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INTERNATIONAL

*Simplifying Complex Technology*

***ScanINSPECT FPT™***

***(Flying Probe Tester)***

# ***Agenda***

## **COMPANY OVERVIEW**

### **ScanINSPECT FPT (Flying Probe Tester)**

- **Feature/benefits**
- **Applications**
- **Maintenance & Spare Parts**
- **ScanINSPECT FPT I, II, III and IV**
- **Legacy Product Re-Engineering**

## **SUMMARY**



**“Integrating Low Cost, Multi-Purpose  
Vision & Test Systems for the Electronics  
Manufacturing Industry”**

**versus**

**High Cost – Single Function**

# ***Company Overview***

- **Over 900 Systems Installed in 46 Countries**
  - **First Systems Installed in 1987**
- **Company Founded in 1990**
  - **Additional Locations in USA & Italy**
- **Developer of Flatbed Scanner-Based Systems**
  - **PC- Based Systems**
  - **Low Cost, Easy to Use, Flexible Products**
- **Flying Probe Tester Integrator**
- **Products Sold Mainly in Electronics Industry**



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# ***ScanINSPECT FPT™***

**Confirm Net List Data with Flying Probe Tester**



## Flying Probe Tester

**ScanINSPECT FPT is a flying probe electrical tester suitable for fixture-less bare PCBs. It can also be used in combination with a grid tester for fault verification or to test nets exceeding test points of a grid tester.**

# ***Advantages of ScanINSPECT FPT***

- **Verify electrical connectivity on a PCB against net lists generated from data**
- **Suitable for testing small quantities right down to a solitary piece**
- **No need to build test fixture**
  - **no need for expensive auxiliary equipment like drilling machine, fixture design software**
  - **no need to purchase fixture building materials, test pins, drill bits, etc**
  - **no need to expand manpower on assembling fixtures**
  - **no need for fixture storage space**
  - **no waiting time, PCBs can be tested as soon as they are produced**
- **Smaller floor space requirement compared to bed of nail testers**

# ***Examples of suitable FPT applications***

- **Prototype or Sample PCB production**
- **Incoming QA tests**
- **Confirm “golden board” for subsequent bed of nail test**
- **Electrical test of bare boards**
  - **rigid substrates, ceramics and flex circuits**
- **Confirm net list accuracy of Gerber data created from scanned data against actual PCB – Legacy Product Re-Engineering**
- **Combination test with bed of nail tester**

# ***Data Input and Test Results***

- **Input data can be in Gerber RS274D, Gerber RS274X, IPC-D-356A, or Probot-HLS formats.**
- **A log file with test results is generated & stored on the PC.**
- **Fault tickets are sent to built-in printer.**

# ***Maintenance and Support***

- **EASY TO MAINTAIN**
  - Maintenance performed by user
- **SPARE PARTS**
  - Inexpensive and readily available
- **CONSUMABLES**
  - Very few

# *ScanINSPECT FPT I*

- 508 x 620 mm max. test area
- 0.127 mm min. pad size
- 0.2 mm min. pad pitch
- Board thickness from 0.4 to 6.5 mm
- 30V to 250V test voltage
- 30mA to 250mA test current
- 3 $\Omega$  to 80 $\Omega$  continuity resistance
- 22M $\Omega$  to 250M $\Omega$  isolation resistance
- 0.02 mm resolution
- 0.05 mm accuracy
- 2 probes front, 2 probes rear
- >1000 tpm
- 50g to 100g probe force



# *ScanINSPECT FPT II*

- 544 x 404 mm max. test area
- 0.1 mm min. pad size
- 0.18 mm min. pad pitch
- Board thickness from 0.3 to 6.5 mm
- Mechanically driven tension frame
- 30V to 250V test voltage
- 30mA to 250mA test current
- 1 $\Omega$  to 150 $\Omega$  continuity resistance
- 22M $\Omega$  to 250M $\Omega$  isolation resistance
- 0.01 mm resolution
- 0.02 mm accuracy
- 2 probes front, 2 probes rear
- 1200 tpm
- 25g to 50g probe force



# *ScanINSPECT FPT III*

- 544 x 404 mm max. test area
- 0.1 mm min. pad size
- 0.18 mm min. pad pitch
- Board thickness from 0.3 to 6.5 mm
- Tension frame
- 30V to 250V test voltage
- 30mA to 250mA test current
- 1 $\Omega$  to 150 $\Omega$  continuity resistance
- 22M $\Omega$  to 250M $\Omega$  isolation resistance
- 0.01 mm resolution
- 0.02 mm accuracy
- 2 probes front, 2 probes rear
- 1 CCD camera front, 1 CCD camera rear for visual aid
- 1200 tpm
- 20g to 30g probe force



# *ScanINSPECT FPT IV*

- 600 x 508 mm max. test area
- 0.1 mm min. pad size
- 0.175 mm min. pad pitch
- Board thickness from 0.2 to 5.0 mm
- Tension frame
- 30V to 250V test voltage
- 30mA to 200mA test current (adjustable)
- 3 $\Omega$  to 280 $\Omega$  continuity resistance
- 5M $\Omega$  to 250M $\Omega$  isolation resistance
- 0.01 mm resolution
- 0.02 mm accuracy
- 2 probes front, 2 probes rear
- 1 CCD camera front, 1 CCD camera rear for fiducial teaching and recognition
- 3200 tpm
- 5g to 10g probe force



# *Legacy Product Re-Engineering*

## Powerful Legacy Product Re-Engineering System



+



**ScanFAB & ScanPLACE**

**ScanINSPECT FPT**

# ***Why Re-Engineer Legacy Products?***

## **Need Exact Replica of Existing part**

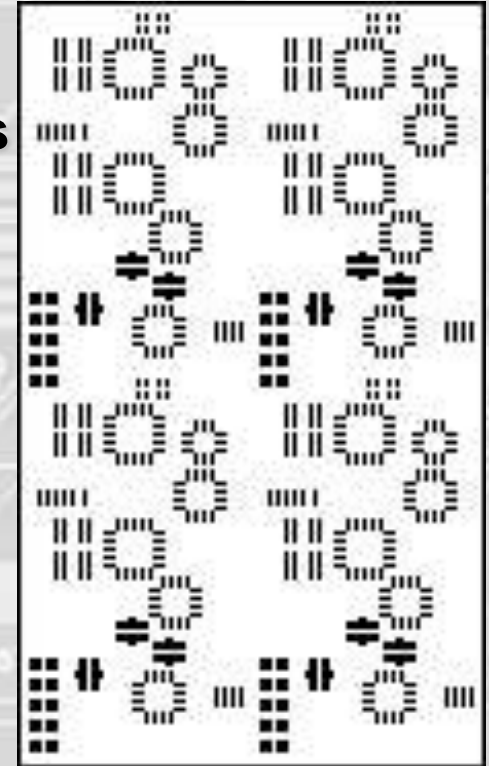
- **Precise Form, Fit and Function**
- **Duplicate original performance characteristics**
  - **Cross talk, RFI, EMI, SI, Delay, etc.**

## **Lower Cost & Save Time**

- **No need to re-certify (UL, CE, FCC, FAA, etc.)**
- **No need to perform environment testing**
- **No need for system testing**
- **No need for expensive complete redesign**

## **Improve on existing part**

- **Miniaturize, Modify and/or improve design**
- **Utilize new components, substrates, etc.**
- **No need for complete redesign**



# ***ScanINSPECT FPT Application Summary***

- **Low cost Electrical Test of PCBs (No test fixture needed)**
- **Fast Test of PCBs (No waiting for fixtures)**
- **Volumes from Production to Prototype**
- **Inbound Q/A**
- **Wide variety of Substrate Support (Rigid, Flex, etc.)**
- **Compliment existing testers**
- **Confirm Legacy Re-Engineering data accuracy**
- **Both continuity and isolation resistance**

# ***ScanINSPECT FPT Systems Summary***

- **Proven** - **150+ Systems Installed in 10+ Countries**
- **Reliable** - **Systems in operation for over 19 years**
- **Economical** - **Low Cost - Quick ROI**
- **Easy to use** - **User Friendly, PC Based**
- **Accurate** - **Calibrated Systems**
- **Flexible** - **Many Inputs**
- **Multi-purpose** - **Prototype, Production, Rigid & Flex**
- **Powerful** - **To 100 micron pad size, 175 micron pad pitch**
- **Environment** - **Minimize Scrap and Rework**
- **Resources** - **100+ FPT staff**
- **Award Winning** - **2004 and 2005 Technology Innovation**
- **Fast** - **Up to 3200 test points per minute**



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