Emerging Technologies

ENHANCED TEST SYSTEM

Brief Description:

Emerging Technologies, LLC. was called upon to design and build an automated test system based on a combination of previous designs.

Emerging Technologies, LLC. developed an updated system that operates similarly to the existing systems. The new system required modification to the existing test application to provide second language support and the ability to use the latest device drivers. Additionally, the test application was updated to be backward compatible for re-deployment on existing systems in the plant. Hardware updates included the replacement of the existing AC Power Source with an alternate manufacture to save cost and provide alternate replacement hardware. The existing I/O card was replaced with the newer design. The existing custom communication interface was updated with a new PCB layout and connector interface.

The new system tests functionality of the DUT based on ordered options, performs break in procedures, and stores test results. Operator selectable automated or manual testing can be performed.

The design package included bill of material, mechanical diagrams, electrical diagrams, and updated LabView 8.5.1 application software.

Customer Benefit:

The customer benefits from new technology and methods, while maintaining the look and feel of existing systems, to perform testing and breaking-in on built to order products. Additionally, the application software (with the addition of some hardware) could be re-deployed on existing plant systems to take advantage of the latest enhancements.

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 – serial
- System Integration
- Other

Special Features:
- ✓ Dual Language Support.
- ✓ Improved DUT Communication Interface.
- ✓ Alternate AC Power Source Capability.
- ✓ Custom Over-head Cable Management Rack.
- ✓ Modular Cable Interface to DUT.
- ✓ Hand-held Barcode Scanner.
- ✓ First Pass Yield Tracking.
- ✓ Manual Testing Capability for Troubleshooting.
- ✓ Modular Test by Product Model and Options.
- ✓ Rack-mounted Industrial PC, Power Supplies, and Instruments.

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