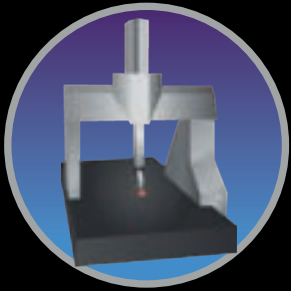


**QUALITY,  
PRODUCTIVITY  
AND EFFICIENCY**



**3D Metrology Software**



**CMM Solutions**



**3D Portable Metrology**

**FAIR, GD&T  
PPAP, SPC  
PMI, MBD  
R&R**

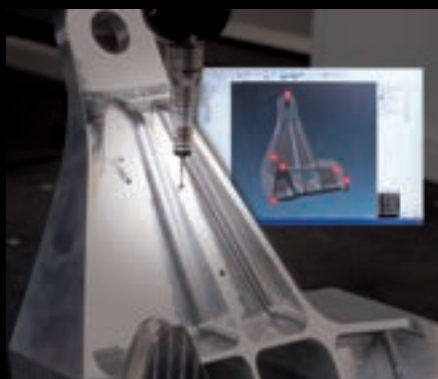
**Quality Control Solutions**



**3D Scanning and  
Reverse Engineering**

 **Metrology<sup>UK</sup>**

**MEASUREMENT SOLUTIONS**

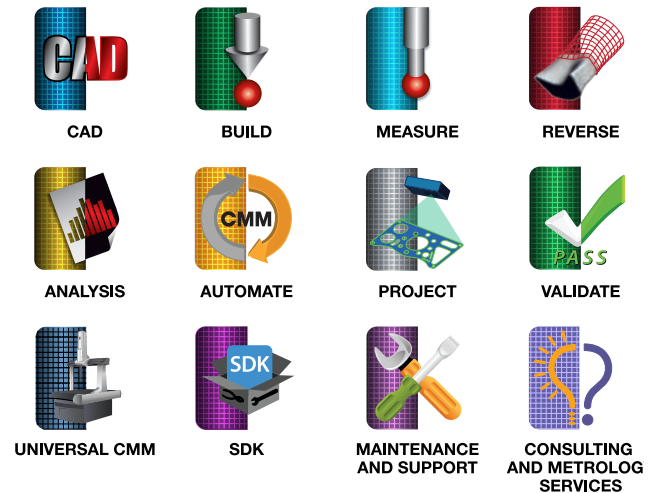


# METROLOGY UK

Our measurement solutions and services are deployed on manufacturing applications worldwide. We work closely with our clients to deliver the solution they expect and demand. Our decades of experience in the manufacturing sectors provides us with a unique knowledge base from which we apply the suitable quality solution for the requirement or task in hand.

## VERISURF SOFTWARE

Verisurf Software provides the most flexible metrology platform with Usability and Innovation at the core.

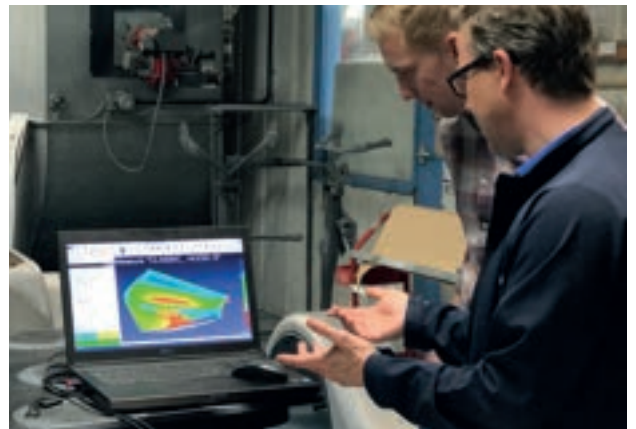


Meeting quality objectives requires confirmation that finished dimensions consistently meet design specs. Successful manufacturers forge, sustain and extend their reputation for quality by integrating 3D metrology systems like Verisurf into their overall production processes.

## ADVANTAGES OF 3D METROLOGY

Verisurf 3D metrology information is most commonly used for quality inspection to verify design intent, but is also used for reverse engineering, tool building and more. Manufacturers commonly adopt 3D metrology to overcome a number of challenges:

- Complete work they can't otherwise perform
- Consolidate multiple apps into a single system
- Comply with customer quality requirements
- Confirm conformance to design specs
- Improve inspection throughput
- Automate manual inspection processes
- Build a CAD model from a physical part
- Precision detail positioning during assembly
- Verify manufacturing processes
- Equip new metrology devices with software










# WITH UNPARALLELED FUNCTIONALITY TO DRIVE ALL YOUR MEASUREMENT DEVICES. SUPPORTING

- **Portable measurement arms** - Faro, Romer, Nikon, RPS, Microscribe, Tomelleri, Kreon
- **Laser Trackers** - API, Faro, Leica and SMX
- **Optical scanners** - Faro 3D Imager, Nikon Laser Radar ,Zeiss Steinbichler, Kreon Scanners
- **Camera Systems** - Creaform, Aicon, Metronor, NDI, OptiTrack, Vstars and Vicon
- **CNC CMM's** Hexagon, Mitutoyo, Wenzel, Sheffield, Coord3, Steiflemayer and many more....

The modular design allows us to tailor make the ideal package for your measurement devices, applications and budget.

## THE BUILDING BLOCKS OF VERISURF SOLUTIONS

Verisurf software solutions are made up of integrated application modules, each with specialized functionality. As customer need as evolved, so has Verisurf. Building outward from its base CAD module, Verisurf is able to connect interrelated disciplines and processes around a common open platform, including: Automated Quality Inspection and Reporting; Scanning and Reverse Engineering; Too Making and Assembly Guidance.

|  | Inspection | 3D Scanning and Inspection | Offline Inspection | CMM Programming and Inspection | Offline CMM Programming | Tool Building and Inspection | 3D Scanning and Reverse Engineering | Offline Reverse Engineering | Guided Assembly and Inspection | Metrology Enterprise |
|--|------------|----------------------------|--------------------|--------------------------------|-------------------------|------------------------------|-------------------------------------|-----------------------------|--------------------------------|----------------------|
|  <b>CAD</b> (required for all configurations) <ul style="list-style-type: none"> <li>• Read any proprietary or universal CAD file type</li> <li>• Import, create, and edit associative MBD (GD&amp;T)</li> <li>• Interrogate CAD model for dimensions</li> <li>• Create and edit solid CAD models</li> <li>• Use any portable or stationary measuring device</li> </ul>                                     | ●          | ●                          | ●                  | ●                              | ●                       | ●                            | ●                                   | ●                           | ●                              | ●                    |
|  <b>MEASURE</b> <ul style="list-style-type: none"> <li>• Measure any type of geometry feature</li> <li>• Guided, graphical device/part/model alignment</li> <li>• Create stunning reports in multiple formats</li> <li>• Instantly analyze and display surface deviations</li> <li>• Learn mode builds inspection plans while measuring</li> </ul>  | ●          | ●                          | ●                  |                                |                         | ●                            | ●                                   | ●                           | ●                              |                      |
|  <b>ANALYSIS</b> <ul style="list-style-type: none"> <li>• Analyze deviations of pointclouds and meshes to CAD</li> <li>• One click alignment, deviation analysis, and report creation</li> <li>• Automatic probe radius compensation</li> <li>• Best fit points and pointclouds to surfaces and holes</li> <li>• Embed annotated, full-color plots in reports</li> </ul>                                  |            |                            | ●                  |                                | ●                       |                              |                                     |                             |                                | ●                    |
|  <b>AUTOMATE</b> <ul style="list-style-type: none"> <li>• No programming! Build plans for CMMs graphically</li> <li>• Automatic CAD feature recognition when constructing plans</li> <li>• Display probe paths and simulate motion before running</li> <li>• Simple, form based parametric control of probe movement</li> <li>• Use saved inspection plans on any measurement device</li> </ul>           |            |                            |                    |                                | ●                       |                              | ●                                   |                             |                                | ●                    |
|  <b>BUILD</b> <ul style="list-style-type: none"> <li>• Position objects in 3D using live graphical feedback</li> <li>• Position or adjust object to assigned tolerance values</li> <li>• Build arrow shows direction and distance to nominal</li> <li>• Use with gravity-based devices to plumb and level objects</li> <li>• Position scribe and trim lines on complex surfaces easily</li> </ul>         |            |                            |                    |                                |                         | ●                            |                                     |                             |                                | ●                    |
|  <b>REVERSE</b> <ul style="list-style-type: none"> <li>• Create manufacturable CAD models from physical parts</li> <li>• Build mesh surfaces and solid models</li> <li>• Easily align multiple, scanned pointcloud objects</li> <li>• Create CAD geometry from pointcloud or mesh cross sections</li> <li>• Fully automated CAD surfacing from pointclouds and meshes</li> </ul>                          |            |                            |                    |                                |                         |                              |                                     | ●                           |                                |                      |
|  <b>PROJECT</b> <ul style="list-style-type: none"> <li>• Position objects using all common laser projection devices</li> <li>• Import CATIA composite ply data to create projection programs</li> <li>• Replace or eliminate hard tooling and templates</li> <li>• Program and edit layouts on the fly to see effects immediately</li> <li>• Reveal features not visible on projection surface</li> </ul> |            |                            |                    |                                |                         |                              |                                     |                             | ●                              |                      |

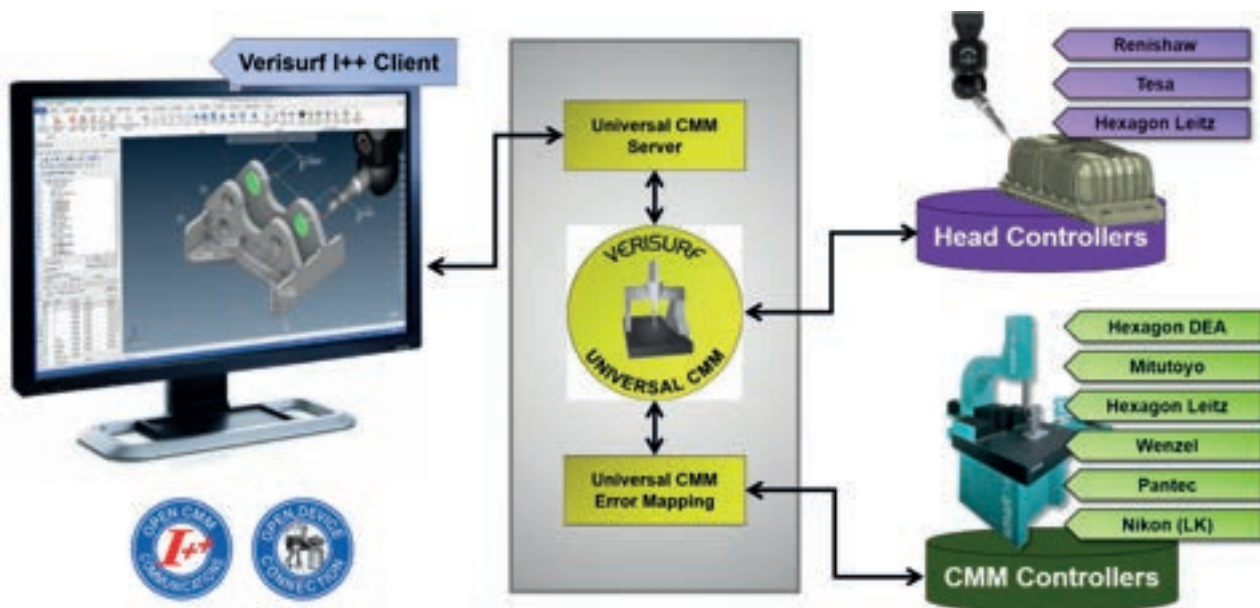
Contact your Verisurf account representative to learn more about special configurations to fit unique needs.



# SOFTWARE UTILITY MODULES

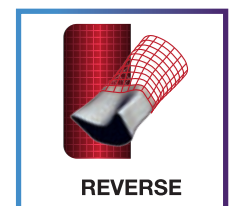
## UNIVERSAL CMM - UNIVERSAL CMM COMPATIBILITY

Universal CMM is an optional, software-only solution that enables seamless communication between Verisurf's standards-based I++ protocol and the most common CNC CMM and head controllers. Adding Universal CMM means that Verisurf can be used as a common platform running on existing CMMs as well as additional portable devices. And since Universal CMM is a software-only solution, manufacturers can avoid the expense and risk of upgrading or retrofitting controllers and probing systems. CMM operators avoid any risk associated with adopting new technology because—with Universal CMM—they can continue to use legacy inspection programs if needed and still enjoy the benefits of using Verisurf. Inspection programs created in Verisurf for a CMM can also be used on portable systems. Human and technology resource utilization improves substantially when all measuring devices can be operated with the same metrology software and skill set.

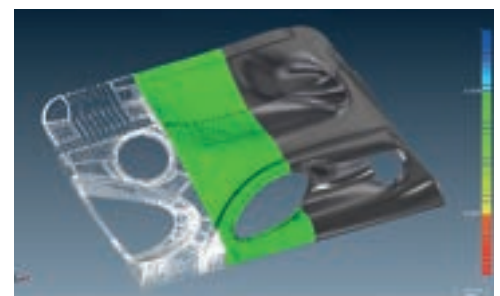


## POWERFUL, VERSATILE REVERSE ENGINEERING SOFTWARE

Re-engineer CAD surfaces, use AutoSurface to reverse engineer complex surfaces or use mixed modeling to blend STL meshes, surfaces and solids in one design. Working with measured data from any measuring device, Verisurf Reverse automatically creates surfaces, features and planar, grid orradial cross sections on machined parts to create precise CAD models.



Leveraging advanced tools, Verisurf Reverse creates and custom-fits lines, arcs, splines, planes, spheres, cylinders, freeform surfaces and more. Providing a fully integrated, comprehensive solution, Reverse also creates complex tooling run-offs with Power Surface, 3D meshes from point clouds in the form of an STL file for surface analysis or future tooling and machining.

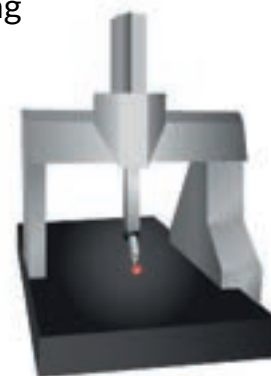


## OPTIONAL CAD AND PMI SUPPORTED TRANSLATORS

Every Verisurf configuration includes the ability to read virtually any type of geometry file. Additional translators are available to read premium CAD system file formats including: CATIA, NX, and Pro/E and Creo file types. Import for selected MBD (GD&T) data types is also available. Verisurf expends continuous effort to maintain compatibility with the most recent versions of all commonly used geometry formats.

## **easyCMM** (DIGITAL SOFTWARE ONLY RETRO-FIT)

This game changing software package allows you to choose the programming software with your preferred CMM hardware platform. This allows you to perform retro-fits with software only saving time and money on changing controllers, scales etc.



EasyCMM enables direct, plug-&-play communications between the most common CMM brands and open-standard I++ client. EasyCMM directly interfaces with any CMM and CMM-head controllers produced by leading global manufacturers, such as Hexagon Dea, Hexagon Leitz, Mitutoyo, Wenzel, Pantec, Nikon (LK) and Zeiss™.

- Easy CMM enables you to purchase CMMs and metrology software products independently; your gain - you are free to select both CMMs and software packages based on any consideration - technological, financial or otherwise;
- You can use one standard metrology software for different CMM brands, decreasing the costs of operator training and increasing the flexibility of staff deployment; your gain - cost-effectiveness and production efficiency;
- You can use different metrology software packages on one CMM without having to buy or set apart a separate CMM for each software product; your gain - reduced investment and maintenance costs and increased work flexibility;
- You can shift different metrology software packages among different CMMs; you are free to change combinations to best suit the application; your gain - maximum CMM productivity;
- You can expand or upgrade the software without having to bear the expenses of rewriting part programs; your gain - major savings in both time and manpower;
- You can retrofit CMMs/CMM controllers without having to bear any extra work or costs; you will still be able to run the existing part programs using the existing software; your gain - Easy CMM will take over and do the matching work.

### END RESULT:

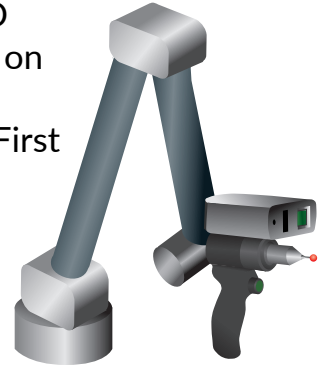
Maximum versatility in mixing measurement software and hardware so they optimally match your needs and applications while allowing for considerable cost saving and improvement in quality and efficiency. A must for anyone with more than one CMM brand.

EasyCMM performs error mapping to compensate for geometric, volumetric, orientation, positioning and kinematic errors in the CMM structure that affect their accuracy.

# PORTABLE METROLOGY

## MASTER3DGAGE PROBE/SCAN

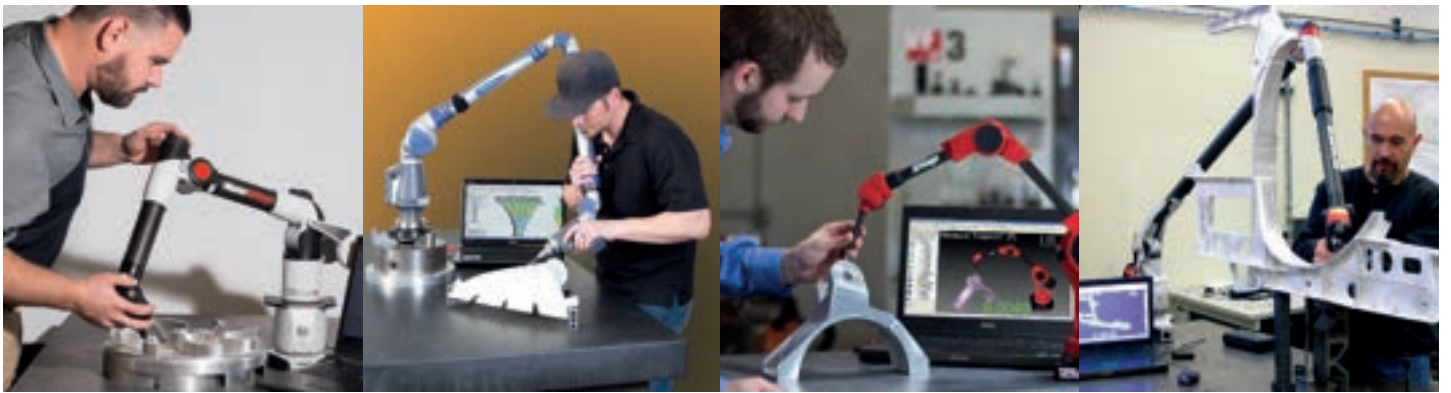
The new PC-based Master3DGage portable CMM system uses precise, 3D model-based software to quickly and accurately verify part quality directly on a CNC machine or anywhere else in the manufacturing process. There's no metrology experience needed. Just align the part, inspect it, and report it. First article inspections that used to take hours or days now take just minutes.



| Shop Floor Ready                         |                    |                   |
|--|--------------------|-------------------|
| APPLICATIONS                             | PRECISION          | DURABLE           |
| FAI's, In Process Control, Data Analysis | Volumetric 0.018mm | Shop Floor Rugged |
| Reverse Engineering, Error Mapping       | Digital Probes     | On Machine Use    |

### We support all Measuring Arm solutions...

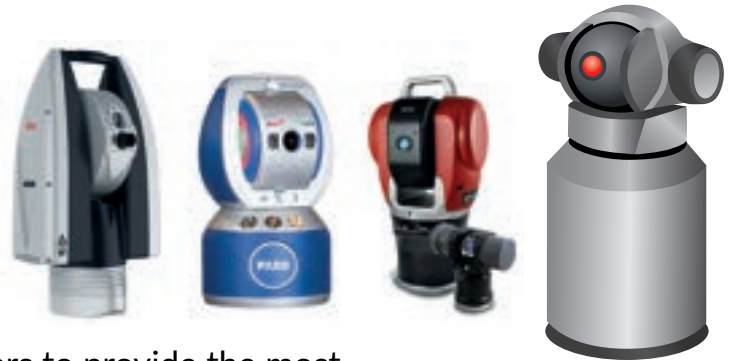
Faro | Romer | Nikon | RPS | Microscibe | Tomelleri | Kreon



With new models and legacy systems. With Verisurf you can bring your existing units to life with rich functionality your team can rely on.

## FARO LEICA API

Metrology UK provide the best Laser tracking solution for your application. We have been involved with Laser tracker applications since their development and our experience is second to none.



We work directly with the Factory manufacturers to provide the most suitable and cost effective solution to suit your needs.

## 3D SCANNING AND REVERSE ENGINEERING

Verisurf Reverse provides a complete suite of tools for the re-engineering process. Direct measurements captured within Verisurf can be converted to fully function surface or solid models with the singular platform. With an on board CAD modelling package Verisurf unique capabilities can tackle the most challenging projects and applications







# SCANOLGY

Use 3D digitization to bridge the gap between the physical and digital Industrial worlds. Turn real-life objects into digital representations. By combining intelligent 3D measurement, metaverse, digital twins, and intelligent manufacturing, we are working to build a boundless territory of 3D Metrology.



## SIMSCAN SERIES

From Accurate Measurement to Assured Geometry and Inspection. With enhanced optics and advanced algorithms, SIMSCAN-S Gen2 delivers accuracy of 0.015 mm. Thanks to its sophisticated sphericity and flatness control, it captures both precise dimensions and surface deviations.



New Generation Engineering Surveying System. V700S integrates advanced RTK and SLAM technologies to deliver centimeter-level accuracy in both open environments and GNSS-denied areas, enabling efficient, reliable surveying anywhere.



