

**OPTICAL AND IMAGING SYSTEM**

1 Top View Camera	3CCD Color camera
4 Angled View Cameras	Mono camera
Lighting	Multi-segment, multi-angled LED, RGB+W
Resolution	10, 12 or 15 $\mu$ m (Factory Setting)
Imaging Method	High-speed, Dynamic Imaging

**IMAGING/INSPECTION SPEED**

15 $\mu$ m	93 cm <sup>2</sup> /sec
12 $\mu$ m	69 cm <sup>2</sup> /sec
10 $\mu$ m	44 cm <sup>2</sup> /sec

**PRE-/POST-REFLOW INSPECTION FUNCTIONS**

Component	Missing, Tombstone, Billboard, Polarity, Shift
Solder Joint	Insufficient/excess solder, Bridge

**X-Y TABLE AND CONTROL**

High Precision Ball Screw/Servo Motor with DSP-based Motion Controller	
X, Y Axis Resolution	1 $\mu$ m

**PCB AND DIMENSION**

Max. PCB Size	TR7500 SII	510 x 460mm
	TR7500L SII	660 x 610mm
Max. PCB Thickness	4mm	
PCB Carrier/Fixing	Motor driven and clamping	
Clearance	Top	50mm
	Bottom	50mm
	Edge	3.5mm
Weight	TR7500 SII	850kg
	TR7500L SII	985kg
Dimensions	TR7500 SII	(W) 1220mm x (D) 1480mm x (H) 1575mm *Not including signal tower, signal tower height:510mm
	TR7500L SII	(W) 1370mm x (D) 1570mm x (H) 1601mm * Not including signal tower, signal tower height:510mm
Power Requirement	200-240V Single phase, 50/60Hz 3KVA	
Options	OCR, OCV, Coaxial Lighting, Barcode System, Offline Editor, Repair Station, SPC Software, YMS System	



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C-7500 SII-EN-1206

T R 7 5 0 0 S I I A O I



- HIGH-SPEED INLINE COLOR AOI
- IMPROVED PERFORMANCE
- TOP-VIEW DIGITAL 3CCD FULL COLOR CAMERA + 4 ANGLED CAMERAS THE MOST COMPLETE AOI COVERAGE
- RGB+W, MULTI-ANGLE, MULTI-SEGMENT CONTROL LED LIGHTING
- FINE-PITCH/01005 COMPONENT READY



**TRI**  
innovation



# A NEW AOI SYSTEM FOR THE NEW SMT GENERATION



## BEST THROUGHPUT FOR INLINE PRODUCTION

Dynamic Imaging technology provides vibration-free imaging of PCBs with high throughput. With inspection speeds reduced to as short as 16 seconds for medium-sized PCB at 15 μm, the TR7500 S11 is twice as fast as the original system. It is also safe for pre-reflow inspection.

## HIGH RESOLUTION IMAGING SYSTEM

The new 3CCD multiple color and monochrome camera system (top and angle views) and the optical resolution (10, 12, and 15 μm) enable the TR7500 S11 to capture clear and large format images. Four angled cameras provide high accuracy inspection of solder joints and lifted leads. By offering a 10 μm resolution, the TR7500 S11 is also capable of inspecting 01005 components. With the ultra-high resolution of 10 μm, small components such as 01005 chips can be easily checked.

## MODULARIZED CONTROL SYSTEM

The precision X-Y table, conveyor system, image acquisition, lighting system and the host PC are all independent modules which allow easy diagnostics and maintenance of the system.

## ADVANCED COLOR LIGHTING

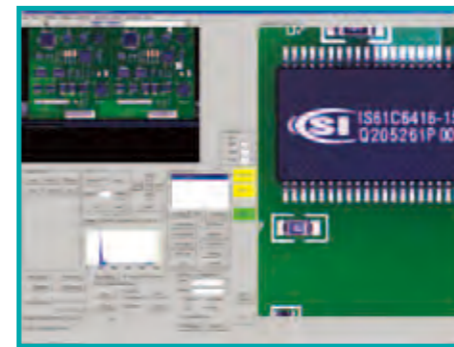
The new RGB+W lighting control and the color imaging system instantly provide operators with an easier visual verification on real images. The advanced color lighting system significantly improves 3D solder fillet reconstruction, which yields more accurate inspection results for solder fillet on small components and fine pitch leads.

## EASY PROGRAMMING ENVIRONMENT

- Programming is easily accomplished by using the data from a CAD file directly. The only mandatory data fields are component name, package type, X- position, Y-position, and rotation angle
- PCBs with special layouts also can be easily edited
- TRI provides a standard Model Library for most of the main component types and they are presented graphically for ease of use. This can greatly reduce the time of inspection box creation and parameter setting
- Accurate warp compensation and the multi-fiducial finding algorithms ensure the correct positioning of the inspection windows, which leads to accurate, repeatable defect detection



Built-in Model Library Function



Color board view for better image clarity



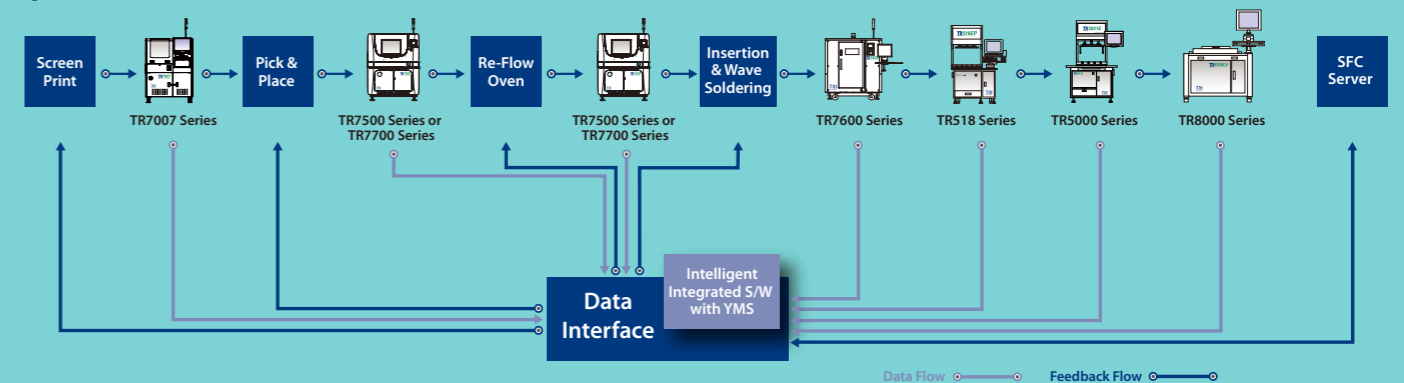
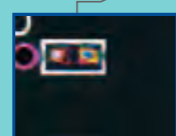
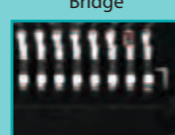
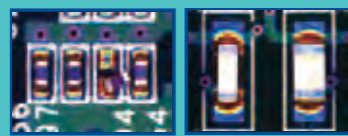
Graphical lighting control editor

## YIELD MANAGEMENT SYSTEM \*

- Testers enable process capability control
  - Real time defect information integration and analysis
  - Defect knowledge management
- \* Optional

Top View (color)

Angle View (mono)



Bridge Insufficient Solder

Lifted Lead IC Skew

Tombstone

Open