

SPECIFICATIONS

Optical & Imaging System

Camera Type	4 MP camera	
Optical Resolution	10 µm or 15 µm (factory setting)	
Field of View	10 µm	20.0 x 20.0 mm (0.79 x 0.79 in)
	15 µm	30.0 x 30.0 mm (1.18 x 1.18 in)

Inspection Functions

Defects Detected	Insufficient Paste, Excessive Paste, Shape Deformity, Missing Paste & Bridging
Measurement	Height, area, volume and offset

Mechanical Stage

X-axis linear motor and linear scale with DSP-based motion controller	
XY Resolution	0.5 µm
Z Resolution	1 µm

Inspection Speed

10 µm	Up to 90 cm ² /sec (14.0 in ² /sec)
15 µm	Up to 200 cm ² /sec (31.0 in ² /sec)

Inspection Performance

Volume Repeatability	Calibration Target (at 3 σ) <1% on TRI certification target
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Height Repeatability	Calibration Target (at 3 σ) <1% on TRI certification target
	Solder GR&R (± 50% Tolerance) <<10% at 6 σ

Effective Depth of Focus	± 5 mm (± 0.10 in)
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Height Resolution	0.4 µm
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Height Accuracy	1.5 µm on certification target
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Max. Solder Paste Size	12800 x 10240 µm at 10 µm
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Min. Solder Paste Size	100 x 100 µm at 10 µm
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Min. Solder Paste Pitch	100 µm
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Max. Height Range	10 µm 600 µm
	15 µm 550 µm



PCB and Conveyor System

	TR7007M SII Plus	TR7007 SII Plus
PCB Size	50 x 50 - 350 x 350 mm (1.97 x 1.97 - 13.8 x 13.8 in)	50 x 50 - 510 x 460 mm (1.97 x 1.97 - 20.1 x 18.1 in)
PCB Thickness	0.6 - 6 mm	
PCB Transport Height	880 - 920 mm	
Max. PCB Weight	3 kg (6.61 lbs)	
PCB Carrier/Fixing	Belt/Pneumatic	
Clearance		
Top	40 mm	
Bottom	40 mm	
Edge	3 mm	

Dimensions

	TR7007M SII Plus	TR7007 SII Plus
Dimensions (W x D x H)	1000 x 1555 x 1500 mm (39.4 x 61.2 x 59.1 in) (not including signal tower, height: 520 mm)	1100 x 1570 x 1550 mm (43.3 x 61.8 x 61.0 in) (not including signal tower, height: 520 mm)
Weight	870 kg (1918 lbs)	950 kg (2094 lbs)
Power Requirement	200 - 240 V, single phase, 50/60 Hz 3 kVA	
Air Requirement	0.6 MPa (87 psi)	

Optional

SPC, Offline Editor, Gerber Tool, Barcode Scanner (linear & 2D) and Support Pins, Closed Loop Function, Dual Lane, Y-Axis Linear Motor, TRI's Yield Management System (YMS), YMS Lite, Auto Conveyor Width Adjustment

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TR7007 SII Plus SERIES



3D SOLDER
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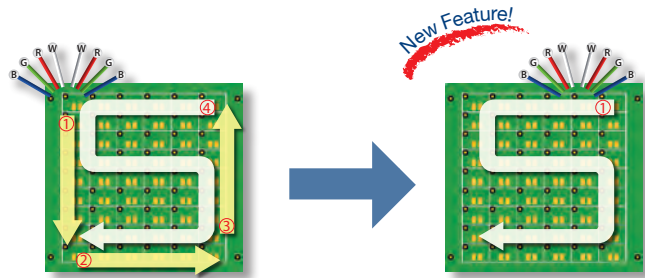
TR7007 SII Plus FEATURES

TR7007 SII Plus

Highly Accurate shadow-free SPI solution with class-leading inspection performance and easy programming brings maximum value to your production line.

Unmatched Speed & Throughput

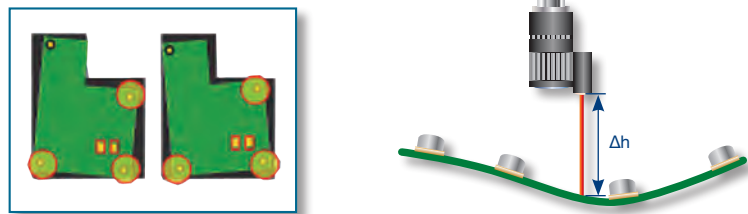
Industry-leading inspection speed using TRI's Dynamic Imaging technology keeps up with the production line beat without slowing down for even the most complex boards with multiple local fiducial marks. TRI's unique solution guarantees perfect results while reducing expensive cycle time.



TRI's Color Imaging needs to scan only one Fiducial Mark on every board, saving cycle time.

Stable and Reliable Performance

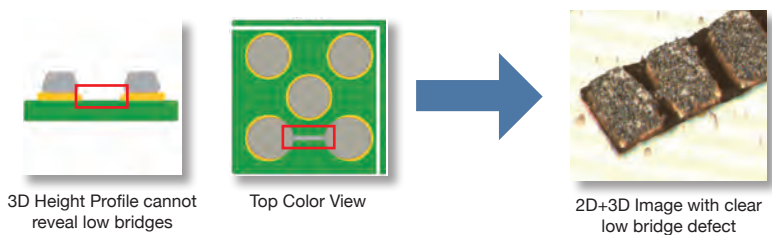
Fully optimized for maximum stability, the TR7007 SII Plus delivers reliable inspection results 24 hours a day, and automatically compensates for manufacturing tolerances and board warp.



Reliable warp compensation and local fiducial marks guarantee stable results under any conditions.

Unique Low Bridge Inspection

World's first inspection of low solder paste bridges under 30 μm ensures no printing defects are missed, and guarantees accurate results under any conditions.



3D Height Profile cannot reveal low bridges

Top Color View

2D+3D Image with clear low bridge defect

Intuitive SPC Display

Full panel maps and real color images allow engineers to quickly monitor and diagnose problematic areas on the stencil, saving management time and reducing rework costs.

SPC

Statistical Report

Multi-panel Histogram

Solder Height Distribution

3D Color Image

SPC 2D Real Image Query

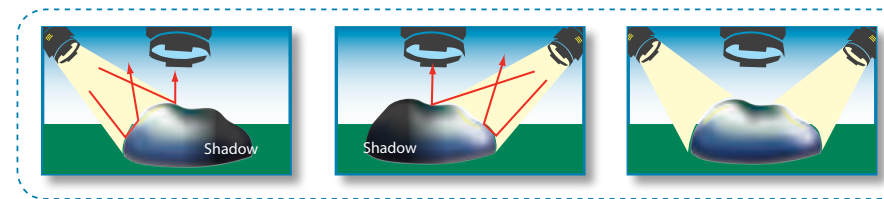
Easy Automated Programming

Rapid automated 5-step programming interface ensures fast changeovers, minimal idle time and helps reduce operator work load.



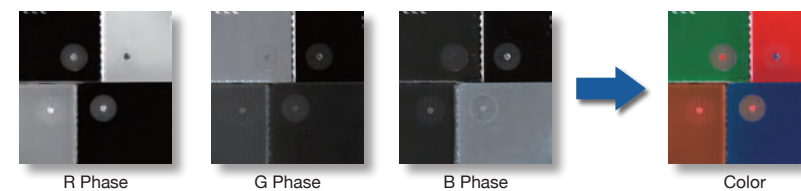
Shadow Free Inspection Technology

Dual projection design and intelligent software ensure the TR7007 SII Plus delivers completely shadow-free inspection results and eliminates problems with specular reflections.



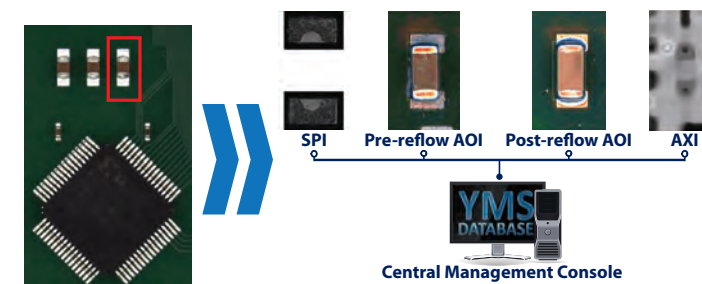
Multi-Color Vision for any PCB

Multi-phase color lighting guarantees accurate inspection results on any PCB color and finish combination, without sacrificing inspection speed.



SMT Line Integration

TRI's Yield Management System links inspection data from SPI, AOI and AXI systems to trace defect roots throughout the PCB assembly line. Modular architecture provides centralized inspection management, real time defect monitoring with analysis and knowledge management necessary to identify problems and implement solutions to maximize production yields.



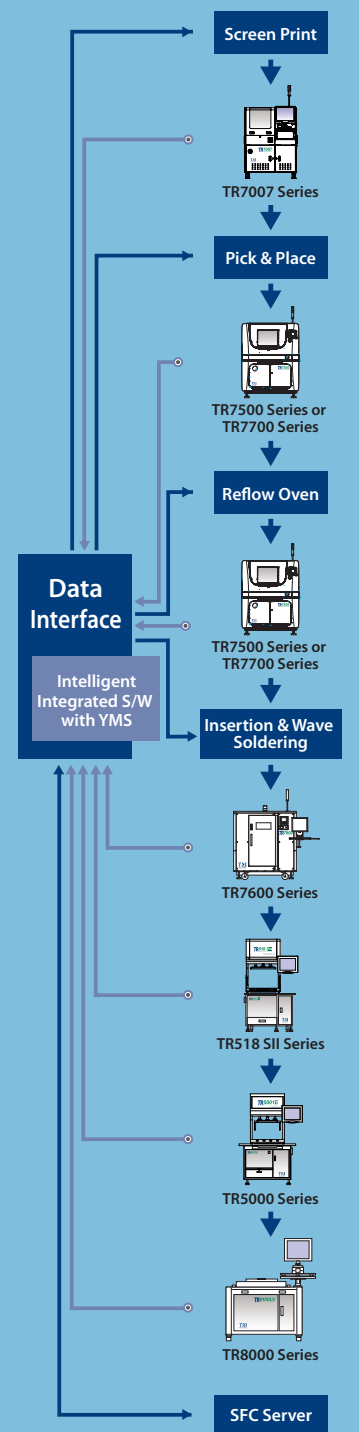
Closed Loop Function

TRI SPI systems share inspection results with connected SMT line equipment to help improve production yields and stabilize production quality while minimizing line stops and reducing production costs.

High Production Value = Maximum Cost Savings

- Industry Leading Inspection Speed
- Stable and Reliable Results
- Early Defect Detection
- Enhanced 100% Defect Coverage
- 98% Rework Cost Reduction

Yield Management System*



Data Flow Feedback Flow

- Inspection results and data integration
- Real time SPC and production yield management
- Quality reports and close loop tracking
- Support defect component analysis and improvements
- Knowledge Management (KM)
- Productivity and Quality Management

* Optional