

TOWER SEMICONDUCTOR LTD  
Form 6-K  
January 19, 2011

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FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of January 2010 No. 5

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

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On January 19, 2011 the registrant announces Tanner EDA and TowerJazz Qualified Process Design Kit and Reference Flow for 0.18um Power Management Process.

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

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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: January 19, 2011

By:

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

Tanner EDA and TowerJazz Announce Qualified Process  
Design Kit and Reference Flow for 0.18um Power  
Management Process

MONROVIA and NEWPORT BEACH, Calif. – January 19, 2011 – Tanner EDA, the catalyst for innovation for the design, layout and verification of analog and mixed-signal integrated circuits (ICs), and TowerJazz, the global specialty foundry leader, have completed qualification of Tanner EDA’s process design kit (PDK) for TowerJazz’s 0.18um Power Management process. This design kit includes symbol libraries for Tanner EDA’s S-Edit schematic capture software as well as parameterized layout generators for its widely installed layout editor, L-Edit.

To complement this PDK, the companies have released TowerJazz’s Power Management AMS Reference Flow, which includes a comprehensive design flow and a Band Gap Reference design that together provide mutual customers with a productive and open custom design solution. The combination of TowerJazz’s advanced power management process with detailed steps and layout tools from Tanner EDA provides analog and mixed-signal IC designers the ability to quickly and accurately create power management chips, including driver ICs, battery and portable power management, and power control for PCs for consumer, communications, and computing applications.

The TowerJazz AMS PM Reference Flow includes a reference design that is based on the TowerJazz 180-nm iPDK. Complete documentation covering the overall flow as well as the detailed reference flow steps is also included. Mutual customers can quickly utilize the complete power management design flow from schematic capture to simulation, layout, physical verification, and parasitic extraction. The comprehensive reference flow also includes valuable productivity features to help designers achieve an on-time and on-budget tape-out.

“Our relationship with Tanner EDA has been based on offering effective, affordable, and all-encompassing solutions to the analog and mixed-signal community,” said Ori Galzur, vice president of design center and PDK development at TowerJazz. “By extending our collaboration to an open iPDK solution for power management at each process node, we continue to allow engineering teams to reduce resource utilization and design cycles.”

“The collaboration between TowerJazz and Tanner EDA delivers tangible benefits such as price, performance and robust design tools to the analog IC design community,” said John Zuk, vice president of marketing and foundry relations at Tanner EDA. “Our initial announcements about this relationship yielded strong support from our respective customers and I’m excited to see our teams deliver on those plans.”

#### TowerJazz 180-nm Process and Features

TowerJazz’s 180-nm Power Management offering 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, all with very low mask count.

#### About Tanner EDA

Tanner EDA provides a complete line of software solutions that drive innovation for the design, layout and verification of analog and mixed-signal (A/MS) integrated circuits (ICs). Customers are creating breakthrough applications in areas such as power management, displays and imaging, automotive, consumer electronics, life sciences, and RF devices. A low learning curve, high interoperability, and a powerful user interface improve design team productivity and enable a low total cost of ownership (TCO). Capability and performance are matched by low support requirements and high support capability as well as an ecosystem of partners that bring advanced capabilities to A/MS designs.

Founded in 1988, Tanner EDA solutions deliver just the right mixture of features, functionality and usability. The company has shipped over 33,000 licenses of its software to more than 5,000 customers in 67 countries.

#### 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](http://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.

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