

## About Datest

Datest is the leading provider of integrated test and inspection services for Silicon Valley and beyond, since 1984.

We serve the EMS Provider and OEM Markets with multiple PCBA and subsystem test capabilities, including In-Circuit, Functional, Flying Probe Test, X-Ray Inspection (2D, 3D, and 5DX AXI) and Boundary Scan.

We also provide Value-Added Services:

- ▶ Troubleshooting, diagnosis, debug and rework of failed boards and "bonepiles"
- ▶ Failure analysis, DFM and DFT analysis
- ▶ Certification Training and Consulting
- ▶ Center of Expertise for Goepel Boundary Scan Products and Applications
- ▶ Counterfeit Component Detection

Datest is AS9100C:2008 and ISO9001:2008 certified, as well as ITAR registered.



Winner of the  
2011 Global  
Technology Award



Winner 2011  
and 2012 Circuits  
Assembly Magazine  
NPI Award

47810 Westinghouse Drive  
Fremont, CA 94539

Phone: 510-490-4600

Fax: 510-490-4111

Email: [info@datest.com](mailto:info@datest.com)

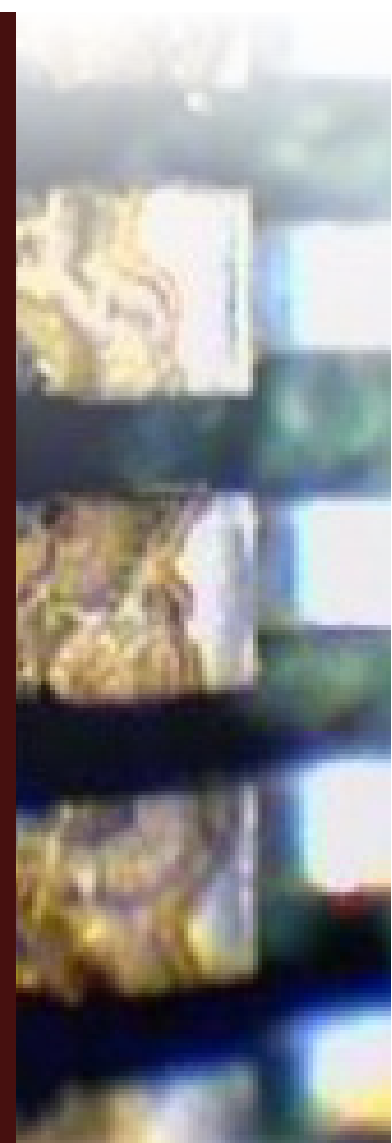
Website: [www.datest.com](http://www.datest.com)



Integrated  
Testing  
Solutions

Counterfeit  
Component  
Identification  
& Detection  
SERVICES

[www.datest.com](http://www.datest.com)



# DEMAND TEST

COUNTERFEIT DETECTION



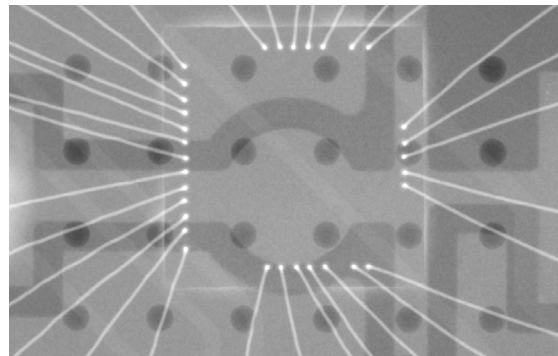
*Country of Origin Typographical Error*

## Applications

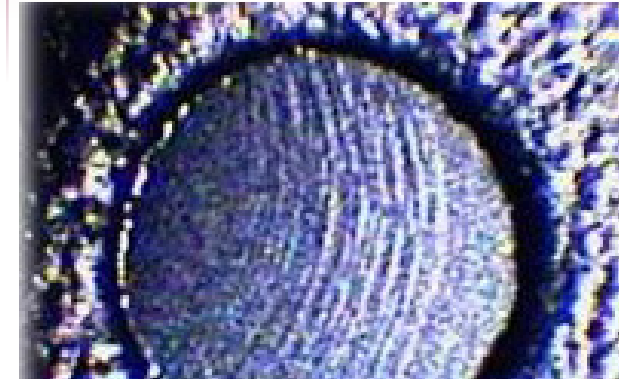
- ▶ Packaging Damage
- ▶ ESD Compliance Violations
- ▶ Falsified or Altered Documentation
- ▶ Part Markings Tampered/Distorted
- ▶ Blacktopping
- ▶ Marking Permanency Tested
- ▶ Pins Bent, Corroded, or Over-sprayed
- ▶ Visible Pull Marks on ICs
- ▶ Mold Pin Cavities Disturbed, Disfigured
- ▶ Bond Wires Altered or Absent
- ▶ Part Die Altered or Absent
- ▶ Flux Residue
- ▶ One-to-One Comparisons (Good vs Suspect Parts)
- ▶ Dimensional Discrepancies to Datasheet
- ▶ Solder Composition or Lead Frame Composition Altered
- ▶ AC/DC Functional Failures

## Tools

- ▶ PRO-STD-001 Counterfeit Component Detection Training
- ▶ Nordson Dage XD7600NT500 Ruby X-Ray Inspection System with X-Plane Software and CT-Scan Capability
- ▶ SPEA 4060 Flying Probe Test System with Goepel CASCON Galaxy Integrated Boundary Scan Capability
- ▶ Microscopes and DMMs
- ▶ Decapsulation subcontracted
- ▶ Agilent 5DX Automated X-Ray Inspection System (AXI)
- ▶ X-Ray Fluorescence (XRF) Subcontracted
- ▶ Solvent Chemical Testing
- ▶ Computerized Scanning Acoustic Microscopy (CSAM) Subcontracted
- ▶ DC Parametric Testing during ICT (Power Up)
- ▶ Vectorless Testing in ICT and Flying Probe to Confirm Internal Device Connectivity
- ▶ JTAG MFG Code, Device ID, and Revision Codes During Boundary Scan Testing
- ▶ Use of Nodal Impedance Testing (NIZT) in Flying Probe to Detect Wrong or Missing Die



*X-Ray image of IC die and bond wires*



*Sanded/Blacktopped*

## Certifications, Standards, and Traceability

- ▶ Datest Employees Trained and Certified to PRO-STD-001
- ▶ Procedures in Accordance with SAE AS 5553
- ▶ Methods in Accordance with SAE AS 6081
- ▶ Process Follows ISO/DIS 12931
- ▶ IC Bond Wire and Ball Bond Analysis per MIL-STD-883H and MIL-STD-750-2
- ▶ All Processes Consistent with Datest's AS9100C-Certified Quality Management System (QMS)