

## ○ SQ3000™ 3D Automated Optical Inspection (AOI) System for Mobile Phone Camera Module

### Benefit Summary

From manual to fully automated and integrated, the SQ3000™ with unparalleled speed, accuracy and ease-of-use, revamped our customer's production cycle to help them gear up for mass production and be competitive in their industry.

### Challenge

Our customer needed to upgrade their inspection process for varying mobile phone camera modules. The existing process was costly and time consuming. Manual inspection was used to closely monitor for solder joint quality, but proved ineffective as defects were not always detected by operators.

Due to inefficiencies across the board, this customer's yields were down and costs and operator investment were high.

Our customer needed a robust and flexible solution to get reliable data for a camera module that changes frequently and contains increasingly shiny components. An automated system would allow them to ramp up mass market production, reduce operator costs, and promote a quality product to remain competitive in their industry.

### Solution

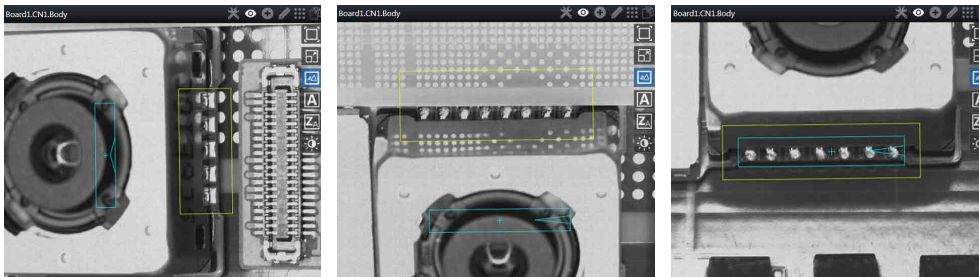
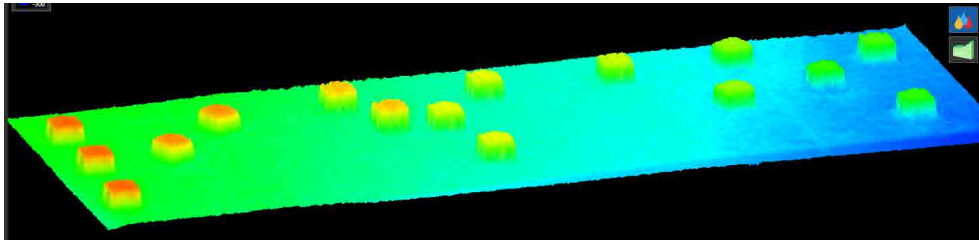
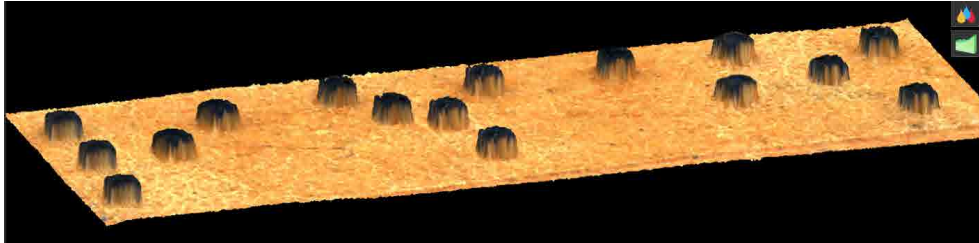
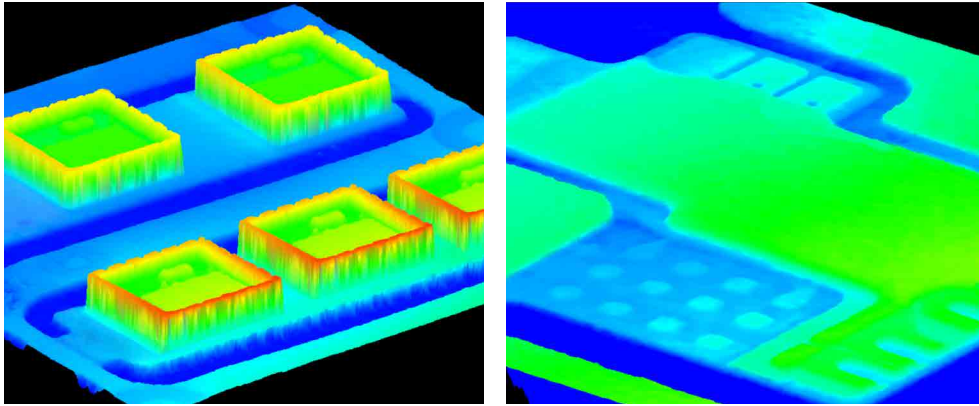
Implementing the SQ3000™ 3D Automated Optical Inspection (AOI) allowed for a versatile solution that is easy to use and provides consistent, accurate results at high speeds. The sensor, software and system all work together to completely automate the full-line inspection process, with higher mean time between failures of the products they produce and a low-to-zero escape rate.

With this solution, our customer is able to meet their production requirement for line cycle time — one SQ3000 is equivalent to, or as fast as, six soldering machine's cycle time and speed.

By implementing a full-line inspection process, our customer is able to identify defects sooner in the process and pinpoint the exact location of each defect for operator ease. The proprietary, industry-leading, Multi-Reflection Suppression (MRS) Sensor Technology effectively inspects for module alignment, open/short circuit, excessive solder, cold joint, burn mark and more. The MRS sensor also inhibits reflection-based distortions that could cause measurement inaccuracies due to shiny components.

This proprietary system evaluated at the best-in-class solution with a high-quality user interface that helps our customers build trust with their customers based on the commitment to the highest quality. It offers a remarkably low escape rate, reduces costs, improves yields and continues to create operational efficiencies.





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