

# **Test System Development**

At Impact ES, testing isn't just a checkpoint—it's a cornerstone of quality. Our customers rely on us to verify performance, uncover issues before they become costly, and deliver the confidence their products will work as intended in the most demanding environments.

## **End-to-End Testing You Can Trust**

With decades of combined engineering expertise and full in-house manufacturing capabilities, we provide end-to-end testing that scales from prototype to production. From aerospace and medical to defense and industrial markets, companies trust Impact ES to safeguard product integrity and ensure every system meets real-world performance standards.



# **Testing Capabilities**

## Reliability & Environmental Validation

- · Verifies durability before power-on
- Methods: X-ray, AOI, solder paste inspection, vibration, thermal/ESS
- Ensures boards withstand real-world stress and maintain long-term reliability

#### **Flying Probe Testing**

- Non-powered structural tests: shorts/opens, passive/active component values, polarity, unsoldered pins
- Ideal for low-to-medium volumes or boards without dedicated test points
- Flexible entry-level validation without requiring custom fixtures

### **Simple Programmers**

- Cost-effective for low-complexity or small PCBAs
- Supports firmware loading, debug access, and manual functional checks
- Useful in both development and basic end-ofline programming

#### Custom Test Fixtures (Bed-of-Nails)

- Full test coverage with spring-loaded probes
- Capabilities: voltage/current measurement, protocol communication (SPI, I2C, USB, Ethernet, etc.), programming & logging
- Controlled by PC applications (C# or LabVIEW) for data traceability, network logging, and scalable automation
- Best suited for higher volumes requiring repeatability & throughput

## **System Testers**

- Validates multiple boards working together as a system
- Performs functional checks, calibration, and integration testing



## **About Us**

We are a multi-site contract manufacturer and engineering partner. We combine design engineering expertise with full manufacturing capabilities, enabling customers to streamline development and production under one roof.

#### **Industries**



**Aerospace** 



**Medical & Life Science** 



**Autonomous & Robotics** 



Space



Military & Defense



**Commercial & Industrial** 

# Why Choose Impact for Testing

#### **Integrated Teams**

Design and test engineers work seamlessly across sites to ensure efficiency and accuracy.

### **Proven Cost Savings**

Smarter testing strategies reduce scrap, rework, and delays.

#### **Scalable Solutions**

From early prototype validation through high-volume production.

## **Multi-Site Strength**

Testing integrated with engineering, PCBA assembly, cable/fiber optics, and box-build capabilities.

# **Certifications**









### **Contact Us**

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#### Locations

- · Clearwater, Florida
- Cranston, Rhode Island
- Grants Pass, Oregon
- Vancouver, Washington
- Ventura, California

