Artec 3D

www.artec3d.com

WHAT'S NEW IN ARTEC STUDIO 15

CERTIFIED
Solution
Partner
SOLIDWORKS

UPGRADE YOUR SCANNER **WITH ARTEC STUDIO 15**

NEW FEATURES
AND BOOSTED ALGORITHMS

SCAN-TO-CAD

WHAT'S NEW IN ARTEC STUDIO 15

- Foundational inspection features
- Primary scan-to-CAD functionality for reverse engineering
- AI-powered HD Mode for high resolution
- Sublime, CGI-ready textures
- New & improved algorithms for speed and precision
- Productivity-fueling new user experience

We've rolled out a cornucopia of features that upgrade your scanner and make it faster and easier to transform your objects into high-accuracy 3D models.

Artec Studio 15 also gives you the power to do more than ever before, including a range of essential scan-to-CAD features that make everyday quality control and reverse engineering tasks **as easy as 1-2-3**.

AI POWERED HD MODE

Double the resolution of your Eva or Leo with Artec's AI neural network based HD Mode.

Capture every surface you scan, including deeply-recessed geometries, and preserve all those sharp edges with razor-sharp clarity and whisper-thin levels of 3D noise.

EVA & LEO: ASTOUNDING HIGH-RESOLUTION SCANS LIKE NEVER BEFORE

Stunning high resolution up to 0.2 mm

Unprecedented levels of resolution with every scan

Whether you're capturing an intricate machine part or a meters-long section of an ancient Roman castle, high resolution is key. But not at the expense of accuracy. Thanks to HD Mode's enhanced AI neural network, all your data will have both, effortlessly delivering production-ready results.

Deep geometry capture

Easily scan those hard-to-reach surfaces

Some deeply-recessed parts and geometries, especially from an angle, can be challenging to fully capture. Now with AI-enhanced coverage, these much deeper surfaces are captured from the first scan and reconstructed in lifelike, geometry rich detail.

Distinctly clean data

Wicked-smart noise filtration for faster processing

Artec Studio's AI engine transparently optimizes your data, filtering out unwanted data points while preserving accuracy. So when it's time to process your scan, there will be nothing extra to slow you down.

Preserve sharp edges

Capture hairline edges and shapes

Capturing sharp edges is essential when scanning myriad objects for aerospace, reverse engineering, quality inspection, etc. Now with HD Mode's AI algorithms, all those edges and surfaces are captured in high definition and reconstructed in your final scan.

ESSENTIAL SCAN-TO-CAD FEATURES

The ABCs of scan-to-CAD right in Artec Studio

Artec Studio 15 offers basic scan-to-CAD functionality for inspection and reverse engineering. Now you can scan your object, create a 3D model and perform simple scan-to-CAD operations all in one software.

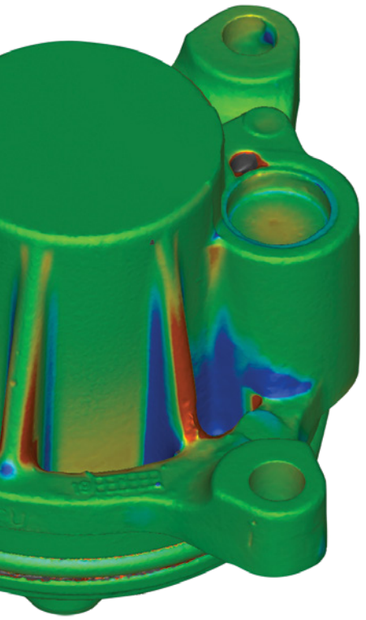
SCAN-TO-CAD FEATURES FOR QUALITY CONTROL

Compare your 3D model with a CAD model

Quick quality control operations can now be run in Artec Studio, making for a faster, more convenient workflow.

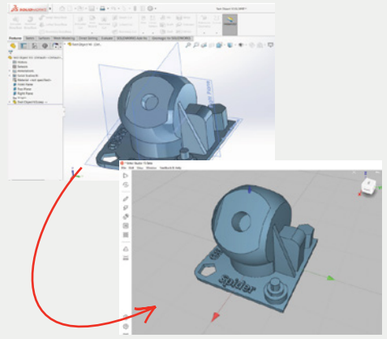
Artec Studio 15 gives you the power to align your scan to a CAD model, allowing you to compare the two models without having to leave Artec Studio. You can carry out fast surface distance map comparisons and micron-accurate measurements of all the 3D models you create.

For more complex processes and tools, simply export to any full package inspection software, such as Geomagic Control X.



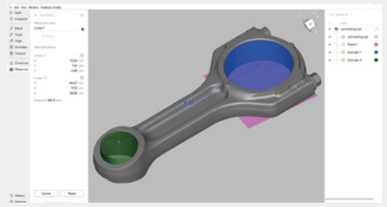
CAD: Import & inspect

Load SOLIDWORKS models and other CAD files for direct comparison with your mesh. A long-awaited milestone for engineering clients everywhere, importing CAD objects directly into Artec Studio shifts your design workflow up to new levels. Now with a few clicks of the mouse you can conveniently import STEP, IGES, and X_T CAD files and get right to work.



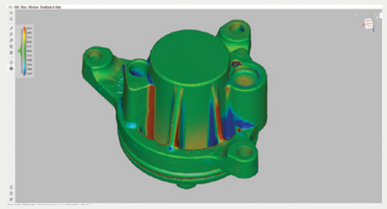
Primitives for quality control

Convert sections of your mesh into primitives — spheres, cones, planes, and cylinders. Use these geometrical shapes to perform highly accurate measurements directly in Artec Studio. For example, measure the deviation of a surface from a plane or the distance between key points on the primitives.



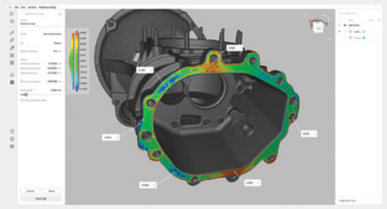
Faster surface distance map

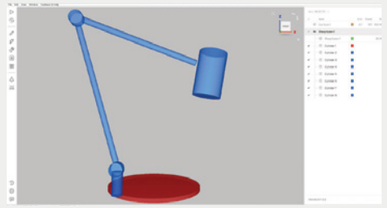
An indispensable tool for metrology engineers and anyone in need of pinpoint measurements between meshes, Artec Studio 15's surface distance map now displays distances in the blink of an eye. Additionally, now you can export your distance map results as a CSV file.



Surface distance map annotations

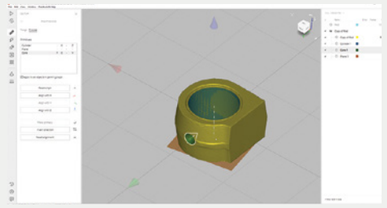
Just Ctrl+Click to add an annotation on the distance map. The distance appears as the default text.





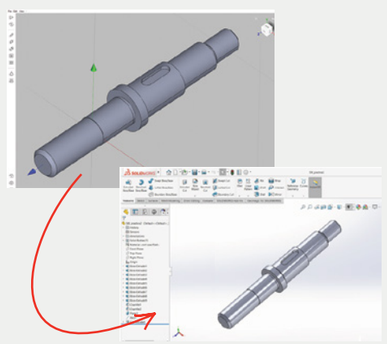
Primitives for reverse engineering

Whether you're designing perfectly-fitting packaging, re-engineering wheel wells on a car to fit high-performance wheels, or even devising a new circuit board schematic with dozens of components clustered together, CAD primitives are there to kick-start your workflow. And now you can do this directly within Artec Studio, quickly and easily, saving you bundles of time and effort.



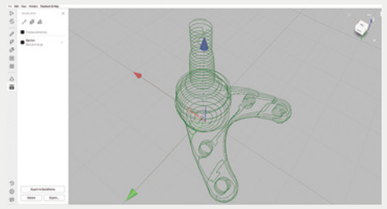
Precise Positioning for reverse engineering

Relied upon by engineers for many years, Precise Positioning lets you position your model in the world coordinate system. This must-have feature readies your models for export to SOLIDWORKS and other engineering software.



Export CAD files directly to SOLIDWORKS or Geomagic Design X

After correctly positioning your model, export the primitives aligned to the scan data as STEP, IGES, or X_T CAD files and continue your engineering workflow in SOLIDWORKS, Geomagic Design X or other CAD software.



15X faster Sections

Now not only can you create sections more accurately by using primitives and Precise Positioning, the Sections tool itself has become 15 times faster.

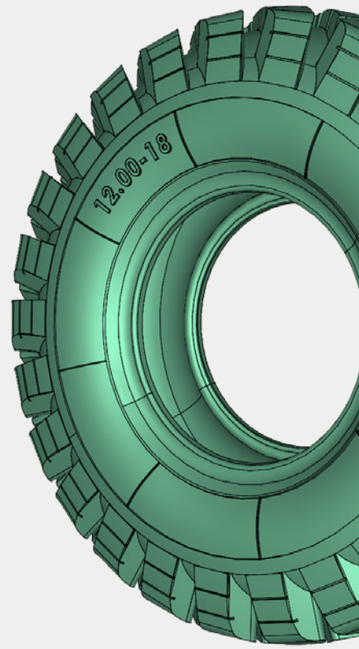
SCAN-TO-CAD FEATURES FOR REVERSE ENGINEERING

Correctly position your model and use primitives to extract key geometrical data

Speed up your workflow by performing basic reverse engineering operations right in Artec Studio.

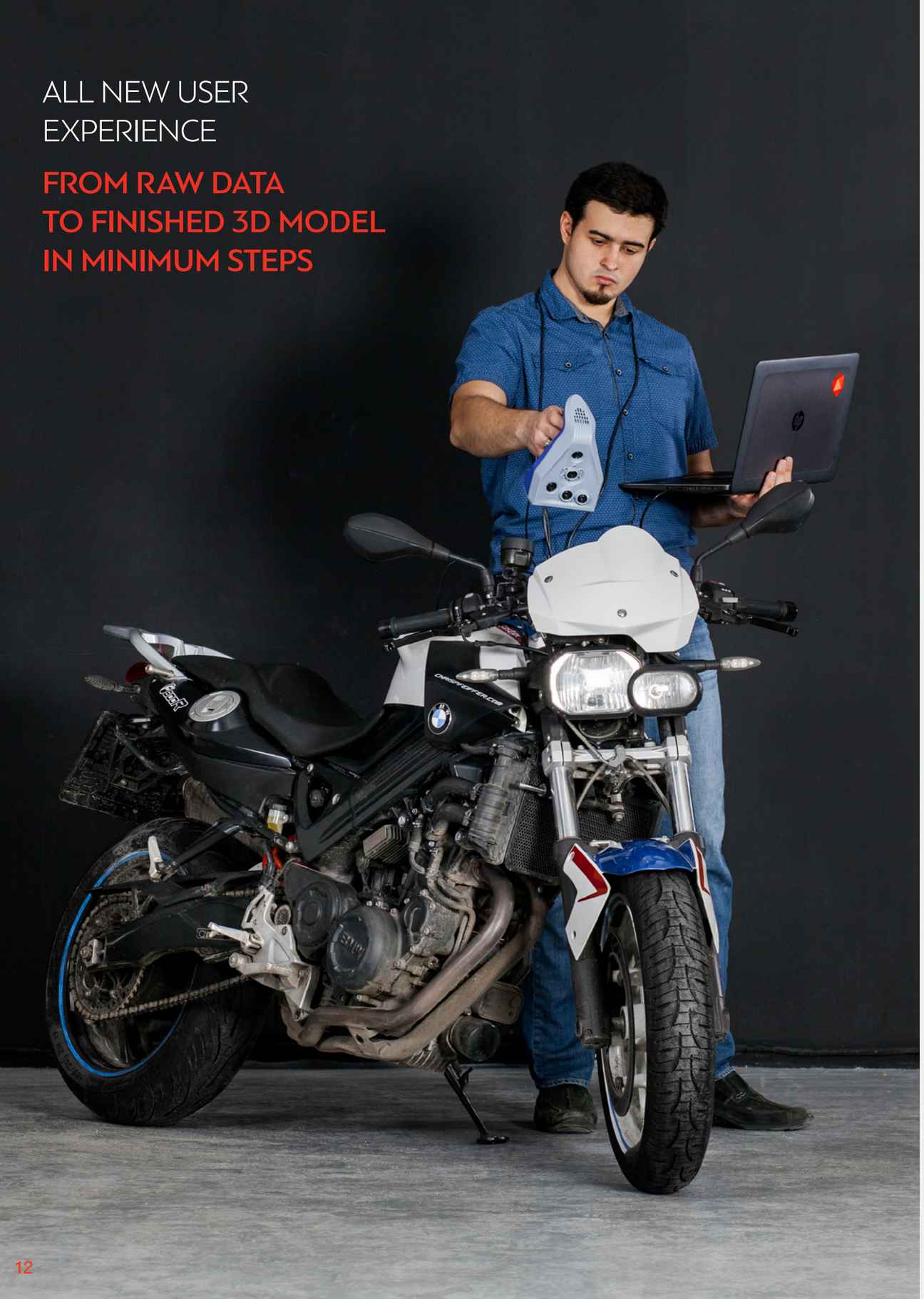
Scan a simple part and use primitives to save key geometrical data in CAD format for immediate use in SOLIDWORKS or other CAD software.

For more complex parts, directly send the mesh into Geomagic for SOLIDWORKS or Design X in just one click.



ALL NEW USER EXPERIENCE

FROM RAW DATA TO FINISHED 3D MODEL IN MINIMUM STEPS



Group 3D data into folders and process it as one unit

Artec Studio 15 unveils a groundbreaking way of working with your scans. Creating 3D models won't merely be faster and better organized, but also that much easier to manage — and especially when you're scanning large objects. Now you no longer need to work with each separate scan individually. Your scans are grouped together and you process them as you would one single scan. All changes you make to a group are instantly propagated across all the scans within.

Auto-group for Eva, Space Spider and Leo data capture

When using Eva or Space Spider, press Start Scan and Artec Studio will automatically group all captured data, even after auto-tracking recovery.

With Leo data, all scans will be grouped together by default on import. Any scans created separately, by using the Add New Scan button on Leo, will be grouped separately.

Custom create groups for easy data management

You can drop-down-menu group or drag and drop your scans into custom folders, and also group your scans according to specific sections of the object. You can even create nested groups, making your workflow all the more organized and efficient.

Automatically group scan data and primitives

Whenever you fit a primitive to a 3D model, a new group is created. This makes it a piece of cake to find everything in one place. Even if you create dozens of primitives, all your data stays well organized, right where you need it. And anytime you've added in primitives to multiple fusions in your workspace, each and every primitive will visually correspond to its respective fusion.

Easily align multiple scans in one click

No need to align scans individually. Now you can align groups of scans together. If needed, you can always ungroup in order to work with individual scans.

Precise Positioning and Groups

Precisely position a set of grouped data. Add new data to this group and it will be automatically positioned accordingly.

Faster, simpler data processing

Intuitive data organization

Easily combine data from multiple scanners

ESSENTIAL FEATURES FOR COLOR 3D MODELS

We know how important color is to you, and that's why with every release, we make Artec Studio's color features even more comprehensive and user-friendly.

Building on the success of Artec Studio 14's Glare Reduction, we've just raised the bar even higher. Take a closer look.

Enhanced color reproduction

Effortlessly create correctly-textured models

With this step-saving feature, any unwanted colors from the background behind the object are automatically suppressed, without having to manually predefine the area of application. Simply adjust the suppression level slider and go. Artec Studio's refined algorithm ingeniously searches across multiple scans for the correct color to substitute. This feature works very much like Glare Reduction, and is the next leap towards achieving perfect textures.

Model-to-model texture transfer

Instantly clone any texture over to your other models

In earlier versions, whenever you wanted to apply texture to your model, you had to select specific scans for indicating the texture to be used.

Now, as long as you have an existing textured model, you can select that instead of your scans, and its texture will then be transferred right over to your new model. This can be a real time saver, especially when you've invested loads of time editing the texture for a model, for example by using Artec Studio's Texture Healing Brush, or using advanced tools in 3D modeling software or graphics editors. Now you can simply clone that brilliant texture over to your other models, just like that.

VIVID TEXTURE FOR CGI AND BEYOND

UPGRADE YOUR SCANNER WITH

ARTEC STUDIO 15'S NEW FEATURES AND BOOSTED ALGORITHMS

In the words of many customers, **"With every new version of Artec Studio, it's like getting an upgraded scanner!"** They're right.

We're passionate about making it easier and faster for you to transform your objects into first-class 3D models. Feature by feature.

HONED ACCURACY

Unless your 3D scans are accurate, little else matters. That's why we've made the best even better, and these accuracy-honing features and updates put you on the easiest path to pristine scans and models.

Auto temperature stabilizer for Eva

Easy-to-achieve maximum accuracy

An Eva-specific feature that makes it even easier to achieve the scanner's maximum accuracy throughout your entire scanning session. The effects of the temperature stabilizer are particularly marked when scanning large objects, as error typically accumulates over distance. With the push of a button, after a brief warm-up period, Artec Studio starts detecting Eva's temperature and makes adjustments in the scanning algorithm as needed. Eva will then maintain an optimal scanning temperature as long as it's plugged in, ensuring the most precise data capture.

Next-generation registration

Expert results faster and easier across all registrations for Eva and Space Spider

Every registration type has been evolved for Eva and Space Spider, and that means Rough, Fine, and Global. The primary improvement is more steadfast texture registration, particularly for scans with less-than-ideal textures.

As well, users can expect to see upgraded texture registration accuracy for scans of larger objects (>2 meters). Results are noticeable even at low key frame ratio settings.

Additionally, Global Registration now has an optional setting for geometry-rich surfaces with little variation in texture. Select it and registration for these types of objects is dramatically improved.

Boosted Autopilot for Leo

The King of the Jungle has found an even sharper set of claws

Highly enhanced thanks to the specific feedback we received from our Leo user base, the new Leo Autopilot delivers unwavering results better than ever. We've also optimized multiple features including Registration, Outlier Removal, Fusion Resolution, and Small Object Filter.

EVEN FASTER SPEED

Because who doesn't want to scan faster? We know that when it comes to 3D scanning, it's just one part of your digital capture workflow. The sooner you can capture your object or area and turn it into a stunningly-precise 3D model, the easier your project will be.

2-4 X faster Artec Ray scan import

Load scans faster

Users of Artec Ray can look forward to significantly accelerated import speeds. This is particularly useful when importing scans of massive objects and environments such as airplanes, factory floors, and large-scale architecture.

Faster project loading

Each scan loads via a dedicated CPU core

Open your projects much more quickly than before, expedient for multi-scan projects. When opening a project with several scans, now each scan will be imported by a dedicated CPU core, whereas in the past all cores were loading just one scan. The result? For example, a project with 10 scans will open 10 times faster on a PC with a 10-core CPU.

EASE OF USE: IMPROVED ALGORITHMS

Our developers are constantly burning the midnight oil in their quest to come up with whip-smart algorithms to make Artec Studio easier and more aerodynamic than ever. Once you dive in and give these clever features a try, you'll know exactly what we mean.

Superior hole-filling

Mends holes more naturally

Now with a heightened algorithm, this feature, available via the Tools tab, delivers more organic hole-filling with improved loops.

Improved Lasso

Even cowboys never did it so good

One of the most highly-used tools in the menu, Lasso's power is without question, and now it's just gotten that much easier to wield. Whether you want to make perfectly straight lines of any length or simply draw curved lines by hand, the choice is yours.

Size-sensitive Max Error mode

Enhanced feature for flagging problem areas

This much-loved feature that color-codes frames with max errors has been expanded for working with objects of all shapes and sizes. Now when scanning larger objects, the acceptable error rate is increased in accordance with the object's magnitude.

SMART AUTOMATION

Once you get used to these genius features, there's no turning back. Whether you're a Micro user jazzed up about the gorgeous high resolution scans with minimal numbers of frames, or you're scanning with one of our handheld scanners and saving gallons of time and effort with the new automatic scan groups and Scan Size Optimizer features, there's something here for everyone!

Autopilot now even more powerful

Taking you up to new heights of productivity

As a result of the new and advanced Auto-align, Autopilot now is even more reliable for all Artec 3D handheld scanners, which is super helpful, especially for less experienced users.

30% more effective Auto-align and at 2X the speed

Auto-align now boasts new, more powerful algorithms

An enhanced feature for users of Eva, Space Spider, and Leo. More accurate and easy to use, with razor-sharp algorithms that deliver spot-on alignments 30% more effectively and up to 2X faster than before.

Scan Size Optimizer

Leaner scan sizes = easier processing = effortless time savings

A hot feature to make working with your scans that much more systematic, now you have the choice of fine-tuning the number of frames per scan. Once that number is reached, a new scan is automatically launched. The process consistently repeats as long as you keep scanning, with all new scans being auto-aligned and grouped together. And when it comes to data processing, smaller scan sizes make it easier to isolate any imperfections and quickly weed them out. Used in conjunction with the new Group feature, all of your smaller scans will be gathered together into the same, easy-to-manage group.

Smart Scanning for Micro

Create 3D models in half the time using Artec Micro's new Smart Scanning mode

Now Micro captures the optimal quantity of surfaces and data in the least amount of frames with every object you scan, resulting in fully-automatic, ultra-high resolution scans that are lean and extremely accurate. Using new, ground-breaking algorithms, Artec Studio calculates the most effective scanning path for your object, ensuring that its every single angle will be covered. This smart mode now makes it extremely easy to scan even the most complex objects. And since only the necessary frames will be captured, processing time is slashed and memory usage reduced. As a result, the workflow from start to finish is now up to 100 % faster.

EASE OF USE: OPTIMIZED & CUSTOMIZABLE INTERFACE

We've methodically fine-tuned the ergonomics of Artec Studio so scanning pros can achieve dazzling levels of productivity, while complete beginners will find themselves ramping up from zero to competent in mere hours.

In only a few clicks, you can customize and streamline your Artec Studio workspace for maximum time saving and effortless ease of use.

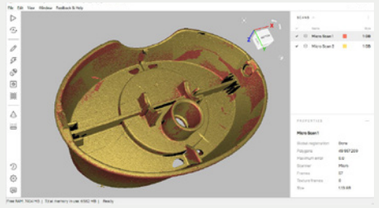
Swipe selection

Just one click selects that much more

Saves you from having to click every time you want to select an object, making it simple and fast to select or deselect multiple items in only one swipe. With the average user clicking dozens if not hundreds of times per project, this little feature is worth its weight in gold.

Customization

Since a cleaner workspace = a faster workspace



Hide the columns that you don't want to see, and configure the ones you're working with for a faster and more visually-accessible experience.

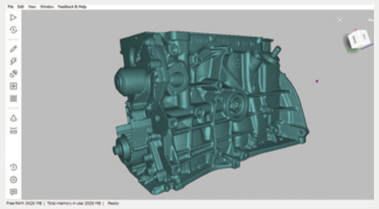
In-depth & advanced information

Every key scan detail at your fingertips

No more digging for your scan details when you need them. Now with just a click of the mouse, you can add new kinds of columns that display all the crucial properties of your selected scan, from polygons and scanner type to frames, texture frames, failed frames, size, and more. And for particular, type-sensitive items, you can toggle an information summary at the bottom of your workspace.

New color picker

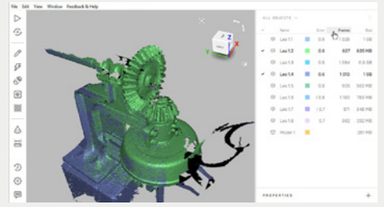
Easy real-time color selection



When it comes to changing the color of your scans, one look is usually all it takes, especially when it's in real time. This handy upgrade lets you keep the color picker open during color selection to see exactly how your scan looks in that color. Now you're free to select any color on the screen and pick that, including the color of any other scan.

Easy-access workspace

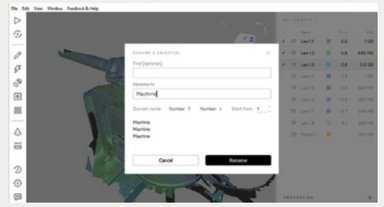
A wealth of scan info on demand



Now you can customize your scans summary to give you all the info you need in one quick glance. In only a few clicks, via drag and drop selection, it's easy for you to sort your list according to scanner type, texture frames, etc.

Convenient mass rename

Rename droves of scans in seconds



A real time-saver for larger projects with significant numbers of scans. Artec Studio 15 lets you easily rename a range of scans in a series to distinguish them. It also lets you search for user-specified keywords in scan names and then rename your scans in custom ways.

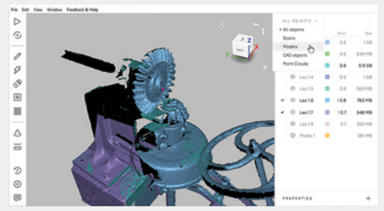
Visually redesigned workspace

Kick your workflow up to next-level velocity and comfort.

With a new ergonomic and spacious view, based on the best in UX design and oodles of user feedback, welcome to a more intuitive and efficient Artec Studio! Updated buttons and icons in one visual-oriented, easier to read, enhanced interface. Especially for users with tight deadlines and demanding projects, every extra effort saved is an incremental gain that frees up your workflow and keeps you focused on what matters most.

Filters

See only the scans you want, when you want



Ideal for projects with larger numbers of scans, now you can hide the items you don't need right now, giving you a streamlined workspace that works with you and never slows you down. Filter and display everything from all your objects, scans, models, CAD objects, and point clouds.

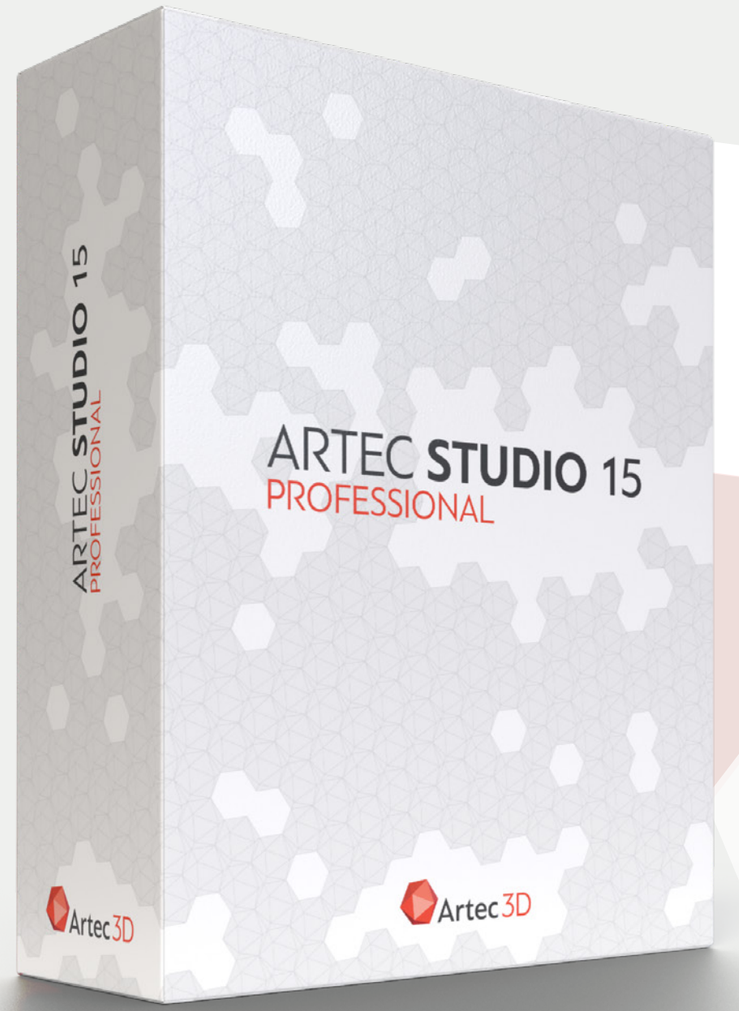
FAST & EASY FEEDBACK

New, inline feedback

Help us make Artec Studio even better!

Users and partners alike can now write feedback within Artec Studio and send it directly to us. Whatever suggestions and ideas you have on improving our software are highly welcome, whether it's a feature request or something else. Works even if you're offline. As soon as you reconnect, your valuable feedback will be sent to us.

ARTEC STUDIO 15



Get every new version of Artec Studio with a subscription license

Artec Studio is available to purchase as a yearly subscription, ensuring you are always up-to-date with the very latest version. Alternatively, you can buy a lifetime license of one single version of the software.

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*

COMPARE ARTEC STUDIO

	AS15	AS14	AS13
ESSENTIAL INSPECTION			
Mesh-to-CAD comparison: import STEP, IGES or X_T files	+		
Surface distance maps: deviation from CAD primitives	+		
Surface distance maps: speed	*Lightning fast*	*Standard*	*Standard*
Surface distance maps: annotations	*Improved*	+	+
Surface distance maps: export	*CSV*		
Measurements: distance between key points of primitives	+		
Measurements: linear, geodesic, sections, distance maps, volume, annotations. Export to CSV, DXF, XML	*Improved*	+	+
Measurements: export cross section area, perimeter length and mesh volume	*Improved*	+	+
SCAN-TO-CAD FOR REVERSE ENGINEERING			
Fit CAD primitives to 3D model	+		
Precise Positioning	+		
Sections	*15X faster*	+	+
Export fitted primitives as STEP, IGES, or X_T CAD files	+		
Export multiple open and closed contours directly to CAD	*Polyline*	*Polyline*	*Single line*
Direct export to Design X	+	+	+
Direct export to SOLIDWORKS	*SOLIDWORKS 2014 — 2020*	*SOLIDWORKS 2014 — 2019*	*SOLIDWORKS 2014 — 2018*
ALL NEW USER EXPERIENCE. FROM RAW DATA TO FINISHED 3D MODEL IN MINIMUM STEPS			
Process grouped 3D data as one unit	+		
Auto-group for Eva, Space Spider and Leo data capture	+		
Create custom groups	+		
Align grouped data	+		
Precisely position grouped data	+		
ADVANCED EDITING & 3D MODELING TOOLS			
Enhanced color reproduction	+		
Auto Glare Removal	+	+	
Bridges	+	+	
Flexible plane selection	+	+	+
Model to model texture transfer	+		
Auto texture correction	+	+	+
Texture Healing Brush	+	+	+
Lasso	*Improved*	+	+
Enhanced Defeature tool and Eraser	+	+	+
Hole filling	*Superior*	+	+

	AS15	AS14	AS13
HONED ACCURACY			
Auto temperature stabilizer for Eva	+		
Next generation registration for Eva and Space Spider	+		
Boosted Autopilot for Leo	+		
SMART AUTOMATION			
Smart Scanning for Micro	*Fully automatic. Required: NVIDIA GPU, 3GB VRAM, CUDA compute capability 3.5 or higher*	*Manual and pre-defined trajectories only*	
Auto-align	*30% more effective and up to 2X the speed*	+	+
Autopilot: automatic data processing pipeline	*Boosted*	+	+
Scan Size Optimizer	+		
Smart Base Removal	+	+	+
EASY 3D SCANNING			
Auto-brightness	*Dynamic*	*Dynamic*	+
Automated sensitivity for scanning black, shiny and fine objects	+	+	+
3D Radar mode	+	+	+
Texture and geometry tracking	+	+	+
FAST, POWERFUL 3D DATA PROCESSING			
HD Mode for Eva and Leo	+		
Project loading	*Streamlined for speed*	+	+
Artec Ray scan import	*2—4x faster*	+	
Max Error mode	*Auto-tailored to object size*	+	+
Support of large datasets	*Up to 500 million polygons*	*Up to 500 million polygons*	*Up to 500 million polygons*
Fine Registration	*Streamlined & optional*	*Streamlined & optional*	*Mandatory*
Texture Mapping	*8X faster than AS13*	*8X faster than AS13*	+
Fast Mesh Simplification	+	+	+
X-Ray mode	+	+	+
ERGONOMICS			
Redesigned workspace for ease-of-use	+		
Customizable workspace	+		
Swipe selection	+		
Easy mass rename	+		
Auto-export naming	+	+	
Customizable scan summary	+		
Filters	+		
Scan info	*In depth & advanced*	*Basic*	*Basic*
Model color picker	*Improved*	+	+
Sound notification	+	+	
One-click Auto-Positioning	+	+	*Basic*
3D rotation cube	+	+	+
3Dconnexion 3D mouse compatibility	+	+	+
Scanner type detection	*Streamlined*	*Streamlined*	*Manual*

COMPARE ARTEC STUDIO

	AS15	AS14	AS13
EXPORT FORMATS			
Mesh	*OBJ, PLY, WRL, STL, AOP, ASC, Disney PTEX, E57, XYZRGB*		
Point cloud	*PTX, BTX, XYZ*	*PTX, BTX, XYZ*	*PTX, BTX, XYZ*
Measurements	*CSV, DXF, XML*	*CSV, DXF, XML*	*CSV, DXF, XML*
CAD	*STEP, IGES, X_T*		
HARDWARE SUPPORT			
3rd party sensor support	*N/A*	*N/A*	*Ultimate Edition: Microsoft Kinect, ASUS XTion, PrimeSense, Intel RealSense 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*