WHITE PAPER

Extended Reach

Technology Combinations from FARO® Are Allowing Users to Focus More on the Actual Measurement and Less on the Measurement Processes

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Ensuring the quality of a car's performance and design, FARO® 3D measurement technology solutions provide a simple, yet accurate way of taking contact and non-contact measurements for quality control in automobile manufacturing and assembly.

Portable CMMs such as articulated arms can be used for rapid prototyping, analyzing car body panels or inspecting a body-in-white, while large-volume laser trackers can be implemented for part inspection, alignment, machine installation, robot calibration or reverse engineering tasks.

FARO has recently developed and introduced new portable metrology solutions that add new measurement features and capabilities to its FaroArm® product family: the FARO 8-Axis system and the FARO PRIZM™ Laser Line Probe (LLP).

The FARO 8-Axis system delivers innovative real-time part rotation to streamline quality inspection processes

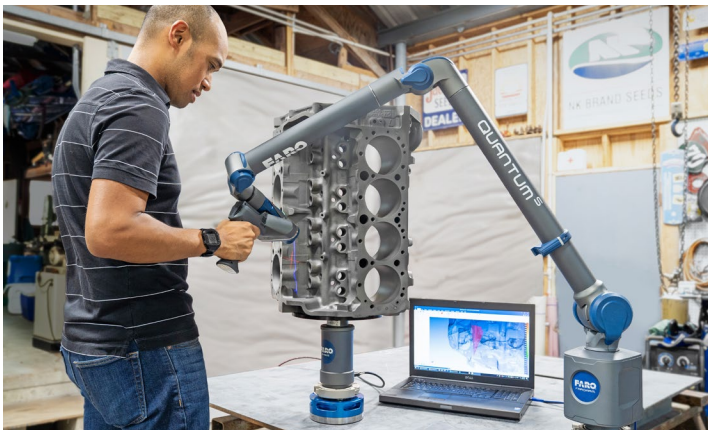
The FARO 8-Axis system combines the portable FARO Quantum FaroArm or Quantum ScanArm portfolio products with a functionally-integrated, yet physically separate, 8th axis.

The 8th axis is a complete rotational axis that provides a natural extension of FaroArm capability. It plugs directly into the FaroArm and results in a seamlessly integrated, high-accuracy additional axis that requires no extra set up time or effort.

The 8th axis enables rotation of what is being measured in real-time – meaning no difficulty reaching around the object, and no need to move the Arm into different locations within the process. This eliminates wasted time and offers an easy-to-use measurement solution that allows users to focus on the actual measurement and not on the measurement processes, taking measurement speed and ergonomics to an even greater level.

The extended reach of this system via the easy-to-use part rotation functionality allows the user to scan, measure and digitize features on both small and large parts with a single Arm position. As a result, this process is up to 40% faster relative to a standard 7-Axis Arm system.

The operator is now able to focus with minimal distraction on the actual scan or measurement of the part since reaching around the part is no longer required. Also, this allows complex objects to be digitized, not only faster, but also more comprehensively.



The FARO 8-Axis Quantum FaroArm enables up to a 40% reduction in the time it takes to measure parts and assemblies

The 8-Axis system is ideal for addressing a range of non-contact measurement and scanning applications, including part inspection, alignment, dimensional analysis, CAD-based inspection, prototype part scanning and reverse engineering.

FARO®

With the FARO PRIZM Laser Line Probe, high resolution, 3D color scanning for vivid, real world visualization and CAD reconstruction of parts is possible

Color Scans and Fine Details

The FARO PRIZM is the first Laser Line Probe available that includes the ability to scan in high resolution, 3D color.

PRIZM is designed to operate as a compact, tightly integrated solution with the FARO Quantum FaroArm product family and extends the FARO tradition of delivering maximum measurement consistency for both direct-to-parts contact and non-contact requirements in every working environment.

PRIZM has certified accuracy for the most demanding metrology challenges. The color scan allows users to view and manipulate a detail-rich, 3D color point cloud model of a part or assembly on a computer screen.

This innovation enables parts and objects to be inspected for dimension and surface quality. This is ideally suited for molded parts where color and surface texture are an essential requirement of the complete inspection, or for identifying splits on stamped sheet metal not detectable with existing technologies. Fine details including texture, such as weld marks, grinding marks, sandblasting and machining patterns, and even text, can be clearly extracted for identification of key features during the inspection process. The true-to-life functionality enhances productivity by supporting inspection professionals in driving out dimensional and surface character quality issues that would otherwise slow the end-to-end the production process.

Scanning large objects in color is fast and simple with the 8-Axis ScanArm and PRIZM Color Laser Line Probe

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