



NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

UCSD and Jazz Semiconductor Develop 2-Antenna Quad-Beam 11-15 GHz Phased Array RFIC Targeted at Satellite Systems and Advanced Radars

High Speed SiGe Process Replaces 8 GaAs Chips, Lowering Cost and Increasing Integration

SAN DIEGO and NEWPORT BEACH, Calif., July 2, 2009 — The University of California, San Diego (UCSD), provider of a leading program in microwave and millimeter-wave RFICs and mixed-signal, and Jazz Semiconductor®, a Tower Group Company (NASDAQ: TSEM, TASE: TSEM), today announced that they have collaborated to develop a two-antenna quad-beam RFIC phased array receiver covering the 11-15 GHz frequency range. First time success was achieved using Jazz Semiconductor's high performance 0.18-micron SiGe BiCMOS process and its own proprietary models, kit and DIRECT MPW (Multiproject Wafer) program. The chip was designed and tested by the Electrical and Computer Engineering School at UCSD, and was sponsored by the DARPA RF VLSI program, Dr. Mark Rosker, Program Monitor.

"UCSD believes that the quad-beam phased array receiver will enable high-performance phased arrays for satellite communications by integrating many functions on the same silicon chip and replacing several GaAs ICs, drastically lowering the cost of phased array assembly," said Dr. Gabriel M. Rebeiz, Professor of Electrical Engineering at UCSD, a co-developer of this chip. "Our success in developing this first-of-a-kind chip depended largely on Jazz's 0.18-micron SiGe BiCMOS process, models and design kit. We view Jazz as a leading specialty foundry with unrivaled design enablement capabilities."

This is the first demonstration of a single silicon chip capable of producing four simultaneous beams from two different antennas, and together with all the necessary CMOS controlling circuits. Alternatively, this chip can be connected to a single antenna with two different polarization ports, thereby allowing the formation of four simultaneous beams of different polarizations. The four simultaneous phased-array beams can be all at the same frequency, or placed randomly at any frequency in the 11-15 GHz range. Each beam can operate over an

instantaneous bandwidth of > 1 GHz with 4-bit amplitude and phase control. As the chip creates four simultaneous beams from the antennas, these beams can point to different areas in the sky (i.e. different angles), preventing the signal gathered in beam 1 to couple to beam 2, and enables at least 30 dB isolation between the two beams.

The SiGe BiCMOS chip operates from a 3.3 V supply, is only 2.4x4.3 mm², replaces at least 8 GaAs chips, and allows a new generation of high-performance multi-beam phased arrays for X to Ku-Band applications. The SBC18HX process offers high-performance 0.18-micron SiGe bipolar and high quality passive elements combined with high density 0.18-micron CMOS, ideal for high-speed networking and millimeter wave applications. This leading edge process achieves an Ft of 155GHz and an Fmax of 200GHz.

"We are pleased with the results achieved by UCSD with its RFIC quad-beam phased array receiver and are excited to enable an innovative technology designed to address the needs of high data-rate communications and satellite-based systems markets," said David Howard, Executive Director of New Product Technology at Jazz Semiconductor. "This collaboration demonstrates the capabilities of the highly advanced specialty wafer processes, models and kits we offer to our customers."

"The chip is currently being transitioned by the U.S. Office of Naval Research to a 1000+ element phased-array capable of four simultaneous beams at Ku-Band, and a contract to a leading U.S. defense company was recently issued based on this chip," added Dr. Rebeiz.

Availability

The chip is available from UCSD and interested parties should contact Prof. Gabriel M. Rebeiz; Department of Electrical and Computing Engineering at UCSD, 858/534-8001 or rebeiz@ece.ucsd.edu.

About UCSD

The University of California, San Diego, is one of the leading Universities in mixed-signal, microwave and mm-wave RFICs, digital communications, applied electromagnetics, planar antennas, RF MEMS (microelectromechanical systems) and nano-electronics research, and is home to the *Center for Wireless Communications* and the *DARPA S&T Center for RF MEMS Reliability and Design Fundamentals*. UCSD has an annual research budget exceeding \$700M, and its Jacobs School of Engineering is ranked as Number 11 in the *US-News and World Report* 2007 ranking. The Electrical and Computer Engineering Department, consisting of 52 teaching tenure faculty, trains approximately 400 graduate students per year. For more information, please visit www.ece.ucsd.edu and www.ucsd.edu.

About Jazz Semiconductor, Inc.

Jazz Semiconductor, Inc., a Tower Group Company (NASDAQ: TSEM, TASE: TSEM), is a leading wafer foundry focused on Analog-Intensive Mixed-Signal (AIMS) process technologies. Jazz offers world-class design enablement tools to allow complex designs to be achieved quickly and more accurately. The company's broad process portfolio of modular AIMS technologies includes RFCMOS, Analog CMOS, Silicon and SiGe BiCMOS, SiGe C-BiCMOS, MEMS, Power CMOS and High Voltage CMOS. Through access to Tower's process technologies, Jazz offers Embedded NVM, CMOS Image Sensors, and Flash MTP and OTP solutions. Jazz Semiconductor's executive offices and its U.S. wafer fabrication facility are located in Newport Beach, CA. For more information, please visit and www.jazzsemi.com.

Safe Harbor Regarding Forward-Looking Statements

This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect Tower's and Jazz's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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