

# TR5001E SERIES



- Modular Upgradeable MDA, ICT and FCT System
- High Fault Coverage Test Solution
- Limited Access Solution with BScan Testing
- Friendly UI for Fast and Easy Program Development

IN-CIRCUIT TESTER

# TR5001E FEATURES

## 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. TR5001E 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

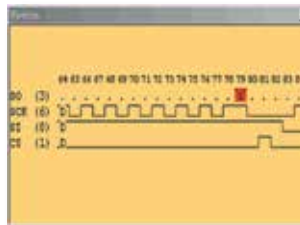


TRI Enhanced TestJet

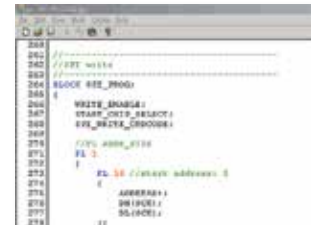
TR5001E

### Digital Test

- Full digital in-circuit test (ICT)
  - Friendly UI
  - On-Board Programming
  - Boundary Scan
- Auto-Generation of test programs



Waveform Display



Color Syntax Program Editor



Board View with Trace Display Capability

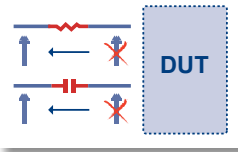


Flash Programming

## Limited Access Solution

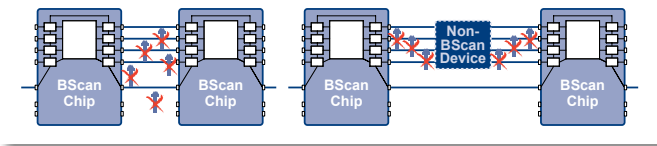
### Drive Through Test

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



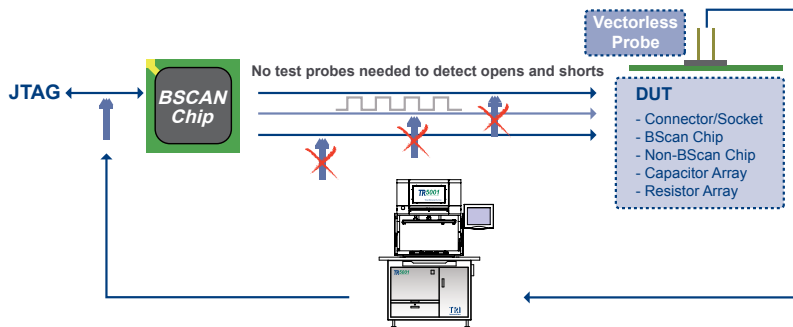
### Boundary Scan Test

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.

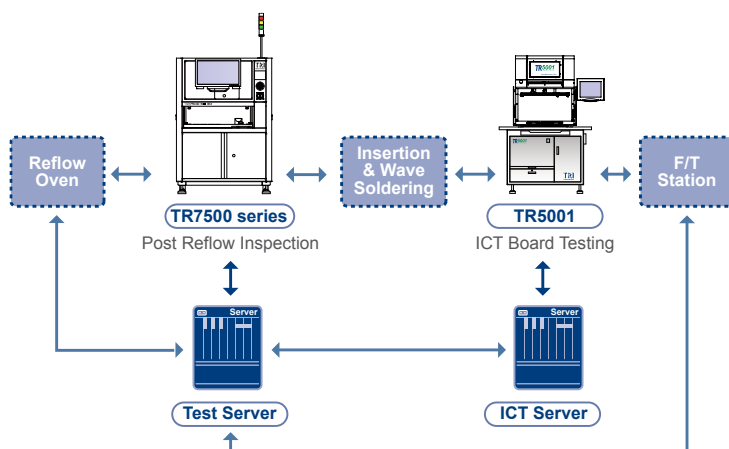


### Dual-Stage Press Unit

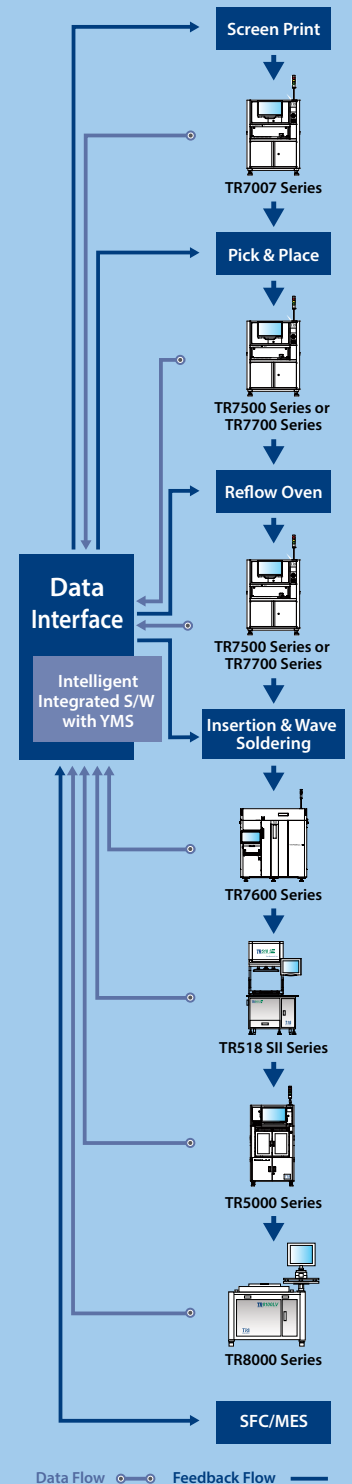
Reduces fixture costs with built-in dual-stage press unit for ICT Functional Test.

### Shop Floor System Support

TR5001E 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

### General

Maximum Analog Test Points	3200 or maximum digital test points: 1600
Operation System	Microsoft® Windows XP, Windows 7 - 10
Power Requirement	200-240 VAC, single phase, 50/60 Hz, 2 kVA
Air Requirement	Dry air 4 - 8 kg/cm <sup>2</sup> , air consumption: 28 liter/cycle
Fixture Type	Press type
Testable PCB Size	
Standard	(W) 420 mm x (D) 300 mm x (H) 100 mm
Option	(W) 500 mm x (D) 350 mm x (H) 130 mm
	Large size PCB can be specially made

### Analog Hardware

Measurement Switching Matrix	6-wire measurement
Programmable Frequency	100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz
Programmable DC Voltage Source	0 - ±10 V, resolution: 6.1 mV
Programmable DC Current Source	0 - 100 mA, resolution: 0.2 mA
Programmable AC Voltage Source	0 - 10 Vpp, resolution: 6.1 mV
Programmable High Voltage Current Source	43 V max, 43 mA max

### Component Measurement Capability

Resistance	0.1 ohm - 40 Mohm
Capacitance	10 pF - 40 mF
Inductance	10 µH - 60 H

### Analog Measurement

AC Voltmeter	0 - 100 Vp
DC Voltmeter	0 - ±100 V, resolution: 2.5 mV - 50 mV
DC Ammeter	1 µA - 100 mA resolution: 30 nA - 30 µA

### Optional Hardware

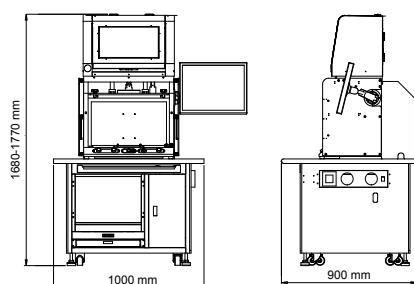
#### Analog Test

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 3.8 V
Pin Receivers	Programmable levels 0 V to 5 V
Pull-up/Pull-down Resistor	4.7 kohm
DUT Power Supplies(Voltage/Max current)	5V/3A, 3.3V/3A, 12V/3A, 18V/3A, -12V/1A, 24V/3A
Programmable DUT Power Supplies (Max Voltage/Max current)	25V/8A, 75V/2.5A
On-board Programming of Flash & EEPROM Memories	
MAC Address Programming	Supports MAC address programming with MAC address being supplied from server
Boundary Scan	Include B-scan Chain Test, B-scan Cluster Test, B-Scan Virtual Nails Test and IEEE1149.6 Test facilities to meet demands of multiple tests
ToggleScan Test	Advanced test technology combining with BScan test function and vectorless test functions to detect the pin open and short defect
Tree Test Facilities with BGA Test	Pattern generator for detection of pin opens for BGA/VLSI chips

### Dimensions/Weight



Unit: mm (in.) Weight: 200 kg (440.92 lbs)

### Powerful Software Environment

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

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