AUTOMATED PUMP AND COMPRESSOR TEST SYSTEM

Emerging Technologies, LLC. was called upon to develop a custom Pump and Compressor Test system based on an existing design. The requirements for the new system included starting from the base design of existing systems previously provided by Emerging Technologies while incorporating features of multiple systems into one new system as well as including some new features.

The new system incorporated all of the base features including monitor and acquisition and monitoring of pressure, pressure loop flow, vacuum, vacuum loop flow, RPM, volts, amps, watts, and up to ten temperature probes to name a few. Additions to the base design included motor speed reference signal, automatic backpressure control, automated test sequencing, and upgraded accuracy via use of digital instruments, among others. Configuration is read at application startup and results are stored in a delimited text file for later review.

In addition to the functional upgrades, the system was split into a two enclosure arrangement allowing for the heavy equipment to reside under the work bench and the now smaller DUT interconnect enclosure to sit on the work bench surface for easy interconnect of the DUT.

Customer Benefit:
The customer is able to enjoy the additional functionality along with a similar look and feel as the existing systems already in use for many years. The upgraded LabView based test application was re-engineered to be backward compatible with the existing systems allowing the older systems to run either the existing test application or take advantages of updates from the updated test application. The system auto-detects the hardware present and enables and disables features based on the system hardware present.

ET RESPONSIBILITIES:
Functional Specification Generation
✓ Design/Engineering
✓ Fabrication
✓ Programming – Software
Programming – Firmware
Field Installation
✓ On-Site Commissioning
✓ Post Commissioning Support

TECHNOLOGIES:
Embedded Computers
Microcontrollers
✓ Visual Software
✓ Control Software
✓ Data Acquisition
✓ Computer Based Control
✓ Communications – RS232 & RS485
✓ System Integration

SPECIAL FEATURES:
✓ Configurable System Hardware & Calibration Files
✓ Test Results Storage and Reporting
✓ Automated Configurable Test Sequences
✓ Legacy System Software Support
✓ Operator Friendly Design
✓ Extended Warranty Support Contract