Emerging Technologies

PROGRAMMING FIXTURE

Brief Description:

Emerging Technologies, LLC was called upon to develop a programming fixture for a SIM card enabled product. This is a high volume product so the programming fixture needed to be durable and have replaceable components. An existing system was in place and failing due to the high volume of DUTs programmed daily.

The system required flexibility to program multiple variations of product and allow for rapid loading and unloading.

This system is designed around the Emerging Technologies, half size, Standard Fixture, previously designed and deployed by Emerging Technologies, LLC.
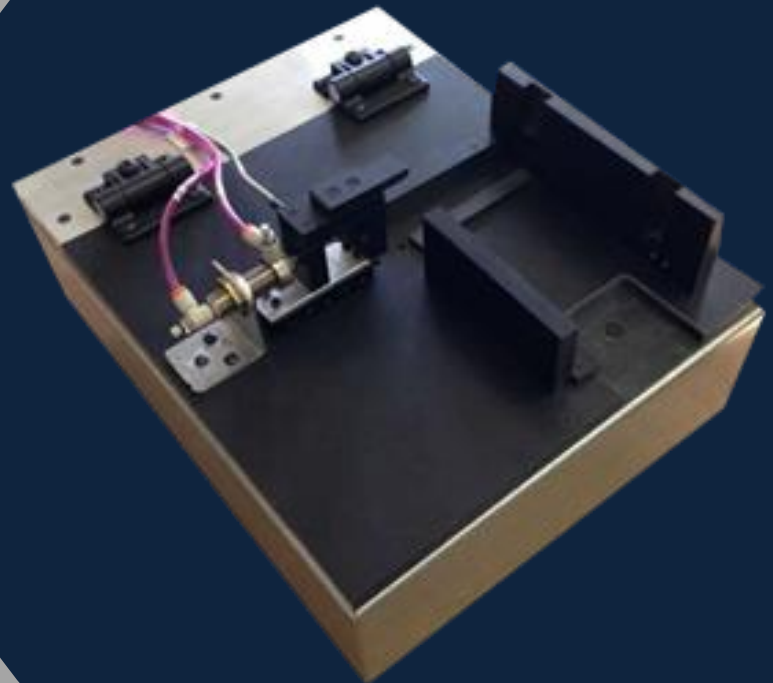
The customer provided their existing programming circuit, current version of custom Visual Basic Test Application, and PC. Emerging Technologies developed a new fixture design using an auto clamping mechanism with replaceable product interface spring probes. The components were integrated with the existing software to provide the new and improved programming system.

Customer Benefit:

The design is easily duplicated for the manufacture of additional systems to keep up with growing throughput requirements of the product. The half sized standard fixture is highly portable and allows for easy transport.

By using spring probes and a pneumatic actuator, the product can be inserted and automatically programmed while the operator is preparing another DUT for programming and packaging the previously completed unit.

The automatic actuation reduces operator fatigue. Given the high volume of product being programmed, operators were becoming fatigued by the repetitive motion of loading, engaging, and unloading product.

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 - Pneumatics

Special Features:
- ✓ Automated Clamping and Programming w/Verification.
- ✓ Portable Fixture with Internal Device Mounting Area.
- ✓ Works with Multiple Product Styles.
- ✓ Designed for Easy Duplication.