



RS Simmons Co., LLC  
PCB Optical Inspection

# SimmScope II

Semi-Automatic Optical Inspection for PCBAs

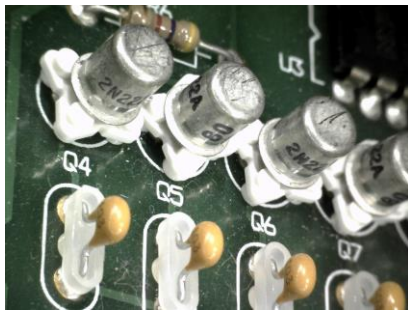
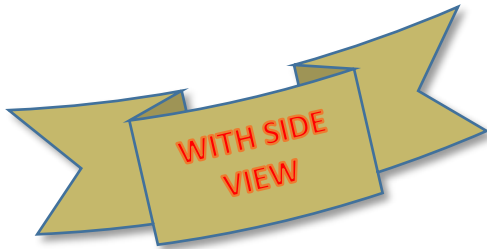


Image Captured with Side View Camera



SimmScope II 1818

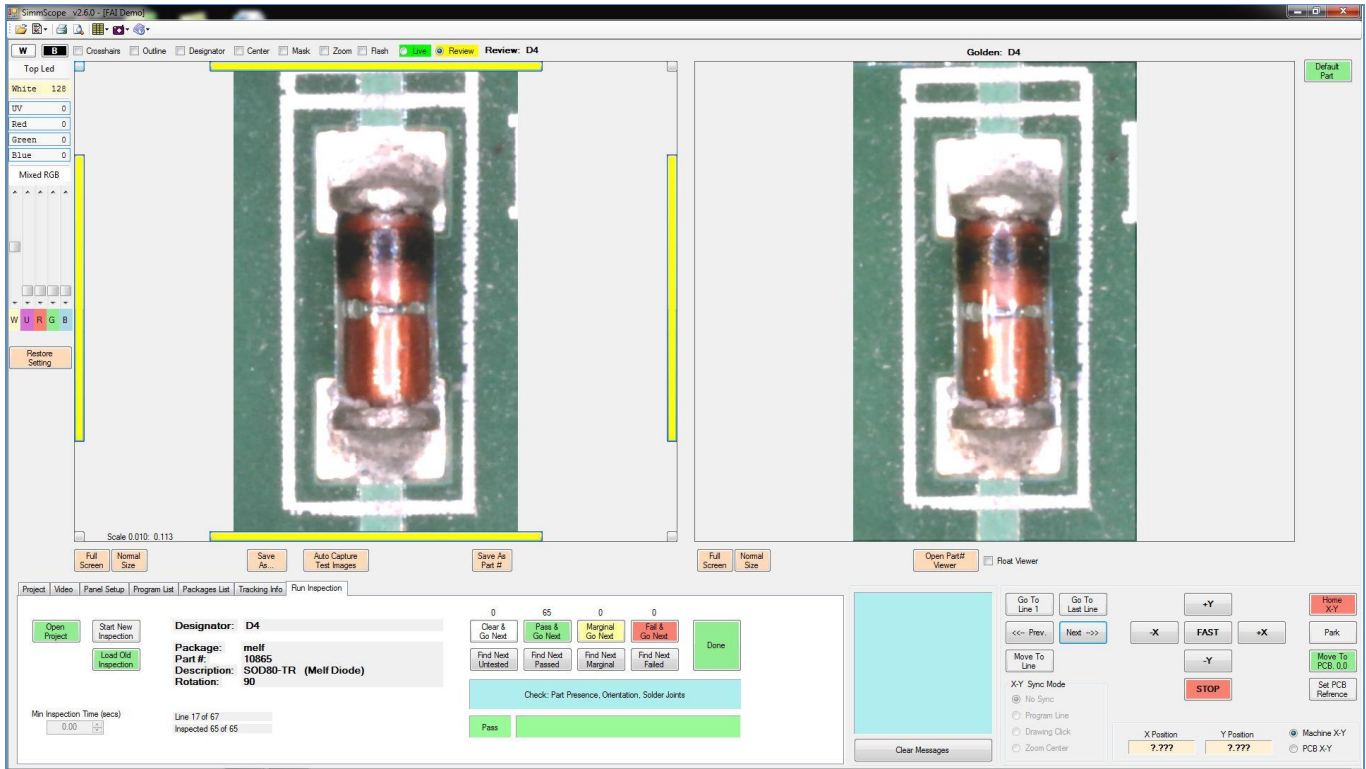
The **SimmScope** is a semi-automatic optical inspection and image archiving system for printed circuit board assemblies. It significantly increases the speed and accuracy of manual visual inspections, and is a fraction of the price of a fully automated AOI. Programming can be done in a matter of minutes using the integrated Gerber, XY Placement List, and Bill of Materials import features. There is also a utility for simple matrix type scanning and inspecting of the board.

The **SimmScope** is a powerful inspection tool for:

- High Reliability applications (MIL-Spec, Medical, Automotive)
- Hi-Mix Low-Volume operations
- First Article Inspection
- Solder Joints and Tall Thru-hole Parts
- Photo Documentation
- Conformal Coating
- Assembly Line Auditing
- Cleanliness/FOD/Tin Whisker detection

### Description:

- The system automatically moves a digital microscope to the inspection points, sets the lighting, camera height and viewing angle, zooms to the region of interest, and displays a live image of the inspection area.
- The Golden Board images for the area are displayed next to the live image for visual comparison by the operator. Unlike AOI, the operator makes all of the pass/fail decisions.
- For difficult inspection points, the lighting can be adjusted using the graphical interface.
- The images are automatically captured and can be stored as part of a post inspection report.
- The inspection can be done by component, by board region, or by a combination of both.
- Inspect for part presence, rotation, polarity, registration, text, solder, solder paste, bent leads, bent pins, jumpers, cut traces, or any other top down or side visual feature on the PCB



### System Specifications (subject to change)

Model Number	SimmScope II 1212	SimmScope II 1812	SimmScope II 1818	SimmScope II 2418
Standard Digital Microscope	Color 5M Pixel (2592 x 1944) Top Down 8 White LED with Adjustable Polarization 10x to 20x optical magnification 0.8" to 1.6" Field of View			
Optional Digital Microscopes	Same as above except: 20x to 50x optical magnification .8" to 1.6" FOV			
Optional Lighting	Programmable Quadrant White, Red, Green, and/or Blue Side Lighting			
Top Clearance	Typically 2" top clearance depending on actual setup			
Bottom Clearance	Typically 2" bottom clearance depending on actual setup			
Inspection Area	12" x 12"	18" x 12"	18" x 18"	24" x 18"
Dimensions	34" x 30" x 27" H	40" x 30" x 27" H	40" x 36" x 27" H	48" x 36" x 29" H
Other Options	Floor Standing, SMEMA conveyor with Manual or Programmable Width Control			

Designed and built in the USA.