

TR7007 SII Plus SERIES



- Industry Leading Inspection Speed
- Shadow Free Fringe Pattern Lighting Technology
- Optical Resolution 10 μm or 15 μm
- Linear Motor Design for Stable and Accurate Inspection
- Advanced SPC Functions for Production Quality Monitoring and Evaluation

**3D SOLDER
PASTE INSPECTION**

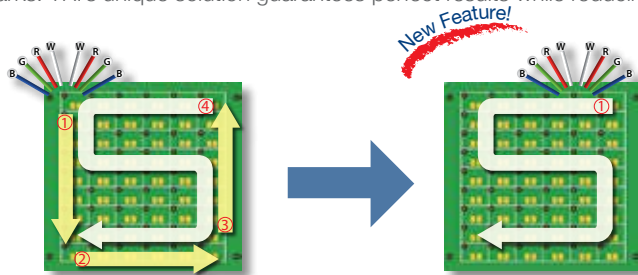
TR7007 SII Plus FEATURES

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

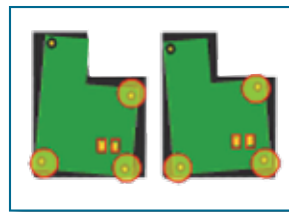
Industry-leading inspection speed using TRI's Dynamic Imaging technology keeps up with the production line beat without slowing down for even the most complex boards with multiple local fiducial marks. TRI's unique solution guarantees perfect results while reducing expensive cycle time.



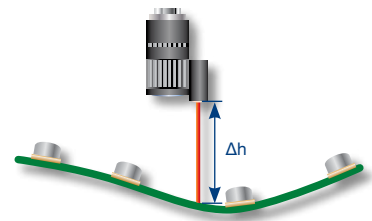
TRI's Color Imaging needs to scan only one Fiducial Mark on every board, saving cycle time.

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.

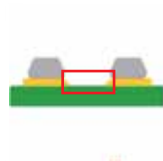


Reliable warp compensation and local fiducial marks guarantee stable results under any conditions.

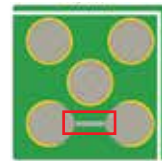


Unique Low Bridge Inspection

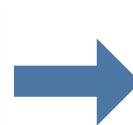
World's first inspection of low solder paste bridges under 30 μm ensures no printing defects are missed, and guarantees accurate results under any conditions.



3D Height Profile cannot reveal low bridges



Top Color View



2D+3D Image with clear low bridge defect

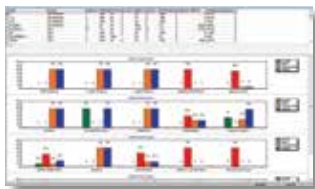
Intuitive SPC Display

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.

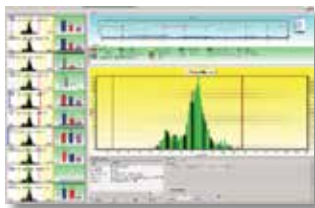
Intelligent Easy Programming Interface

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

SPC



Statistical Report



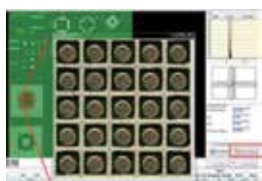
Multi-panel Histogram



Solder Height Distribution



3D Color Image

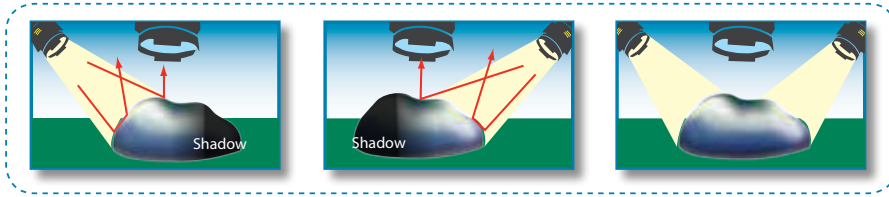


SPC 2D Real Image Query



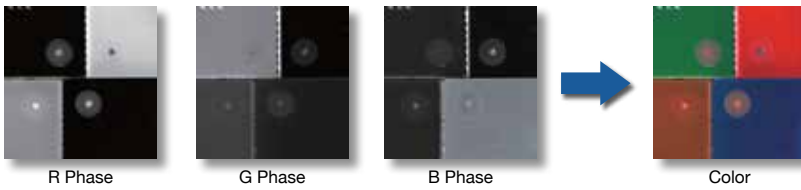
Shadow Free Inspection Technology

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



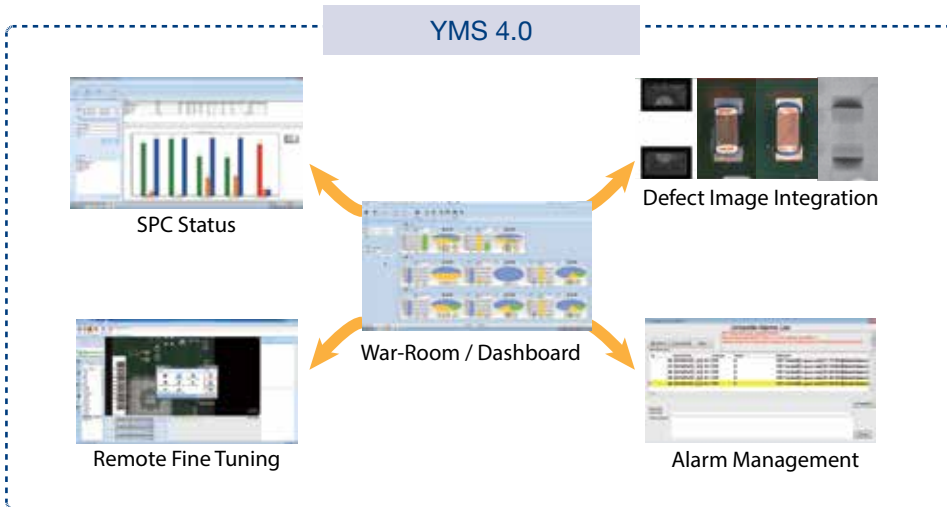
Multi-Color Vision for any PCB

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



Industry 4.0 Production Line Integration

YMS 4.0 lets TRI inspection solutions interface and share inspection data with the shop floor system and other inspection machines. With the central console an operator can control, track, analyze and optimize the inspection process across the entire production line and obtain real actionable data to optimize production quality in the Industry 4.0 environment.



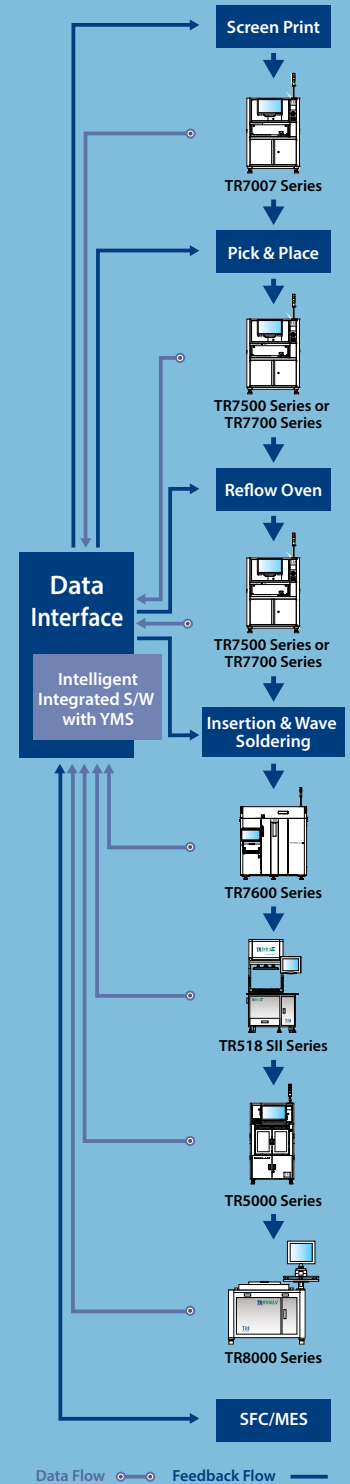
Closed Loop Function

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



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

Optical & Imaging System

Camera Type	4 Mpx 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
15 µm	Up to 200 cm ² /sec

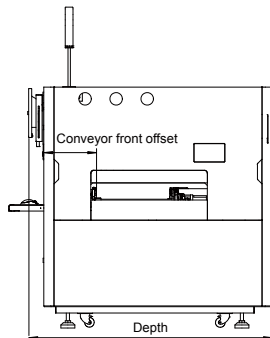
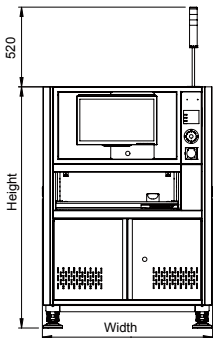
Inspection Performance

Volume Repeatability	Calibration Target (at 3σ)	<1% on TRI calibration target
Height Repeatability	Calibration Target (at 3σ) Solder GR&R (± 50% Tolerance)	<1% on TRI calibration target <<10% at 6σ
Height Resolution	0.4 µm	
Height Accuracy	1.5 µm on calibration target	
Max. Height Range	10 µm 600 µm 15 µm 550 µm	

PCB and Conveyor System

	TR7007 SII Plus	TR7007L SII Plus	TR7007 SII Plus DL
Min. PCB Size		50 x 50 mm	
Max. PCB Size	510 x 460 mm	660 x 610 mm	510 x 310 mm x 2 lanes 510 x 590 mm x 1 lane
PCB Thickness		0.6 - 5 mm	
PCB Transport Height		880 - 920 mm	
Max. PCB Weight		3 kg	
PCB Carrier/Fixing		Belt/Pneumatic	
Clearance			
Top		25 mm	
Bottom		40 mm	
Edge		3 mm	

Dimensions



	TR7007 SII Plus	TR7007L SII Plus	TR7007 SII Plus DL
Width	1100 mm	1300 mm	1100 mm
Depth	1570 mm	1650 mm	1770 mm
Height	1550 mm	1650 mm	1560 mm
Conveyor front offset	335 mm	365 mm	335 mm
Weight	950 kg	1250 kg	1100 kg
Power Requirement	200 - 240 VAC, single phase, 50/60 Hz, 3 kVA		
Air Requirement	72 psi - 87 psi (5 - 6 bar)		

Unit : mm

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 4.0), YMS Lite

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