

FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month of July 2006

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 July 24, 2006, the Registrant announced that Tower cooperates with Waves Audio and VLSI Solution to improve sound quality to LCD TV's, attached hereto is a copy of 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: July 24, 2006

By: /s/ Nati Somekh Gilboa

Nati Somekh Gilboa
Corporate Secretary

TOWER SEMICONDUCTOR COOPERATES WITH WAVES AUDIO AND VLSI
SOLUTION TO IMPROVE SOUND QUALITY OF LCD TVS

MANUFACTURED AT TOWER, MAXXBASS(R) CHIP CHOSEN FOR JVC'S NEW LCD TVS

MIGDAL HAEMEK, ISRAEL - July 24, 2006 - Tower Semiconductor Ltd. (NASDAQ: TSEM; TASE: TSEM), a pure-play independent specialty foundry, today announced production start of MaxxBass(R) ASIC product. A result of joint collaboration between Waves Audio, VLSI Solution and Tower, the product was enhanced to meet JVC's stringent requirements for audio quality.

The dramatic improvement in sound quality of small speakers achieved through the new product opens up a whole new realm of possible applications including LCD TVs, notebook computers, portable loudspeakers and car audio.

The business model between the companies allows each to effectively contribute its expertise to the success of this project. Waves Audio provides its patented psychoacoustic audio algorithm and system expertise; VLSI Solution provides its expertise in mixed signal semiconductor design, and Tower provides volume production manufacturing capabilities.

"Waves strategy in the CE market is to deliver audio solutions that compensate for limitations in small loudspeakers. The acoustics has become the A/V bottleneck for a wide range of consumer products, and Waves has unique psycho-acoustic algorithms to compensate for these limitations," said Paul Bundschuh, vice president sales and marketing, Waves Semiconductor and OEM Licensing Division. "Waves executes our CE strategy by being both a fab-less and design-less semiconductor company and by working closely with our design and manufacturing partners to service our customers' needs. Waves success at JVC and other firms would not be possible without the excellent support from VLSI Solution and Tower Semiconductor."

"VLSI Solution has developed a strong relationship with Waves which utilizes our semiconductor design expertise", said Tapani Ritoniemi, president of VLSI Solution Oy. "By leveraging the best capabilities of each firm, VLSI is pleased to assist Waves in becoming highly competitive semiconductor vendor in the consumer electronics industry."

"Apart from the immediate contribution to Tower's revenue from a growing new market segment, we believe that such collaborative projects open the door to many new opportunities", said Yossi Netzer, general manager of mixed-signal & RF product line at Tower Semiconductor. "Tower's involvement and investment in such collaborative projects is important to the continued growth of the company."

ABOUT TOWER SEMICONDUCTOR LTD.

Tower Semiconductor Ltd. is a pure-play independent wafer foundry established in 1993. The company 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 non-volatile memory solutions, mixed-signal and CMOS image-sensor technologies. To provide world-class customer service, the company maintains two manufacturing facilities: Fab 1 has process technologies from 1.0 to 0.35 micron and can produce up to 16,000 150mm wafers per month. Fab 2 features 0.18-micron and below standard and specialized process technologies, and has the current capacity of up to 15,000 200mm wafers per month. Tower's Web site is located at www.towersemi.com.

ABOUT WAVES AUDIO LTD.

Waves is the world's leading provider of audio signal processing tools for professionals. Its processors are used to improve sound quality in the creation of practically all of the world's most popular music, movie soundtrack and multimedia titles. Waves offers both award-winning embedded software for digital audio workstations and various hardware product tools to the world's most successful and demanding audio professionals. For more information, visit www.waves.com.

ABOUT VLSI SOLUTION OY

VLSI Solution Oy is a design and manufacturing service company, offering multi-level technology licensing, product development and custom IC sales. The company has also developed its own audio decoder family and offered as standard products.

VLSI Solution Oy has competence especially in Multimedia, Signal Processing Systems, Telecommunications and Mixed-Signal Industrial Electronics. Founded in 1991, the company is located in Tampere Technology Center Hermia in Finland. For more information, visit www.vlsi.fi.

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 Forms 20-F, F-1, 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.

CONTACTS:

Tower Semiconductor USA:
Michael Axelrod, +1 408 330 6871
pr@towersemi.com