High Precision Model

3D AXI

AUTOMATED X-RAY INSPECTION

TR7600F3D SII SERIES

- Next Generation Platform Design for Higher Speed up to 10 FOV/s
- Smart Factory Ready for Easy MES Connectivity
- 5μm High Precision Inspection for Comprehensive Defect Detection

Smart Board Warpage

2X Faster * Inspection

900x460 mm mm Large Board Support

TRI innovation

*Compared to the previous model, TR7600F3D.

TR7600F3D SII S

In-Depth High-Speed 3D X-Ray Inspection

The TR7600F3D SII is the next-generation high-speed in-line automated X-Ray inspection solution, soaring speeds as to twice to three times as fast as the previous model. The AXI solution can inspect large boards, up to 900 mm x 460 mm. The TR7600F3D SII lowers the escapes and false calls without compromising the production line's cycle time.

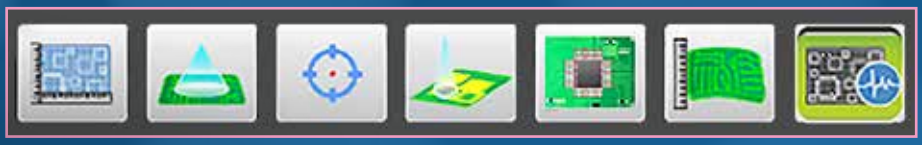
2X

Faster Inspection Optimized Cycle Time

* Compared to the Previous Model, TR7600F3D

Smart Programming

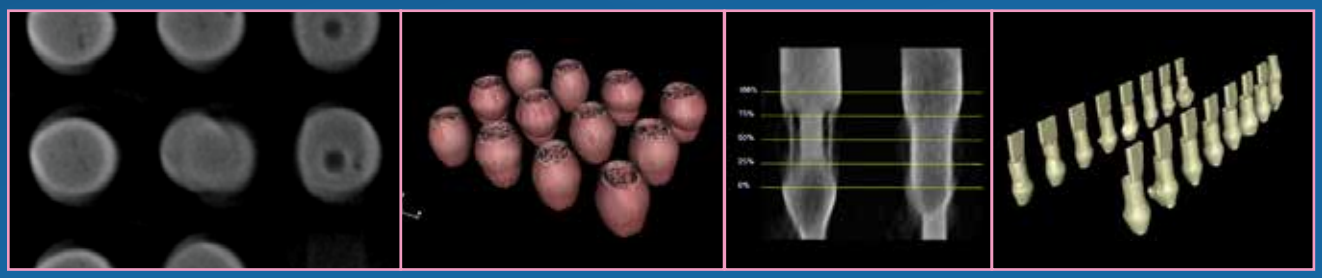
The new 3D AXI intuitive software helps set up inspection programs based on CAD data. The TR7600F3D SII is equipped with TRI's extensive Smart component library, reducing Engineer workload and minimizing production downtime.



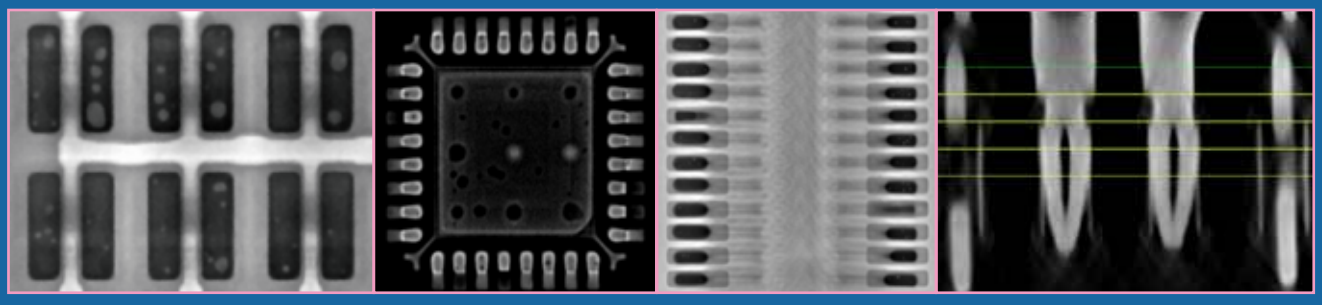
Library Editor | Board View Scan | Fid Mark | FOV scan | Library Review | Warp | Fine Tuning

High Resolution Design for Maximum Defect Detection

The TR7600F3D SII enhanced 3D inspection with planar CT imaging can recreate a complete 3D model of each solder joint, enabling clear analysis of shape irregularities, head-in pillow and voiding problems. Vertical cross-section CT images help with reliable visual review of borderline and buried solder joints.



BGA Head-in-pillow Defect | 3D CT BGA Inspection | THT Cross Section | 3D CT DIP Inspection



Void Inspection of LED | QFN 3D CT Inspection | DIMM Connector Inspection | Press-fit Cross Section Inspection

SERIES

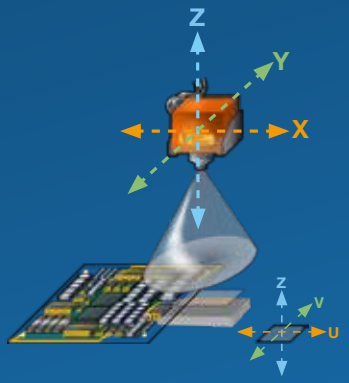
TRI innovation

Board Warpage Control

The TR7600F3D SII uses multiple laser sensors to accurately measure any PCB assembly deformation and automatically adjusts component inspection parameters to compensate for local board warpage. This ensures reliable inspection of the most complex boards with overlapping and multilayered components and heavy press-fit connectors.

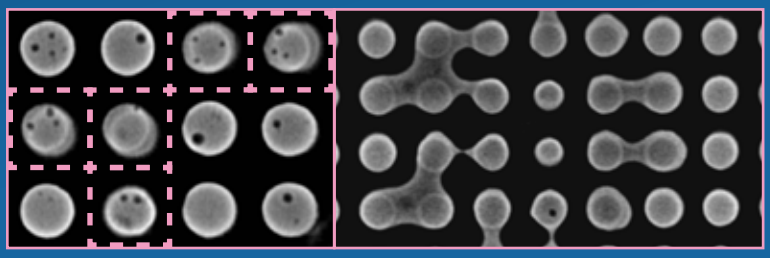
High Precision Technology

During the inspection the sample is fixed, preventing possible sample damage. The TR7600F3D SII has six independent motions with flexible programming that supports multiple focal settings in one program. The AXI solution is Ideal for thick PCBs with dual side PressFit, PoP packages, PCBs with tall components, and more.



High Accuracy BGA Inspection

TRI AXI inspects individual slices absolute area, shape and compares it to the nearest BGA. TRI's new HiP defect algorithm considers multiple slices simultaneously, quantifying and comparing the profile of the BGA.

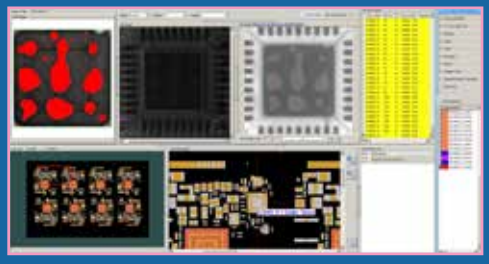


BGA HiP Defect

BGA Short/Open Defect

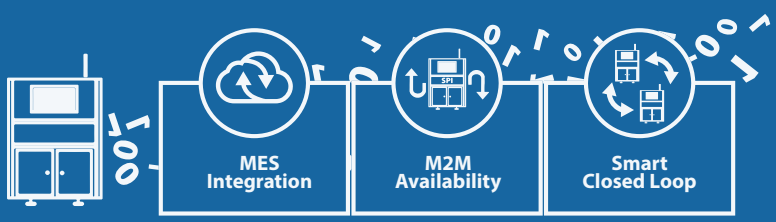
Top of the Line Repair Station

The 3D AXI solution collects a wide range of inspection data to offer instantaneous process monitoring and analysis. This integrated approach offers clear statistical feedback that improves defect management and enhances the efficiency of the inspection process.



- 2D Defect Viewer
- 3D Defect Image
- CT Defect Viewer
- Board Viewer
- Joint Information
- History Data

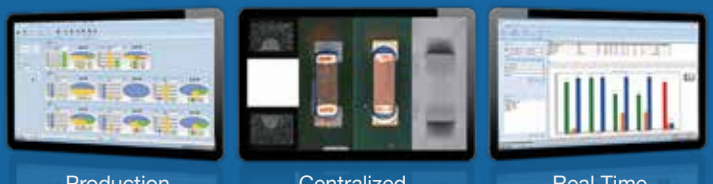
Big Data Ready



Boost your factory intelligence and optimize your production line by easily integrating big data analytics from your solutions. TRI's smart factory test and inspection solutions promote full traceability and data exchange, by generating big data for your MES applications, essential for optimizing your production your yield rate, enabling the connected factory.

Smart Monitoring

TRI's smart factory solutions allow operators to aggregate information from individual systems for statistical analysis of production line defect rates, reviewing and fine-tuning inspection results, and identifying component defect trends and emerging production issues.



Production Analysis

Centralized Inspection Center

Real Time SPC Trends

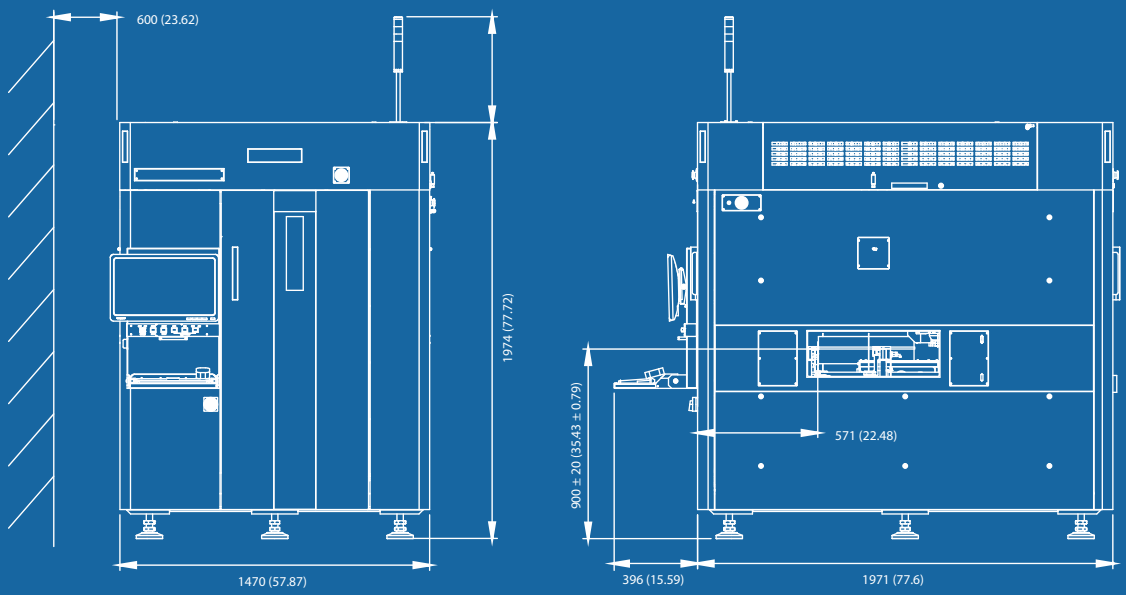
Specifications

TR7600F3D SII SERIES

Imaging System	Camera	Flat Panel Detector
	X-ray Source	130 kV Max (User Adjustable)
	Imaging Resolution (Choose 3 Resolutions)	5 µm / 10 µm / 15 µm / 20 µm / 25 µm / 30 µm
	Inspection Method	2D, 2.5D, 3D Slicing, Planar CT (Optional)
Inspection Functions	Component Defects	Missing, Misalignment, Tombstone, Billboard, Tantalum Polarity, Rotation and Floating
	Solder Joint Defects	Insufficient/Excess Solder, Bridging, Open, Solder Ball, Non-Wetting, Void and Lifted Lead
X-Y-Z-Axis Control		High-Precision Ballscrew + AC-Servo Controller
X-Y-Z Axis Accuracy		1 µm
Max PCB Size*		900 x 460 mm (35.43 x 18.11 in.)
PCB Thickness		0.6 - 7 mm (0.02 - 0.28 in.)
PCB Transport Height		880 - 920 mm (34.65 -36.22 in.)
Max PCB Weight		12 kg (26.46 lb)
PCB Carrier / Fixing		Step Motor Driven / Pneumatic Clamping
Clearance	Top	5 mm (0.2 in.) / 25 mm (0.98 in.) / 45 mm (1.77 in.) / 50 mm (1.97 in.)
	Bottom	70 mm (2.76 in.) / 55 mm (2.17 in.)
	Edge	3 mm (0.12 in.) or 5 mm (0.20 in.)
Weight		3850 kg (8,487.8 lb)
Power Requirement		200 – 240 VAC, Single Phase, 50 / 60 Hz, 4 kVA
Air Requirement		72 psi – 87 psi (5 – 6 bar)
Optional Features		Barcode Scanner, Repair Station, Offline Editor, Yield Management System (YMS 4.0), CAD Converter and CT Imaging

* The Max. PCB Size will vary depending on the angle of incidence

Unit: mm (in.)



TR7600F3D SII

Global Network

Nuremberg, Germany trieurope@tri.com.tw
San Jose, USA triusa@tri.com.tw
Tokyo, Japan trijp@tri.com.tw
Ansan, Korea trikr@tri.com.tw
Shenzhen, China shenzhen@cn.tri.com.tw
Suzhou, China suzhou@cn.tri.com.tw
Shanghai, China shanghai@cn.tri.com.tw
Penang, Malaysia trimy@tri.com.tw

HEADQUARTERS
7F., No.45, Dexing West Rd., Shilin Dist.,
Taipei City 11158, Taiwan
+886-2-2832-8918 Sales@tri.com.tw

TRI 德律 TRI INNOVATION

C-7600F3D SII-EN-2007

www.tri.com.tw