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TriQuint Receives DARPA Award to Explore 'NEXT' Advanced GaN Technology

TriQuint's New \$16.2M DARPA Contract Will Pursue Radically-Enhanced Gallium Nitride Circuits for Defense, Aerospace

HILLSBORO, Oregon & RICHARDSON, Texas (USA) – October 19, 2009 – TriQuint Semiconductor (NASDAQ: **TQNT**), a leading RF products manufacturer and foundry services provider, today announced that it has been awarded a \$16.2 million Defense Advanced Research Projects Agency ([DARPA](#)) multi-year Gallium Nitride (GaN) R&D contract to create complex, high dynamic range circuits for future defense and aerospace applications.

TriQuint received its DARPA contract to [advance GaN research](#) and develop new generations of compound semiconductor circuits through the Nitride Electronic NeXt-Generation Technology (NEXT) program. TriQuint's Principal Investigator, Senior Fellow Dr. Paul Saunier, explained that achieving NEXT program goals could lead to GaN circuits as radically different as today's computers are compared to those in the 1980s.

"GaN is already recognized for its ability to handle more power per square millimeter than other semiconductor technologies like gallium arsenide, and much more so than silicon. Yet even with the advances TriQuint has pioneered, today's analog GaN technology has frequency and power limits."

"NEXT circuits will be 'game-changing' technology that could [radically improve performance](#) in defense and aerospace applications like phased array radar and communications. NEXT calls for complex digital GaN circuits that also have very high breakdown voltages—something that silicon can't do, and that is also beyond the scope of today's other semiconductor processes," said Dr. Saunier.

Dr. David Fanning, TriQuint's Program Manager for NEXT, described the different segments of the new DARPA contract and key performance milestones. "The initial phase will run two years, pursuing devices that can operate at 300 GHz with essential yield levels of a small circuit. The 18-month Phase II program will push the operating frequency to 400 GHz while increasing yield and circuit size. The third and final 12-month segment will seek to extend the operating frequency to 500 GHz while also substantially increasing yield and circuit size," he said.

Dr. Fanning explained that another key aspect of the NEXT program will be to develop enhancement-depletion (E/D) mode GaN circuits, similar to the E/D circuits that TriQuint uses for greater functionality and power handling in its Gallium Arsenide devices.

The TriQuint NEXT team will include [IQE plc](#), a leading manufacturer of advanced GaN semiconductor wafers. TriQuint will also team with University of Notre Dame Professors Patrick Fay, Debdeep Jena, Greg Snider and Huili Xing to explore alternative wafer materials and circuit designs. University of Illinois Professor Ilesanmi Adesida will assist with work to develop advanced fabrication processes.

TriQuint has been a leader in GaN research for both defense and civilian applications since 1999. In addition to defense products, TriQuint has released GaN amplifiers for civilian applications and has provided commercial GaN foundry services since 2008. TriQuint was selected in 2009 by DARPA to [lead a Phase III effort of the Wide Bandgap Semiconductor \(WBGs-RF\) R&D](#) program that is developing high-power, wideband GaN circuits with defense and aerospace applications.

TriQuint is a leading manufacturer of high-performance, high-reliability GaN and GaAs integrated circuits as well as surface acoustic and bulk acoustic wave (SAW / BAW) filters for communications and radar programs. TriQuint's standard products portfolio and R&D leadership have made the company a leading supplier to [Boeing Company](#), [Lockheed Martin Corporation](#), [Northrop Grumman](#), [Raytheon](#) and other major defense contractors. TriQuint also serves consumer markets such as mobile phones, wireless LAN and GPS.

For more information about TriQuint products for defense and aerospace, visit www.triquint.com. Register for product updates and our newsletter at www.triquint.com.

FORWARD LOOKING STATEMENTS

This TriQuint Semiconductor, Inc. (Nasdaq: TQNT) press release contains forward-looking statements made pursuant to the Safe Harbor provisions of the Private Securities Litigation Reform Act of 1995. Readers are cautioned that forward-looking statements involve risks and uncertainties. The cautionary statements made in this press release should be read as being

applicable to all related statements wherever they appear. Statements containing such words as 'leading', 'exceptional', 'high efficiency', 'key role', 'leading supplier', or similar terms are considered to contain uncertainty and are forward-looking statements. A number of factors affect TriQuint's operating results and could cause its actual future results to differ materially from any results indicated in this press release or in any other forward-looking statements made by, or on behalf of, TriQuint including, but not limited to: those associated with the unpredictability and volatility of customer acceptance of and demand for our products and technologies, the ability of our production facilities and those of our vendors to meet demand, the ability of our production facilities and those of our vendors to produce products with yields sufficient to maintain profitability, as well as the other "Risk Factors" set forth in TriQuint's most recent 10-Q report filed with the Securities and Exchange Commission. This and other reports can be found on the SEC web site, www.sec.gov. A reader of this release should understand that these and other risks could cause actual results to differ materially from expectations expressed / implied in forward-looking statements.

FACTS ABOUT TRIQUINT

Founded in 1985, we "Connect the Digital World to the Global Network"[®] by supplying high-performance RF modules, components and foundry services to the world's leading communications companies. Specifically, TriQuint is a supplier in the top five mobile phone manufacturers' products, and is a leading gallium arsenide (GaAs) supplier to major defense and space contractors. TriQuint creates standard and custom products using advanced processes that include gallium arsenide, gallium nitride (GaN), surface acoustic wave (SAW) and bulk acoustic wave (BAW) technologies to serve diverse markets including wireless handsets, laptops, GPS/PND, base stations, broadband communications and military. TriQuint is also the lead researcher in a multi-year DARPA program to develop advanced GaN amplifiers. TriQuint, as named by Strategy Analytics¹, is the number-three worldwide leader in GaAs devices and the world's largest commercial GaAs foundry. TriQuint has ISO9001 certified manufacturing facilities in Oregon, Texas, and Florida and a production plant in Costa Rica; design centers are located in North America and Germany. Visit TriQuint at www.triquint.com to receive new product information and to register for our newsletters.

¹ *Announced February 2009 and May 2009, respectively.*

Dr. Gailon Brehm
Director – Defense & Aerospace Product Marketing
TriQuint Semiconductor, Inc.
Tel: +1 (972) 994-3896
Fax: +1 (972) 994-8504
E-mail: gbrehm@tqs.com

Media Contact:

Mark Andrews
Strategic Marketing Communications Manager
TriQuint Semiconductor, Inc.
Tel: +1 (407) 884-3404
Mobile: +1 (407) 353-8727
E-mail: mandrews@tqs.com