



# NEXTENGINE 3D SCANNER HD

TECHSPECS

## ARCHITECTURE

Measurement System	NextEngine proprietary MultiStripe Laser Triangulation (MLT) technology. Patents Pending.
Source	Twin arrays of four, Class 1M, 10 mW solid-state lasers with custom optics. 650 nm wavelength.
Sensor	Twin 3.0 Megapixel CMOS image sensors.
Photo Surface	Optically synchronous 7-color surface capture for precision-locked geometry correlation.
Photo Lighting	Built-in spatially diverse whitelight texture illuminators with tri-phosphor, 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 HD™	Software to Scan, Align, Polish, and Fuse 3D Models. High-performance OpenGL 3D viewer.	
SolidWorks Integration	Scan to SolidWorks (Office Premium 2007 + later). Click to toggle between scanning/design.	
Native File Format	SolidWorks + NextEngine co-developed native format. No import or export needed.	
Standalone Use	ScanStudio also works outside SolidWorks for creation of standard-format scan-output files.	
Format Options	Scan data can be output as mesh file formats: STL, OBJ, VRML, XYZ, and PLY files.	
File Size	20MB 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 HD™	Points-to-Mesh solution. Drives scanner and builds 3D mesh models.	Standard
ScanStudio HD PRO™	Delivers 2X scan speed, 4X raw point data, and offers Large Object (23" x 17") mode.	\$995
ScanStudio CAD TOOLS™	Points-to-NURBS solution. Adds surfacing and spline output to speed CAD modeling.	\$995
RapidWorks™	State-of-the-art Points-to-CAD engineering tool. Build solid models with feature trees.	\$2,995

## 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 160K points/in <sup>2</sup> (Macro) and 22.5K points/in <sup>2</sup> (Wide).
Texture Density	400 DPI on target surface in Macro Mode and 150 DPI in Wide Mode.
Dimensional Accuracy	±0.005" in Macro Mode and ±0.015" 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.

## GENERAL

Minimum Requirements	2GHz Dual Core, 2GB RAM, 256MB graphics, Windows XP / Vista 32-bit.
Recommended System	Quad Core, 4+ GB RAM, 512+ MB graphics. Windows 7 / 8 64-bit.
Interface	USB 2.0 high-speed interface. USB cable included.
Power	100 – 240 VAC built-in worldwide auto-switching power supply. AC cable included.
Eye Safe	Beam is about 1/1000th brightness of a laser pointer (but avoid looking into beam).
Tripod Mount	Stainless steel 1/4" 20-thread standard screw mount for tripod setups.
Size	Compact 8.8" x 3.6" (letter size) desktop footprint. 10.9" high. Approximately 7 lbs.



NEXTENGINE DESKTOP 3D SCANNER



MODEL 2020i

1.0A  
50/60HZ

100 – 240VAC

USB 2.0

MANUFACTURED BY NEXTENGINE INC. SANTA MONICA, CA  
WORLDWIDE PATENTS PENDING ASSEMBLED IN MALAYSIA

FCC  
Listed to comply with FCC standards  
FOR HOME OR OFFICE USE

UL  
LISTED  
L.T.E.  
E305225  
NWGQ

CE

TAMPER EVIDENT SEAL. WARRANTY VOID IF OPENED.



LASER LIGHT — DO NOT VIEW DIRECTLY WITH  
OPTICAL INSTRUMENTS (MAGNIFIERS)  
CLASS 1M LASER PRODUCT 635-670nm <2.2mW CW  
CLASSIFIED PER IEC 60825-1 (Ed. 12 - 2001)  
COMPLIES WITH FDA PERFORMANCE STANDARDS FOR  
LASER PRODUCTS EXCEPT FOR DEVIATIONS PURSUANT  
TO LASER NOTICE NO. 66, DATED JULY 26, 2001.