9 Light Square
Adelaide, SA 5000

Electronics Design Engineer

Location: Adelaide, Australia (On-Site)
Employment Type: Full-time
Department: Engineering

About Paladin Space

At Paladin Space, we are pioneering the world's first reusable space debris removal system – creating technology that safeguards Low Earth Orbit and enables a sustainable future in space as the industry grows. Our mission is to clean, reuse, and protect the near-Earth environment for customers across the commercial, defence and government industries.

Our team core values include tenacity, curiosity, and creativity – which are especially important when we're tackling the hardest problems in space. We enjoy building new technology by designing, assembling, testing, failing, iterating and succeeding at a rapid pace, while having fun along the way. As a result, we also value proactivity and efficiency, executing our mission with purpose and precision. And above all, we believe in synergy: collaboration across every technical, legal, and business domains to deliver impact that extends beyond Earth.

If you want to apply your technical expertise to one of the most meaningful challenges in the space industry (and see your electronics drive real spacecraft in orbit) this is your opportunity to make a lasting impact.

Job Overview

We are seeking an experienced Senior Electronics Design Engineer to lead the design, development, and testing of Paladin's spacecraft electronics systems. This role spans the full electronics lifecycle – from concept and schematic capture to PCB design, firmware development, and hardware validation for flight and ground systems.

As a senior member of the engineering team, you will take ownership of critical electronic subsystems that enable spacecraft actuation, sensing, power, and communication. You'll work closely with mechanical, software, and systems engineers to integrate robust, efficient, and flight-ready electronics that perform flawlessly in orbit.

This position is ideal for a hands-on, systems-minded engineer who is as comfortable debugging firmware as they are laying out a complex PCB or developing test infrastructure. You'll combine deep technical expertise with strategic insight – helping define Paladin's electronic architecture and mentoring junior engineers as we scale our technology.

As a growing startup, Paladin Space offers a modest base salary with participation in our Employee Share Scheme, providing long-term value as the company grows

Key Responsibilities

- Lead the design and development of embedded electronic systems for spacecraft subsystems, including control, sensing, power distribution, and communications.
- Own PCB design, from schematic capture and component selection to layout, fabrication, and bring-up.
- Develop and maintain firmware for microcontrollers, embedded systems, and actuation/sensor interfaces (C/C++ or similar).
- Implement and optimise hardware-in-the-loop (HIL) and system-level testing frameworks.
- Conduct design reviews, signal integrity, and power analysis to ensure reliability under space conditions.
- Work hands-on in integration and validation, debugging mixed-signal circuits and refining designs through iterative testing.
- Support environmental qualification (vibration, thermal, vacuum) and radiation-tolerant design approaches.
- Document all aspects of design and testing, maintaining rigorous traceability and configuration control.
- Collaborate closely with mechanical, software, and systems teams to ensure cohesive spacecraft architecture.
- Mentor junior engineers and contribute to continuous improvement of design, testing, and development processes.

Required Skills & Experience

- Bachelor's or Master's degree in Electronics, Electrical, Mechatronics, or Aerospace Engineering, or a related field.
- 2+ years of professional experience designing and testing embedded electronic systems.
- Proven experience in PCB design (Altium Designer, KiCad, or similar), including multilayer, high-speed, and mixed-signal boards.
- Familiarity with CAN, RS-422, SPI, I2C, or custom communication protocols
- Strong proficiency in embedded firmware development (C/C++, RTOS, or similar environments).
- Solid understanding of analog and digital circuit design, including filtering, ADC/DACs, and motor or sensor interfacing.

- Experience with power systems (battery management, or low-noise design).
- Strong skills in hardware testing, validation, and troubleshooting with oscilloscopes, logic analysers, and other test tools.
- Experience in hardware reliability design for harsh environments (e.g. thermal, vibration, radiation).
- Excellent communication and documentation skills, with a focus on clarity, consistency, and accountability.
- Demonstrated leadership and mentoring experience, with a proactive and collaborative mindset aligned to startup dynamics.

Bonus Skills (Highly Valued)

- Experience with space-qualified components, radiation analysis, or aerospace standards (ECSS, NASA, IPC).
- Familiarity with STM32 (and STM32Cube IDE) for embedded firmware development.
- Knowledge of Python or MATLAB for automation, test scripting, or data analysis.
- Experience with hardware-in-the-loop (HIL) simulation or test automation frameworks.
- Understanding of EMC/EMI design practices and compliance testing.
- Exposure to FPGA development (Verilog, VHDL) or soft-core processing environments.

Why Join Paladin Space

At Paladin Space, you'll be building the technology that keeps orbit sustainable. You'll have end-to-end ownership of your designs and the rare opportunity to see your work launched, operated, and reused in orbit.

We're a small, ambitious, and tightly knit team that values action, openness, and curiosity. We encourage creative problem-solving, rigorous engineering, and cross-disciplinary collaboration. Your work won't just contribute to a spacecraft – it will help define a new industry standard for sustainable operations in space.

If you're ready to build hardware that matters and want to be part of a team that moves fast, dreams big, and executes with precision – we would love to hear from you.