Artec3D

AN INTRO TO ARTEC
STUDIO 14

INDUSTRY ACCLAIMED SOFTWARE
for professional 3D scanning
and data processing

New and experienced users alike can easily achieve
high accuracy 3D scans

AUTOPILOT MODE

FAST PROCESSING SPEED

**SCAN EVEN BLACK
AND SHINY OBJECTS**

MAKING ACCURATE 3D MODELS
HAS NEVER BEEN SO STRAIGHTFORWARD

Autopilot

An advanced smart mode which guides users through post-processing in a few easy steps, automatically selecting the most effective settings for your data and producing a high precision 3D model.

Optional advanced settings

Artec Studio has a full range of advanced settings, giving experienced users full control and flexibility.

3D Radar for easy scanning

Color guided data visualization makes 3D scanning easy. Green tells you that you are holding the scanner at the optimal distance from the object, red means you are too close, and blue, too far away. Simple!

Scan even black and shiny objects

Artec Studio features the most advanced algorithms for capturing hard-to-scan surfaces such as hair or shiny, black objects.

Glare-free scans

The Automatic Glare Removal feature uses advanced PBR algorithms to rid your scans of glare. Can easily save you hours of time.

High precision

Whether you choose Autopilot or manual mode, Artec Studio never compromises on precision.

Direct compatibility with CAD

Create a 3D model in Artec Studio and directly export it to SOLIDWORKS, AutoCAD or Design X.

Create, edit and process even huge datasets

Artec Studio is so powerful that you can work with datasets of up to 500 million polygons. Perfect for scanning large objects and for making 3D models in maximum resolution.

No need for markers

Artec's best in class color and geometry tracking means you don't need to stick targets on your object. Just point and shoot!

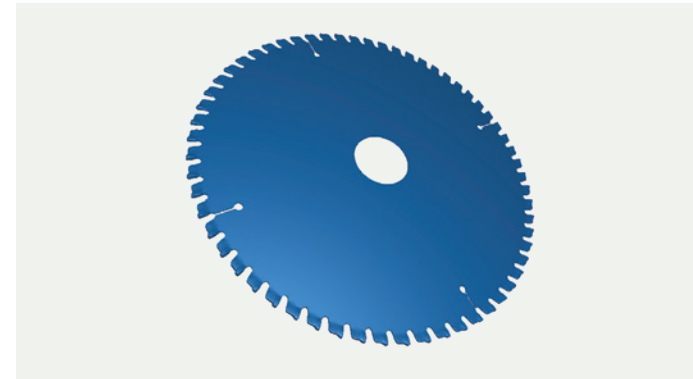### Built with speed in mind

Powerful algorithms that process your data in seconds. Automated features to save you time.

EXPORT YOUR MODEL TO A WIDE RANGE OF POPULAR SOFTWARE

AUTODESK. DS SOLIDWORKS Geomagic blender

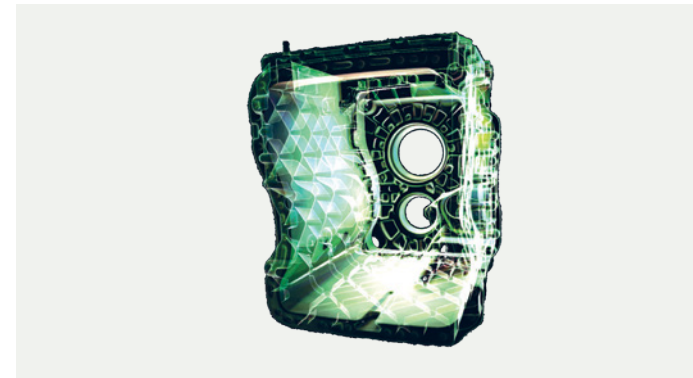# HOW TO MAKE A 3D MODEL
THE WORKFLOW EXPLAINED

Workflow 1

Autopilot

For highly accurate results in a few easy, automated steps.

Scan your object and then enter Autopilot to process all your data automatically. Perfect for beginners to achieve professional, high precision results. A great time saver for advanced users.

Workflow 2

Manual mode

For highly accurate results, with full control and flexibility during the process.

Scan your object and choose the post-processing settings yourself. Advanced users have a full range of powerful tools to manipulate their 3D data exactly as they like.

Workflow 3

Build your 3D model as you scan

For instant results, with no post-processing.

Using Real-Time Fusion scanning mode, move the scanner around the object and see your model being built as you go. Perfect for scanning simple objects, such as limbs or a torso, or for getting a quick preview.

"Autopilot: very user-friendly and easy!"

Teddy Larsson,
AK Innovative CAD&CAM Solutions

"The Autopilot tool is amazing. I actually got better data on a difficult part processing through the auto-tool than through manual processing!"

Kevin Shain,
Laser Design, 3D scanning systems and 3D measurement services

"Many of my clients need things within a very tight time-frame. I have found real-time fusion to be a godsend when I need to make sure everything is covered before the subject needs to be returned."

Cameron Berry,
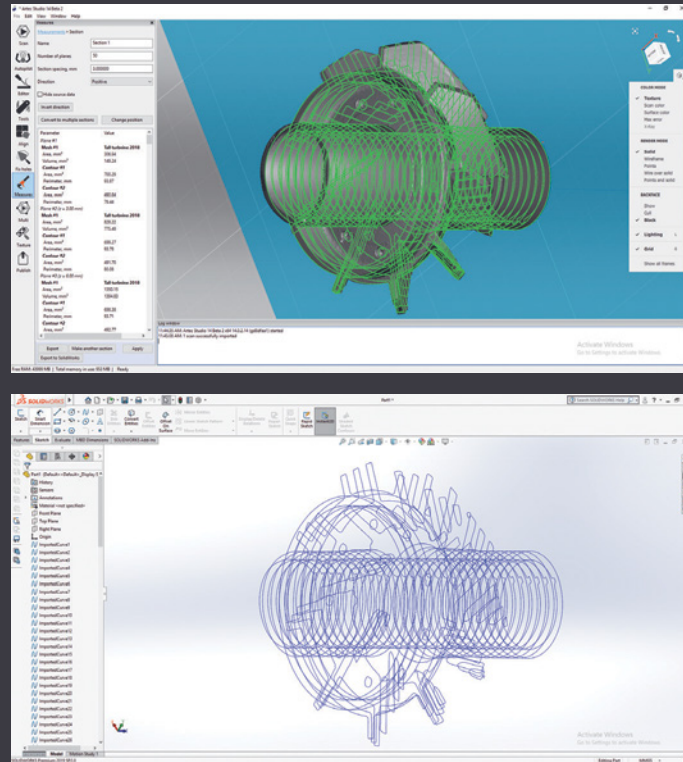3D scanning specialist, Ink Digital

EXPANDED CAD/CAM FUNCTIONALITY

In the past, exporting over to CAD/CAM applications would require a go-between application to add surfaces to your model. But now in Artec Studio 14, for some reverse engineering workflows this step has been slashed altogether!

Direct Export to SOLIDWORKS and AutoCAD

For users exporting files over to SOLIDWORKS or other CAD/CAM applications, you can now fluidly export unlimited numbers of open and closed contours as CSV or DXF files. Allows you to reverse engineer simple shapes at wildfire speed using only Artec Studio and SOLIDWORKS or AutoCAD, avoiding the need for additional software to accomplish this step. A real time-saver and ideal for engineers, packaging makers and others.

## IDEAL FOR QUALITY INSPECTION

Users in need of peerless metrology-grade color 3D scanning solutions for quality assurance have reason to celebrate. With our industrial desktop 3D scanner Artec Micro and long-range, tripod-mounted laser scanner Artec Ray, you have all the tools at hand for precise, breathtaking digital capture of objects in Artec Studio. Ideal for quality inspection, reverse engineering, industrial design, and more.

Integration with Artec Micro

Since the last version of Artec Studio was released, a new member of the Artec scanner family has stepped onto the stage: Artec Micro, a brilliant desktop scanner designed for unrivalled, one-click quality inspection of small and tiny objects.
With a staggering point accuracy of up to 10 microns, Micro excels at quality assurance and reverse engineering, as well as jewelry, design, and dental applications. Artec Studio 14 is integrated with Micro, so long-time users of the software can look forward to Studio's great features and unparalleled performance while scanning and post-processing with Micro.

Target-Free Registration for Artec Ray

A true milestone has been achieved! In Artec Studio 14, time-pressured users of our long-range 3D laser scanner Artec Ray now have the ability to perform stunningly-fast geometry-only Global Registration without needing to set up spheres or 2D targets. Transcending others in its class in both submillimeter precision and angular accuracy, Ray delivers exceptional scans with a bare minimum of noise, which translates to reduced project times and outstanding results. Additionally, users have the option for hybrid registration via the use of geometry + 2D targets.
Even with huge data sets, you'll be registering your scans faster than you ever dreamed.
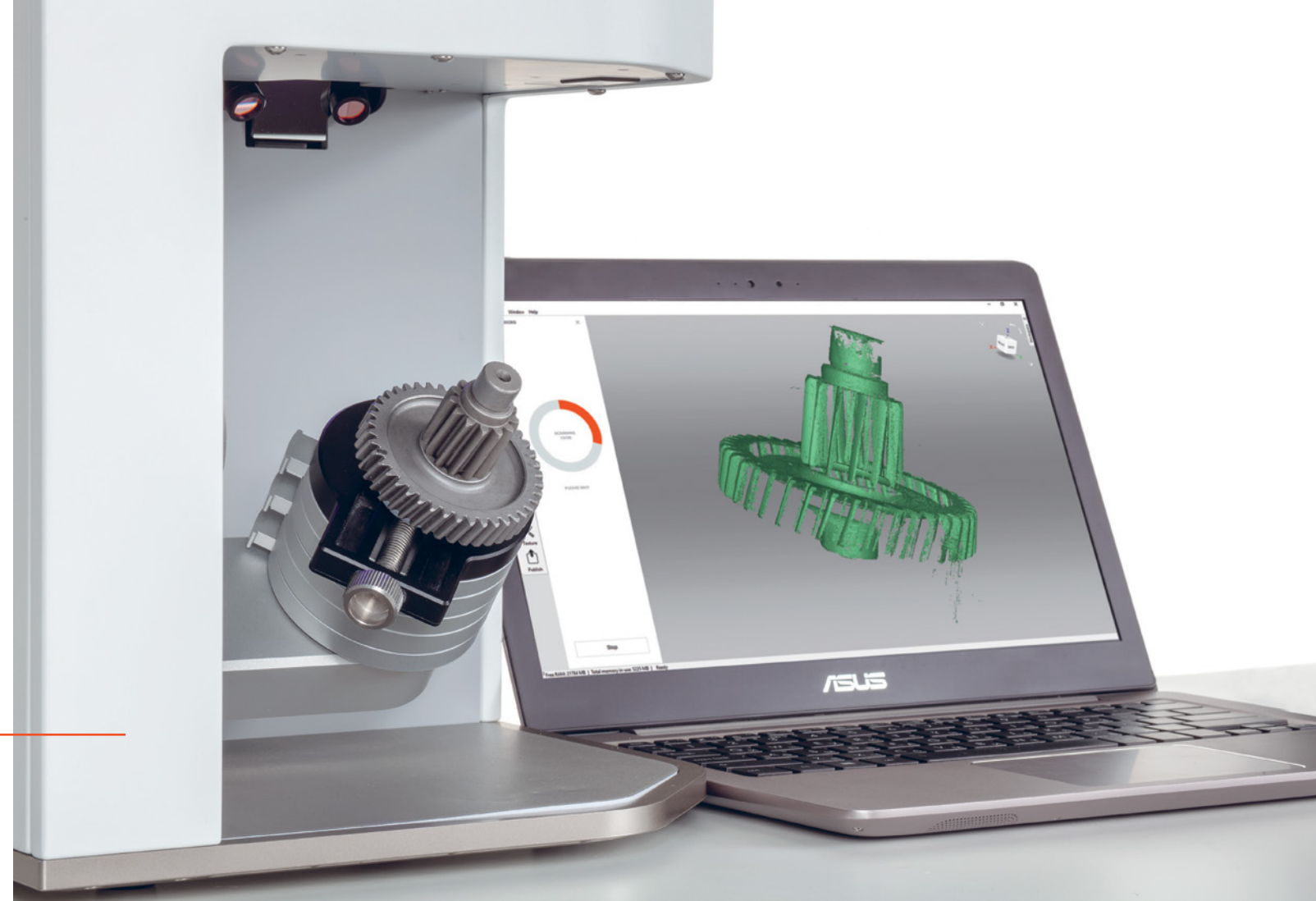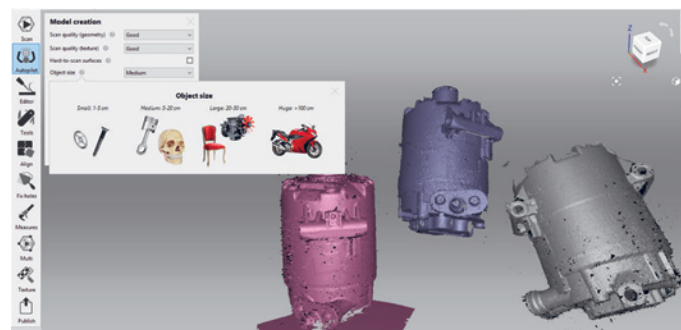
MORE ABOUT PROCESSING 3D DATA

AUTOPILOT MODE
FAST, AUTOMATED POST-PROCESSING

Whether you are new to 3D scanning and require step-by-step guidance in 3D data processing, or are an experienced user looking to speed up your workflow, Artec Studio's breakthrough automated processing features set a new horizon in 3D scanning.
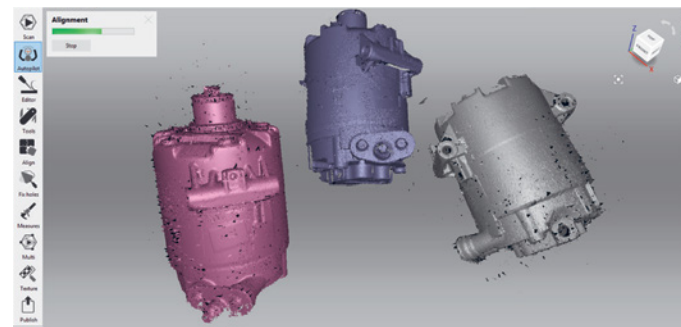
/ Automatically applies the optimal post-processing algorithms for your object in order to achieve the best possible result

/ Full post-processing timeline, totally automatic

/ Perfect for beginners, a great time saver for advanced users

USING THE AS AUTOPILOT,
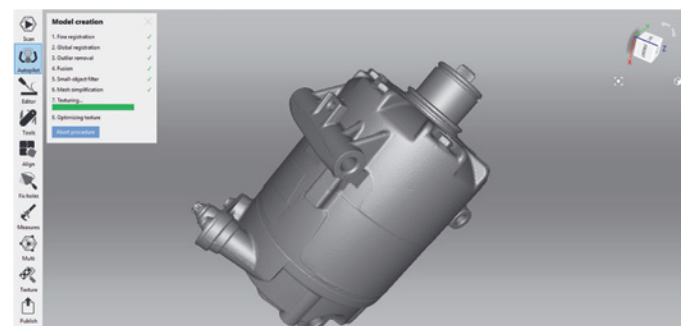RUN THROUGH 4 EASY STEPS TO AN ACCURATE, WATERTIGHT 3D MODEL

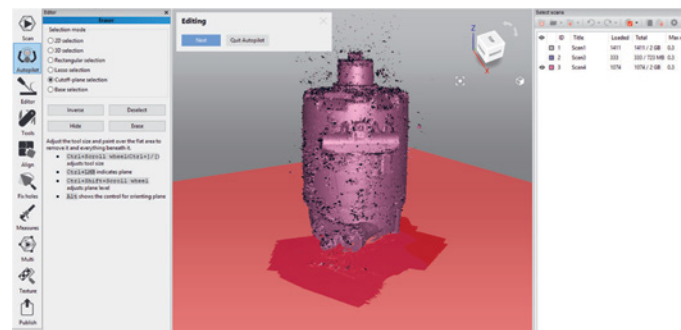*Step 1* Answer a few simple questions about your object and the type of 3D model you need
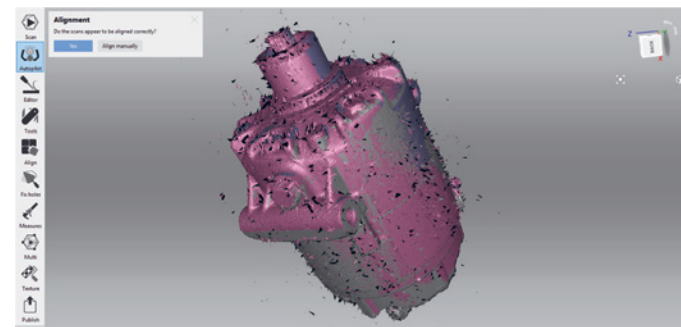
Step 2 Delete any unwanted scanned data

Step 3a Auto align your data in one click

Step 3b Confirm that all scans are correctly aligned

Step 4 Autopilot applies the best processing algorithms to your data

Result A high precision 3D model
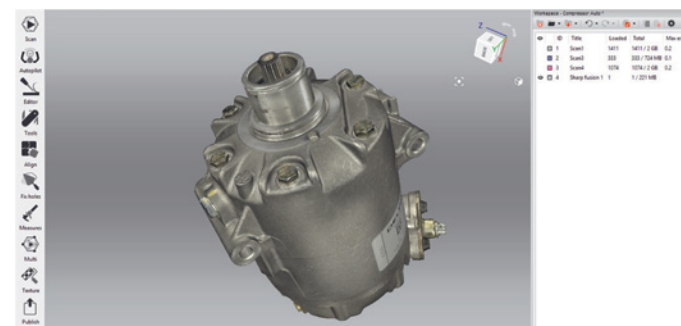
MANUAL MODE

CONTROLLED MANUAL PROCESSING
AT BREATHTAKING SPEED

Artec Studio 14 also features a full range of tools for you to process your 3D model manually, giving you full control over your data.

Included are many features which streamline your workflow, making it even faster to achieve the results you need.

Smart base removal

Automatically delete the base your object was scanned on. Detects even curved surfaces. No need to manually erase that table, stand, or floor!

Fast, accurate scan alignment

Auto-align for quick, easy processing. Now 95% of objects can be auto-aligned with total accuracy at the click of a button.

Apply texture at lightning speed
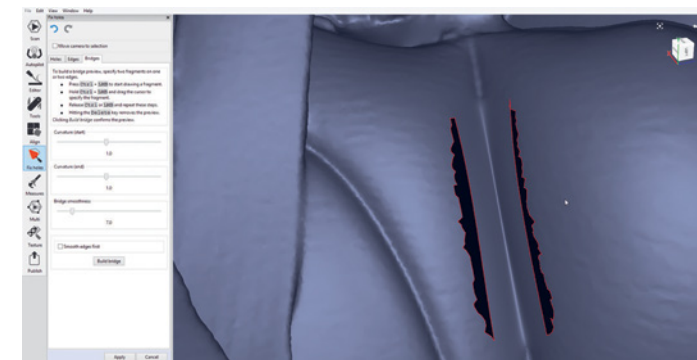
Accurately map brilliant color to your object in no time.

Organically seal up any holes with bridges

Artec Studio's new Bridges feature uses your scan's existing geometry to repair holes by creating custom surfaces.

Simplify your mesh in a flash

Optimize the size of your 3D model file by reducing the number of polygons from millions to thousands while maintaining the high quality of the mesh.
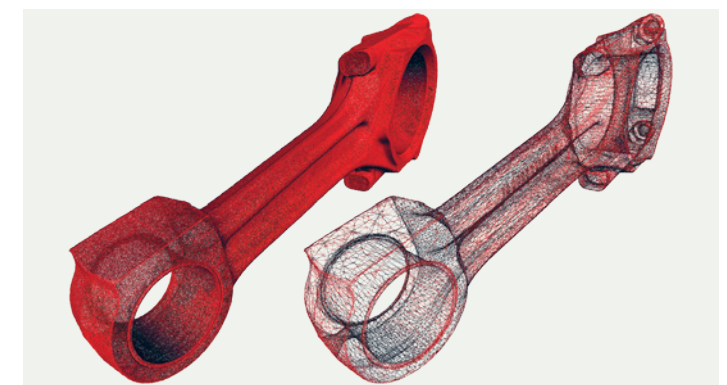
Smart geometry editing

Touch up your 3D model in a few quick clicks with Artec Studio's intuitive geometry editing tools.

Rapid, automatized and precise texture editing

Use Artec Studio's advanced algorithms to automatically map texture where data is missing.

ANALYZE YOUR 3D MODEL

/ Measure the surface and volume of your 3D model

/ Export linear, geodesic and section measurements in DXF, CSV and XML

/ Annotate your 3D model

/ Compare scans and models with surface distance maps
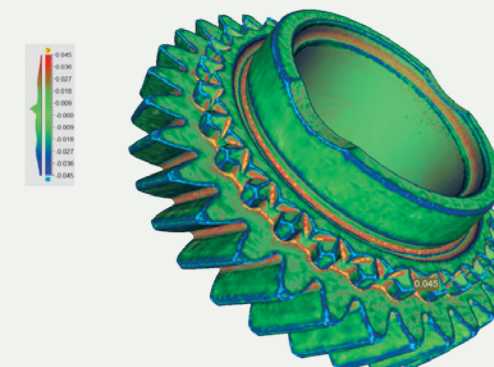
EXPORT TO
YOUR PROFESSIONAL APPLICATION

Direct Scan to SOLIDWORKS and AutoCAD

Artec Studio 14 continues its solid tradition of effortless integration from 3D scan to CAD with a range of crucial tools for technicians, engineers, designers and others.

As before, with just one click, your 3D models can be sent over to 3D Systems Design X. Or install the Geomagic for SOLIDWORKS plugin on your computer, then you're just a click away from landing your 3D model directly in SOLIDWORKS. And now it's possible to work directly with SOLIDWORKS or AutoCAD by exporting multiple sections of your models from Artec Studio.

Publish your 3D model online

Upload to the Internet and embed your 3D model on your site.

Popular 3D export formats

Export your 3D model to the format you need: OBJ, PLY, WRL, STL, PTX, BTX, AOP, ASCII, Disney PTEX, E57, XYZRGB

WHAT ELSE DO I NEED TO KNOW
ABOUT ARTEC STUDIO?

FULL-FEATURED GUI

ARTEC STUDIO COMES WITH A FULL-FEATURED INTERFACE THAT ALLOWS YOU TO MANIPULATE YOUR 3D MODELS. INCLUDES:

/ Projects and built-in Undo/Redo

/ 3D editing tools (eraser, smoothing brush, transformation tools)

/ Advanced 3D processing algorithms, including: auto-align, hole filling, mesh smoothing, filtration, edge smoothing and much more

LOCALIZATION FOR
12 LANGUAGES

Chinese Traditional, Chinese Simplified, Czech, English, French, German, Italian, Japanese, Korean, Polish, Russian and Spanish

Artec 3D
STUDIO 14

For use with the following Artec 3D scanners:

Artec Micro, Leo, Ray, Space Spider, Eva, Eva Lite, plus discontinued models (Spider, MH and MHT series AG, AC, W2 and T2)*

*For full information on compatibility with discontinued scanners, please contact support@artec3d.com

Subscription or one-off purchase

Artec Studio is available to purchase as a yearly subscription, ensuring you are always up-to-date with the very latest version, or as a one-off lifetime purchase of a single version only.

Artec Studio 14
Professional

	Annual subscription to latest version	Professional Lifetime
1 License	US $1,200	US $2,900
3 Licenses	US $3,000	US $7,250

COMPARE ARTEC STUDIO

EASY 3D SCANNING

	AS14	AS13	AS12
Auto-brightness	Dynamic	+	
Automated sensitivity for scanning black, shiny and fine objects	+	+	+
3D Radar mode	+	+	+
Texture and geometry tracking	+	+	+

FAST, POWERFUL 3D PROCESSING

	AS14	AS13	AS12
Autopilot: automatic post-processing pipeline	Customizable	+	+
Support of large datasets	Up to 500 million polygons	Up to 500 million polygons	Up to 500 million polygons
Global registration: Object range	Up to 250% greater than AS12	Up to 250% greater than AS12	
Global registration: Speed	2X the speed of AS12	2X the speed of AS12	Up to 10 times faster than AS11
Global registration: Settings	Customizable for greater accuracy or speed	Customizable for greater accuracy or speed	
Fine registration	Streamlined & optional	Mandatory	Mandatory
Texture mapping	800% faster than AS13		
Smart base removal	+	+	+
Auto-Align: texture + geometry based	+	+	+
Fast mesh simplification	+	+	+
X-Ray mode	+	+	
Max error mode	Enhanced for easy scan data inspection	Enhanced for easy scan data inspection	+

DAZZLING VISUALS

	AS14	AS13	AS12
Sequence animation	+		
Geometry rendering	High-detail	High-detail	Glossy
Texture rendering	High-detail	High-detail	Glossy
Optimized raw data rendering	+	+	
Smooth rendering of 3D models	Up to 500 million polygons	Up to 500 million polygons	

ADVANCED EDITING & 3D MODELING TOOLS

	AS14	AS13	AS12
Auto glare removal	+		
Bridges	+		
Flexible plane selection	+	+	
Auto texture correction	+	+	+
Texture healing brush	+	+	+
Enhanced Defeature Tool, Eraser and Lasso	+	+	Basic

ERGONOMICS

	AS14	AS13	AS12
Sound notification	+		
One-click Auto-Positioning	+	Basic	Basic
3D rotation cube	+	+	
3Dconnexion 3D mouse compatibility	+	+	+
Auto-export naming	+		
Scanner Type Detection	Streamlined	Manual	Manual

MEASUREMENT TOOLS

	AS14	AS13	AS12
Linear, geodesic, sections, distance maps, volume, annotations, CSV, DXF, XML export	+	+	Basic
Export mesh square and mesh volume	+	+	+

DIRECT SCAN TO CAD

	AS14	AS13	AS12
Export multiple open and closed contours directly to CAD	Polyline format for reverse engineering	Single line format	
Direct export to Design X	+	+	+
Direct export to SOLIDWORKS	SOLIDWORKS 2014—2019	SOLIDWORKS 2014—2018	SOLIDWORKS 2014—2017

IDEAL FOR QUALITY INSPECTION

	AS14	AS13	AS12
Scan & process data from Artec Ray high-accuracy long-range scanner	+	+	
Target-free registration for Artec Ray	+		
Scan & process data from Artec Micro metrology-grade desktop scanner	+		

EXPORT FORMATS

	AS14	AS13	AS12
Full range of export 3D formats	OBJ, PLY, WRL, STL, BTX, PTX, AOP, ASC, Disney PTEX, E57, XYZRGB	OBJ, PLY, WRL, STL, AOP, ASC, Disney PTEX, E57, XYZRGB	

HARDWARE SUPPORT

	AS14	AS13	AS12
3rd party sensor support	N/A	Ultimate Edition: Microsoft Kinect, ASUS XTion, PrimeSense, Intel RealSense F200, R200 & SR300, XYZprinting 3D scanner	Ultimate Edition: Microsoft Kinect, ASUS XTion, PrimeSense, Intel ReaSense F200, R200 & SR300, XYZprinting 3D scanner
Scanning on MacOS	Artec ScanApp [beta] or Boot Camp	Artec ScanApp [beta] or Boot Camp	Artec ScanApp [beta] or Boot Camp

VIDEO CARD COMPATIBILITY

	AS14	AS13	AS12
NVIDIA Quadro	+	+	+
NVIDIA GeForce 400 Series or higher	+	+	+
AMD	+	+	+
Intel Series 4600 and higher	+	+	+

ARTEC 3D SCANNERS COMPATIBLE WITH AS14:
Artec Micro, Leo, Ray, Space Spider, Eva, Eva Lite, plus discontinued models (Spider, MH and MHT series AG, AC, W2 and T2)*
*For full information on compatibility with discontinued scanners, please contact support@artec3d.com

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