

GPS Controller Functional Tester

Project Overview

- Fully automated functional test
- GPS controller for automotive applications
- Collaborative test strategy development
- 12 week development and delivery
- Multiple systems installed and supported in China and North America



Test Performance Details

- CAN communications
- Battery monitor
- Watchdog circuit
- GPS Radio
 - ▶ Teseo GPS chipset
 - ▶ Phase and frequency error
 - ▶ NI Vector Signal Generator
- USB Port
 - ▶ File transfer
 - ▶ Host power
 - ▶ Current draw
- Stereo audio
 - ▶ Gain, frequency, amplitude
 - ▶ SINAD (signal power, noise, and distortion)
 - ▶ Amplifier frequency response 200Hz - 8KHz
 - ▶ CODEC (encode/decode)
- Bluetooth
 - ▶ TX/RX power, center frequency
 - ▶ PSKEY
 - ▶ BT Address management
 - ▶ Stored build and test date
- Automated Data Logging



Circuit Check, Inc.

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Engineering Services

GPS Controller Programming Station

Project Overview

- Fully automated programming station
- Collaborative strategy development
- 10 week development and delivery
- Instalations in France, China and North America



System Performance Details

- JTAG programming
- Product short circuit protection
- Automated bar code scanning
- High speed transfer of large flash images via Ethernet/NFS server interface
- Multiple parts programmed on each product
- Multithreading allows parallel programming and increased throughput
- Programming Stats
 - ▶ 4 products per panel
 - ▶ 3 flash images per product; 80Mbytes
 - ▶ 3 minute cycle time per panel
 - ▶ 1 product every 15 seconds
- Automated Data Logging



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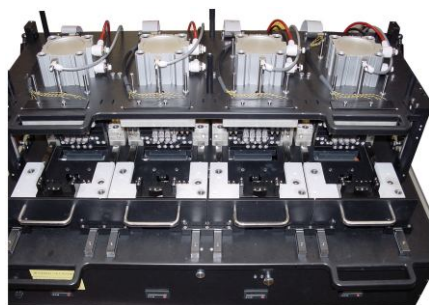
Engineering Services

High Volume Power Meter Tester

Project Overview

- High volume fully automated programming and functional test station
- Delivery plan integrated with customer's NPI schedule

Pneumatic drawer style test fixtures to decrease test time



Test stand and fixtures to test four parts at a time

Test Performance Details

- Infrared communications
- Digital I/O
- Firmware load and verification
- Clock frequency
- Magnetic switch actuation
- Supercap charge/discharge
- Power supply voltage and current
- Low line voltage detection
- LabWindows/CVI software
- Interchangeable Signature Series fixture
 - ▶ Supports multiple product families
- Drop In product interface
 - ▶ Supports multiple products
 - ▶ Rapid changeover
- Four position multi threading
 - ▶ Independent parallel testing
 - ▶ Shared instruments
 - ▶ Increased throughput



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Engineering Services

Custom Digital Chip Tester

Project Overview

- High volume custom chip tester/programmer
- Fully-automated with robotic chip & tray handling
- Programs and verifies IBM-technology eFuses
- User-maintainable VB.NET test executive



Test Performance Details

- Runs ATPG STIL-format scan chain test programs
- Executes 6×10^8 -bit tests with hard compare in 240ms
- Offers 280 channels of I/O at 50MHz
- HSDIO-to-DUT pin soft-mapped with Virtex-5 FPGA
- Simultaneous support of four logic voltages
- Laser-marks tested chips with 2D barcodes & logos