



Product Brief

QVI Fusion™

The new QVI Fusion is the most sophisticated high performance multisensor dimension measuring system available anywhere in the world. The machine and all its underlying technology were developed and manufactured by QVI in the USA.

Fusion addresses three fundamental needs for metrology equipment in advanced manufacturing:

- 1.) **High Productivity** – Fusion combines fast throughput with high accuracy for productivity in high production volume situations. Fusion uses a combination of high speed transport stages, large field, multi-mag optics and a range of auxiliary sensors to perform comprehensive part measurements and comparison to their CAD model quickly. ZONE3 software ensures all sensors are simultaneously calibrated and ready for use at any time. This allows Fusion to be adapted to a wide variety of measurement needs very easily.
- 2.) **Ease of Use** – Fusion is powered entirely by QVI's ZONE3 3D CAD-based metrology software, offering a simple and intuitive user experience with instant measurement of the entire 100mm (diagonal) field of view using the new* FeatureExtractor™ video processing technology. Simply stage a part, turn on a light source and measure the entire FOV instantly. A trove of additional sensors, including high magnification video, touch and scanning probes, lasers, or FeatherProbe® can be deployed on-axis as needed.
- 3.) **Low Cost of Ownership** – Fusion offers among the lowest CoO among high performance multisensor systems. A compact footprint, simple utility requirements, and modest preventive maintenance needs keep facility and maintenance costs low, while fast throughput and multiple calibrated sensors on a single system offer low cost per part.

The heart of the Fusion system is its unique dual magnification, telecentric optics. The Low magnification field is 100 mm diagonal, offering a large scene with extended depth of field and perfect telecentricity. Imaging is crisp with three light sources available. Low mag is optimized for low distortion and telecentricity for accurate feature size measurements anywhere in the scene. The High magnification is a 5:1 multiple of the low mag, with 20mm diagonal field of view. High mag is optimized for video autofocus accuracy and for the integral TeleStar Plus interferometric laser. Both magnifications have the same working constant (and generous) working clearance of 185mm – affording ample distance between the same part and lens to allow for tall parts or fixture tooling. The entire optical assembly including lenses are made in the USA.

Watch the video here: <http://pi.ogpnet.com/l/66682/2017-07-20/b2cggn>

** Historical note: QVI first deployed full field Feature Extraction on its IQ-2000 advanced video multisensor system in 1986. At that time, an advanced mini-computer with a dedicated array-processor was required to handle the full field video image produced by a black & white camera with just 300,000 pixels.*



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