

APPLICATION BRIEF

2020

MULTI-MODEL DUT FUNCTIONAL TEST SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to develop and build an EOL Test System to test Pre-Molded Circuit Boards and Post-Molded Final product. The tests were designed to verify specific stages of DUT testing had been completed on the assembly line prior to final molded product testing.

The Test system runs the DUT through tests that verify continuity on the board, digital inputs, digital outputs, analog outputs, and LED color and brightness.

The compact design of the system creates a minimal footprint while being able to test a variety of parts in the fixture using nest interchangeability. This system has the capability to test 4 different styles of product.

Customer Benefit:

Configurable limit files provide the capability to adjust test parameters and tests themselves to allow for a significantly configurable test system.

Application user screens are configurable for multiple language support. This includes prompts, titles, and phrases.

Results are stored for every check performed by the system including test limits, expected values, along with the result of each individual check

System uploads all data to a common remote server when a network connection exists allowing results storage accessibility outside of the test system hardware. If the network connection is disconnected, the system will store results locally until the connection is reestablished and can be uploaded.

LED Analyzer simplifies LED check and reduces test time, operator subjectivity, & operator prompts in the system.



ET Responsibilities:

- ✓ Functional Specification Generation
- ✓ Design / Engineering
- ✓ Fabrication
- ✓ Programming - Software
- ✓ Programming – Firmware
- ✓ Circuit & PCB Design
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support

Technologies:

- ✓ Embedded Computers
- ✓ Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – RS232
- ✓ Ethernet, Modbus
- ✓ System Integration
- ✓ Multi Language Interface

Special Features:

- ✓ Touch-screen monitor.
- ✓ Barcode Scanner
- ✓ RS232 Communication
- ✓ DMM Current measurement.
- ✓ Continuity Test
- ✓ Adjustable Height Fixture
- ✓ Multi Language Screen and Decals
- ✓ Fixture is adjustable to handle different size Product
- ✓ Fixture sensors determine proper setup
- ✓ Screens designed to work best with touchscreens