

TOWER SEMICONDUCTOR LTD

Form 6-K

September 27, 2011

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of September 2011

No. 4

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 September 27, 2011, the registrant announces Strategic Collaboration with Presto Engineering for SiGe Foundry Customers.

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: September 27, 2011

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

TowerJazz and Presto Engineering Announce Strategic Collaboration
for SiGe Foundry Customers

Presto's Hubs support integrated test and production services for SiGe designs
targeting rapidly growing high speed communications market

NEWPORT BEACH, Calif. and SAN JOSE, Calif., September 27, 2011 - TowerJazz, the global specialty foundry leader, and Presto Engineering, the leader in integrated test and product engineering services, today announced a strategic collaboration to deliver comprehensive services for companies developing high speed communications products utilizing SiGe technology from TowerJazz. The alliance between Presto and TowerJazz covers wafer-level and packaged part development activities, spanning the space from design characterization to volume production, probing and final test. Foundry customers of TowerJazz now have access to the full range of semiconductor services from the Presto Engineering Hubs located in Silicon Valley, Europe and Israel.

“We have seen a significant growth in design starts for high-speed communications devices, driven in part by expansion of 100 Gigabit networks and the shift to E-band wireless infrastructure systems. Time-to-volume production is key in these fast-growing markets and having a proven SiGe test and product engineering solution will be vital for our common customers' success. We look forward to working closely with the TowerJazz foundry team to make that a reality,” stated Dr. Michel Villemain, Presto Engineering founder and CEO.

“Combining our leading position in SiGe process technology with collaborations such as the one announced today with Presto, provides our customers the ability to speed product development of new communication products,” said Dr. Marco Racanelli, Senior Vice President and General Manager, RF and High Performance Analog Business Group. “Presto's Hub locations in the US and Israel are also well-suited to our global footprint that now includes 8-inch fabs in the US, Israel and Japan.”

The demand for high-speed interconnects continues to exceed industry analyst expectations, according to Dell'Oro Group. As cited in their recent report, the adoption of 100 gigabit solutions is occurring faster than that of 40 gigabit, driving projected revenues to nearly \$1 billion by 2013 and \$2 billion by 2015. TowerJazz's enhanced SiGe BiCMOS technology is aimed at replacing GaAs components in high growth markets such as high speed communications. SiGe provides significant integration and cost advantage over GaAs with demonstrated performance of up to 200GHz as well as noise and power performance that is competitive with GaAs while offering as much as 40% lower die cost. Also included are CMOS options to enable mixed-signal and digital functions on the same chip further reducing cost of the complete system.

Presto offers TowerJazz customers comprehensive RF testing services in Ka-Band and E-Band, including both frequency and time-domain tests, noise, and power measurements, jitter, phase noise and bit-error-rate (BERT) measurements. The Presto Hubs complement their test services with test program generation, special probe technology development for RF applications, probecards and load boards realization. Besides test, Presto Engineering offers comprehensive turn-key solutions including qualification (reliability testing for temperature, environmental and electrical stresses) both physical and electrical fault isolation and failure analysis, all the way to supply chain management.

About TowerJazz's latest High Speed SiGe process

SBC18H3 is TowerJazz's third generation 0.18um SiGe technology and offers transistors with 240GHz Ft and 260GHz Fmax in a cost-effective and analog-friendly 0.18um node. IP of high-speed components such as TIAs, Laser Drivers, SerDes, CDRs from H2 and HX can be readily ported to the new H3 process since they are all in the same 0.18um node, allowing them to benefit from improved performance as well as reduced power consumption and noise.

Meet TowerJazz and Presto Engineering at Upcoming Industry Events

Presto Engineering and TowerJazz will be exhibiting at upcoming industry conferences, inviting attendees to obtain further technical information about the SiGe foundry technology and Presto's product engineering and production services:

GSA Ecosystem

October 6, 2011, Santa Clara, CA

European Microwave Week

October 11-13, 2011, Manchester, England

TowerJazz Global Symposium

November 3, 2011, Newport Beach, CA

About Presto Engineering

Presto Engineering, an ISO 9001 company, delivers comprehensive test and product engineering solutions to IDM and fabless companies. Operating from hubs in Silicon Valley, Europe and Israel, our business is focused on helping to improve the speed and predictability of new product releases. Presto combines unique technical expertise, extensive industry experience and supply chain management, with leading edge ATE for SoC and RF, reliability, FIB, and FA/FI services to offer a complete product engineering solution designed to complement our customer's internal resources. More information can be found at www.presto-eng.com

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader, its fully owned U.S. subsidiary Jazz Semiconductor, Inc. and its fully owned Japanese subsidiary TowerJazz Japan, LTD, 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 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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