

TOWER SEMICONDUCTOR LTD

Form 6-K

May 14, 2012

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of May 2012

No. 05

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 Form 40-F

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 No

On May 14, 2012, the registrant announces TowerJazz Introduces Reference Flow 2.0, Featuring Key Cadence Technology, for its Power Management Platform.

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: May 14, 2012

By: /s/ Nati Somekh
Name: Nati Somekh
Title: Corporate Secretary

TowerJazz Introduces Reference Flow 2.0, Featuring Key Cadence Technology, for its Power Management Platform

NEWPORT BEACH, Calif., May 14, 2012 – TowerJazz, the global specialty foundry leader, today announced the release of the most comprehensive 180nm power management analog/mixed-signal reference design flow, featuring key technology from Cadence Design Systems. The two companies will showcase Reference Flow 2.0 at several events, including DAC, the Cadence CDNLive! conference and the Cadence Mixed-Signal Technology-on-Tour. The new reference design flow features mixed-signal power management techniques that incorporate the Cadence Encounter® Digital Implementation System and Virtuoso® technologies with a unified custom/analog and digital flow for TowerJazz's TS018PM 180-nanometer and TS035PM 350-nanometer bipolar-CMOS-DMOS (BCD) power management process technologies. These innovative process technologies provide industry-leading features to integrate power management devices together with control logic.

TowerJazz's collaboration with Cadence ensures a validated path to silicon realization with end-to-end mixed-signal design, verification and implementation solutions on the most advanced power management platform. The collaboration aims at accelerating design realization while reducing risk and lowering overall development costs. TowerJazz's Reference Design Flow 2.0 delivers advanced mixed-signal methodology based on OpenAccess and SKILL-based process design kits (PDKs) to enable silicon success and faster time to market for customers.

TowerJazz will be featuring its Reference Flow 2.0 at the upcoming CDNLive! User Conference in Munich, Germany on May 14-16, 2012 as well as at DAC, San Francisco on June 3-6, 2012 and Cadence Mixed-Signal Technology-on-Tour in Singapore (June 26, 2012), EDSFair in Japan (November 2012) and other locations.

“By collaborating with Cadence, we are demonstrating to our customers that we are committed to delivering qualified out-of-the-box flows for a fast and reliable path from design to mass production,” said Ori Galzur, VP of Design Center and Design Enablement at TowerJazz.

“Our collaboration with TowerJazz addresses the needs of our customers to efficiently design into even the most complex technologies for wireless, networking, and consumer devices, where the analog and mixed-signal contents can represent more than half of the entire design,” said Tom Beckley, senior vice president of Research and Development, Custom IC and Signoff, Silicon Realization Group at Cadence Design Systems. “By teaming to create sophisticated SKILL-based Virtuoso PDKs for TowerJazz's power management platform, we are enabling our mutual customers to tackle these difficult designs faster and with greater confidence of high-quality results.”

About TowerJazz 0.18-micron Power Management Process

TowerJazz's 0.18-micron power management platform is a cost-effective solution which offers modular add-ons such as a unique zero-mask-adder multi-programmable non-volatile memory (NVM) solution, thick copper-top metallization for high current drive, and optional 1.8V gate for heavy digital power management integrated circuits (ICs). In addition, it offers scalable LDMOS devices that provide excellent area optimization of the power devices for up to 60 volts, with very low mask count.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering 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 CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a quick and accurate design cycle. In addition, TowerJazz

provides (TOPS) Technology Optimization Process Services to IDMs as well as fabless companies that need to expand capacity, or progress from an R&D line to a production line. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan 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 TowerJazz'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.

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