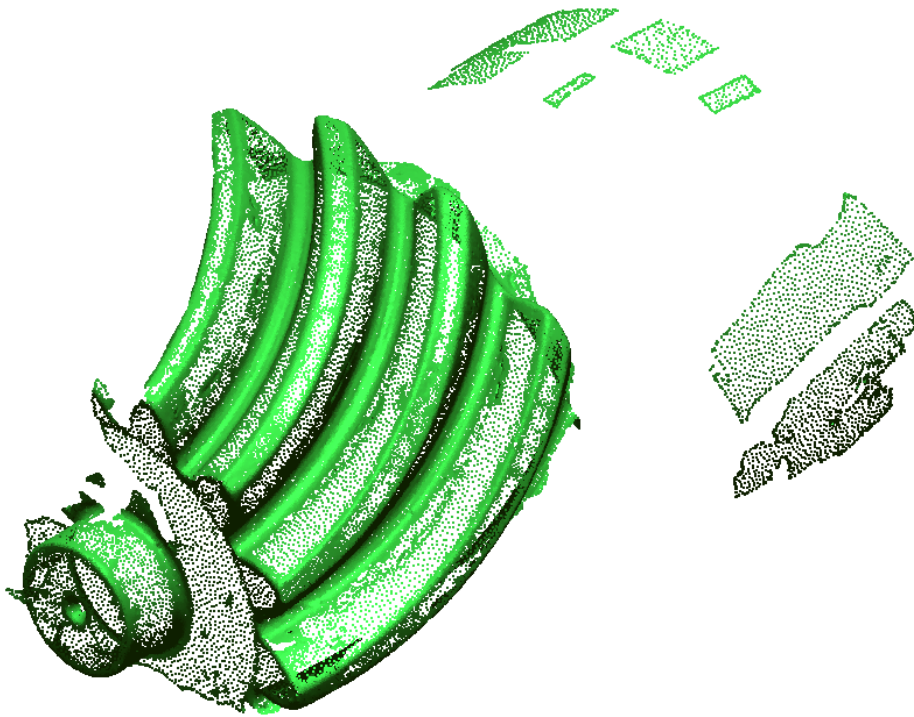
ACHIEVED RESULTS WITH THE NEXTENGINE 3D SCANNER

REVERSE ENGINEERING OF PLASTIC PROTOTYPE



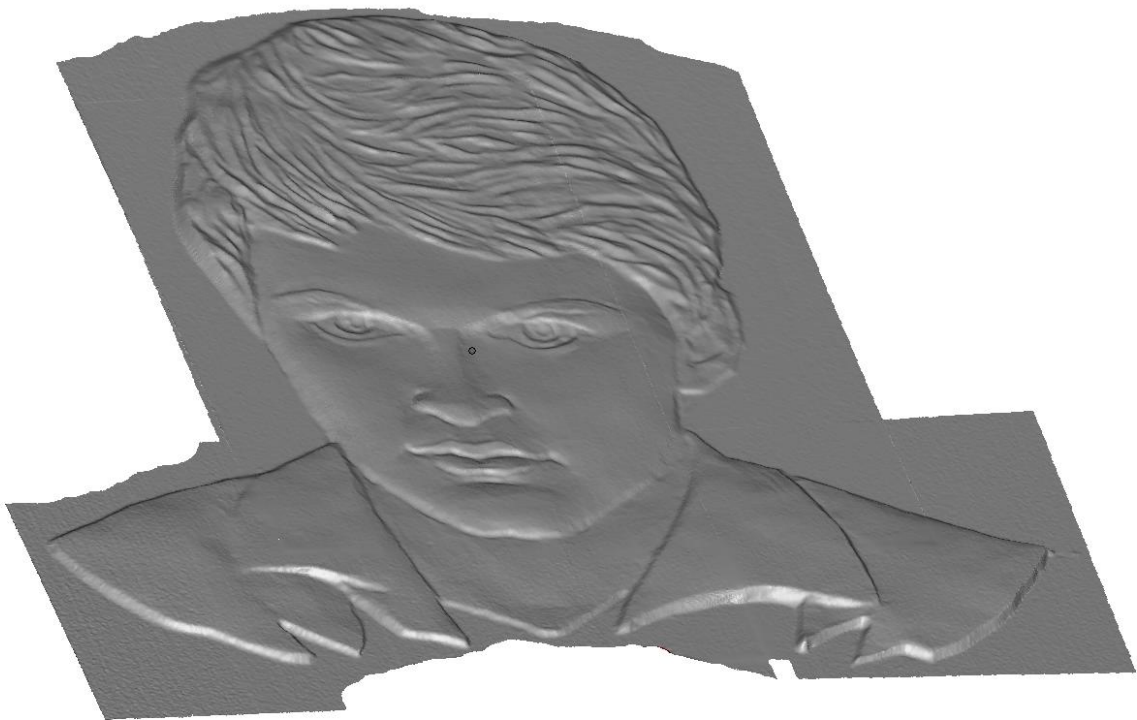
3D scanned wing

REVERSE ENGINEERING OF BEVEL GEAR



3D scanned bevel gear

SCALLING OF ARTISTIC RELIEF



3D scanned gypsums relief