JSAz

PowerSpector

PowerSpector JSAz 550

PowerSpector JSAz 350

Mek PowerSpector Desktop

Desktop AOI System For SMT + THT Components And Solder Joints

mek®
marantz electronics ltd

because inspection matters

JSAz

PowerSpector

Desktop AOI System For SMT + THT Components And Solder Joints

Benefits

- **Revolutionary Selective 3D Laser Measurement Technology**
  Selective height measurement of any given object. Assign two points, a reference and a target.
- **Newest Generation 5MP USB 3 Vision Cameras**
  The latest generation of high speed, high quality cameras. No capture card requirement.
- **Multi-color 4 angle lighting with Line Source Coaxial Lighting and Meniscus Profiler**
  Reliable solder joint meniscus and pad surface analysis to find solder and paste printing defects.
- **Flexible Classification And Reporting Scenarios**
  Integrate AOI efficiently in existing operations and factory layout.
- **Compatible With Mek Catch System For MES Gateways, Repair, Real Time Monitoring And SPC**
  Catch System is compatible with Windows 11 and is a complete suite for data collection, display and statistics.
- **Line Sourced DOAL (Direct On Axis Lighting) Coaxial Lighting**
  Inspect solder joints without shadow effects from tall components nearby.
- **High Speed Inspection**
  Using modern processor and storage power for parallel imaging, calculation and data transmission.
- **High Resolution Telecentric Optics**
  Standard 15µ resolution for optimal magnification of smaller SMT component package sizes.
- **8x Angular Cameras**
  Triple use of the angular cameras: Automatic inspection, defect classification and repair post-inspection.
- **Z-Axis Moving Optical Unit**
  Focus and position optimally for variying PCB and component distances, warpage or sandwitch assemblies.
- **Compatible With Mek EZPro**
  EZPro is the software tool developed by Mek for ultra fast automatic programming of full measurement recipes.
- **Synthetic Imaging And Spectral Analysis**
  Powerful algorithms to achieve optimized inspection results.

mek®
marantz electronics ltd

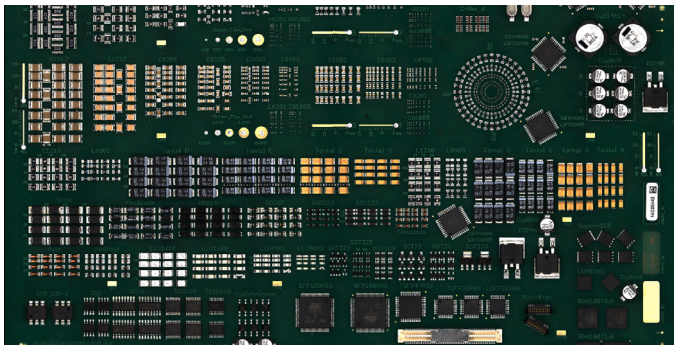
because inspection matters

JSAz

PowerSpector

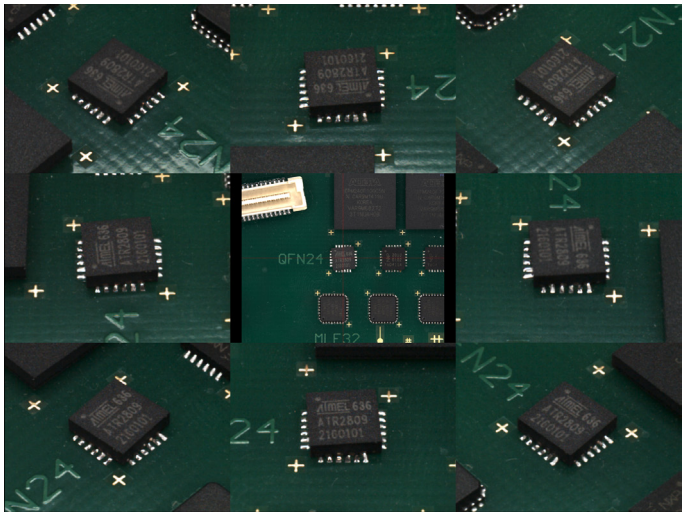
Desktop AOI System For SMT + THT Components And Solder Joints

Features

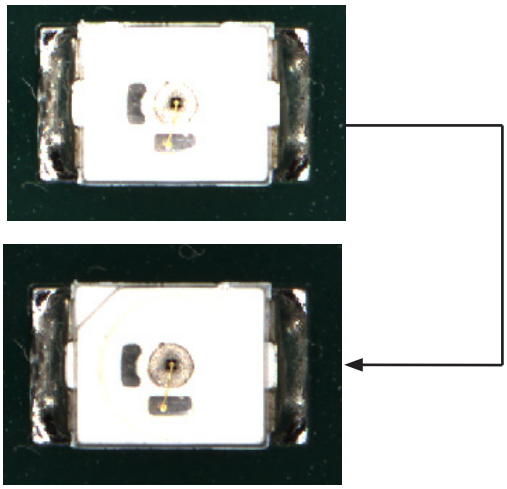


→ **High Definition Images**
The large frame camera CCD and the high quality lenses combination result in crisp and high definition images.

→ **01005" Components Inspectable**
High camera and lens resolution make inspection down to 01005" components possible.



→ **8x Angular Cameras**
Triple use of the angular cameras: Automatic inspection, defect classification and repair post-inspection.



→ **Dynamic Light Reduction And Increase**
Dynamically adjust light intensity to analyse details on white/black PCB's or white/black components.

JSAz

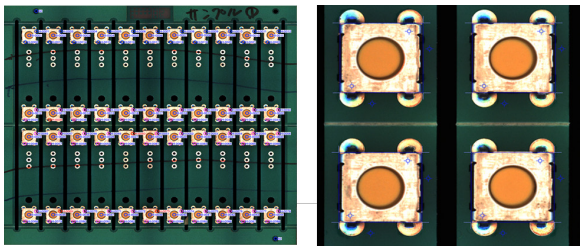
PowerSpector

Desktop AOI System For SMT + THT Components And Solder Joints

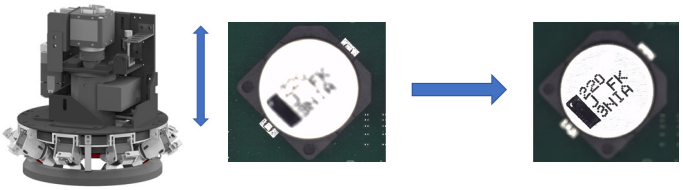
Features

(Height = Measurement – Reference)

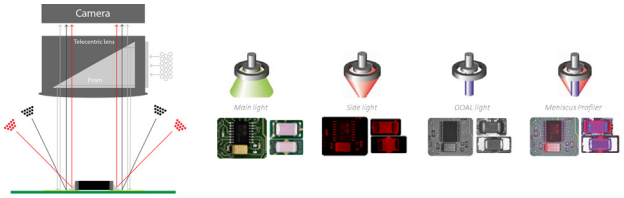
→ **Selective 3D Laser Measurement**
Measure heights of any given object. Simply assign two points, a reference and a target. Rapid measurement that only extends the cycle time slightly.



→ **Coplanarity Measurement**
There is no limit of how many points can have the laser height measurement. Coplanarity of components can be measured in both horizontal and vertical directions.

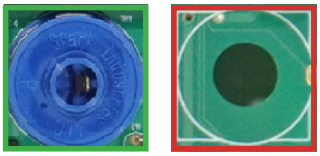


→ **Z-Axis Moving Optical Unit**
Ability to focus and position the optics optimally for best inspection results.

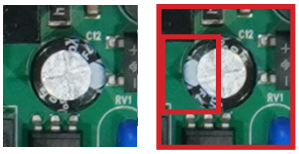


→ **Meniscus Profiler**
Coaxial and omnidirectional lighting from different angles and with different colors to make solder defects visible.

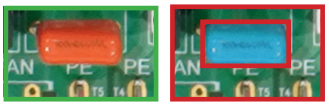
Defect Types (not limited to)



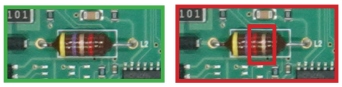
→ **Presence/Absence**



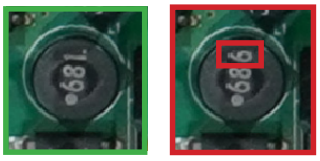
→ **Polarity**



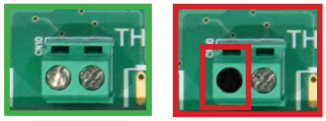
→ **Correct Type/Color**



→ **Correct Type/Value/Color**

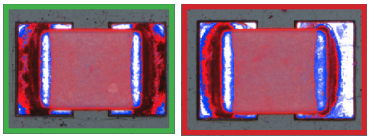


→ **Text (OCV and OCR)**

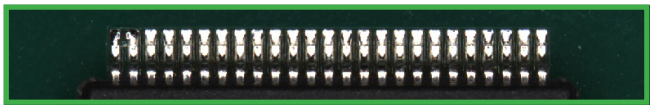


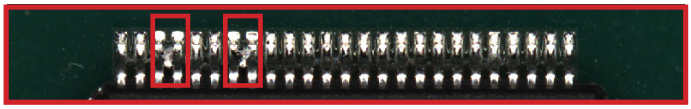
→ **Damaged Component**

→ **Billboarding**



→ **Lack Of Solder**





→ **Bridges**

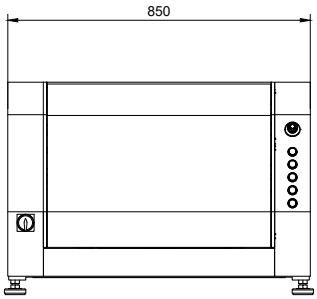
mek® marantz electronics ltd

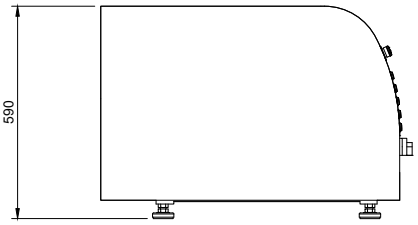
because inspection matters

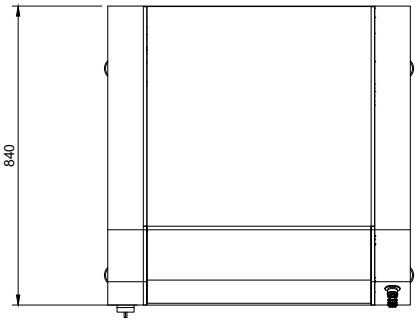
Specifications Desktop PowerSpector JSAz 350 and JSAz 550

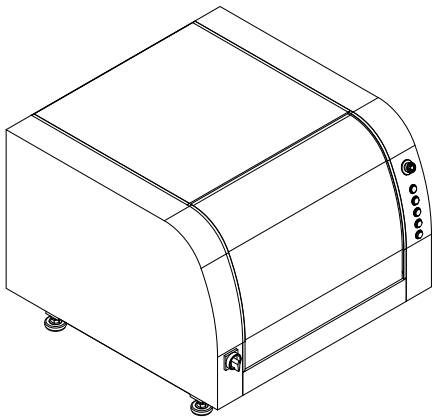
Characteristics	PowerSpector JSAz 350	PowerSpector JSAz 550
Product Type	SMT And THT Components And Solder Joints AOI	
Maximum PCB Size	350x250mm (13.8"x9.8")	550x550mm (21.7"x21.7")
Camera Movement	X + Y Direction	
PCB Movement	Stationary	
Parts Inspection	Components Height, Coplanarity, Presence, Polarity, Soldering, Shape, Offset, Text	
Image Processing	Synthetic Imaging, Spectral Analysis, Grescale/RGB Limits	
Camera Type	5 MP CCD Camera With USB3 Vision	
Camera Field of View/Resolution	36 x 30mm (1.42" x 1.18") / 15.0 µm (14.4 x 12mm / 6µm option)	
Lens	Telecentric lens with built in prism for DOAL Lighting	
Selective Height Measurement	Laser Projector, Triangular spot measurement	
Lighting System	Omnidirectional Quad LED rings: Side White, Side Red, Main, Line Sourced DOAL Diffused On Axis Lighting	
System Specifications		
Minimum Inspection Component Size	01005" (0.4 x 0.2mm) (6µm lens upgrade option)	
Component Clearance (Top)	60mm (2.4")	
Component Clearance (Bottom)	70mm	
Side Cameras	8x Digital color USB 3.0 Vision in 45/45 orientation	
Max Measurable Height	30mm	
Height Measurement Resolution	30µm	
Z-Axis Stroke	30mm (1.2")	
Inspection Speed Typical	0.6 sec per FoV	
Electrical Requirements	100-240 VAC /150W	
Interfacing		
Control PC Type	Apple MacOS	
Data Interface	USB	
Programming Interface	CSV Centroid placement file, (ODB++, IPC2581, Gerber option)	
Repair/Monitor/SPC System/MES-interface	Mek Catch System (Windows 7/8/10/11) (Option)	
3rd Party Interfacing (MES) & Data Storage	Enterprise SQL DB/XML Files/Socket (Catch System Option)	
General		
Operating Temperature	15-30 deg. C(60-90 deg. F)	
Operating Humidity	15-80 % RH	
External Size	W850 x D840 x H590 (33.4" x 33" x 23.2")	W1000 x D1090 x H590 (39.4" x 42.9" x 23.2")
Weight	110kg (242lbs)	130 kg (287 lbs)

Dimensional Drawing JSAz 350

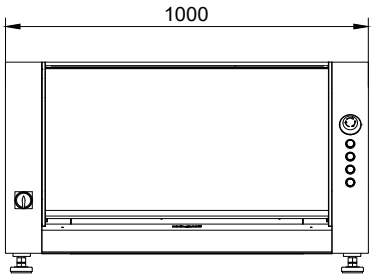


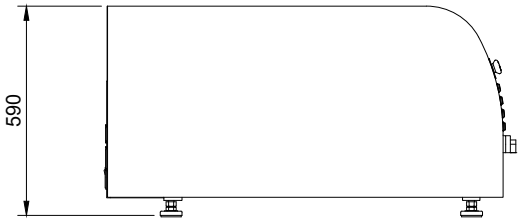


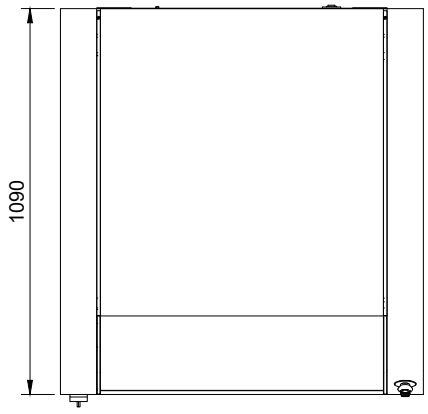


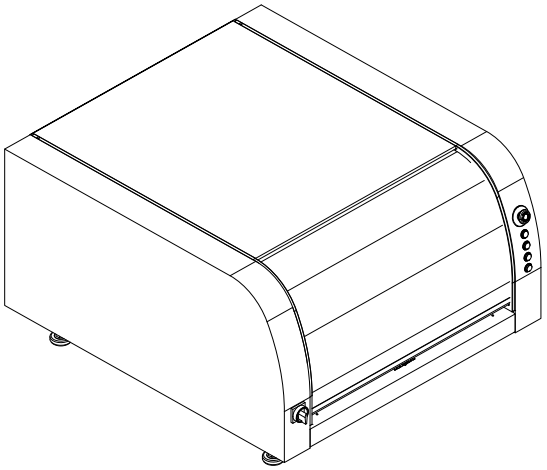


Dimensional Drawing JSAz 550









Marantz Electronics Ltd.
5F North Square 2, Yokohama Business Park
134 Godo-cho, Hodogayaku, Yokohama,
Kanagawa 240-0005 Japan
T +81-45-340-5566
info@marantz-mek.co.jp,
www.model22x.com

Mek Europe BV
Polluxstraat 2b
5047 RB Tilburg, Netherlands
T +31 40 7114111
info@mek-europe.com
www.mek-europe.com

Mek Americas LLC
8275 S Eastern Ave, suite 200
Las Vegas, NV 89123
T +1 702 660 6112
info@marantz-electronics.com
www.marantz-electronics.com

mek®
marantz electronics ltd

Mek Europe reserves the right to change the design and specifications without notice. © Mek Europe BV, V4. July 2026

because inspection matters