

SPECIFICATIONS

General

Maximum Analog Test Points	3200 or Maximum Digital Test Points: 1600
Operation System	Microsoft® Windows 2000/XP/Window 7 32 Bit
Power Requirement	200 – 240 V, Single Phase, 50/60 Hz 3 kVA
Conforms to SMEMA standards	
Air Requirement	Dry Air 4 – 8 kg/cm², Air Consumption: 4 liters/cycle
Fixture Type	Inline

PCB and Conveyor System

PCB Size	
Standard	(W) 450 mm x (D) 300 mm x (H) 0.6 – 5 mm
Min.	(W) 70 mm x (D) 70 mm
Max. PCB Weight	2 kg (5 kg option)
Component Height Limitations	
Top Surface of Conveyor	90 mm
Bottom Surface of Conveyor	30 mm
Conveyor Height	890 – 1100 mm

Analog Hardware

Measurement Switching Matrix	6-wire measurement
Programmable Frequency	100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz
Programmable DC Voltage Source	±10V max, Resolution: 6.1 mV
Programmable DC Current Source	+100 mA max, Resolution: 0.2 mA
Programmable AC Voltage Source	10 Vpp max, Resolution: 6.1 mV
Programmable High Voltage DC Source	43 V at 43 mA max

Component Measurement Capability

Resistance	1 ohm – 40 Mohm
Capacitance	10 pF – 40 mF
Inductance	10 µH – 60 H

Analog Measurement

AC Voltmeter	0 – 100 V
DC Voltmeter	0 – ±100 V; Resolution: 2.5 mV – 50 mV
DC Ampmete	1 µA – 100 mA; Resolution: 30 nA – 30 µA

Optional Hardware

Analog Test

TestJet Technology	Vectorless open circuit detection
Arbitrary Waveform Generator (AWG)	Frequency Range 0 – 100 KHz; Resolution: 0.15 Hz

Digital Test

Non-multiplexing 1:1 per pin architecture	
Pin Drivers	Programmable levels 0.5 V to 4 V
Pin Receivers	Programmable levels -5 V to 5 V
Pull-up/Pull-down Resistor	4.7 K
DUT Power Supplies	5 V@3 A, 3.3 V@3 A, 12 V@3A, 18 V@3 A, -12 V@1 A and 24 V@3 A
Programmable DUT Power Supplies	25 V@ 8 A, 75 V@ 2.5 A
On-board Programming of Flash & EEPROM Memories	
MAC Address Programming	Supports MAC address programming with server supplied MAC address
Boundary Scan	Includes B-Scan Chain Test, B-Scan Cluster Test, BScan Virtual Nails Test and IEEE1149.6 Test
ToggleScan Test	Advanced test technology that combines with BScan and Vectorless test functions to detect pin open or short issues
Tree Test Facilities with BGA Test	Pattern generator for detection of pin opens for BGA/VLSI chips

Dimensions/Weight

Dimensions	(W) 900 mm x (D) 900 mm x (H) 1640 – 1850 mm (not including signal tower, signal tower height: 515 mm)
Weight	500 kg

Powerful Software Environment

Microsoft® Windows operating system software	User friendly interface
Automatic Test Program Generator (ATPG)	
Automatic protection of specific points during debug	
Auto-learning and test program generation for opens/shorts clamping diode and TestJet tests	
Auto-debugging of passive components	
Built-in self-diagnostic function	
Board view displays test fail devices and pins instantly	

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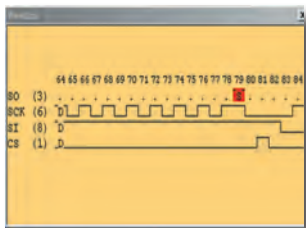
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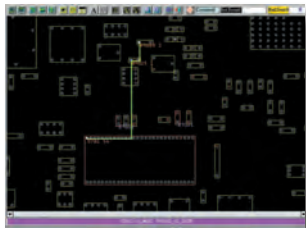


IN-CIRCUIT TESTER

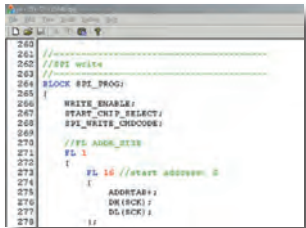
# TR5001 INLINE FEATURES



Waveform Display



Board View with Trace Display Capability



Color Syntax Program Editor



Flash Programming

## The Most Cost-Effective Test Strategy

Non-Multiplexing Pin Design, Driver/Receiver to Pin Ratio 1:1.

- Optimized Nail Placement with 1:1 Ratio Flexibility
- ECNs only require moving few existing wires compared with 2:8/2:9 driver/receiver per pin
- 1:1 Driver/Receiver per pin provide for the fastest test program development and debugging

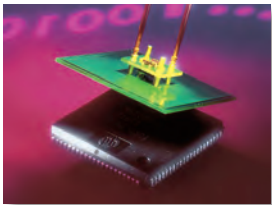
The most flexible ICT+FCT solution in the market. TR5001 INLINE can integrate with external instruments for functional tests such as: PXI, Labview, ....etc.

### Analog Test

- R, L, C Measurement
- 6-Wire Measurement
- Auto-Guarding Feature
- AC Phase Measurement

TRI Enhanced TestJet  
Detects open connections on ICs, connectors and other SMT devices.

Transistor/Diode Measurement



TRI Enhanced TestJet

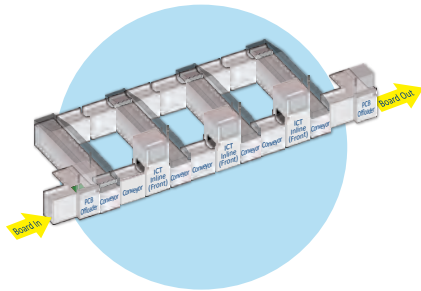
### Digital Test

- Full digital in-circuit test (ICT)
  - Friendly UI
  - On-Board Programming
  - Boundary Scan
- Asset, Corelis and JTAG  
Auto-Generation of test programs
- Frequency Counter
  - LED Testing

TR5001  
INLINE

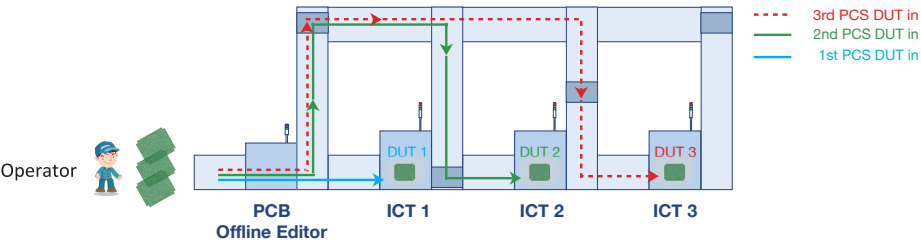
## Inline Fixture Design

- Fast-insertion mechanism
- Conforms to SMEMA standards
- Dual stage press unit
- Fast, easy fixture swap
- Reduced labor costs
- Increased productivity
- Enhanced efficiency
- Automatic test without human interruption
- Test program compatibility with TR5001/TR5001E
- PCBA protection mechanics



## Reference Production Layout

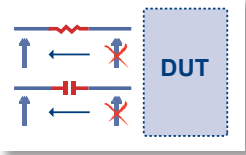
This example production line setup connects 3 ICT systems for higher production rate by inspecting multiple boards at once. When a board arrives at a busy ICT, it is forwarded thru the bypass conveyor to the next available ICT without waiting for the end of the test cycle.



## Limited Access Solution

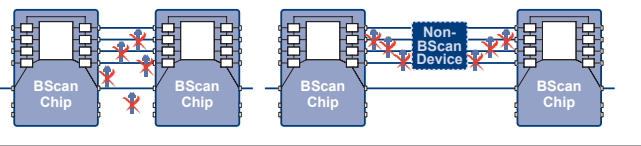
### Drive Through Test

Greatly reduces test probes for passive analog components connected in series with JTAG and BScan capable devices and connectors.



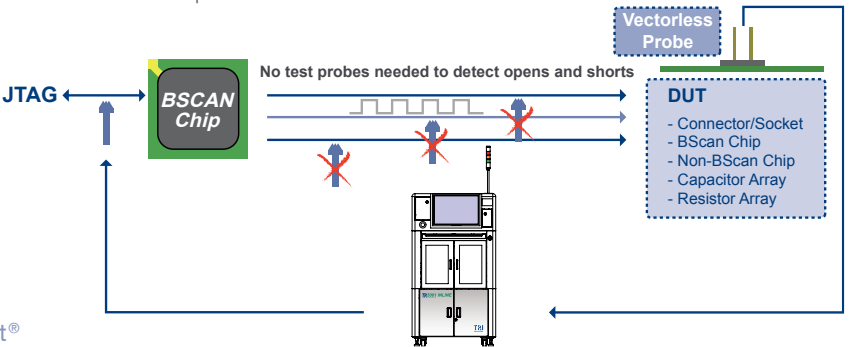
### Boundary Scan Test

Virtual nails tests for RAM, ROM, TTL and TREE devices, and IEEE1149.6 Test.



### TRI ToggleScan® Test

A powerful vectorless test technology that significantly reduces number of test probes, ToggleScan utilizes BScan and vectorless probes to test non-Bscan devices.



### Vreg Test®

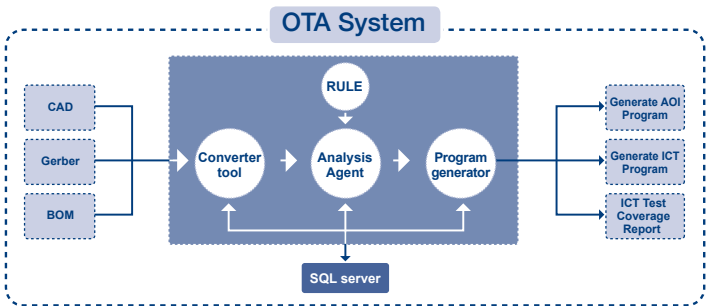
Test PWM circuits without test probes.

### TRI CPU Socket Test

Quickly tests LGA CPU sockets using a specialized vectorless probe in connection with an onboard BSCAN device.

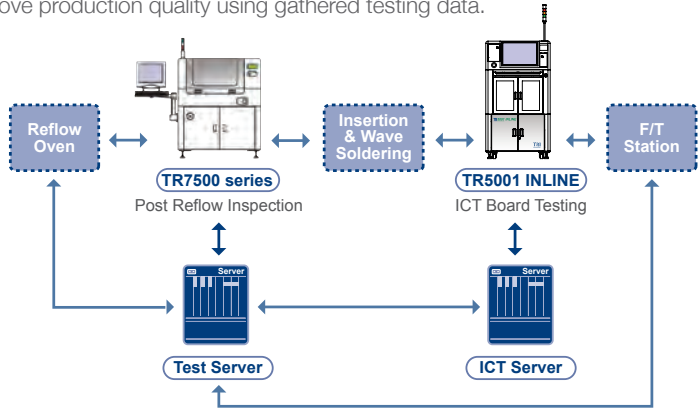
## OTA (Optimal Test Analyzer)

Optimal Test Analyzer helps production test managers achieve full inspection and testing coverage to ensure stable production quality.

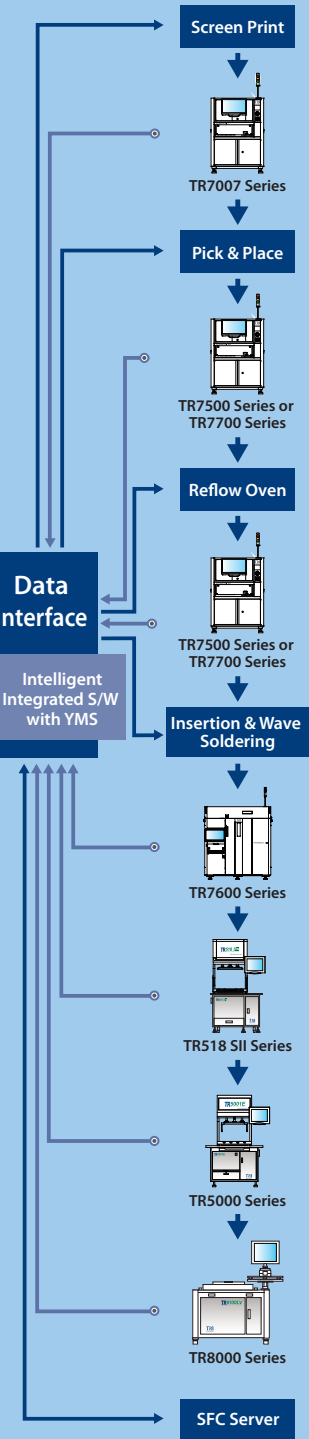


## Shop Floor System Support

TR5001 Inline can integrate with many shop floor systems to help centralize production line management and improve production quality using gathered testing data.



## 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
- \* Optional