



**YOUR TEST AND
INSPECTION
PARTNER**

Test Research, Inc.

www.tri.com.tw

Test Research, Inc. is the world's leading supplier of Test and Inspection Solutions for the PCBA Manufacturing Industry. Test Research, Inc. offers the most robust product portfolio in the industry for automatic test and inspection solutions. From Solder Paste Inspection (SPI), Automated Optical Inspection (AOI) and Automated X-Ray Inspection (AXI) systems to Manufacturing Defect Analyzers (MDA), Functional Tester (FCT), and In-Circuit Test (ICT) equipment, TRI provides the most cost-effective solutions to meet a wide range of manufacturing test and inspection requirements. TRI solutions are designed to interoperate with other manufacturing equipment to minimize downtime, optimize production quality and reduce operator workload.

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CORE VALUES

Teamwork
Rapid Response
Integrity
Innovation
Service

MISSION

Develop advanced technologies in automated testing and inspection.

Improve and uplift the product and service quality.

Enhance the quality of people's lives through high-tech solutions.

VISION

Become the leading brand in the Automated Testing Equipment market.

TRI has gained recognition and acceptance by major international brands and other world-class companies. Presently, TRI has more than 850 employees and has established offices in the USA, Germany, Japan, Korea, Malaysia, Vietnam and Mainland China. We also have distributors in over 30 countries. By introducing excellent inspection and testing equipment to the world, TRI is offering customers not only outstanding products but also comprehensive services. We commit ourselves to fulfill our customers' goals and pride ourselves in customer satisfaction. Our personnel embrace a common prospect and share the reality of excellent performance.

MILESTONES AND ACHIEVEMENTS



HQ & SUBSIDIARIES

DISTRIBUTORS / REP.

- Europe Austria / France / Germany / Hungary / Ireland / Israel / Italy / Poland / Portugal / Romania / Russia / Slovakia / Spain / Switzerland / Turkey / UK
- America Canada / USA / Brazil / Mexico
- Africa Egypt / South Africa / Tunisia
- Asia India / Indonesia / Japan / Korea / Malaysia / Philippines / Singapore / Thailand / Vietnam





2007

- Launched AXI Product Line: TR7600
- Established Branch in Schwabach, Germany

2008

- Established Branch in Tokyo, Japan
- Established Manufacturing Plant in Linkou, Taiwan

2011

Named "Asia's 200 Best under a Billion" by Forbes

2015

Launched Stop-and-Go 3D AOI: TR7700Q/QI

2016

Launched Multi-core ICT: TR5001 SII

2019

30th Company Anniversary

2020

- Established Branch in Ansan-si, Korea
- Launched SEMI AOI: TR7700QE-S

2021

- Established Branch in Bắc Ninh, Vietnam
- TRI Certified by IPC CFX

2022

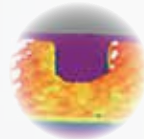
- Launched Bottom-view AOI: TR7700QB SII
- Joins IPC-DPMX Corporate Members

CERTIFICATIONS AND AWARDS



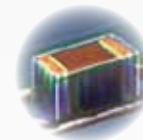
30 Years of Excellence Since 1989

SMART TEST AND INSPECTION SOLUTIONS FOR THE CONNECTED FACTORY



Solder Paste Inspection (SPI) Ultimate Resolution Shadow-Free 3D SPI

- Closed Loop Ready
- World-class Gauge R&R
- Industry Leading Speed



Pre-Reflow Automated Optical Inspection (AOI) Ultra-High Resolution and Precision 3D AOI

- Smart Programming
- Multiple 3D-Technologies
- Real-Time SPC Trends

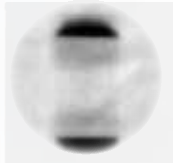


Solder Printer

Pick & Place

Reflow Oven





Automated X-Ray Inspection (AXI) In-depth High-Speed 3D AXI Solutions

- Enhanced CT Planar Imaging
- Smart Board Warpage Compensation
- Ease of MES Integration



Post-Reflow Automated Optical Inspection (AOI) Zero Escapes and Zero False Calls 3D Inspection Solutions

- Smart Inspection Library
- Foreign Material Inspection
- Conformal Coating Inspection

Electrical Test (ICT+ FCT + MDA)

In-Circuit Tester (ICT) + Functional Tester (FCT) Next Generation Parallel Inline in-Circuit Tester

- World-class Testing Accuracy
- Intuitive UI Flowchart-based Programming
- Automated Diagnostics and Calibration
- In-System LED Testing, up to 1080 LED Channels

Manufacturing Defects Analyzer (MDA) High Accuracy and Reliability Modular MDA Solutions

- Excellent Performance with up to 2560 Testing Points
- Ease of Integration with Robotic Arms
- Easy Operation with USB interface connection



Insertion & Wave Soldering



Skip Board Data



Semiconductor & Packaging Industry

The miniaturization of electronics components demands higher resolution and drives the production to increase the need for precise inspection solutions. TRI inspection platforms have robust metrology capabilities that enable high-reliability inspection, lowering the false call rates.



Automotive Industry

Intelligent Inspection solutions ranging from Coplanarity to 3D CT X-Ray Inspection are essential for the Automotive Industry. THT components are popular in the Automotive Industry; detect PIN shifts and height measurements with TRI Inspection Solutions. TRI ICT solutions can test automotive LEDs and modern vehicles ECUs (Electronic Control Units) through CAN-LIN bus tests.



INDUSTRY LEADING TEST AND **INSPECTION AUTOMATION**

Consumer Electronics

TRI's Solutions provide a competitive edge to customers to meet the demands of the Consumer Electronics industry. Accurate inspection algorithms help reduce the cycle time, rework and cost of the production line. TRI's Smart Inspection Library promotes fast deployment and enhances the production quality and throughput.



Medical Industry

As a high fidelity industry, the Medical EMS, require high reliability and flexible algorithms for alignment, measurement, inspection and recognition. TRI Inspection Solutions deliver traceable world-class Gage R&R, high performance, accurate and reliable Inspection results.

LED Industry

Precisely measure the LED strips coplanarity with TRI's optical inspection technologies. TRI's ICT LED Analyzer can easily measure simultaneously for color and brightness, up to 1080 LEDs Channels per test.

Telecommunications Industry

With new technical innovations, such as 5G and AIoT, new requirements arise; integrated boards with multilayer and double-sided boards will become more common. TRI's Optical Inspection and Board Test solutions provide the EMS industry with accurate and full-range capabilities.

SMART FACTORY SOLUTIONS

TRI'S SMART TEST AND INSPECTION LIBRARY PROMOTE EASE OF PROGRAMMING AND MAINTENANCE TO ACHIEVE PRECISE AND ACCURATE INSPECTION RESULTS.

SMART PROGRAMMING

Achieve seamless programming and improve your production efficiency with TRI's Smart Library. The Smart Test and Inspection Library promote ease of programming and maintenance to achieve precise and accurate inspection results.



READY TO INSPECT IN MINUTES

SMART INSPECTION FEATURES



AI Driven Inspection



Deep Learning OCR



Remote Production Monitoring



Auto Calibration



Smart Library

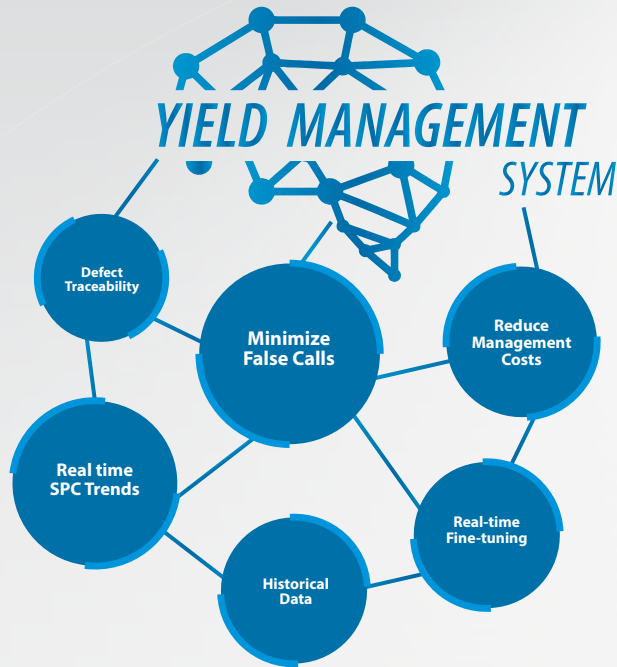


Metrology Applications



Smart Board Warpage

YIELD MANAGEMENT SYSTEM (YMS)

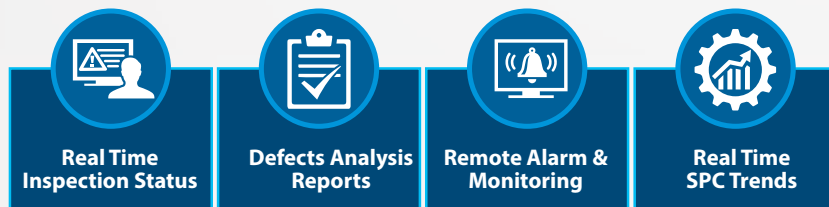


Strengthen your decision process and improve the efficiency of the Operators while reducing the overall management cost with TRI's Yield Management System (YMS). The Smart Factory Software simplifies the production line monitoring as it integrates the test and inspection data and promotes productivity, data traceability, defect root cause and data integration.



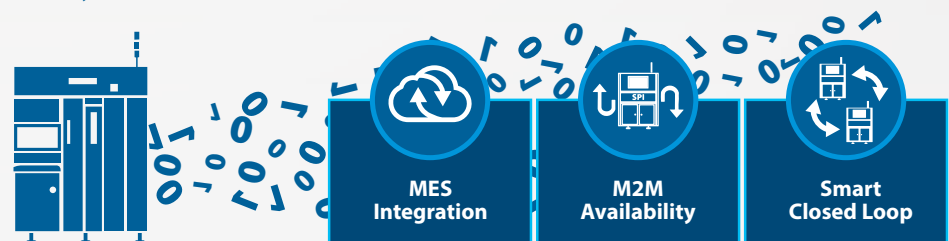
SMART MONITORING

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.



BIG DATA READY

Boost your Factory Intelligence and Optimize your production line by easily integrating Big Data Analytics from your Test and Inspection 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.



Industry leading provider of PCBA
inspection & testing solutions

TRI
innovation

HEADQUARTERS

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