

# TriQuint Semiconductor, Lockheed Martin Announce Advanced Process Gallium Nitride With Improved Power, Efficiency, Stability

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TriQuint Semiconductor and Lockheed Martin today announced breakthrough results for power density, power added efficiency and radio frequency (RF) lifetime for gallium nitride High Electron Mobility Transistor (HEMT) devices. Achieving breakthrough performance and improved reliability is an important step in significant size and weight reductions for radar-based defense applications.

Gallium nitride HEMT devices provide higher power density and efficiency required for high power phased array radar, electronic warfare, missile seeker and communications systems.

"Gallium nitride's more than five-times improvement in power density compared to gallium arsenide devices makes it ideal for high power radar and communications applications," said Dr. Gailon Brehm, TriQuint's military business unit manager. "Gallium nitride has capabilities from L-band up to W-band, making it a very exciting technology for the future of millimeter and microwave applications."

The device's increased power density can be the basis for simplifying radar power distribution in large systems and can greatly reduce operational electrical current. This advancement can lead to significant weight and size reductions in shipboard systems and land-based applications.

TriQuint's new proprietary process increases gallium nitride HEMT power density 50 percent beyond that of more conventional E-beam T-gate devices. In addition, power added efficiency is 10 to 15 points higher, which allows these devices to function with reduced power dissipation and lower operating temperature.

Improved RF lifetime has been demonstrated with this advanced high voltage gate structure as well. The reduced gate leakage and lower electric field in the drain region contribute to the improved RF device lifetime.

"At Lockheed Martin, we have a passion for invention," said Dr. Mahesh Kumar, director of Research and Technology for Lockheed Martin Maritime Systems and Sensors' business in Moorestown, NJ. "Gallium Nitride will redefine what is possible by providing our customers the reliable, compact, high-powered technology they need to field solid-state phased array radar, space systems and missiles to protect against emerging threats."

TriQuint has worked with gallium nitride since 1999 under the sponsorship of Lockheed Martin. Partners also include General Electric Global Research Center, the University of South Carolina, ATMI, Emcore and Sandia National Labs.

## ABOUT LOCKHEED MARTIN:

Headquartered in Bethesda, MD, Lockheed Martin employs about 130,000 people worldwide and is principally engaged in the research, design, development, manufacture and integration of advanced technology systems, products and services.

## ABOUT TRIQUINT:

TriQuint Semiconductor, Inc. is a leading supplier of high performance products for communications applications. The company focuses on the specialized expertise, materials and know-how for RF/IF and optical applications. The company enjoys diversity in its markets, applications, products, technology and customer base. Markets include wireless phones, base stations, optical networks, broadband and microwave equipment, and aerospace and defense. TriQuint provides customers with standard and custom product solutions as well as foundry services. Products are based on advanced process technologies including gallium arsenide, indium phosphide, silicon germanium, and surface acoustic wave (SAW). TriQuint customers include major communications companies worldwide.

TriQuint has manufacturing facilities in Oregon, Texas, Pennsylvania and Florida, as well as production assembly plants in Costa Rica and Mexico, and design centers in New England, Germany and Taiwan. All manufacturing and production facilities are certified to the ISO9001 international quality standard.

TriQuint is headquartered at 2300 NE Brookwood Parkway, Hillsboro, OR 97124 and can be reached at 503/615-9000 (fax 503/615-8900). Visit the TriQuint web site at <http://www.triquint.com/>.

#### Forward-Looking Statements:

This 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 such as statements of the Company's plans, objective, expectations and intentions involve risks and uncertainties. A number of factors affect TriQuint's operating results and could cause the company's 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 those related to its respective markets, the demand for semiconductors for applications such as optical networks and wireless communications, the demand for products utilizing SAW technology, and performance of its manufacturing facilities. TriQuint cannot provide any assurance that future results will meet expectations. Results could differ materially based on various factors, including the company's performance and market conditions. In addition, historical information should not be considered an indicator of future performance. Additional considerations and important risk factors are described in TriQuint's reports on Form 10-K and 10-Q and other filings with the Securities and Exchange Commission. These reports can also be accessed at the SEC web site, [www.sec.gov](http://www.sec.gov).

The cautionary statements made in this release should be read as being applicable to all related statements wherever they appear. Statements containing such words as "believes," "expects," "plans," "projects," "intends," "estimates," "anticipates," or similar terms are considered to contain uncertainty and are forward-looking statements. A reader of this release should understand that it is not possible to predict or identify risk factors and should not consider the list to be a complete statement of all potential risks and uncertainties. We do not assume the obligation to update any forward-looking statements.

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SOURCE: Lockheed Martin Maritime Systems & Sensors; TriQuint Semiconductor,

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