

# APPLICATION BRIEF

## 2020

### ***RESISTANCE/CONTINUITY ASSEMBLY VERIFICATION TEST SYSTEM***

#### **Brief Description:**

Emerging Technologies, LLC. was called upon to develop a custom test system to automatically make resistance and continuity checks to determine the correct components and correct interconnect of the customer product.

The system is custom designed to make measurements based on a customer configured table based on customer model number. The measurements are systematically taken and verified to the configuration via the customer configured test sequence. Some electrical outputs are used to energize components of the DUT allowing for specific measurement to be made. Results are stored in a delimited text file for later review.

This system was evolved from a design previously provided by Emerging Technologies to the same customer. Custom machining, fabrication, programming, and assembly were employed. Modular components were used where possible to allow flexibility for future modifications. A complete design package including design diagrams, sample system screens, sample configuration files, sample results file, and sample reports was developed for review with the customer prior to fabrication of the system.

#### **Customer Benefit:**

The customer is able to configure the system for specific models of product with specific product options to verify correct electrical assembly of their product. Results are stored for later re-call and report is printed for record.



#### **ET Responsibilities:**

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

#### **Technologies:**

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – Ethernet
- ✓ System Integration
- Other

#### **Special Features:**

- ✓ Configurable Test Specification File
- ✓ Test Results Storage
- ✓ Mobile Enclosure
- ✓ Operator Friendly Design
- ✓ Kelvin Based Resistance Measurements