

VS20 inline | VS40 inline | VS60 inline

VeriSpector



Mek VeriSpector Inline

Inline THT Manual Assembly
AOI System

Inline THT Manual Assembly AOI System



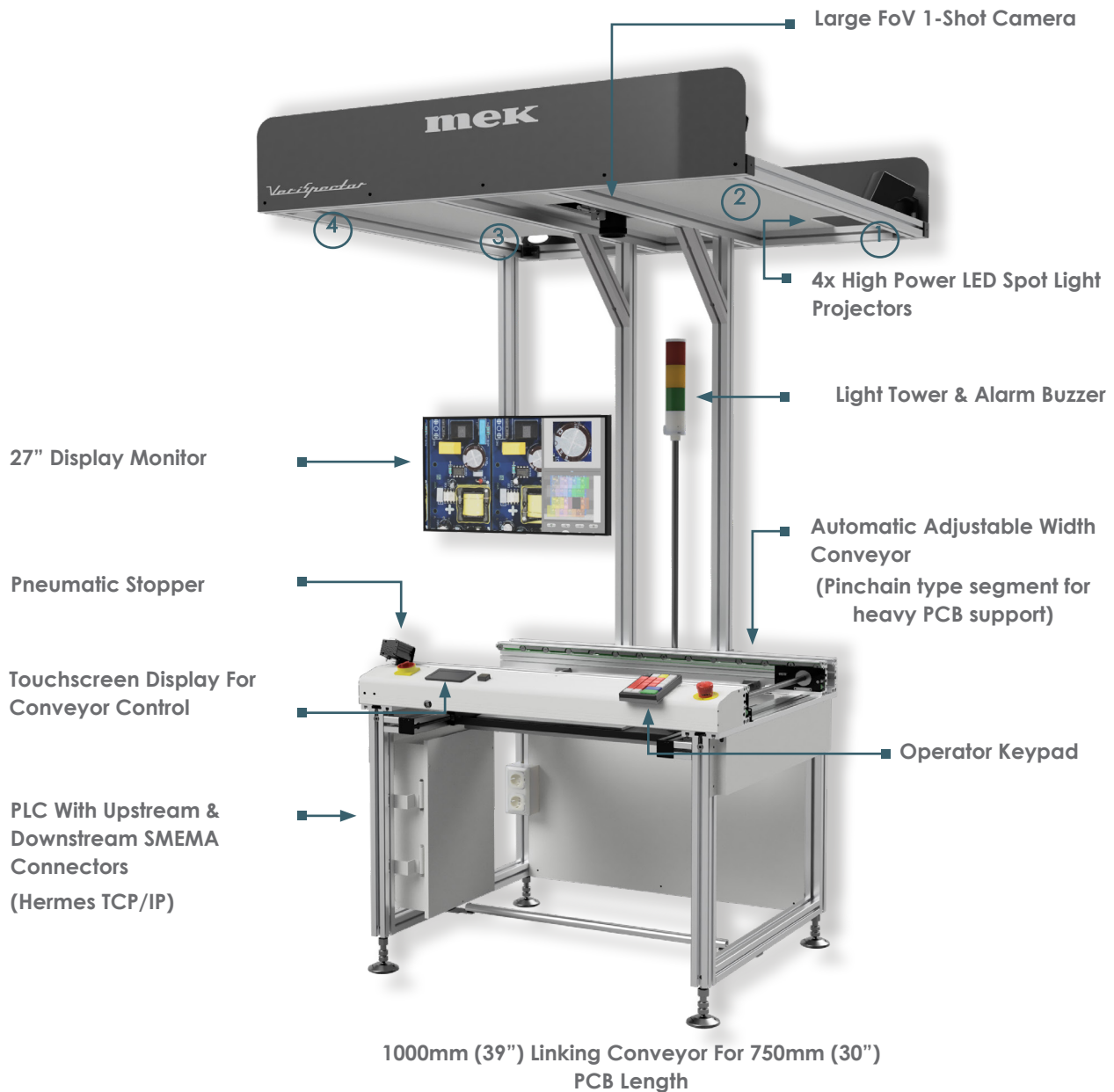
Benefits

- **Inspection Of Manual Or Automated THT Assemblies**
Prevent assembly defects before they move into the next process. Perform instant defect-curing and improve yield
- **Detect THT Components Assembly Defects Like Presence, Orientation, Shape, Offset, Text, Color Etc.**
Optimized for the assembly tasks but not limited to!
- **Max. PCB Size 750mm x 500mm (29.5" x 19.7")**
Large PCB sizes are supported. Via optical zoom, resolution can be increased for smaller PCB's
- **Powered By Mek 22X AOI Software**
Unified software, Utilizing the same Mek AOI platform solutions with over 28 years of development. Access to all the algorithms and libraries
- **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
- **Overhead Orthogonal Camera And Bundled LED Lighting System**
Color and glare optimized. High intensity LED lights for minimized influence of ambient light
- **Camera Resolution: 24Mp, 42Mp or 60Mp With Professional Quality Lenses**
Optimized optics to capture small details and defects. Tune resolution to minimal required 1D or datamatrix barcode size.
- **Barcode Capture Using The VeriSpector Camera Or External Barcode Reader**
Multi barcode capture using the Mek 22X software barcode decoding engine. External barcode readers can be used for versatility
- **Flexible OK/NG Display**
Display defects with red circles on PCB map or by classifying NG images. Display on remote repair station is possible via Mek Catch System
- **Inline Operation**
Conveyor for fully automatic operation in different modes. OK/NG status output to use with buffers and a reject mode to fix defects on the fly
- **Post Defect Classification And Reporting Scenarios**
Inspect your PCBs Inline & Classify/Report/Analyze Defects later whenever convenient with Mek Catch System



Hardware Features

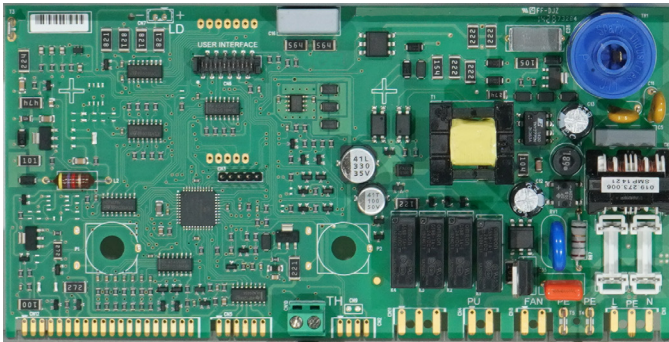
The Mek VeriSpector Inline Can Be Inserted Into Any THT PCB Assembly Line Pre- Wave Or Selective



Inline THT Manual Assembly AOI System



Image Quality



→ Minimized Unwanted Light Reflection

Lights are positioned outside the PCB area which eliminates reflection from PCB surface and metallic components

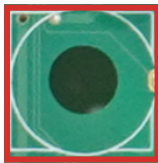
→ High Definition Images

The full frame camera CCD and the high quality lenses combination result in crisp and high definition images

→ Low Effect By Ambient Light

High power spot LED projectors and the large area full frame CCD combination minimize the effect of ambient light

Defect Types (not limited to)



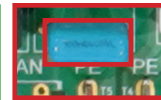
→ Presence/Absence



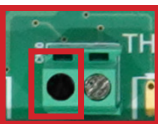
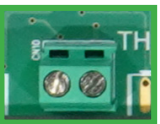
→ Polarity



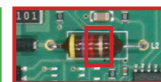
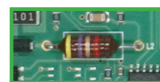
→ Text (OCV and OCR)



→ Correct Type/Color



→ Damaged Component



→ Correct Type/Value/Color



Specifications VeriSpector Inline

Specifications	VS20 inline	VS40 inline	VS60 inline
PCB Size	Max Size: 750x500mm (29.5"x19.7") For smaller PCB sizes, optical zoom can be used to further increase the resolution		
Characteristics			
Product Type	1-Shot Stationary AOI		
Camera Movement	Stationary		
PCB Movement	Stationary		
Parts Inspection	Presence, Orientation (polarity), Shape, Offset, Text, Color		
Image Processing	Synthetic Imaging, Spectral Histogram Analysis, Custom Algorithms		
Camera/Lens Type	Digital Singe Lens CMOS Camera with High Resolution Optical Zoom Lens		
Sensors/Lens Resolution	24Mp / 2100LP	42Mp / 3600LP	60Mp / 3600LP
Lighting System	Quad Low Reflection LED System		
System Specifications			
Resolution @ 750x550mm PCB	125µm	94µm	79µm
Resolution @ 525x350mm PCB	88µm	66µm	47µm
Resolution @ 375x250mm PCB	63µm	47µm	39µm
Top Clearance Above Carrier	~1250mm		
Bot Clearance Below Carrier	45mm		
Carrying Rails Clearance	3mm		
Inspection Speed Typical	<5s Per Assembly		
Electrical Requirements	100-240 VAC /400W		
Interfacing			
Control PC Type	Apple Mac Mini M2 Pro		
Data Interface	USB		
Repair/Monitor/SPC System/MES-interface	CSV Centroid File (Placement File)		
Repair/Monitor/SPC System/MES-interface	Mek Catch System (Windows 7/8/10) (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		
Belt Speed	14 m/min.		
Fixed Rail	Front (Or Specify)		
Flow Direction	Left To Right (Or Specify)		
Machine Interface	SMEMA		
External Size	W1600 x D780 x H2485 mm (63" x 26" x 98")		
Weight	170kg (375lbs)		

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

Marantz Electronics Ltd.

4F North Square I, Yokohama Business Park,
134 Goudo-cho, Hodogayaku, Yokohama,
Kanagawa Japan 240-0005
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 Europe reserves the right to change
the design and specifications without
notice. © Mek Europe BV, May 2023 Rev 5.

mek[®]
marantz electronics ltd

because inspection matters