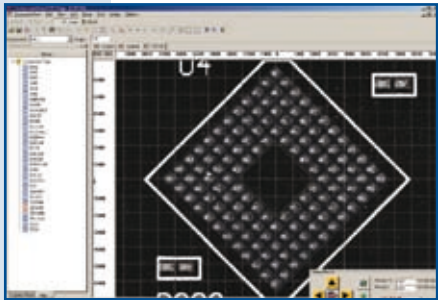
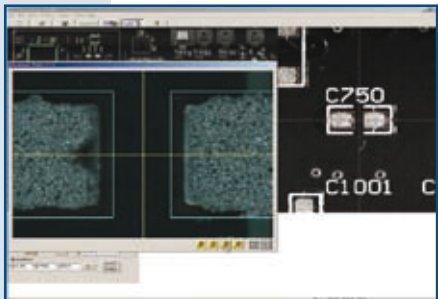




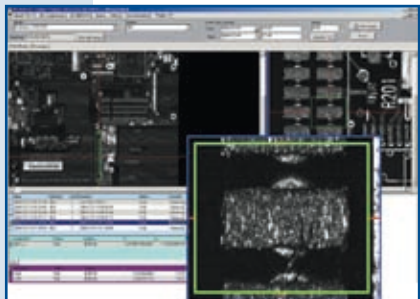
Easy Component Selection From Full-Board Inset



Real Image Assisted Component Library Creation



32X High Resolution Color Real Image



SPC

EASY PROGRAMMING

- Component library-based inspection window can be generated with CAD data
- Auto-window generation for CAD-less inspection process
- Import Gerber File system for fast programming preparation

COMPACT FOOTPRINT

One-meter face width allows easy replacement of existing conveyor⁽¹⁾

⁽¹⁾ For TR7006 only

CUSTOMIZED STATISTICAL PROCESS CONTROL

Customer-oriented SPC/SFC implementation possible

COST-EFFECTIVE WITH HIGH-QUALITY PROCESS

- Optimal price / performance ratio
- Early defect detection
- Reduces costly reworks on lead bridge and μ BGA

WORLDWIDE SERVICE AND SUPPORT

Global engineering service network provides instant support

	TR7006/L/LL-20	TR7006/L/LL-16	TR7006/L/LL-12
Scan Width	25.6 mm	20.48 mm	15.36 mm
Optical Resolution	20 μ m	16 μ m	12 μ m
Mechanical Stage			
Lateral Resolution	1 μ m	1 μ m	1 μ m
Vertical Resolution	1 μ m	1 μ m	1 μ m
Horizontal Scanning Pitch	10 ~ 40 μ m	8 ~ 32 μ m	6 ~ 24 μ m
2D Color Camera (Option)			
Option Resolution	8.3 μ m	8.3 μ m	8.3 μ m
Magnification Power	32X @	32X @	32X @
	17" LCD Monitor 1280 x 1024	17" LCD Monitor 1280 x 1024	17" LCD Monitor 1280 x 1024
Min. Solder Paste Height Range	40 μ m	32 μ m	24 μ m
Max. Solder Paste Height Range	600 mm	480 mm	360 mm

Inspection Speed	mm ² /sec in ² /sec			mm ² /sec in ² /sec			mm ² /sec in ² /sec		
10 x 20 μ m	2470	3.8		08 x 16 μ m	1580	2.8	06 x 12 μ m	880	1.3
12 x 20 μ m	2960	4.5		12 x 16 μ m	2370	4.3	12 x 12 μ m	1770	2.7
16 x 20 μ m	3950	6.1		16 x 16 μ m	3160	5.7	16 x 12 μ m	2370	3.6
20 x 20 μ m	4940	7.6		20 x 16 μ m	3950	7.1	20 x 12 μ m	2960	4.5
40 x 20 μ m	9880	15.3		32 x 16 μ m	6320	11.4	24 x 12 μ m	3550	5.5

Board Warp Tracking			
Pre-Scan	Max 4% @ 25.6 mm or 8 mm	Max 4% @ 20.48 mm or 6.4 mm	Max 4% @ 15.36 mm or 4.8 mm
Run-Time Tracking	Max Slope 4% @ 25.6 mm	Max Slope 4% @ 20.48 mm	Max Slope 4% @ 15.36 mm
Volume Repeatability			
Calibration Target (± 3 Sigma)	< 2% @ Dia 0.6 mm/H 200 μ m	< 2% @ Dia 0.6 mm/H 200 μ m	< 2% @ Dia 0.6 mm/H 200 μ m
Solder GR&R	< 10% @ $\pm 50\%$ Spec Tolerance	<< 10% @ $\pm 50\%$ Spec Tolerance	<<< 10% @ $\pm 50\%$ Spec Tolerance
Height Repeatability			
Calibration Target (± 3 Sigma)	< 1 μ m @ H 200 μ m/Dia 0.6 mm	< 1 μ m @ H 200 μ m/Dia 0.6 mm	< 1 μ m @ H 100 μ m/Dia 0.6 mm
Solder GR&R	< 10% @ $\pm 50\%$ Spec Tolerance	<< 10% @ $\pm 50\%$ Spec Tolerance	<<< 10% @ $\pm 50\%$ Spec Tolerance

	TR7006	TR7006L	TR7006LL
Board Size			
Minimum	50 x 50 mm	50 x 50 mm	50 x 50 mm
Maximum	330 x 280 mm	510 x 460 mm	660 x 610 mm
Board Edge Clearance	3.5 mm	3.5 mm	3.5 mm
Top Side Clearance	20 mm	20 mm	20 mm
Bottom Side Clearance	40 mm	40 mm	40 mm
Board Thickness	0.5 mm ~ 5 mm	0.5 mm ~ 5 mm	0.5 mm ~ 5 mm
Max. Board Weight	3 Kg	5 Kg ⁽²⁾	10 Kg ⁽²⁾
Conveyor Speed	50 ~ 700 mm/sec	50 ~ 700 mm/sec	50 ~ 700 mm/sec
Dimension (W x D x H)	1000mm x 940mm x 2100mm	1220mm x 1250mm x 2100mm	1370mm x 1570mm x 2111mm
Weight	550 Kg	780 Kg	985 Kg

⁽²⁾ Optional
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TR7006 SPI



- ULTRA HIGH SPEED 3D SOLDER PASTE INSPECTION SYSTEM
- IDENTIFY SOLDER PASTE DEFECTS IMMEDIATELY
- FAST, EASY PROGRAMMING
- PROVIDES STATISTICAL PROCESS CONTROL OUTPUT



3D IN-LINE SOLDER PASTE INSPECTION SYSTEM

Incorporates TRI's leading-edge laser scan system with unmatched resolution, repeatability and accuracy.

INDUSTRY'S FASTEST 3D LASER SCANNING

- True 100% In-Line Solder Paste Inspection.
- Full 3D scan at maximum 98.8 cm² / sec (15.3 in²/sec).
- Inspect M size board (330 mm x 250mm) in less than 25 secs.
- Repeatable and accurate results even on small CSP, 0201, and 01005.
- Programmable resolution range from 6 to 40 μm meets the requirements for fine-pitch PCBA and speed-critical applications.
- Run Time Tracking, pre-scan for warpage is not needed (saves inspection time).



3D SOLDER PASTE INSPECTION

Inspection of the height, area and volume of the solder

- Users can define the ranges for the height, area and volume of the solder.
- Color images can be used to display the distribution of the solder height.

BOARD VIEW

Display the map of PCB and show the profile of total board.

FOV

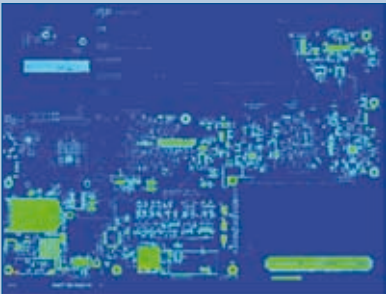
Show the solder detail.

INSPECTION RESULT

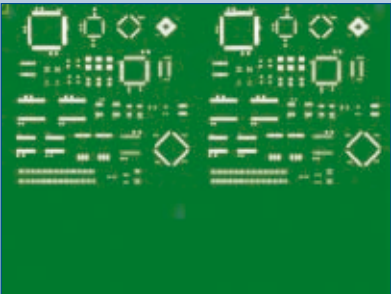
Display the inspection result and export the raw data for user tracking to effectively improve the quality and efficiency of PCB manufacturing.

UNIQUE FEATURES

3D Panel Warpage View



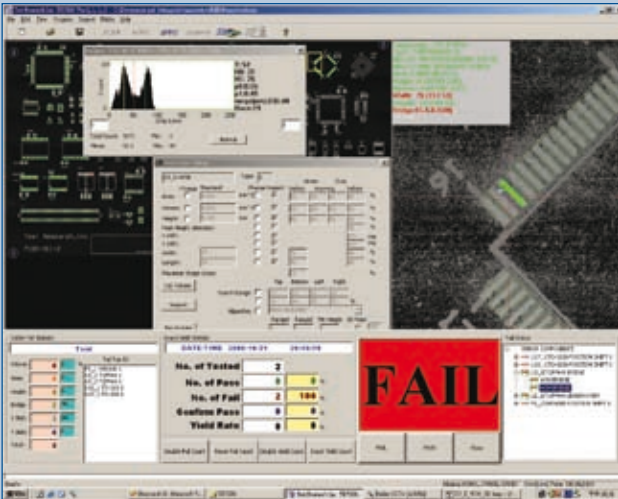
CAD Map



2D Board View

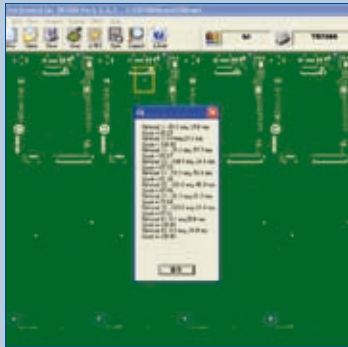


3D Solder Paste Height Profile Panel View

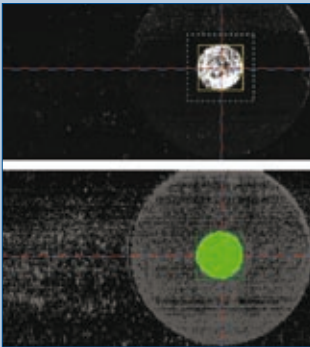


Detection Function of Area, Volume, Height, Peak Height, Shape Deformation, Registration, Bridge, and Foreign Material.

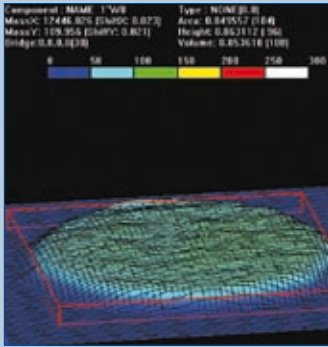
Multi - Board Multi - Fiducial



3D Fiducial Mark Finding



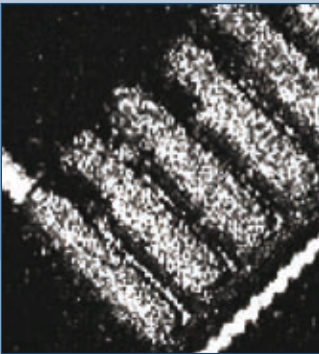
Fiducial Mark Finding 3D Color View



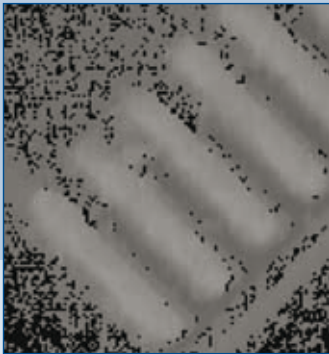
Copper Base Reference Capable



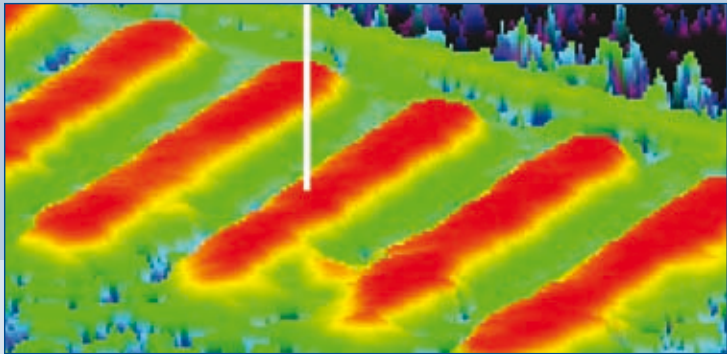
- Both 2D and 3D height images are available at run time for defect review and inspection program editing.



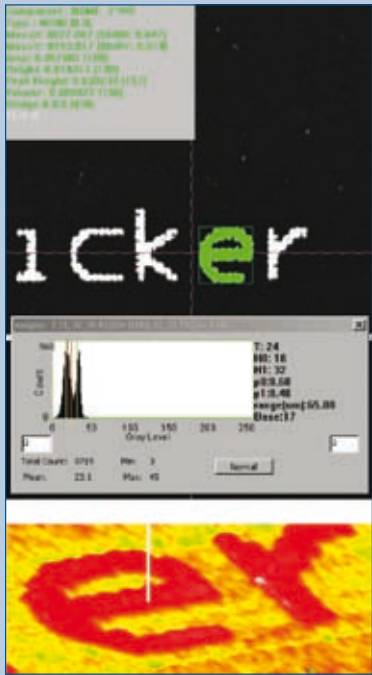
2D Real Image



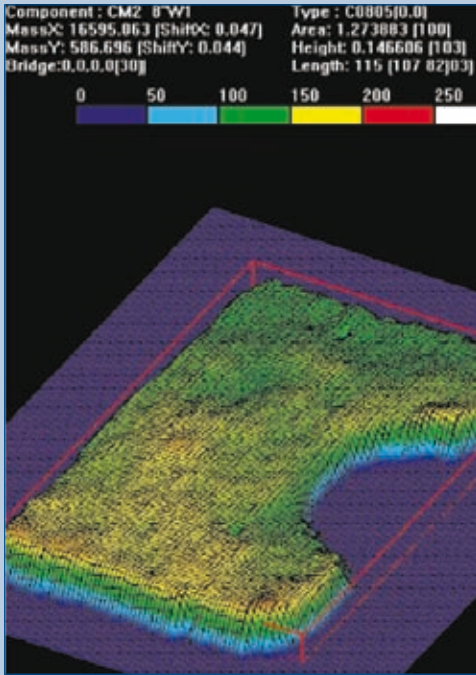
3D Height Profile



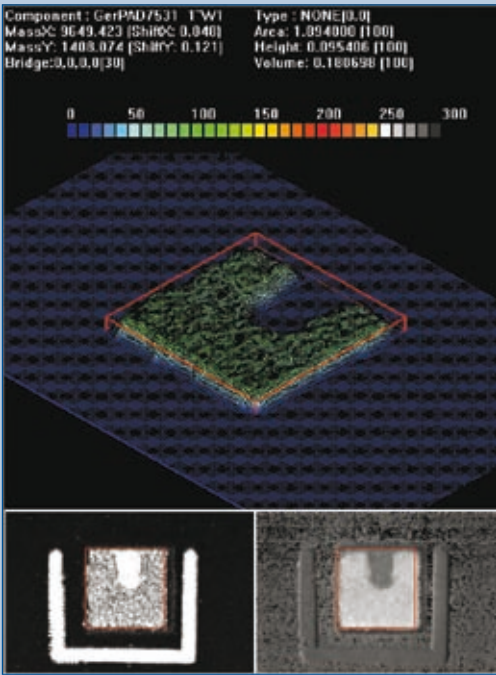
Bridge in 3D Color



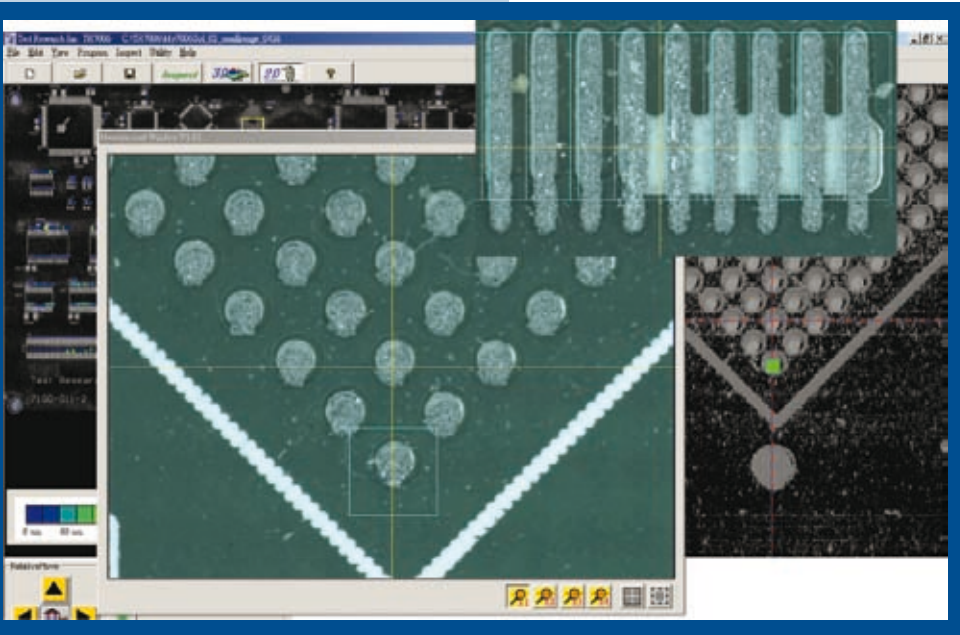
Minimum Measurable Height



3D Color Solder Pad Mesh Plot



3-in-1 View



2D Color Real Image

LIVE 2D COLOR HIGH RESOLUTION IMAGE

- 32X Real Image 3D Solder Paste Inspection.