TOWER SEMICONDUCTOR LTD
Form 6-K
November 12, 2009

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of November 2009 No. 3

TOWER SEMICONDUCTOR LTD.
(Translation of registrant s name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 23105
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F x Form 40-F o

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes o No x

On November 11, 2009, the registrant announces that Phasor Solutions Selects TowerJazz for Transceiver Chipset for Mobile Broadband Service.

This Form 6-K is being incorporated by reference into all effective registration statements filed by us under the Securities Act of 1933.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TOWER SEMICONDUCTOR LTD.

Date: November 11, 2009

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

Phasor Solutions Selects TowerJazz for Transceiver Chipset for Mobile Broadband

Service

High Performance 155GHz SiGe BiCMOS process chosen over traditional GaAs used in phased array radar

LONDON, England and NEWPORT BEACH, Calif., November 11, 2009 Phasor Solutions, a developer of high performance phased array antennas for satellite communications and radar applications, and TowerJazz, the global specialty foundry leader, today announced Phasor has selected TowerJazz s high performance SiGe BiCMOS process to manufacture its innovative transceiver chipset for mobile broadband service on moving platforms such as trains, manned and unmanned airplanes, and military vehicles. To achieve this service, satellite communications will be enabled by a phased array containing multiple transceiver ICs residing within an array of connected 8x12 inch flat panels which together function as a high gain satellite dish and related electronics. Phasor s initial target is wireless internet access on trains, an estimated available market of about 625 million users a year worldwide according to BWCS, a London-based firm that studies the telecommunications industry.

Phasor chose TowerJazz s 155GHz SiGe BiCMOS process over traditional GaAs solutions used in phased array radar due to its ability to operate in the required 12GHz to 15GHz band and for its integration capabilities allowing for multiple analog and digital functions to be integrated into a single chip. As a result, the process enables a reduction in component count, cost and complexities associated with multiple discrete devices. In addition, due to the expected market demand for this transceiver chipset, proven high volume manufacturing capability was a necessary condition for a foundry partner.

By using phased array antennas and adjusting the relative phase of the signal received by (or transmitted from) each antenna element, it is possible to electronically steer the beam to point precisely in a given direction and to dynamically adjust the beam direction to compensate for movements of the antenna or satellite. Phasor s first high gain antennas are designed for the roofs of trains. These antennas, working at Ku-Band, are 3 cm high. Phasor offers a conformal, modular and low height antenna design, a 10x cost reduction versus conventional phased array antennas, and robust and scalable production capabilities.

The SBC18HX process offered by TowerJazz includes high performance 0.18-micron SiGe Bipolar and high quality passive elements combined with high density 0.18-micron CMOS, well-suited for high-speed networking and millimeter wave applications. This leading edge process achieves an Ft of 155GHz and an Fmax of 200GHz, an optimal choice for a variety of high frequency applications. Six layers of metal are standard with deep trench and metal resistor options.

We chose TowerJazz for the manufacture of chipsets for our high performance phased array antennas due to the features of its SiGe BiCMOS process which met our high frequency requirements and is ideal for this type of application. This specialty technology, together with advanced design kits and high volume manufacturing capability proved to be a winning combination for us, said Vito Levi D Ancona, Chief Executive Officer, Phasor Solutions.

We are excited to be an enabler for this innovative technology which addresses the need for high data rate communications and satellite-based systems for mobile broadband solutions on trains and in the future, airplanes. We continue to push the performance limits of silicon-based technology to provide a lower cost and higher integration alternative to GaAs, allowing customers to access new and larger markets with high frequency products such as the one announced here, said Dr. Marco Racanelli, Senior Vice President and General Manager for the RF & High Performance Analog and Aerospace & Defense Business Groups at TowerJazz.

About Phasor Solutions
Phasor Solutions was founded by Anglo Scientific Ltd and Richard Mayo in 2005 to develop flat and conformal high gain antennas to fit on the roof of moving vehicles. Since then, Phasor has raised venture capital funding through a supportive pool of investors and has built a strong team around founder Richard Mayo, a very experienced circuit designer looking for an opportunity to repeat or exceed previous success. For more information please visit www.phasorsolutions.com.

About TowerJazz
Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader and its fully owned U.S. subsidiary Jazz Semiconductor, operate collectively under the brand name TowerJazz, manufacturing integrated circuits with geometries ranging from 1.0 to 0.13-micron. TowerJazz provides industry leading design enablement tools to allow complex designs to be achieved quickly and more accurately and offers a broad range of customizable process technologies including SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as MEMS capabilities. To provide world-class customer service, TowerJazz maintains two manufacturing facilities in Israel and one in the U.S. with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.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 and/or 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, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

For TowerJazz

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