

# FORM 6-K

## SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of October 2008

### 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

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On October 2, 2008, the registrant Announces Production Launch of Yitran's IT700 PLC Module. 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.

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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: October 2, 2008

By: /s/ Nati Somekh Gilboa

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Nati Somekh Gilboa  
Corporate Secretary

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#### YITRAN COMMUNICATIONS AND TOWER SEMICONDUCTOR ANNOUNCE PRODUCTION LAUNCH OF YITRAN'S IT700 PLC MODULE

##### **Smart home market applications for the module is estimated at 45M units by 2010**

MIGDAL HA'EMEK, Israel, and BEER SHEVA, Israel, October 02, 2008 – Yitran Communications Ltd. (Private holding), a leading developer and manufacturer of Powerline Communications (PLC) technology, and Tower Semiconductor, Ltd. (Nasdaq: TSEM, TASE: TSEM), an independent specialty foundry, today announced the successful production launch of Yitran's new IT700 PLC module. IT700 will be manufactured using Tower Semiconductor's advanced 0.18u NVM technology at Tower's 200-mm Fab 2 in Migdal Ha'emek, Israel.

The **IT700** PLC module is a small sized, highly robust, low cost solution suited for infinite number of applications in the command and control applications such as Remote Metering Management (AMI/AMM) and smart home/building applications. IT700 is HomePlug Command and Control ready. According to Techno Systems Research, the market application space for such command and control modules is estimated to grow from 2.5M units in 2005 to over 45M units by 2010.

IT700 PLC transceiver includes an extended 8051 micro controller unit (MCU) core and full analog front end (AFE) module, enabling a high level of code efficiency and high speed operation. IT700 includes the patented and award winning elements of its predecessor, IT800, and excels its predecessor in performance. It is fully backward-compatible with the IT800 series.

Avner Matmor, Yitran's Co-Founder and CEO noted, "IT700 opens the door to many applications which have been waiting for a robust PLC solution and at a cost that will allow them to combine competitiveness both in performance and affordability. Custom products, such as IT700, are made possible through highly sophisticated architectural design of the product combined with best-of-breed manufacturing technology. We are proud to partner with Tower, whose reputation for excellence is known world-wide."

"We are pleased to take part in Yitran's success through the manufacturing of their custom power line communication designs," said Dr. Avi Strum, Vice President and General Manager of Specialty Products at Tower Semiconductor. "Custom products for high-end applications bring out the best that our technology has to offer, enabling high-profile business opportunities for both companies."

The inclusion of Yitran's patented DCSK (Differential Code Shift Keying) spread spectrum modulation technique in the transceiver core, enables extremely robust communication with data rates of 7.5Kbps. The product complies with worldwide regulations (FCC, ARIB and CENELEC bands).

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Yitran Communications Ltd. is pleased to announce that it is offering to all HomePlug Alliance members a license to practice Yitran's essential patents in products implementing the HomePlug C&C specification. The license is offered in accordance to the HomePlug Alliance Open Standard policy upon request and under NDA with Yitran. The license is offered to all participants in the standard, including both manufacturers of semiconductor products and manufacturers of end-products implementing the HomePlug C&C specification. For more information please contact Yitran at [Yitran@Yitran.com](mailto:Yitran@Yitran.com).

#### **About Tower Semiconductor Ltd.**

Tower Semiconductor Ltd. is a pure-play independent specialty wafer foundry. Tower manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron; it also provides complementary technical services and design support. In addition to digital CMOS process technology, Tower offers advanced mixed-signal & RF-CMOS, Power Management, CMOS image-sensor and non-volatile memory technologies. Through access to the process portfolio of its wholly owned subsidiary, Jazz Semiconductor, Tower offers RF CMOS, Analog CMOS, Silicon and SiGe BiCMOS, SiGe C-BiCMOS, Power CMOS and High Voltage CMOS. To provide world-class customer service, Tower maintains two manufacturing facilities in Israel with access to Jazz Semiconductor's fab in the U.S. and manufacturing capacity in China through Jazz's partnerships with ASMC and HHNEC. For more information, please visit [www.towersemi.com](http://www.towersemi.com) and [www.jazzsemi.com](http://www.jazzsemi.com).

#### **About Yitran Communications Ltd.**

Yitran Communications Ltd. designs, develops and markets high performance, low cost PLC modem chips and systems. Yitran's products provide robust and reliable communication over existing electrical wiring and power grids to enable a variety of Command and Control applications such as Energy Management/Smart Grid, Home/Building Automation, AMR/AMM, Commercial Automation and Management. Yitran is a contributing member of the HomePlug Powerline Alliance and an active member in standards organizations including CIC, CABA, HPNA and member of IPCF, ETSI and Echonet. Through its association, Yitran lends its discerning viewpoint and technological leadership in a power line connected communications future. Yitran's customer and partners include Microsoft as a co developer of the Simple Control Protocol (SCP) supported by General Electric, Renesas, Matsushita Electric Works, Hitachi, KEPCO, Kinden, LG and others to ensure convergence between existing and future Command and Control Standards. More information can be found at [www.yitran.com](http://www.yitran.com).

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Safe Harbor  
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 our business is included under the heading "Risk Factors" in our most recent Annual Report on Form 20-F, Forms F-4, F-3 and 6-K, as were filed with the Securities and Exchange Commission and the Israel Securities Authority. We do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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