ISOspeed

S2

5D Solder Paste Inspection System

√ Automatic solder paste inspection after the printing	*Measure and control your print quality with real-time feed back*
√ Detects anomalies in the printing process	*Tune your printing process before defects occur*
√ Measures: True volume, height, area, offset and shape and bridging	*Measure all major parameters of the solder paste printing without compromise, find defects and optimize your process*
√ High speed inspection with 5D technology, measuring beyond the bounds of apertures	*Patented advanced sensor technology for 3D and 2D simultaneous inspection, with 2D to 3D comparative analysis to determine slump and release*
√ 3rd Generation Head design	*The new inspection head up to 3x speed of previous generation and enhances accuracy and repeatability*
√ Accurate and precise volume and height measurement (3D)	*Adjust your solder paste printer for immediate yield improvement*
√ True area measurement and offset and shape inspection (2D)	*Improve fast moving yield fluctuations and incidental printing defects. Find solder paste slumping*
√ Process Control and Production Control	*Bring the real world in to your analysis and get tighter tolerances for tighter control*
√ Onboard extensive SPC tool	*Integrated real time statistics for instant feedback. Simple to use and easy to understand*
√ Topographical zero referencing	*Accurate and precise measurement of the solder pad height reference level including warped PCB's with true colour reference extraction*
√ Shadow free measurement	*Minimize blind spots; reliable solder paste volume and height measurement*
√ Multi colour lighting system	*Accommodates light and dark PCB's of any colour. Flex and Ceramic.*
√ Step by step simple and fast programming	*Create full inspection programs in minutes*

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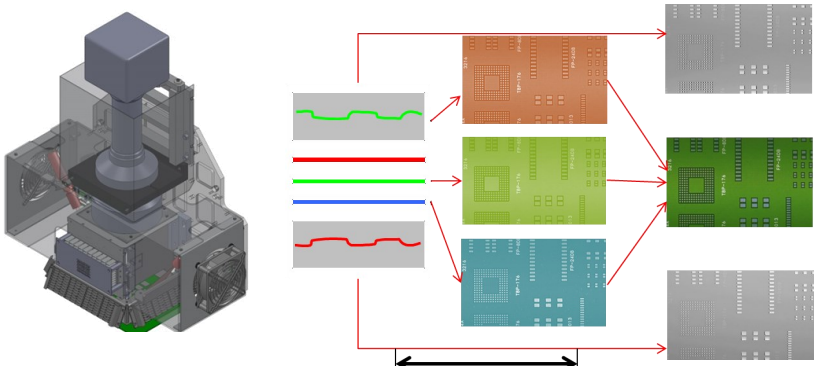
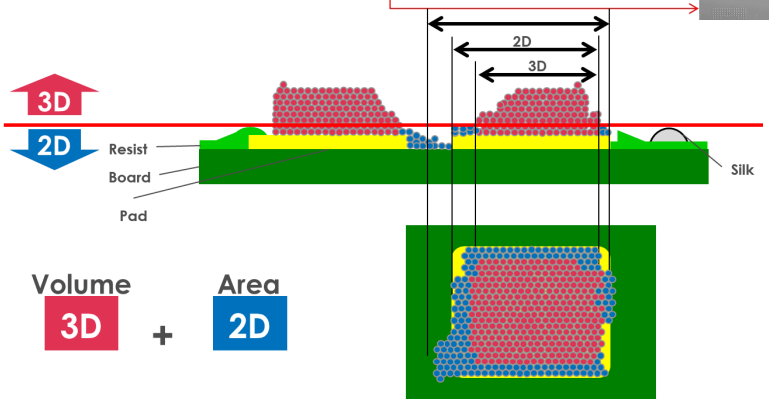
Hardware and Software Features

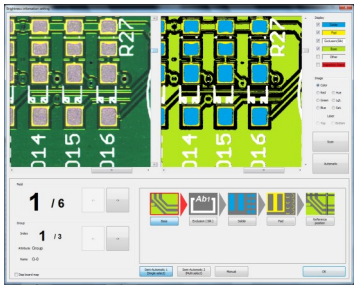


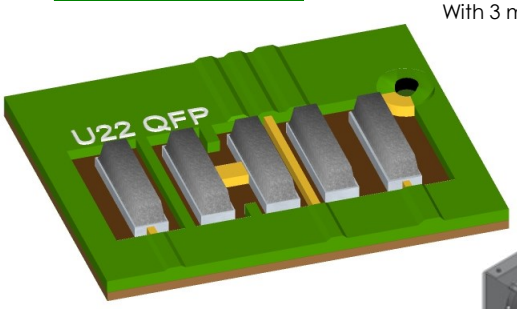
Dual Projection, Full colour, Simulations 3D and 2D Image capture.
Complete image capture. Providing the most detailed image of the Solder paste and PCB. Using the Patented **5D** sensor technology. With Episcopic Lighting and Telecentric Blue Violet lasers, for extremely stable high resolution capture.

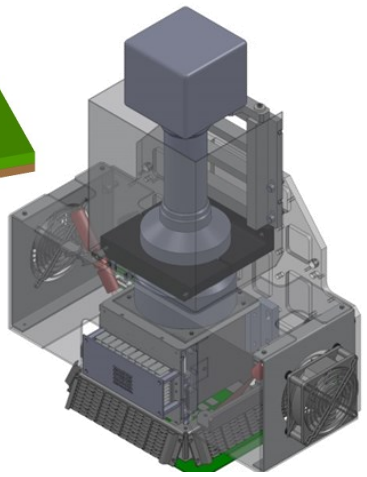


5D Sensor Imaging.
See more than conventional 3D SPI. Capture below zero reference defects. True Area, Volume, Height , Offset and bridges. With Parallel full time, 3D and colour 2D capture the MEK S2 that can see defects beyond pure 3D SPI. Below Zero defects. Offsets and bridges below pad height.,

Dynamic PCB warp compensation.
Measure and compensate for PCB warp with automatic camera Z axis adjustment. With 3 mm depth of focus.



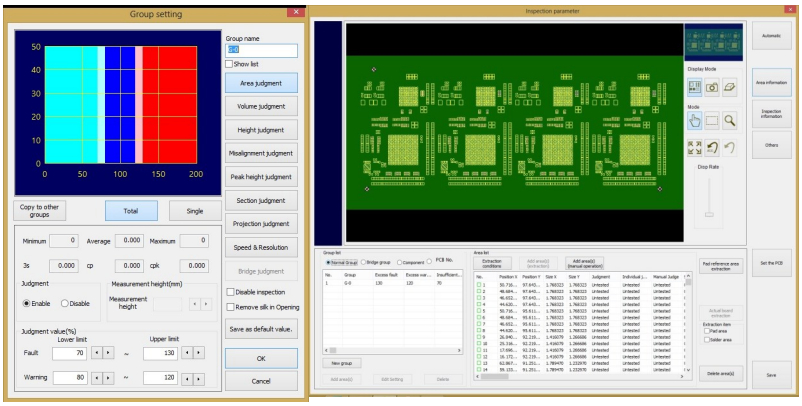


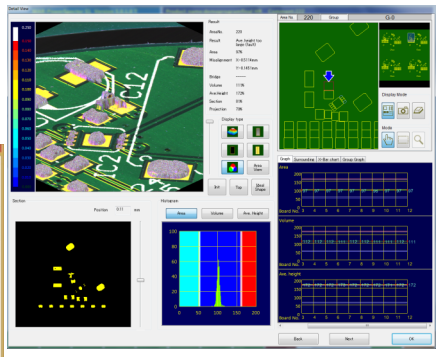


Colour extraction of Zero reference:
True colour 2D imaging allows Intelligent Zero referencing. Understand the effects of the PCB's topography on paste printing. Remove silk screen from triggering false defects on bridging and volume detection.

Fast and Simple Programming
Program using Stencil Gerber and CAD data. Using our proprietary gerber Conversion interface. Simple setup of programs Groups. Histogram assisted Defect and warning tolerance setting.

Linear and 2D Barcode capable. Tolerance by Part or package. Stepped stencil setup.





Full Colour Defect Display.
Easy to understand Display defects in relation to PCB features

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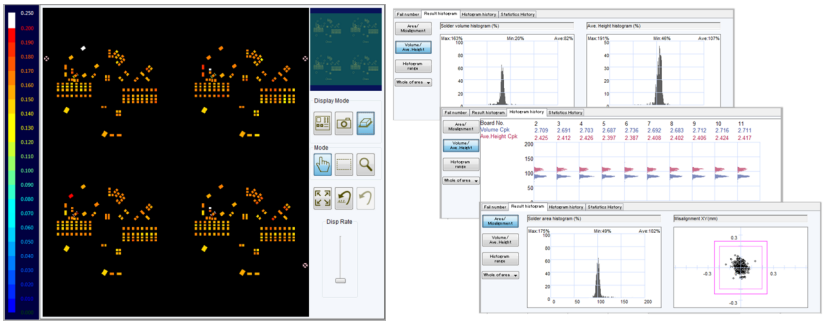
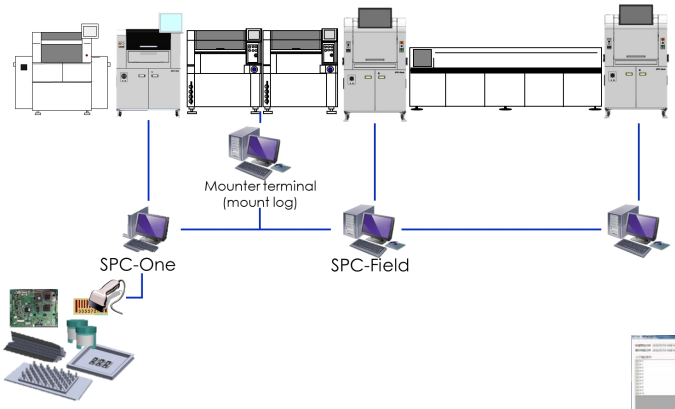
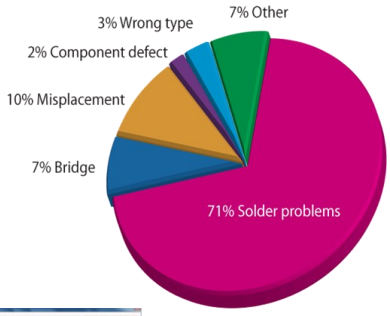
Hardware and Software Features — Continued



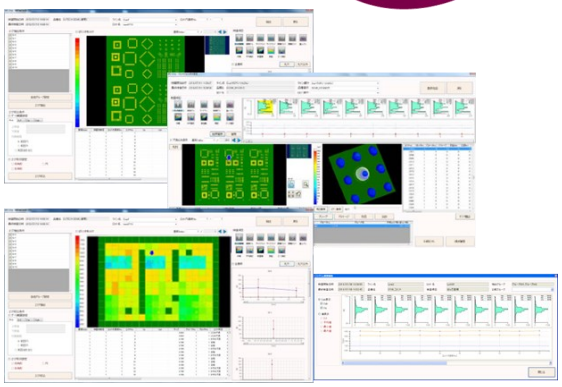
Unparalleled Live process feed back
Extensive options for live process display. Topographical Height Volume and area maps. Histogram analysis by group.

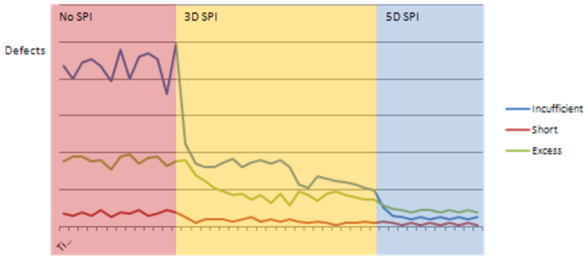
The Ultimate in Process control
Prevent Up to 70% of end of line Solder Defects. Utilise in-depth solder deposition analysis. Understand and tune the Solder Paste print process.



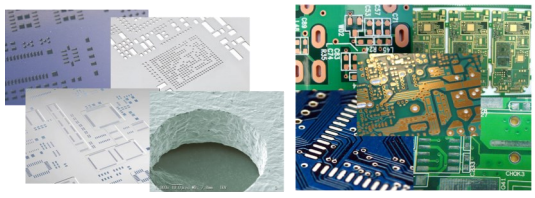


SPC One Version 3, SPC Field (for AOI) and FIBER-System
Process control and Studies can be easily implemented. SQL data storage either locally or on a remote server, And data export to Excel or CSV formats. Transition charts and histogram displays enable simple tuning of the print
process. Fibre allows SPC One for SPI and the ISO Spector 3D AOI SPC Field system to link inspection data and feed back to Printers and pick and place equipment.

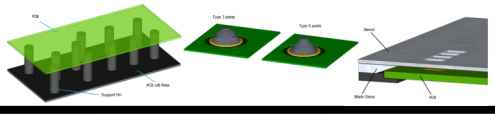




5D SPI
Process improvement beyond 3D. Simultaneously 3D and 2D image processing methodologies. That deliver defect detection beyond which was previously possible. Giving optimal print results leading to increases in productivity and profitability.



Tighter tolerances for tighter control.
Revolutionary new Production Control mode. Finally an SPI that understands the real world of print capabilities. Monitor process deviation. Automatically adjust to process Window variations. Tune your process then monitor it.



About MEK Europe BV
A former division of Marantz well known for its high quality Audio/Video products, MEK Japan (Marantz Electronics Kabushiki Kaisha), developed its first AOI system in 1994. Developed to inspect PCB assemblies for correct component placement and soldering, the company's original AOI system was designed for use in Marantz factories.
Proving to be a highly successful, cost-effective alternative to traditional human inspection, MEK developed its first generation commercial system in 1996. With a steadily growing installed base, MEK Japan and its European headquarters, MEK Europe BV, have sold over 5000 units worldwide to date. Now well established as a leading force in AOI technologies.

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Specifications	PowerSpector S2 SPI
Model	**S2**
Maximum PCB Size	510 mm x 460 mm 20.1 inch x 18.1 inch
Characteristics	
Inspection Items	Volume, Height, Area (section/projection/average), Offset, Shape, Bridging and more
Minimum PCB Thickness	0.3mm (11.8 mils)
Maximum PCB Thickness	4.0mm (157.5 mils)
Minimum Component Size	01005 chip 18/9 micron lens 008005 with optional 12/6 micron lens
Minimum Pad size	200µm (4 mils) diameter in normal mode (18 Micron lens) 150 micron (12 micron lens)
Maximum Paste Height	600µm (23.6 mils)
Maximum PCB Warp	±6mm (240 mils)
Inspection Speed	18/9 micron lens 18micron: 9300 mm2/sec Standard speed, 18500 mm2/sec High speed 9 micron: 4100 mm2/sec High Resolution 12/6 micron lens 12micron: 3300 mm2/sec Standard speed, 6500 mm2/sec High speed 6 micron: 1600 mm2/sec High Resolution
Optics	
Camera	Patented advanced 5D sensor
Lens Type	High Grade Telecentric
2D Illumination	RGB Vertical illumination and RGB Low angle Illumination
3D Illumination	Blue/Violet Laser with sub pixel processing
Conveyor System	
Width Adjustment	Automatic
Conveyor Height	830 ~ 970 ± 25mm (1")
Conveyor Configuration	Left to right and right to left with front side fixed or rear fixed
Minimum PCB Size	50 x 50mm (1.97" x 1.97")
Interfacing	
Communication Interface	Extended SMEMA
Controller	Intel™ based PC (included)
Operating System	Windows™ 8 Pro 64Bit
General	
Power Supply	200 ~ 240V, 50/60Hz, 1.5KVA
Air Supply	0.4 ~ 0.5Mpa, 10Nl per minute
Operation Environment	10 ~ 60 °C
Operating Humidity	35-85% RH
External size	W1100 x D1200x H2080 (43.3" x 53.38" X 78.22")
Weight	Approx. 400Kg

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