



Electronics Engineering

From Concept to Production-Ready Electronics

Impact ES develops reliable electronic systems for medical, industrial, aerospace, defense, and commercial applications. Our team supports the entire product lifecycle—from requirements and architecture through verification, regulatory support, and manufacturing transition.

Whether developing a wearable sensor operating on microamps of current or a high-voltage therapeutic system delivering kilovolt-level pulses, we create electronics engineered for performance, reliability, and manufacturability.

End-to-End Electronics Development

System Architecture & Design

- Requirements analysis and feasibility studies
- Electronic system architecture
- Component selection and risk assessment
- Design for manufacturability (DFM)
- Design for testability (DFT)

Hardware Development

- Schematic capture
- PCB layout and stackup development (HDI, BGAs, high speed controlled impedance)
- Prototype bring-up and debugging
- Verification testing
- Sustaining engineering support

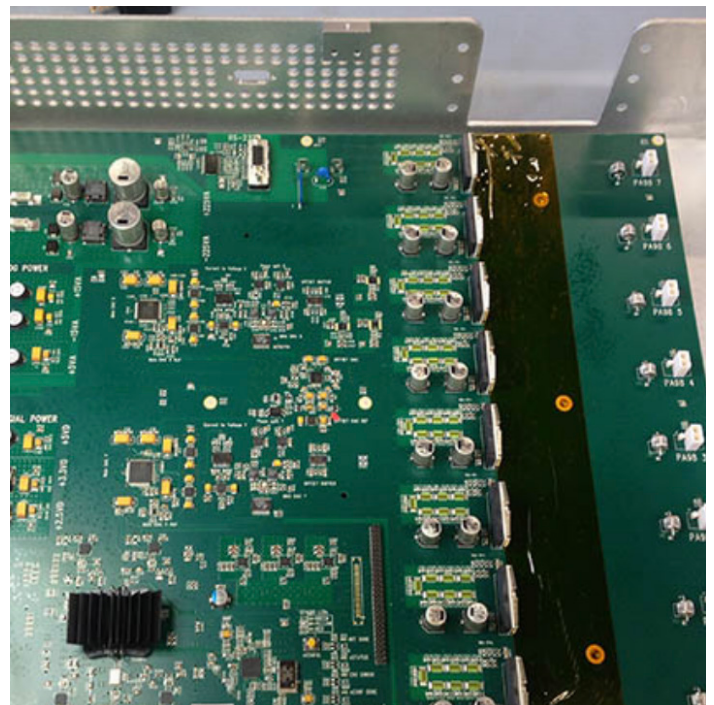
Core Technical Expertise

Analog & Mixed-Signal Systems

- Sensitive signal acquisition
- ECG, EEG, and biomedical sensing
- Precision measurement systems
- Sensor integration and conditioning

Digital & Embedded Electronics

- Microcontrollers and SoCs
- FPGA development and integration
- High-speed digital interfaces
- DDR memory systems
- PCIe and complex digital architectures



Power & Isolation

- Battery-powered devices
- Ultra-low-power electronics
- Medical isolation systems
- High-voltage and pulsed-energy applications

Connectivity & Wireless

- Bluetooth Low Energy (BLE)
- Wi-Fi
- RFID / NFC
- Cellular and IoT-connected devices

Verification & Problem Solving

- Design verification testing
- EMC/EMI troubleshooting
- Root cause analysis
- Failure investigations
- Product redesigns and obsolescence support
- Sustaining engineering

Reliability & Risk Engineering

We design products for long-term reliability and predictable field performance by identifying and mitigating risk early in development.

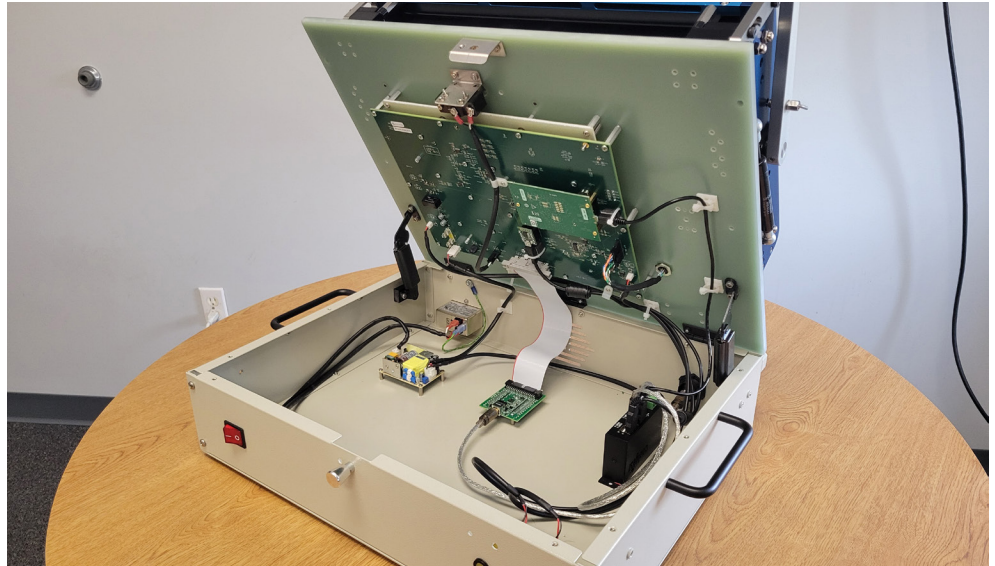
- Component stress and derating analysis
- Worst-case tolerance analysis
- Power and thermal margin assessment
- Failure mode and risk evaluation
- Design reviews and design verification support
- Reliability-focused design decisions

Compliance & Product Realization

- IEC 60601 medical electrical systems
- EMC/EMI design and troubleshooting
- Regulatory test support
- Risk-managed development processes
- ISO 13485 quality system support
- Manufacturing transfer assistance

Industries Served

- Medical & Life Sciences
- Aerospace
- Defense
- Industrial
- Connected Devices & IoT

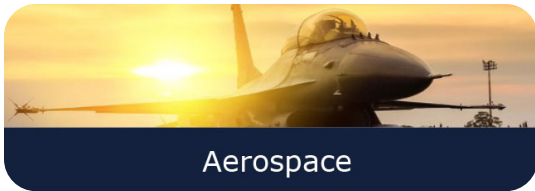


Why Impact ES?

Decades of Experience

Our engineers have been designing complicated electronics, fiber optics, and software-based devices for nearly three decades. Our expertise allows us to ensure seamless integration across both disciplines. From challenging analog electronic designs to cloud-based data access and reporting, we will provide outstanding solutions appropriate for your application.

Tailoring solutions to meet our client's requirements, we offer both design-only and manufacturing-only services, as well as versatile combinations of the two to address diverse needs.



Aerospace



Autonomous & Robotics



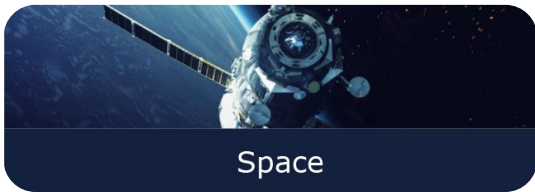
Commercial & Industrial



Medical & Life Sciences



Military & Defense



Space

Industries We Serve

At Impact Electronic Solutions, we offer cutting-edge prototype and full-turnkey production services, providing unparalleled innovation and seamless solutions to meet your needs.

Our expertise spans highly regulated and mission-critical environments. We deliver complex electronic, fiber optic, and electromechanical products with exceptional quality and reliability. From product development to full-scale manufacturing, we prioritize customer-centric solutions and support groundbreaking innovations.

With extensive experience, we ensure success across diverse industries by consistently meeting rigorous standards and exceeding expectations.

About Us

We are a dynamic team dedicated to delivering innovative electronic design and manufacturing services that consistently outperform industry standards.

Our headquarters are in the Pacific Northwest, and the Impact ES network spans five key locations across the U.S.:

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

Our facilities have been recognized for excellence by numerous corporations, organizations, and publications, showcasing our commitment to quality, precision, and customer satisfaction nationwide.

Fiber Optic Cables and Assemblies Certifications



We design and build products that matter.

Contact Us

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