FARO® BuildIT Metrology Software

Streamlined Configurability for Dimensional Validation of Parts & Assemblies

Real-Time Inspection, Assembly & Alignment for Manufacturing Professionals

FARO BuildIT Metrology Software is the industry's leading metrology software platform for alignment, inspection, and build applications. BuildIT delivers accurate management of all dimensional validation processes throughout the manufacturing lifecycle. BuildIT Metrology includes best-in- class features such as device bundling and real-time visual feedback in a streamlined user interface, allowing users to position parts for high-precision assembly and alignment applications.

BuildIT Metrology is designed to support both manual and automated workflows. Automation, flexibility, and easy customization enable the streamlining of workflows by reducing operator training time and increasing efficiency. Processes are easy to create and extremely versatile. From simply recording a workflow as it is performed, to creating complex logic and modularization, BuildIT Metrology's automation has each user's unique processes covered.

Benefits

BuildIT Metrology leverages more than 20 years of proven expertise in delivering best-in-class measurement solutionsto the manufacturing industry.

Increase Manufacturing Efficiency

Streamline manufacturing processes by creating automated, guided, repeatable workflows; minimizing clicks and manual work. Speed and ease of use are enhanced through improved alignment, registration, and association of point clouds.

Minimize Rework & Waste

Use metrology-assisted assembly and alignment to guide part placement in real-time to ensure that the finished assembly meets the required tolerances and is built properly.

Powerful Established Platform

- Robust metrology engine for factory use
- Powerful CAD and Point Cloud Engine with efficient algorithms certified by both the National Institute of Standards and Technology (NIST) and Physikalisch-Technische Bundesanstalt (PTB), guaranteeing that the BuildIT fitting algorithms are accurate and reliable
- Reliable native CAD Import with embedded Geometric Dimensioning and Tolerancing (GD&T)
- Conforms to international standards (GD&T, ASME, ISO)

Configurable Automated Workflows

- Advanced and powerful functionality including complex logic, variables, python extensions, etc.
- Easy process recording & generation of customized reports
- No coding is required

Single Software Ecosystem

- Compatible with all FARO measurement devices including Tracer Laser Projectors
- Interface with external robotic devices via Input/Output (I/O)
- Third-party metrology hardware compatible

Capabilities

Validation to CAD

- Verify accuracy of measurement data to design models
  - Compare single points and/or point cloud data
  - Perform surface deviation analyses
  - Evaluate geometric features
- Import 3D CAD files from native (CATIA® V4 V5 V6, NX, Parasolid, CREO (Pro/E), Inventor, SolidWorks, AutoCAD), or neutral formats (IGES, STEP, SAT, JT)

Real-Time Device Interface

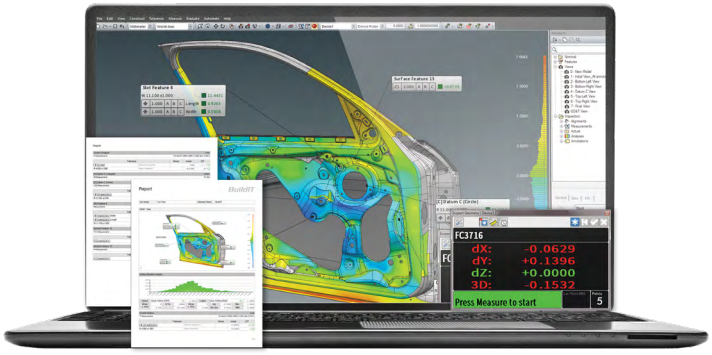
- Interface in real-time with all FARO probing and scanning measurement devices as well as all major third-party party hardware
- Interface with laser projectors to:
  - Project design templates for prefabricated parts and assemblies
  - Project equipment placement for factory layout and planning
- I/O interface with various robotic integrations

GD&T Evaluation

- Powerful Geometric Dimensioning and Tolerancing (GD&T analysis capabilities for model-based workflows
- Import GD&T, FTA and NX-PMI assembly level data from CAD for model-based inspection
- Easily create and apply GD&T tolerances
- Automatically evaluate attached GD&T tolerances when measurements are taken
- GD&T features contain extraction, filtering and outlier rejection settings to optimize analysis
- Evaluate complex GD&T (including MMC, MMB, etc according to industry standards (ASME, ISO)

Metrology Assisted Assembly & Alignment

- Measurement Control Window constantly displays the 3D deviations in all axes
- Real-time build arrows help to place parts accurately



Configurable Automation

- Quickly and easily record a process as it is performed, for repeatabilityImport GD&T, FTA and NX-PMI assembly level data from CAD for model-based inspection
- Display text instructions and images at key points for guided processes
- Use complex logic statements, variables, and call processes within processes for advanced workflows
- Extended programming using Python

Detailed Reporting

- Customize reports to include only the relevant informationGenerate charts, graphs, screen shots and data tables
  - Generate charts, graphs, screen shots and data tables
  - Export as PDF, XLSX, CSV

Industries

Aerospace & Defense, Automotive, Steel/Paper Mill, Heavy Machinery, Shipbuilding, Energy, Space/Satellite

Applications

Measurement, Alignment, Part Inspection, Tool/Jig Building, Assembly, Meshing. In-line, Next-to-line

Hardware Requirements	Minimum Requirements	Recommended Requirements
Operating System	Microsoft Windows 10, 64-bit	Microsoft Windows 10, 64-bit
Processor	Intel Core i3 or AMD equivalent	Intel Core i7 or AMD equivalent
RAM	8GB RAM	16GB RAM+
Hard Drive	20GB free solid state hard drive space	250GB or more of solid state hard drive space
Graphics Card*	Integrated graphics OpenGL 4.0	NVIDIA Quadro series or AMD Radeon Pro series OpenGL 4.2+ 2GB memory (VRAM)

*We recommend updating the video driver to the most recent released version from the manufacturer website

Local offices in over 25 countries around the world. Go to **www.faro.com** to learn more.

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