

# NEWS RELEASE

## **VELOX Semiconductor**

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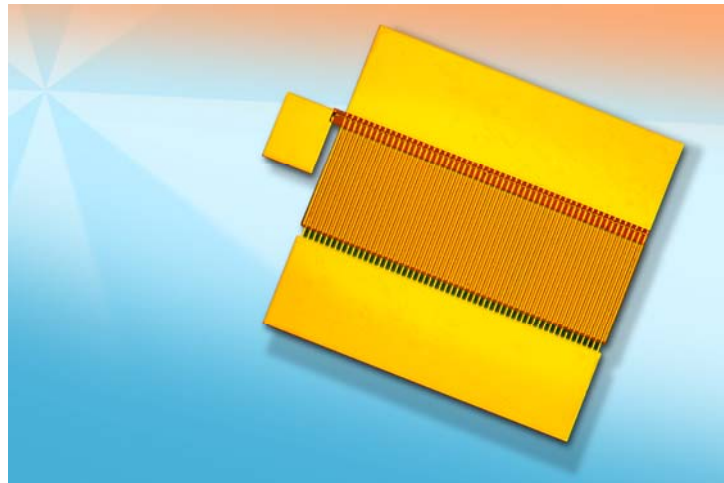
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*For Immediate Release*

## **VELOX Semiconductor Awarded Advanced Technology Funding**

Company Will Develop 1200 Volt, 100 Amp, Gallium Nitride-on-Silicon Transistors for Automotive and Power Supply Applications

**October 9, 2007 – Somerset, NJ – VELOX Semiconductor**, a leading manufacturer of Gallium Nitride (GaN) transistors and diodes, announces an ATP (Advanced Technology Program) award from the U. S. Department of Commerce's National Institute of Standards and Technology (NIST). The NIST award is for development of high-voltage (600 Volt and 1200 Volt), high-current (20 Amp and 100 Amp) electronic switches based on VELOX's Gallium Nitride-on-Silicon (GaN on Si) technology. The program funding will advance VELOX's efforts in developing new enhancement-mode Field Effect Transistors (FETs).



These new switching devices will offer major benefits to the automotive, computer laptop, consumer and industrial power supply industries. Successful introduction of the new FETs will both significantly increase the fuel efficiency of the best-in-class hybrid vehicles, and they will increase the efficiency and drastically decrease the size of power supplies used for consumer, computer, industrial and telecom applications. The ATP funding for the two year program will total \$2,000,000 and matching funds from a variety of sources will make the total program cost of approximately \$3,280,000.

In Phase I, VELOX will develop 600V, 20A GaN FETs for improved power supply applications. In the next phase, 1200V, 100A devices will be developed, which are ideal for motor driver applications in the automotive industry.

According to VELOX Semiconductor's CEO, Thomas Hierl, "GaN on Si technology has attracted significant interest from researchers in the last seven years. Major challenges in making GaN-based transistors are now being met in order to produce larger electrical currents and develop "enhancement mode" designs. VELOX has already developed 600V GaN Schottky diodes for consumer and power supply applications. These devices are in the final stages of development before transition to production."

He adds, "The ATP funding will significantly accelerate GaN FETs development at VELOX. It gives us an opportunity to bring a second GaN-based product to the market following the introduction of GaN-based Schottky diodes and we look forward to using the GaN growth and fabrication skills mastered on GaN diodes to advance the GaN-based FETs under this NIST funded program."

### **About VELOX Semiconductor and GaN:**

**VELOX Semiconductor** (Somerset, NJ, [www.veloxsemi.com](http://www.veloxsemi.com)) manufactures Gallium Nitride (GaN) transistors and diodes. The advanced GaN-based technology developed by VELOX allows significant improvements in cost, size and efficiency of power supplies, leading to smaller sizes and improved portability. Privately owned, VELOX is committed to providing reliable and cost effective GaN devices to the power supply industry and the automotive, industrial, computer and telecom markets, reducing cost and size and increasing efficiency of customers' current systems.

**Gallium Nitride (GaN)** is a wide bandgap semiconductor material, currently used in optoelectronic applications, and in high-power and high-frequency devices. In power supply applications it enables the implementation of higher frequency circuits which offer benefits in efficiency, product size, low noise, smaller heat sink requirements, and higher yield. In automotive applications it enables implementation of significantly more efficient motor drivers.

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