**Principal Electrical Engineer**

at Overair, Inc.

Santa Ana, CA

**Company Overview**:

At Overair, we are dedicated to bring next generation sustainable air transportation to everyone.  Our answer is Butterfly, an all-electric vertical takeoff and landing (VTOL) aircraft designed to safely and affordably carry passengers over traffic and congestion.  Butterfly leverages over two decades of VTOL aircraft development, patented VTOL technology, and flight vehicle experience.

Overair believes in the lofty goals of sustainable air mobility and we are committed to solving the hard challenges along the way.  We are building an industry leading team covering an expanse of skills, talents, and expertise in order to build a superior electric VTOL aircraft.  If you enjoy solving difficult problems, and seeing your ideas and visions expressed in flying aircraft, we want you on our team.

**Job Overview**:

Overair is seeking a talented Principal electrical engineer to lead our hardware design, development, and test of electrical LRU products for an all-electric EVTOL aircraft. The ideal candidate will be proficient in all aspects of electrical engineering as it pertains to an electric aircraft and work both as an individual contributor and team lead.

This engineer will work closely with mechanical, software, and other engineering teams to provide complete solutions. The candidate has experience in developing and supporting electronics and complex systems though the design lifecycle: from bench-level prototypes to deployed flight hardware. This role requires the candidate to thrive in a high paced environment and be comfortable with new, broad, and minimally defined engineering problems typical of research and development.

**Roles and Responsibilities:**

* Manage day-to-day work and performance of Electrical HW design team
* Participates in the electrical design, development, and test/qualification activities of state of the art embedded digital and power electronics circuits
* Coordinate and monitor tasking amongst the team.  Participates in collaborative engineering activities with the Mechanical, Software, and Systems engineering teams.
* Conduct comprehensive electrical design reviews to ensure design parameters, product performance, and manufacturability requirements are met
* Collaborate with Systems Engineering to write technical requirements and specifications for associated electrical LRU products.
* Participate with the Systems Safety group in FMEA/FMECA's
* Define test and validation plans for hardware.

**Required Qualifications:**

* B.S. in electrical engineering or related discipline with 10 yrs of relevant experience or an advanced degree and 8 yrs of experience
* 5 years experience leading electrical/HW engineering project teams
* Advanced understanding of EE fundamentals, including:
  + Power conversion (linear and switching regulators)
  + High-speed digital design and layout
  + Power electronics (brushless motor control and DC-DC conversion)
  + Signal conditioning and conversion (ADCs, filters)
  + Discrete semiconductor design (FETs, BJTs, diodes)
  + Digital communication (I2C, SPI, RS422, Ethernet)
* Experience in avionics/aircraft electronic LRU design, development, DO-160 qualification and documentation
* Schematic capture, PCB design (Altium), and component selection
* Experience design for manufacture both for PCBAs and top level assemblies
* Hands-on experience with board bring-up and debugging electronics hardware including use of test equipment like Oscilloscopes, Logic & Spectrum Analyzers, Debuggers, etc.

Leadership & Management skills:

* Ability to multitask in an environment requirement a high level of detail and accuracy, work independently and take ownership of all assigned tasks
* Ability to work in a multicultural team with varied degrees of experience
* Ability to track and follow-up on open issues and action items
* Self-starter with the ability to work through ambiguity and evolving requirements
* Excellent written and communication skills, effectively managing projects and working with cross-functional teams
* Capable of presenting information to peers and managers

**Desired Qualifications:**

* High voltage electrical design (400V+)
* Experience with DO-254, DO-178, and other relevant certification standards
* Reliability analysis and evaluation, including use of FMEA, FMECA
* Experience with designing for HIRF, EMI, EMC
* Thermal modeling and cooling implementation of electrical LRU's
* Expertise with embedded programming on microcontrollers