GaN Systems Announces 10X Production Increase at TSMC

GaN Systems is uniquely positioned to meet high volume GaN demand as industry ramps to $15B

OTTAWA, Ontario, December 1, 2015 – GaN Systems, the leading manufacturer of gallium nitride power transistors, announces that its foundry, Taiwan Semiconductor Manufacturing Corporation (TSMC), has expanded the high volume production of products based on GaN System’s proprietary Island Technology® by 10X in response to surging global demand from consumer and enterprise customers. GaN Systems has the industry’s broadest and most comprehensive portfolio of GaN power transistors with both 100V and 650V GaN FETs shipping in volume.

Transistors based on GaN Systems' Island Technology and using TSMC’s GaN fab process boast the best performance and Figure of Merit in the industry, easily outstripping the capabilities of the world’s highest performance silicon power semiconductors, the latest silicon carbide devices and competing gallium nitride products. The unique combination of TSMC’s gallium nitride process and GaN Systems' proprietary Island Technology design is further enhanced by GaNPx™ packaging, which delivers high current handling, extremely low inductance and exceptional thermal performance. GaN Systems’ power switching transistors continue to lead the gallium nitride market, providing best-in-class 100V and 650V devices and driving product innovation ranging from thinner TVs to extended range electric vehicles.

Sajiv Dalal, VP Business Management at TSMC, comments, “We are delighted to confirm that our collaboration with GaN Systems has brought the promise of gallium nitride from concept through reliability testing and on to volume production.”

Adds Girvan Patterson, GaN Systems’ President, “GaN has emerged as the power semiconductor solution of choice. Smart mobile devices, slim TVs, games consoles, automotive systems and other mass volume items have been designed with GaN transistors as the enabling power technology, so it is imperative that devices are available in correspondingly large quantities. Using our patented Island Technology, we have designed
and made available for widespread adoption GaN power solutions that greatly exceed the performance standards exhibited by silicon devices. That is why, after three years of working together, we are so excited to formally announce our collaboration with TSMC, the world’s leading third-party semiconductor manufacturing company and a byword for quality and service industry-wide.”

Delivering large volumes of highly reliable GaN transistors in near-chipscale packaging is the culmination of a journey GaN Systems began in 2008. The company was founded with the mission of creating a low cost, highly reliable GaN-on-Silicon product based on Island Technology, a method of creating small islands where electro-migration is mitigated, die size is minimized and very high current devices realized with high yield. Using Island Technology with TSMC’s GaN-on-Silicon manufacturing techniques enabled GaN Systems to deliver the most usable, high performance, normally-off transistor to the market in mid-2014. This has allowed global power system manufacturers in the energy storage, enterprise and consumer markets to design, develop, test and bring to market more powerful, lighter and far smaller new products in their quest to attain competitive edge. To meet customers’ increasing demand for high GaN volumes in 2016, TSMC’s commitment to volume production flow comes at the perfect time.

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Photography Available


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About GaN Systems

GaN Systems is a fabless semiconductor company that is the first place systems designers go to realize all the benefits of gallium nitride in their power conversion applications. To overcome silicon's limitations in switching speed, temperature, voltage and current, the company develops the most complete range of gallium nitride power switching transistors for a wide variety of markets. GaN Systems' unique Island Technology® addresses today’s challenges of cost, performance, and manufacturability resulting in products that are smaller and more efficient than other GaN design approaches. The company is headquartered in Ottawa, Canada. For more information, please visit: www.gansystems.com.