

Modular Automated Test Equipment – PCB Fault Diagnosis



CHALLENGE

Existing testing systems face several challenges, including their black-box nature, which makes interpretation difficult, and the wide variety of PCB functionalities that complicate testing. Conventional ATEs are often non-intuitive, relying on complex terminology, and different test approaches require multiple ATEs. This results in high dependency on external suppliers, limiting efficiency, scalability and ease of use in testing operations.

SOLUTION

- COTS-Based Modular ATE: Flexible, off-the-shelf hardware
- All-in-One Testing Approach: JTAG, Signature, RF, Flying Probe, ICFT, OCFT
- Modular Architecture: Scalable and customizable for diverse PCB types
- User-Friendly Interface: LabVIEW-based software guides fault identification

PLATFORM

- NI PXIe Platform: Reliable, high-performance hardware for advanced testing

KEY BENEFIT	DESCRIPTION
Ease of Use	Software-guided fault detection, minimal training needed
Modular & Scalable	Adapts to various PCB types and test requirements
Reduced Downtime	Quick maintenance with COTS hardware.
Lower OEM Dependency	Minimal reliance on external suppliers.
Comprehensive Testing	Multiple test methods for complete PCB diagnostics.

