

Embedded Hardware Design Engineer

About the Position

The successful engineer at DE Design Works enjoys working in a casual collaborative team environment with other engineers and customers on a variety of product development projects which typically include custom hardware and software, wired and wireless communications technologies, control systems, and user interfaces. The team member is comfortable working independently and collaboratively on multiple projects, balancing priorities, designing complex analog, power, and high-speed digital circuits, and strives for continuous learning. The embedded hardware designer will define architecture, generate schematics, layout complicated printed circuit board assemblies and be skilled at troubleshooting. This is a great opportunity to work with the latest technology and a world class team bringing products to life. This position offers a unique experience of work-life flexibility and balance through virtual collaboration and residence at our Chesterfield, MO offices R&D design lab in St. Louis.

About the Company

DE Design Works is an engineering services firm specializing in napkin sketch to production product development with core competency in embedded firmware, application software development, printed circuit board (PCBA) hardware design, quick turn prototyping, pre-certification testing for scaling the manufacturing of electronic assemblies to volume production. DE has been in business since 2002. We strive to provide our customers with innovative, high-quality solutions through the deployment of cutting-edge technology and services that exceed the customer's expectations. Our customers range from small to large corporations that represent industrial, commercial, medical, and military market segments. Through vertical integration of our skilled engineers, DE delivers complete designs with expertise in hardware, software, systems, and mechanical disciplines.

Desired Skills & Experience

Responsibilities:

Lead electrical PCB design projects and engineering efforts for a wide range of industrial, medical, and military products in a collaborative technology focused environment of creative engineers.

Qualifications:

A minimum of a bachelor's degree in Electrical Engineering or Computer Engineering, with PCB design experience. Strong communication skills are necessary. Previous experience as a hardware design engineering desired. Work in OrCAD Allegro and or Altium will be required. Bench troubleshooting and lab equipment experience and capability is required.

Technologies and traits desired:

The ideal candidate will have a passion for embedded PCB hardware design and problem solving, be a self-starter, meet deadlines, and contribute to constant improvement initiatives, research, and collaboration.

PCB architecture design, schematic entry, block diagram creation, critical component selection and sourcing, high speed PCB layout, BGA layout, high power test to 6kW, voltage up to 10kV, low voltage power supply design, BLDC/ACI/PMSM motor control PCB design to 3kW, analog control circuits and sensors, Op-Amps, filters, ESD/RFI/EMC compliance, low power battery management control systems down to nano-Amps, optimal grounding and isolation understanding and techniques, circuit simulation, methods of design for manufacturing and test. Electromechanical robotics and vehicles, motion control, PID controls, UPS/power conversion topologies. Advanced materials and process, flex, rigid flex, organic and printed electronics, ISO quality management, source control, design for manufacturing. SAE, IEC, UL, CSA, ETL, MIL-STD, pre-FDA compliance. Familiarity with firmware in C, C++ for MCU/MPU/DSP/FPGA custom embedded PC platform SoM and carrier design with BSP/Linux ground up dev ops, troubleshooting complex hardware/firmware control systems. Test procedure development. Working knowledge of communication technologies UART/RS, USB, I²C, SPI, Ethernet MII/RMII/GMII, Wifi, BLE, A2B, ProfiNET, Ethernet/IP, CAN, proprietary RF mesh, LoRa, RFID, 4/5G LTE, NBIoT, GPS/GNSS, IMU/motion, RGB/LVDS/GPU graphics display.

Please email resume to hr@dedesignworks.com