TOWER SEMICONDUCTOR LTD
Form 6-K
October 29, 2014

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month October 2014 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 x Form 40-F o

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 o No x

On October 29, 2014, the registrant and Physical Logic Ltd. Announces Volume Production of High Performance MEMS-based Accelerometer for Inertial Navigation Applications

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: October 29, 2014

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

NEWS ANNOUNCEMENT FOR IMMEDIATE RELEASE

TowerJazz and Physical Logic Ltd. Announce Volume Production of High Performance MEMS-based Accelerometer for Inertial Navigation Applications
Inertial Measurement Unit (IMU) market is expected to reach $2.6B in 2015

MIGDAL HA'EMEK and BNEI-BRAK, Israel, October 29, 2014 — TowerJazz, the global specialty foundry leader and Physical Logic Ltd., a developer of MEMS-based sensor applications, announced today a milestone achievement for mass production of its first generation high performance MEMS-based accelerometer family (MAXL-OL-2000). MEMS accelerators are sensors which can be used in inertial navigation applications to calculate the direction and speed of moving objects such as ships, aircraft, submarines, guided missiles and spacecraft. They are also used for measurement activities including monitoring cardiac patients to translate signals from the heart to the pacemaker, seismic sensing, tilt sensing, etc.

According to Yole Développement, many new applications are fueling the growth of the Inertial Measurement Unit (IMU) market, which is benefiting from significant technology evolutions, such as the continuous improvement of MEMS IMUs. High-performance inertial sensors and systems is a dynamic market segment as an ever-increasing number of platforms require stabilization, guidance or navigation functions. According to a Yole report, "Gyroscopes and IMUs for Defense, Aerospace & Industrial," the IMU market is expected to reach $2.6 billion in 2015.

Physical Logic developed its MEMS-based accelerometer using a unique open-loop in-plane-bulk micromachining technology to provide a best in class tactical grade accelerometer with 40g dynamic range, 0.2% scale factor non-linearity and 4mg long term bias repeatability. The MAXL-OL-2000 includes an ASIC driver and offers solutions for various navigation and avionics applications. Other MAXL-OL-2000 tactical grade accelerometers with various dynamic range scales are also offered.
High-end accelerometer process flow is challenging and sets extreme manufacturing demands for high aspect ratio Si etch, stress control, high accuracy double side alignment and interface to package. TowerJazz's 0.18-micron MEMS modular process and MEMS controller were used for Physical Logic's accelerometer and ASIC devices respectively, in order to achieve the superior specifications required for sensitivity, stability, small form factor and low power consumption.

"TowerJazz meets our very high requirements for performance, on-time delivery, quality and technical support demanded by our customers," said Katja Beyer CEO and General Manager of Physical Logic Ltd. "TowerJazz's MEMS offering, combined with its advanced power management platform and superior engineering capabilities, enhances our success in penetrating markets requiring MEMS-based accelerometer applications."

"Physical Logic's focus on MEMS-based sensors and its expertise in MEMS design has positioned the company to meet the needs of a multitude of applications including military and consumer electronics, where rapid scale-up can be achieved. We are extremely pleased to be Physical Logic's foundry of choice for MEMS manufacturing to address this expanding market," said Zmira Shternfeld-Lavie, Vice President of Process Engineering R&D, TowerJazz.

"We are also proud to announce successful tests of our MAXL-CL-3000, the first upcoming commercial inertial navigation grade closed-loop MEMS accelerometers which meets scale factor non-linearly of 0.1% over 30g dynamic range and long term bias repeatability of 0.35mg. We chose TowerJazz as our foundry partner for its reputation in the industry for first time silicon success," said Aviram Feingold, Vice President Engineering at Physical Logic.

About Physical Logic Ltd

Physical Logic Ltd is a subsidiary of Physical Logic AG.
Physical Logic AG, founded in 2004, is a privately-held Swiss company, headquartered in Zurich, Switzerland, and is focused to expand within special sections of the sensor market. With its subsidiaries, Physical Logic develops “smart” MEMS-based sensor applications.

About TowerJazz
Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and its fully owned U.S. subsidiary Jazz Semiconductor, Inc. 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, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz also provides a world-class design enablement platform for a quick and accurate design cycle as well as Transfer Optimization and development Process Services (TOPS) to IDMs and fabless companies that need to expand capacity.

To provide multi-fab sourcing and extended capacity for its customers, TowerJazz operates two manufacturing facilities in Israel (150mm and 200mm), one in the U.S. (200mm) and three additional facilities in Japan (two 200mm and one 300mm) through TowerJazz Panasonic Semiconductor Co. (TPSCo), established with Panasonic Corporation of which TowerJazz has the majority holding. Through TPSCo, TowerJazz provides leading edge 45nm CMOS, 65nm RF CMOS and 65nm 1.12um pixel technologies. For more information, please visit www.towerjazz.com and www.tpsemico.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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