Coop Applications Engineering Student

GaN Systems Inc. – Kanata, Ontario, Canada

**About GaN Systems**

GaN Systems is the global leader in GaN power semiconductors with the largest portfolio of transistors that uniquely address the needs of today’s most demanding industries including data center servers, renewable energy systems, automotive, industrial motors and consumer electronics.

As a market-leading innovator, GaN Systems makes possible the design of smaller, lower cost, more efficient power systems. The company’s award-winning products provide system design opportunities free from the limitations of yesterday’s silicon. By changing the rules of transistor performance, GaN Systems is enabling power conversion companies to revolutionize their industries and transform the world.  For more information, please visit: [www.gansystems.com](http://www.gansystems.com/)

**Job Description**

The coop applications engineering student will be responsible for supporting the applications engineering team in maintaining and enhancing GaN Systems industry leadership position. We are looking for a highly technical, lab-oriented individual to assist in the development of evaluation boards, reference designs, products and test programs for our leading edge GaN E-HEMTs. Testing, trouble shooting and documenting results will be essential part of the job. The successful candidate will be required to actively participate in research, analysis and experimentation in the pursuit of these development goals. GaN applications, from 48V to 1200V, span multiple power electronics fields including AC/DC, DC/DC SMPS, inverters & motor drives. GaN Systems offers the opportunity to be involved with the most leading-edge power semiconductor technology worldwide.

**Responsibilities:**

* Support and coordinate the design, development, verification, manufacturing and test of evaluation boards and reference designs.
* Characterization of GaN discrete transistor and modules to understand application-relevant static and dynamic electrical performance.
* Ensure all products, including evaluation boards and reference designs are enabled with proper documentation and timely feedback is provided.
* Support the analysis, development and optimization of power electronics topologies and circuits that demonstrate the advantages of GaN E-HEMTs.
* Research industry and academic articles to enhance the benefit of GaN in power electronics.
* Use schematic, layout, calculation and simulation tools for printed circuit board generation, application analysis and circuit evaluation.
* Coordinate laboratory test set up and breakdown of test equipment. Ensure compliance to calibration and safety requirements
* Develop, test and document reference design, evaluation platform for GaN E-HEMT target applications.
* Assess and provide technical answers to customer inquiries.
* Review, provide feedback and assist in the development of improved processes for product development and documentation.
* Maintain an understanding of solutions available from competitors.

**Skills & Experience:**

**Required:**

* Basic electric circuit design and analysis
* Awareness of power semiconductor devices including gate driver design, turn-on/off switching behavior, miller effect, circuit parasitics and loss calculation.
* Knowledge of different topologies (half/full bridge, PFC, inverter and resonant circuit such as LLC/PSFB), and power electronics control theory.
* Laboratory prototyping and testing.
* Strong written and communication skills.
* Basic knowledge of analog, digital control circuit, microcontroller and DSP programming.
* A passion for power systems, power devices and providing world-class technical support to customers.
* Work effectively as part of a highly productive team.

**Desired:**

* Previous experience in an electronics laboratory is preferred.
* Knowledge and design/application experience with GaN and/or SiC power device is a plus.
* Printed circuit board project experience
* Experience working with internal and external customers.
* An individual who desires to influence the direction of a leading emerging technology company.

**Education:**

Must be a 3rd year university student actively enrolled in a qualified electrical engineering program. A focus on power electronics will be an asset.

We sincerely thank all applicants for their interest, however only qualified candidates will be contacted.

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