



700 Veterans Highway  
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## Principal Electrical Engineer

July 23, 2018

Intelligent Product Solutions (<http://intelligentproduct.solutions>) is a leading product development professional services company. The leadership and senior engineering team are deeply talented with unparalleled experience in industry and consulting services. Our client base includes some very well-known brands both large and small. Because of our explosive growth, we are seeking talented individuals to join our team.

Our company is seeking highly motivated Electrical Engineers who would enjoy working on diverse and challenging products. We are looking for individuals who have high creativity balanced with strong engineering fundamentals. We seek Engineers experienced in multiple environments with expertise in a diverse set of Hardware and Embedded Software technologies. We are engaged in all phases of the product development lifecycle, from requirements to deployment, constantly working iteratively and delivering quality product through industry standard development practices.

This is an Electrical Engineering position where the individual is expected to perform direct hands-on Hardware development on client projects. Prior experience in performing hardware (digital and analog) as well as embedded software (bare metal, RTOS and Linux based) development is a must. Must understand end-to-end IoT system: from edge device, through cloud as well as a big picture understanding of the Application interfaces such as Android/iOS/Windows Apps or web interfaces.

The ability to work with cross-functional engineering teams is required. We seek high-energy individuals who are self-directed, take responsibility and can manage their individual work; satisfying customers who expect on time and budget delivery that meets or exceeds requirements. Outstanding communication and interpersonal skills are required as this position will require frequent contact with our clients on a technical and business level.

POSITION TITLE: Principal Electrical Engineer  
DIVISION: IPS Electrical Engineering Department  
REPORTS TO: Electrical Engineering Management

### POSITION SUMMARY:

This is position for a senior electrical engineer to perform work in either product design, analysis or manufacturing support or a combination of those areas.

### EDUCATION PREFERRED:

Bachelor of Science in Electrical Engineering  
Master of Science in Mechanical Engineering preferred



### **EXPERIENCE REQUIRED:**

- Minimum 10-15 years experience in electrical design and analysis as applied to high-speed circuit design, electronic/mechanical packaging.
- Experience designing wireless, and high speed communication systems.
- Quantitative skills include proficiency in classical hand calculations of power management, power distribution, communication bus architectures and implementation constraints.
- Strong knowledge of design practices to reduce impact of EMI/ESD.
- Expertise to perform detailed circuit analysis and trade studies related to high speed microprocessor, microcontroller and wireless architectures may be required
- Direct experience in use of CAD tools is required with a preference for those with board layout design for high speed and RF expertise as applied to both component part and layout design.
- Knowledge of FPGA and Micro-controlled based Embedded Software is desirable but not mandatory.

### **SCOPE OF WORK:**

This is considered a lead engineer level electrical engineering position intended for those combining significant, relevant work experience, as an individual contributor, and the ability to lead other engineers as a primary role. Engineers in this position will work on a wide variety of tasks ranging of high complexity covering the full spectrum of product development needs, from an Electrical Engineering perspective. The level of responsibility in this position is high. The engineers in this category are expected to serve in key leadership roles combining project level responsibility for all electrical technical issues, resource utilization, program planning and scheduling. Engineers in this category can be expected to have responsibility for high level design and analysis tasks or to serve in a capacity as a lead engineer on large, multi-faceted projects. They are expected to be capable in all areas of design and analysis. Engineers in this position are routinely expected to direct the work of other engineers, at all levels, as well as Engineering Aides, Technicians or Drafters in support of assigned tasks.

### **ESSENTIAL FUNCTIONAL RESPONSIBILITIES:**

- Design complex level electronics as well as major product systems.
- Expected to perform tolerance analysis of complex systems and be proficient at performing engineering analysis of circuits, power consumption, power management or thermal analysis using classical hand calculations.
- Work as lead project electrical engineers on larger multi-functional teams.
- Manage teams of electrical engineers, and designers as well as potential external resources required to develop client's products.
- Work under the direction of another lead engineer in cases where major, complex sub-systems may need to be developed.
- Excellent skills at managing human resources are required in that engineers in this category will be required to direct the work of other engineers at all levels.
- Provide performance feedback, both positive and negative, on those working under their direct guidance. This feedback would be provided to both the individual associates under their direction as well as the Engineering Manager.
- Expected to have achieved high competency in circuit design, circuit simulation, and PCB layout with results interpretation as applied to complex analysis tasks as required.
- Engineers in this position are required to investigate and resolve complex problems.
- Highly proficient using CAD tools, particularly in regard to circuit simulation, for routine use in the performance of their duties.
- Serve as a strong technical mentor to other less senior engineers.



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**SUPERVISION RECEIVED:**

Minimal supervision is required in this position. Engineers in this role are expected to lead others and provide timely, periodic input to the Electrical Engineering Manager on team and individual performance and issues. Since these are strong technical positions, it is expected that they will have achieved a high level of technical competency and self-direction not requiring significant oversight. Unusual or particularly complex problems ordinarily will be elevated to brainstorm sessions with the highest-level engineers on staff.

**SUPERVISION EXTENDED:**

Engineers in this role may serve as both individual contributors and technical leadership positions on large, multi-faceted projects. Supervision will include direction of other engineers, at all levels, designers, engineering aides, technicians or drafters. Engineers at this level will be asked to provide performance feedback on staff members working under their direction. The position requires skill in working with others.

**CONTACT WITH OTHERS:**

Continual contact with all members of project team as a team leader. Frequent contact with management at middle or senior levels. Will have frequent and significant contact with external suppliers on complex or sensitive issues. Significant direct customer interaction may occur requiring tactful and sensitive communications. Skills required include both verbal and written forms of communication as this individual. Written work should demonstrate consistent high quality. Besides being an engineering expert, must be able to effectively communicate and represent the company brand to the client.