#### FORM 6-K

#### SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of February 2012 No. 1

# 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 £

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 S

On February 07, 2012	, the registrant announces	s that Kilopass XPM <sup>1M</sup> Noi	n voiatile Memory IP	Quanned on TowerJazz
130nm CMOS.				

#### **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: February 07, 2012 By: /s/ Nati Somekh

Gilboa

Name: Nati Somekh

Gilboa

Title: Corporate

Secretary

#### Kilopass XPM<sup>TM</sup> Non Volatile Memory IP Qualified on TowerJazz 130nm CMOS

Highly reliable NVM enabled for Analog/Mixed-Signal designs for calibration and trim data storage

Santa Clara, Calif. – January 7, 2012 – Kilopass Technology Inc., a leading provider of logic non-volatile memory (NVM) intellectual property (IP) today announced that its XPM embedded one-time programmable (OTP) anti-fuse NVM IP has successfully completed 1000 hours of JEDEC 47 standard qualification for the 130nm G CMOS process at TowerJazz, the global specialty foundry leader. Analog and mixed-signal designers building SoCs on the TowerJazz 130nm G CMOS process now have a source of anti-fuse NVM IP memory blocks affording 1kb to 1Mb of secure storage for calibration and trim data with over 10 years of reliability and data retention. The Kilopass XPM addresses the multi-billion dollar markets of RF power amplifiers, capacitive sensors, PMIC and other mixed-signal applications.

During qualification, three Kilopass test chip lots underwent 1000 hours of reliability testing for high temperature operating life (HTOL) and high temperature storage life (HTSL) on the 130nm G CMOS process at TowerJazz. Successfully completing HTOL and HTSL testing of test chips from three different wafer lots fulfilled the demands of the JEDEC 47 specification. JEDEC 47 describes the procedure for accelerated life testing at elevated voltages and temperatures that ensure product reliability and data retention for over 10 years.

"We are pleased with the results from the JEDEC 47 standard 3-lot qualification of Kilopass' XPM non-volatile memory IP blocks on the TowerJazz 130nm G CMOS process," said Ilan Rabinovich, VP, Customer Support and General Manager, Mixed-Signal CMOS Business Unit at TowerJazz. "We provide customers design kits, IP blocks and dedicated design services to enable a fast, accurate design cycle for first-time working silicon. With Kilopass anti-fuse NVM qualified on the TowerJazz 130nm node, our customers have another source of high-reliability, long-life NVM IP for their designs."

"We are thrilled to have our XPM NVM IP qualified at TowerJazz and available to analog/mixed signal designers," said Linh Hong, Vice President of Marketing at Kilopass. "Today's analog and mixed-signal applications require better calibration and trimming to ensure consistent performance across process variations and changeable environmental conditions. Designers using TowerJazz's foundry now have an embedded non-volatile memory to store trimming data for analog/mixed signal designs that add no silicon cost and can be programmed in the field to adjust circuits that drift over time."

#### About Kilopass NVM OTP Memory

Kilopass embedded NVM is implemented in standard CMOS without any additional backend process steps. It is designed for manufacturability and mass production and uses standard foundry design rules and manufacturing process controls. Kilopass supports in-system programming without process or mask modifications, thus keeping manufacturing costs low. Over 2 billion chips manufactured at the major semiconductor foundries in over 30 processes from 180nm to 40nm have shipped with Kilopass' anti-fuse technology.

Kilopass' XPM solutions NVM OTM IP for the TowerJazz 130nm G process are available for licensing now. (Click here for a video on Kilopass IP offerings at TowerJazz.) For more information, contact info@kilopass.com.

#### About Kilopass

Kilopass Technology, Inc., a leading supplier of embedded NVM intellectual property, leverages standard logic CMOS processes to deliver one-time programmable (OTP) and many-time programmable (MTP) memory. With 58 patents granted or pending and more than 800,000 wafers shipped from a dozen foundries and Integrated Device Manufacturers (IDMs), Kilopass has more than 100 customers in applications ranging from storage of firmware and security codes to calibration data and other application-critical information. The company is headquartered in Santa Clara, Calif. For more information, visit www.kilopass.com or email info@kilopass.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 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.

###

For more information, contact:

Nanette Collins

Public Relations

For Kilopass Technology

(408) 980-8808

(617) 437-1822

Jonah McLeod

Kilopass Technology

(408) 980-8808

(949) 715-3049

lauri.julian@towerjazz.com

nanette@nvc.com