

VGSTUDIO

The Simple Solution for the Visualization of CT Data

VGSTUDIO is the ideal choice for visual quality inspection in industrial applications, e.g., in the electronics industry, but also for the visualization of data in fields of academic research such as archaeology, geology, and life sciences.

VGSTUDIO covers the entire workflow, from the precise reconstruction* of three-dimensional volume data sets using the images taken by your CT scanner to visualization (in 3D and 2D) and the creation of impressive animations.

A sample of the features in VGSTUDIO

Visualization

> 3D visualization of even very large CT data sets – with almost no limit on data volume

- > Real-time ray tracing for a photo-realistic look
- > Combined visualization of voxel and polygon data, including textured meshes
- > Arbitrary orientation of 2D slices
- > 2D slice rotation view around a customizable axis
- > Gray-value classification of a data set
- > A wide variety of 3D clipping options
- > Unrolling of objects or leveling of freeform surfaces in a 2D view
- > Combination of consecutive slices into a single 2D view

Bookmarks

> Save 3D and 2D views, clippings, selected coordinate systems, and rendering settings as bookmarks.

- > Switch between bookmarks and between different views within your project easily with one click.

Data Set Alignment

- > Simple 3-2-1 registration
- > Simple registration

Measurement Instruments

> Distance, polyline length, and angle measurement instruments

- > Snap mode to snap instruments to the surface for an easier use of measurement instruments

Videos/Animations

> Create impressive animations of your volume data with just a few clicks.

- > Automatically generate the camera trajectory between two or more key frames.
- > Save your animation as a movie or create an image stack.

Data Import/Export

> Import data from most major industrial CT systems.

- > Import standard image formats (such as .bmp, .jpg, .jp2, .raw, .tif) as well as DICOM and DICONDE data.
- > Open metrology projects created with VGMETROLOGY or VGMETROLOGY ES (.mvgl files).
- > Read and write .vgarchive files that combine all files, folders, and even source data.
- > Reduce data set sizes when importing data on less powerful computers.
- > Save memory by opening data sets with unloaded gray values.

Display of Analysis Data & Reports

> Display all analysis data generated with VGSTUDIO MAX or VGMETROLOGY.

- > Use the export and reporting features and save results in the VG Report Format (.vgrf) and as customizable test reports, e.g., in a .xlsx or .pdf file.

* The CT Reconstruction Module is not part of the basic edition of VGSTUDIO and must be purchased separately.



Create stunning animations with VGSTUDIO

CT Reconstruction Add-On Module *

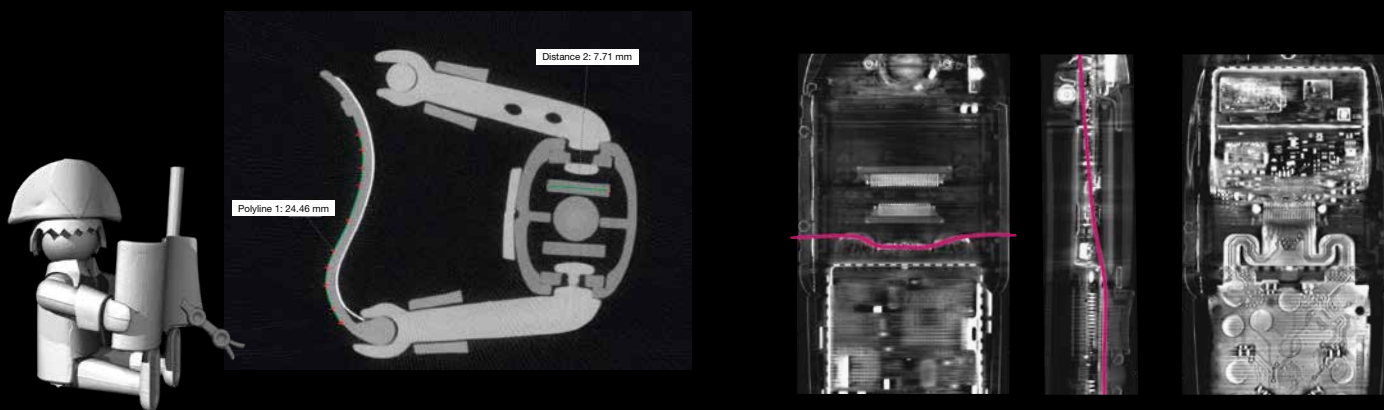
- > **Supports cone beam, fan beam, parallel beam, planar, and helical (spiral) CT.**
- > Exports reconstructed volume data sets directly as VG projects.
- > Uses one or multiple GPUs to speed up calculations by incorporating OpenCL.
- > Reconstructs even very large data sets (limited only by the PC hardware used).
- > Provides a real-time, single slice preview.
- > Uses robust automatic scan geometry corrections.
- > Reduces metal and ring artifacts.
- > Allows an artifact-free ROI (Region of Interest) reconstruction.
- > Extends the field of view by shifting the detector or rotation table.
- > Improves the image quality using the standard Volume Graphics beam hardening correction or the optional Iterative Artifact Reduction (IAR) **.

Licenses and Languages

- > Available as node-locked or dongle license
- > Available in six languages: English, German, French, Japanese, Chinese, and Korean

Upgrade Options

If your needs grow, you can upgrade VGSTUDIO to VGSTUDIO MAX, giving you access to all analysis add-on modules: Coordinate Measurement, Nominal/Actual Comparison, Wall Thickness Analysis, Porosity/Inclusion Analysis, Enhanced Porosity/Inclusion Analysis, Fiber Composite Material Analysis, Foam Structure Analysis, Structural Mechanics Simulation, Transport Phenomena, Manufacturing Geometry Correction. ***



Use of measurement instrument

Example of the use of non-planar view. Left and middle: regular slice view, the line reflects the path of the non-planar slice, right: non-planar view

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** Technology licensed by Fraunhofer EZRT

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