

TOWER SEMICONDUCTOR LTD

Form 6-K

January 11, 2011

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of January 2011 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 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 January 11, 2011, the registrant announced e2v Responds to Customer Demand by Increasing Production of Dental X-ray Sensors Incorporating Advanced CMOS Image Sensor Technology from TowerJazz Attached please find the press release.

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

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 11, 2011

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

NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

e2v Responds to Customer Demand by Increasing Production of Dental X-ray
Sensors Incorporating Advanced CMOS Image Sensor Technology from TowerJazz

CHELMSFORD, England and MIGDAL HA'EMEK, Israel, January 11, 2011 — e2v, the leading provider of technology solutions for high performance imaging systems and TowerJazz, the global specialty foundry leader, today announced that e2v has significantly increased the rate of production of its dental x-ray sensors incorporating TowerJazz's advanced 0.18-micron CMOS Image Sensor (CIS) technology.

e2v offers best-in-class sensors integrating high end CMOS design, coupled with high performance X-ray conversion layers for uncompromised image quality. Dental intra-oral X-ray sensors replace the X-ray film that dentists use, providing an instant digital image on a screen rather than on film that needs developing.

The design expertise of e2v, combined with the high performance manufacturing capabilities of TowerJazz, has resulted in a new generation of System-on-Chip (SoC) dental sensors benefiting from high image quality and advanced levels of integration and embedded capabilities.

With a strong relationship over more than five years, e2v has been progressively increasing production over the past year, using TowerJazz's advanced Fab2, to match demand for these advanced sensor solutions. The fast growing dental X-ray sensor market, moving from film to digital and from CCD to CMOS technology, was worth \$30 million in 2009 and is expected to increase by 10 to 15% per year.

“We are pleased to have TowerJazz as our manufacturing partner as we increase production volumes of our dental sensor products. Their leading 0.18-micron CMOS image sensor technology is a key enabler in providing excellent stitching performance, high yields, and a rich IP portfolio,” said Francois Thouret, Divisional Director for e2v's High performance Imaging Solutions Business. “As we continue to design and develop next-generation CMOS image sensors and our customers' needs become more customized, we value the capabilities and flexibility of a specialty foundry partner like TowerJazz to meet our stringent requirements, offering superior process technology combined with outstanding customer support.”

Dr. Avi Strum, Vice President and General Manager of TowerJazz's Specialty Business Unit said, "Our partnership with e2v combines years of CMOS image sensor experience, expertise and collaboration. e2v's ability to specify and design innovative, state of the art intra-oral sensors is a key factor of the product's success in the market. TowerJazz's 0.18-micron stitching technology allows e2v to deliver best-in-class sensors through customizable solutions, unique stitching technology and leading manufacturing capability. The dental x-ray sensor market is growing rapidly and the market potential is substantial. We highly value our continued relationship to deliver e2v's dental sensor products as well as provide e2v with other advanced CMOS image sensors to a variety of end markets."

About e2v Technologies

e2v is a leading designer, developer and manufacturer of specialised components and subsystems. Products are defined under two groups: sensors and semiconductors, and electronic tubes. They enable innovative systems for medical and science, aerospace and defence, and commercial and industrial applications. With 1800 employees in 5 manufacturing plants through Europe and sales and support offices in 4 key global territories, as well as a network of distributors and representatives covering other key territories, e2v has a true global presence. e2v is listed on the main market of London Stock Exchange (e2v.l). For the year ended 31 March 2007, the Company achieved sales of 174m. Further information is available from <http://www.e2v.com>.

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.

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.

###

For TowerJazz:

For e2v:

Company Contact

Melinda Jarrell

(949) 435-8181

melinda.jarrell@towerjazz.com

Media Contact

Sylvie Mattei

+33 4 76 58 30 00

sylvie.mattei@e2v.com

Media Contact

Lauri Julian

(949) 715-3049
lauri.julian@towerjazz.com

Investor Relations Contact
Noit Levi
+972 4 604 7066
noit.levi@towerjazz.com
