

TOWER SEMICONDUCTOR LTD

Form 6-K

May 22, 2013

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FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of May 2013 No. 2

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  S    Form 40-F  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  F    No  S

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On May 22, 2013, the registrant announces Crocus Licenses its Magnetic Logic Unit™ Technology to TowerJazz.

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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: May 22, 2013

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

Crocus Licenses its Magnetic Logic Unit™ Technology to TowerJazz

License agreement to TowerJazz will help speed adoption of Crocus' non-volatile memory and magnetic sensors technologies,  
products to hit market before end of 2013

SANTA CLARA, Calif. and MIGDAL HAEMEK, Israel, May 22, 2013 — Crocus Technology, a leading provider of magnetically enhanced semiconductors, and TowerJazz, the global specialty foundry leader, today announced a licensing and joint promotion agreement for the use of Crocus' Magnetic Logic Unit™ (MLU) process technology by TowerJazz in its customers' embedded System-On-Chip (SoC) applications.

The license agreement to TowerJazz will help speed adoption of Crocus' non-volatile memory (NVM) and magnetic sensors technologies in the fast growing magnetic markets. The NVM and sensor markets are expected to reach \$2 billion each by 2016. Products manufactured by TowerJazz are expected to hit the market before the end of 2013 with a few customers that are already being engaged.

As part of the agreement, Crocus will make its MLU blocks, including magnetic sensors and secure embedded memories, available to TowerJazz customers for integration into their SoC designs. Crocus' MLU will enable better performance with non-volatile memory (NVM) i.e. speed like DRAM. It will include unique security options that are not available in other NVMs and uniquely provide SoCs with magnetic sensor technology. Crocus and TowerJazz plan to collaborate to promote the MLU technology and related MLU blocks to their respective customers.

With support from Crocus, TowerJazz has started porting and installing the MLU technology at its Migdal Haemek manufacturing facility in Israel. In addition to manufacturing MLU-based products for SoC customers, Crocus also intends to use TowerJazz's manufacturing capability to bring its own magnetic sensor and non-volatile memory products to market later this year.

Crocus' MLU is a magnetic technology offering significant advantages in performance, security and cost-effectiveness over Flash memory. This makes it ideal for use in smartcards and other embedded micro-controller applications. In addition, MLU has magnetic sensor capability and is ideal for use in automotive and consumer electronics applications. While MLU requires only the addition of three to four masking layers to standard CMOS, it brings powerful benefits, including the unique ability to embed MLU based secure memories and magnetic sensors into SoCs. Crocus has developed, and is making available for customer evaluation, MLU-based field sensor blocks that replace hall effect sensors as well as embedded memories that operate at below 3 volts. This is important for low power/low voltage applications.

"Crocus and TowerJazz have been engaged for several years in bringing MLU technology based on 130nm process node to production," said Bertrand F. Cambou, executive chairman of Crocus Technology. "We are looking forward to combining Crocus' MLU technology with such a high quality manufacturing operation. This collaboration sets the stage for bringing to market leading edge SoC products in the automotive and consumer market segments."

"The long-standing collaboration with Crocus helps us to further expand our technology envelope and provide our customers with a more differentiated offering," said Zmira Shternfeld-Lavie, vice president of Process Engineering R&D and general manager of Transfer, Optimization and development Process Services Business Unit (TOPS™), TowerJazz. "The newly developed non-volatile memories and magnetic sensors will significantly increase our offering for a wide-range of SoC applications."

About Crocus Technology

Crocus Technology is a leading developer of a magnetically enhanced semiconductor technology for mobile security, embedded microcontrollers and applications requiring extreme operating conditions. Crocus' breakthrough proprietary Magnetic Logic Unit™ (MLU™) technology offers many advantages for applications demanding high speed, secure and robust performance at lower cost. In embedded security, Crocus' tamper-resistant MLUs read and write faster than flash memory and fit in a smaller footprint. Available in SIM and other embedded form factors, MLUs bring unprecedented levels of secure authentication for mobile payments, access control and other critical data transactions needing high-level security. In the embedded space Crocus' MLUs are effective in replacing most existing memory blocks with the added ability of operating in rugged environments, notably in high temperature electronics (400°C). Founded in 2004, Crocus is led by a senior management team with high-level industry experience from Motorola, AMD, Intel and Gemalto. It has US operations in Santa Clara, California and offices in Grenoble and Gardanne, France. For more information, please visit: <http://www.crocus-technology.com/>.

#### 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, offering a broad range of customizable process technologies including: SiGe, BiCMOS, Mixed-Signal/CMOS, RFCMOS, CMOS Image Sensor, Power Management (BCD), and MEMS capabilities. TowerJazz also provides a world-class design enablement platform that enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Transfer Optimization and development Process Services to IDMs and fabless companies that need to expand capacity. TowerJazz offers multi-fab sourcing with two manufacturing facilities in Israel, one in the U.S., and one in Japan. 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 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), 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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