

Test System Engineering

From concept to production, your global partner for functional test systems, test fixtures, and test engineering.

Circuit Check's Test System Engineering team provides full turn-key automated test solutions. Our Test System Engineering value stream includes design for testability (DFT) consulting, requirements / specification development, test system design/fabrication/integration, installation, startup support, and sustaining services. Our experienced project managers, engineers, and technical staff work directly with you to ensure all of your testing needs are solved.



Industries Served:

- Automotive
- Military & Aerospace
- Medical
- Industrial
- Computer Networking

Flexible solutions specific to your design verification and manufacturing test needs

Turn-Key Production Test & Design Verification Test

Circuit Check designs, builds, and globally delivers industry-standard and custom test systems. Circuit Check test systems deliver value to customers who need to verify product functionality against production test metrics during the build stage. In addition, we help our customers prove their designs before going to production. Our expertise includes thermal shock, vibration, humidity/temperature, HALT and HASS testing solutions. We architect each test solution to deliver full functional, parametric testing of your product with scalability to handle any volume product build.



Circuit Check understands the needs for test platforms that must operate in production test environments while preserving measurement correlation for verification and validation. Circuit Check test systems are designed and built to accelerate production release schedules. Since our systems are platform based, they are easier to scale to address needed applications.

Circuit Check Overview

- **Over 40 years of Designing & Manufacturing Electronic Test Solutions**
- **Unparalleled Quality**
- **Experienced Test Engineers**
- **Global Support**



Circuit Check testing solutions include

- Friendly configuration and management
- High performance measurement technology based on PC, VXI, and PXI architectures
- Flexible platform designs to minimize system change costs
- Parallel testing methods
- DC-to-RF, optical and high density switching communications
- Wide array of communications protocols High power DC and AC source loads
- Minimized system footprint to maximize floor space
- Platform-based architecture that can be configured and customized to match the application needs and process requirements
- Support testing multiple generations of products with drop in test fixtures



Build to Print

Circuit Check is a proven supplier who is established as a key outsource partner to a wide range of manufacturers and OEM's across many industries. Equipment manufacture and assembly can be a drain on both capital and staff resources. Selecting a build-to-print partner that can quickly and cost-effectively take on all or part of your test system assembly requirements is often an effective option.

Drawing on extensive technical and production experience Circuit Check delivers services of the highest standard, achieving cost reductions, improving quality and enabling you to meet shorter delivery schedules.



Our Disciplined Approach

Plan the Design

Intended Use Specification: Defines high level system intended uses and also reflects any customer imposed implementation requirements including; safety, ergonomics, agency requirements, corporate build guidelines, data logging, and deployment environmental parameters.

Test Requirements Specification: Defines detailed test requirements for a single product part number. The TRS defines the testing sequence, methods, measurement limits, and other similar requirements.

Design Plan: Establishes the design concept for the test system including instrumentation, fixture interface, and system footprint.

Design & Build

Independent Design Review Process Ensures Quality and Design Conformance

- Requirements Review
- Design Outputs Review
- Layout Review
- Code Review

Validate & Verify

Validation: Confirmation that Intended Uses have been accomplished

Verification: Confirmation that Test Requirements have been satisfied

Test System Engineering Expertise

Certified Project Management

- Dedicated project managers
- Corporate-wide ERP
- Time, cost and risk management

Factory Line Automation

- Indexed, rotary tables
- Palletized systems
- Lean cell manufacturing

Industry Standards

- CE, UL, CSA, and ISO compliant
- ITAR, IEC, IEEE
- IPC-A-610 (cable assembly standard)
- IPC-A-620 (PCB assembly standard)

Test Systems

- Model and design – CAD, documentation
- Electrical – wiring, labeling
- Mechanical – pneumatics, shielding

Test Fixturing

- SolidWorks® modeling
- Complete machining centers on-site
- Quick-change fixtures and adapters

Test Software

- LabVIEW®, LabWindows/CVI, TestStand®
- C/C++, .NET, C#
- Python
- CCITest, CIMTest



Customized Solutions

Our fully integrated test engineering value stream includes PCB and functional product test expertise, integrated world class software engineering, machining, drilling and fabrication facilities. A dedicated project management process ensures continual communication with you through the design, build, verification, acceptance and life-cycle management stages.

Test Systems

- High/Low Volume Production
- Validation System
- Bench-Top Programmers
- Repair/Depot
- Measurement Automation

Products

- Complete Functional Test Systems
- In-Line Automation
- Functional Test Fixturing
- Test System Analytics Software
- In-Circuit Test Fixturing
- Self-Test Fixturing and Software

Services

- Turn-Key Test System Design
- Build-to-Print Test System Build
- Specification Development
- Sustaining Engineering
- PCB Finite Element Analysis
- Fixture-to-PCB Strain Gauge Analysis

Platforms

- Benchtop & Benchtop with Drop In
- Standalone
- Line Automation Equipment
- Custom programming Stations



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