Job Description

Job Title: Senior Power Electronics Engineer
Department: Design Engineering
Reports To: Product Design Director
FLSA: Exempt

Summary: The New Product Development team is beginning several projects to develop new motor drive and power converter platforms for our next generation of products. This position researches, designs, develops, and tests components, products, and systems of several new related products. The successful candidate will play an integral part in developing these new exciting platforms based on industry leading technologies.

Essential Duties and Responsibilities include the following:

- Leads new designs from conception into production while working with a multi-discipline team.
- Responsible for all aspects of power electronics design including components, circuits, modules and system integration.
- Plans, schedules and coordinates detailed phases of the engineering work in part of a major project or in a total project of moderate scope.
- Devises new approaches to problems encountered.
- Plans and develops experimental test programs.
- Confers with research and other engineering personnel to clarify and resolve problems and prepares design modifications as required.
- Prepares schematics, directs preparation of detailed drawings and identifies critical components and signals for PCB Layout Engineer.
- Directs and/or coordinates manufacturing or building of prototype product or system.
- Compiles and/or analyzes operational, test, and research data to establish performance standards for newly designed or modified equipment or product.
- Analyzes test data and reports to determine if design meets functional and performance specifications.
- Evaluates engineering test results for possible application to developments of systems or other uses.
- Conducts design review meetings for projects assigned.
- Other duties as assigned.

Requirements:
This position requires:

- BS degree in Electrical Engineering with five or more years of experience in power electronics.
- Sound knowledge and experience in traditional and modern power electronic technologies including (not limited to):
    - Inverter technology for variable speed motor drive (MOSFET, rectifiers and gate driver PWM technologies).
    - Passive power devices, e.g. inductors, capacitors, resistors and transformers.
    - Power electronics system architecture design and hardware integration.
    - Motor drive and power converters (AC-DC, DC-DC, DC-AC) control technologies.
    - Motor control and commutation methods for various types of three phase motors, e.g. BLDC, PMSM, ACIM both sensored and sensorless.
    - Product certification (UL, CSA, CE, FCC, etc…)
- Experience in control, circuit and system simulation tools (PSpice, MATLAB, PSIM) preferred.
- Experience designing with 16-bit and 32-bit microcontrollers (DSP is a plus).
- Experience using schematic capture and circuit simulation software. PCB layout experience preferred.
- Embedded firmware design experience using C and Assembly.

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Candidates for this position must be fully competent in all conventional aspects of the subject matter or functional area assignments and hold a broad knowledge of precedents in the specialty area and a good knowledge of principles and practices of related specialties. This position also requires that employees possess and/or demonstrate the relevant competencies as outlined in Delta's Competency Matrix.

Company Information

For more than 47 years, Delta Systems has been designing and manufacturing quality switches and electronic components for the top Outdoor Power Equipment manufacturers and neighboring equipment & vehicle markets. Leveraging our core engineering and world-class manufacturing, our dedicated team develops customizable equipment control solutions to enhance the overall user experience. Each solution (hour meters, safety interlock controllers, ignition switches, gauges and displays) is crafted to ensure optimal performance and reliability. Delta's next generation of advanced products offer automotive-style operator experiences offering solutions such as rear back-up cameras, ultrasonic object detection, touch screen displays, push-button ignition switches and Bluetooth connected systems.