



YSi-V



High-End Hybrid Optical Inspection System (AOI)

Unique features ensure accurate inspection results and high efficiency, for optimum productivity.

12 MP or 5 MP

2D and 3D

4-directional angular
camera inspection

High-speed 3D
25% faster

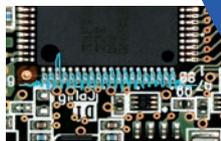
NEW

2D High-speed, high-resolution 2-dimensional inspections

High-resolution imaging with 12 or 5 megapixels

YSi-V is available in a standard type with a 5 MP camera or as a high-end type with a 12 MP camera. The 12 MP camera along with a telecentric lens supports a high number of pixels. It also incorporates a high-speed signal processing control system and other features to achieve an inspection capability twice that of ordinary units along with an expanded visual field, superior image resolution, and high speed.

Provides optimal inspection technique selectable from 5 different methods



Laser

Detects height.
Example: floating lead detection.
Note: laser is provided as an option.



Shape

Extracts sloped sections.
Example: detection of solder fillet.



Brightness

Selective brightness adjustment of captured image enhances inspection for missing components, polarity, component ID by character recognition.



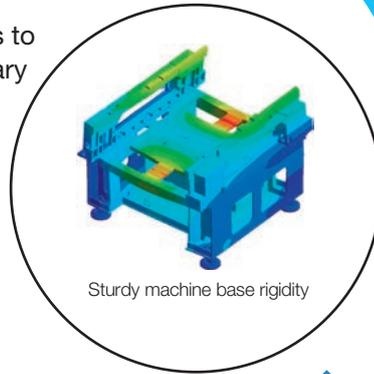
Infrared

Shows white components on white resist.



Color

Can isolate features of a desired color.
Example: detection of exposed copper.



Sturdy machine base rigidity

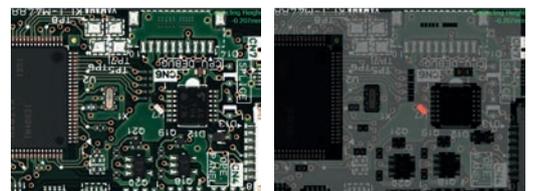
3D Height and sloped surface 3-dimensional inspections (option)

YSi-V makes high-speed height measurements within an entire field of view, in one batch. This 3D imaging reliably detects floating components that a 2D inspection can miss. Detection is also improved where color tones between board and components are similar or when there is interference between silk-screen and pattern. YSi-V 3D inspection can also detect the slope gradient and direction, and make pass/fail contour judgements.



NEW

Detection of extra components or contamination as solder ball or black material. Based on luminance or by 3D height detection.

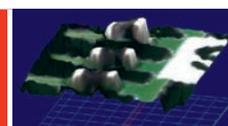


2D and 3D inspection of leaded packages and chip components

2D



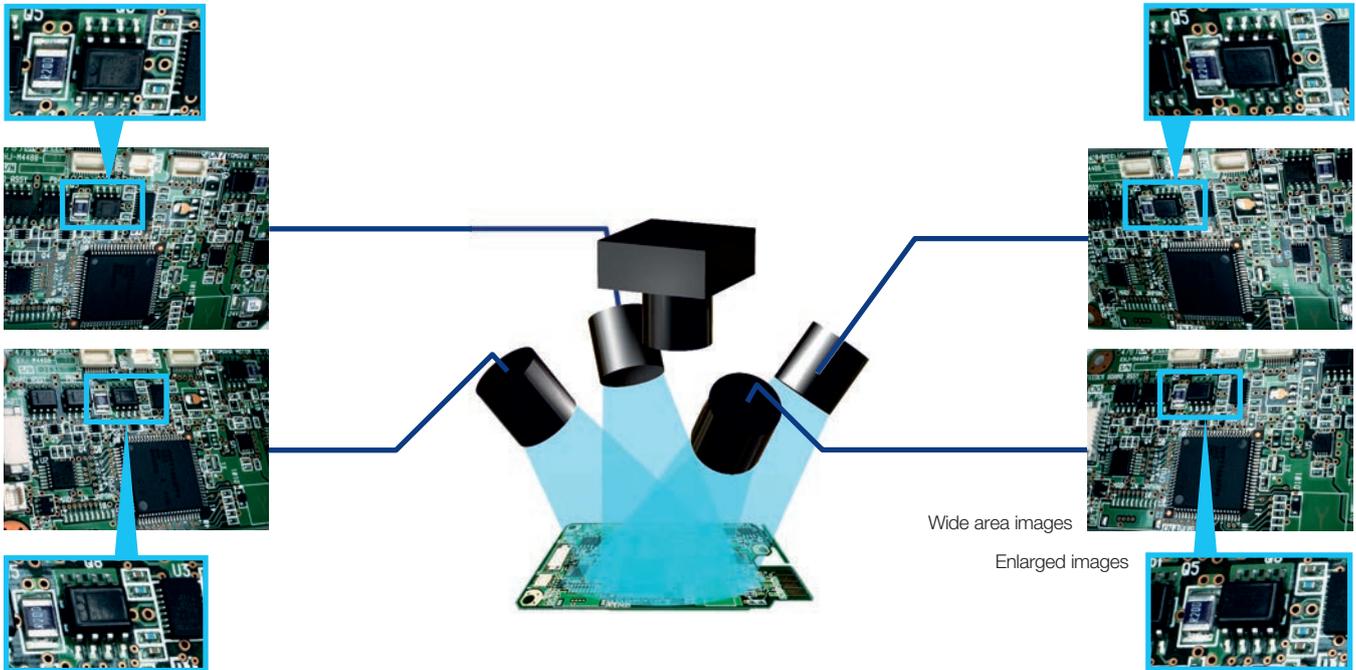
3D



4V Angular inspection

Besides the orthogonal inspection, YSi-V can do angular inspection from four directions (45°, 135°, 225°, 315°). You can isolate a component and inspect it as if looking at the board from four different angles

without removing the board from the line. This minimizes human intervention with boards, thereby eliminating errors and reducing the number of process steps.



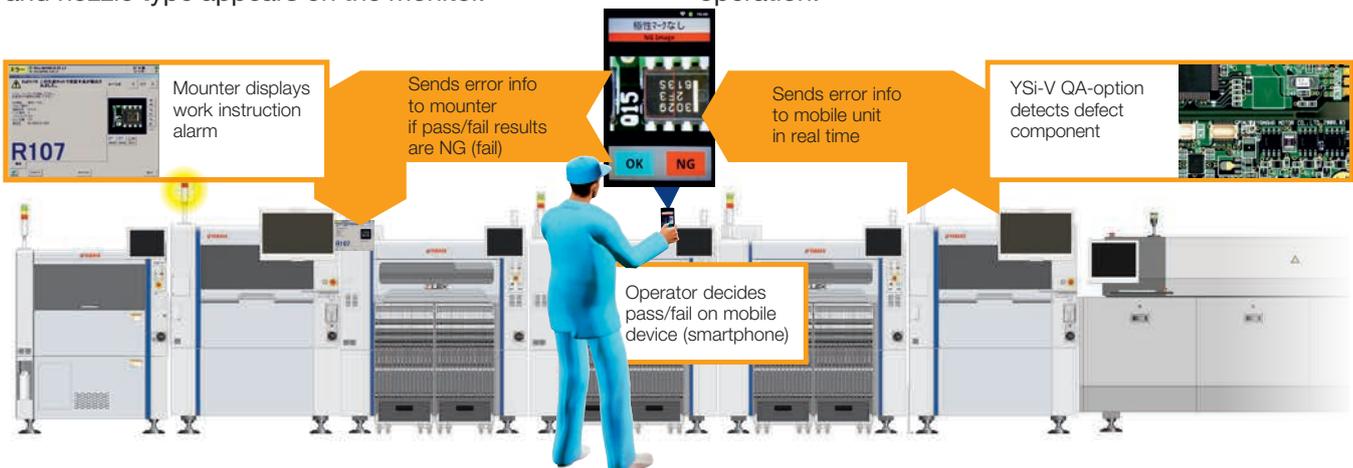
Supports and easy creation of inspection programs!

Loads Yamaha mounter data for import into inspection data. A preinstalled library of over 1,000 types drastically shortens the startup time. Also supports IPC standards (IPC-A-610), and just specifying the particular class automatically updates the inspection standards. Auto tuning of the inspection window size based on pad size.

Quality assistance, using mobile pass/fail judgement (option)

If a defect is detected, this system identifies the responsible mounter and feeds back error information. That mounter is automatically set to cycle-stop and data such as the setting position, head number and nozzle type appears on the monitor.

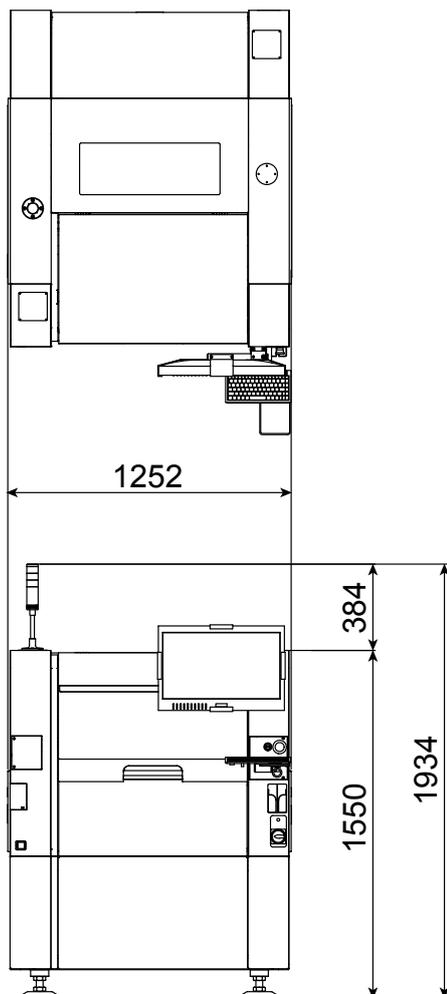
The error information and an image of the defect are sent by wireless LAN to the operator's mobile terminal. The operator can communicate pass/fail judgement directly from the mobile device to resume normal line operation.



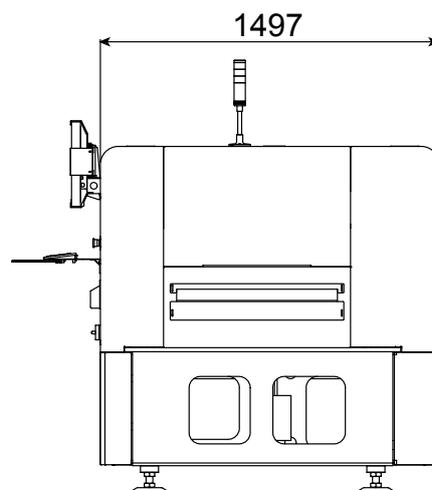
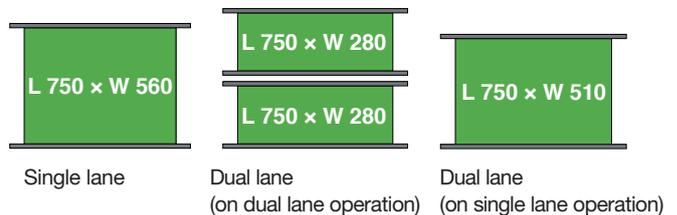
Specifications

Inspection camera	12 MP high-end	12 MP high-speed	5 MP standard
Resolution	12 μm 7 μm optional	12 μm 7 μm optional	18 μm
PCB size range	L 610 x W 560 mm (max.) to L 50 x W 50 mm (min.) Applicable for L 750 mm longer PCB (option)		
Target items	Components status after mounting, components status and solder status after hardening		
Power supply	3-phase AC 200/208/220/230 V ± 10% 50/60 Hz		
Air supply source	0.45 MPa or more in clean dry state		
External dimension	L 1,252 x W 1,497 x H 1,550 mm (not including projections)		
Weight	Approx. 1,300 kg		

YSi-V

External dimensions

Productivity-boosting dual system

Capable of parallel dual-lane board conveying to speed up small & mid-sized board inspections and can also convey large longitudinal boards to a maximum of 750 mm in length (option). (Please consult us for board sizes exceeding 750 mm in length.)



Specifications and appearance are subject to change without prior notice.

Yamaha Motor Europe N.V.
Niederlassung Deutschland, Geschäftsbereich IM
German Branch Office, IM Business
Hansemannstrasse 12 · 41468 Neuss · Germany
Tel: +49-2131-2013520
info-yimeim@yamaha-motor.de
www.yamaha-motor-im.eu

Yamaha Motor Corporation, U.S.A.
Intelligent Machinery Division
1270 Chastain Road · Kennesaw · Georgia 30144 · U.S.A.
Tel: +1-770-420-5825
info-ymaim@yamaha-motor.com
www.yamaha-motor-im.com