



Optical Gaging Products

A Division of Quality Vision International

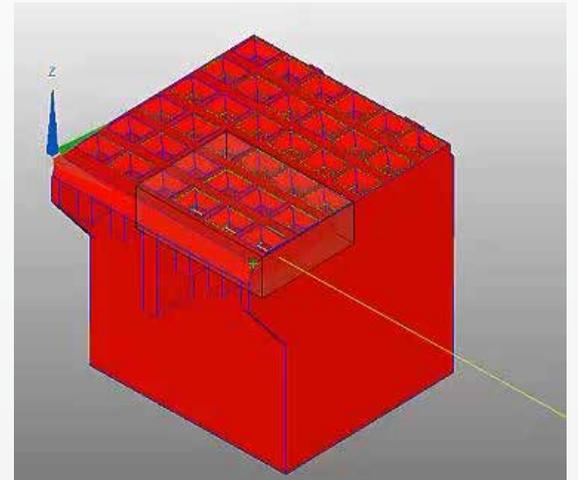
Case Study

ZONE3 Advanced Metrology Software

Focus: High Productivity Tools for Complex Part Measurement

Challenge: Parts with hundreds or thousands of intricate features present a tough measurement challenge. This electrical connector is a common example. It contains a 6 x 6 array of cavities, each with 22 toleranced dimensions. Using conventional techniques, programming each of these small features individually would consume many hours of programming time, and the actual measurement time would also be considerable.

The ZONE3 Advantage: QVI's new ZONE3 3D-CAD based metrology software is designed to make short work of high density parts. ZONE3 combines a series of high productivity tools that make it easy to set up measurement routines for high density parts, and optimize their run time.

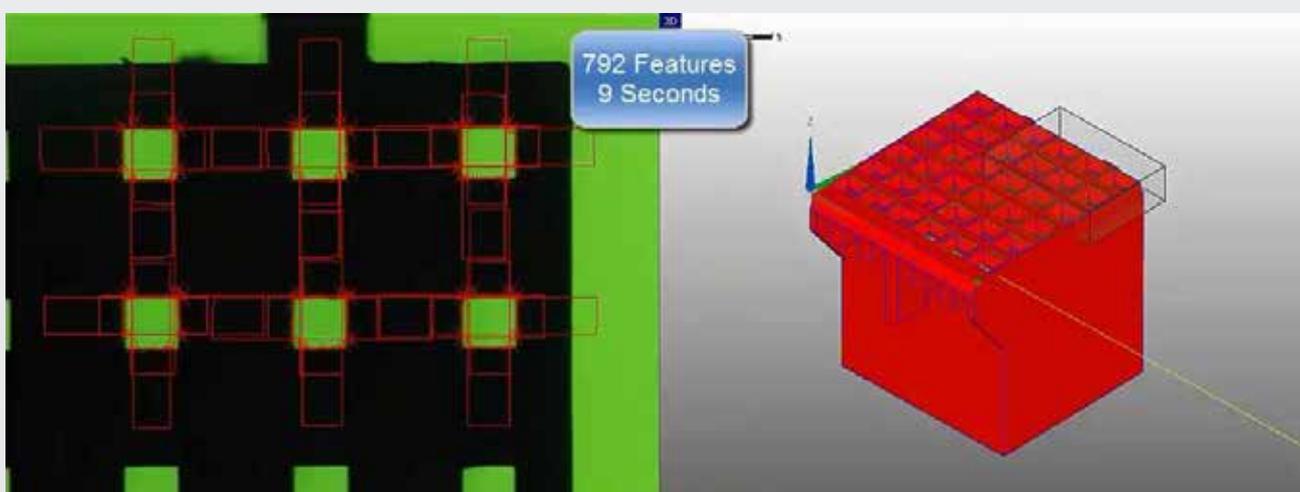


ZONE3's CAD-model based interface makes use of the detailed feature information already present in the CAD model. Simply set up the measurements for one feature, then use the "Apply to Similar" tool in ZONE3 to apply the same measurement strategy and reporting scenario to all similar features in the CAD model. Unlike a conventional repeat loop, Apply to Similar works equally well on uniform or random feature arrangements, reducing programming time from hours to minutes.

At run time, ZONE3 offers more high-powered tools to speed up measurement of high density parts. ZONE3's SnapShot™ technology simultaneously measures any and all features that fit within the optical field of view. Extremely low distortion optics and advanced metrology camera technology enable accurate measurements across the entire field of view. ZONE3's Optimizer™ looks ahead in the routine and plans stage motion to center groups of features in the field of view, rather than the conventional method of centering each individual feature before measurement. Each stage move and video SnapShot provide maximum productivity with minimal latency time.

The Result: All 792 dimensions on the connector were programmed in just a few minutes, including setting focus and edge parameters, nominal dimensions, tolerances and reporting parameters for each dimension. Measurement time was just 9-seconds for the entire part using the automatic SnapShot and Optimizer tools – a 500% improvement compared to measuring the same part without ZONE3's productivity tools.

Improving productivity in process metrology means increasing speed without sacrificing accuracy. OGP SmartScope multisensor measuring systems combine the best optical, electronic, motion and software tools to ensure high accuracy measurements, while maximizing productivity during part set up and at run time.



For more information about this case study visit our website at www.ogpnet.com or email us at info@ogpnet.com.