FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month March 2020 No. 2

TOWER SEMICONDUCTOR LTD.

(Translation of registrant's name into English)

Ramat Gavriel Industrial Park
P.O. Box 619, Migdal Haemek, Israel 2310502
(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 March 4, 2020, the Registrant Announced Tower Semiconductor SiGe Technology Adopted by Renesas Electronics for Production of its Market Leading SATCOM RFICs

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: March 4, 2020

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

NEWS ANNOUNCEMENT **FOR IMMEDIATE RELEASE**

Tower Semiconductor SiGe Technology Adopted by Renesas Electronics for Production of its Market Leading SATCOM RFICs

The compact and highly efficient Ku- and Ka-Band active beamforming and Low Noise Amplifier RFICs will enable next-generation terminals that utilize phased array antennas for LEO, MEO and GEO satellite communications

MIGDAL HAEMEK, Israel, March 4, 2020 –Tower Semiconductor (NASDAQ/TASE: TSEM), the leading foundry of high value analog semiconductor solutions, today announced that Tower Semiconductor's SiGe BiCMOS platform was selected for the development and production of Renesas Electronics' market-leading beamforming and amplifier RFICs for phased array antenna applications.

Phased array antennas or more specifically active electronically scanned arrays (AESAs) have been a staple of the defense industry for over 40 years, but are now rapidly emerging in the commercial marketplace due to the exponentially growing demands for connectivity. These antennas will be critical to the enablement of high data-rate, low latency connectivity in the air, at sea and on the ground, taking advantage of the rapid growth in throughput from existing GEO and emerging non-geostationary (NGSO) LEO/MEO satellite networks.

"In migrating to AESAs from mechanical antennas, our customers require reliable, compact and cost-effective ICs with exceptionally low power consumption and noise figure that meet their system EIRP and G/T requirements," said Naveen Yanduru, Vice President of RF Communications, Industrial and Communications Business Division at Renesas. "Thanks to the strong collaboration between Tower Semiconductor and our world-class design team, we are exceeding our customer's expectations by all metrics and progressing rapidly into production."

By leveraging Tower Semiconductor's high-performance SiGe BiCMOS technology, Renesas is able to achieve unprecedented levels of integration. For example, the Renesas 8-ch transmit IC has a footprint of only two square millimeters per transmit channel and consumes less than 100 mW, while delivering 10 dBm of output power. Several design parameters had to be pushed to their limits to achieve these results and required a close collaboration between the companies to ensure the accuracy of design models and first-pass success. During early development, the Renesas design team also took advantage of the flexibility and customization of the Tower Semiconductor process offerings to identify the optimal compromise between cost and performance.

"We are pleased to be working with a leader such as Renesas that is leveraging the value of our SiGe Terabit platform to deliver breakthrough phased array product performance for Satcom applications," said Marco Racanelli, Tower Semiconductor Sr. Vice President and General Manager of Analog IC Business Unit. "This complements the booming opportunities we see for similar phased array products in 5G mmWave and automotive radar where SiGe offers dramatically lower power consumption than alternatives while preserving the ability for high levels of integration and low cost."

By some estimates, the Satcom market is projected to grow to $50 billion by 2027 at a CAGR of 10%. In the same timeframe, the number of satellites is projected to triple from approximately 8,000 to 24,000, primarily driven by growth in NGSO communications satellites providing ubiquitous high-data rate and low latency communications. This is expected to fuel a transition from fixed and mechanically steered antennas to electronically steered antennas, creating a significant market for beamforming ICs.

For additional information about Renesas Electronics Corporation, please click here.

For additional information about Tower Semiconductor's technology, please click here.

About Tower Semiconductor

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the leading foundry of high value analog semiconductor solutions, provides technology and manufacturing platforms for integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, mobile, infrastructure, medical and aerospace and defense. Tower Semiconductor's focuses on creating positive and sustainable impact on the world through long term partnerships and its advanced and innovative analog technology offering, comprised of a broad range of customizable process platforms such as SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, non-imaging sensors, integrated power management (BCD and 700V), and MEMS. Tower Semiconductor also provides world-class design enablement for a quick and accurate design cycle as well as Transfer Optimization and development Process Services (TOPS) to IDMs and fabless companies. To provide multi-fab sourcing and extended capacity for its customers, Tower Semiconductor operates two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm) and three facilities in Japan (two 200mm and one 300mm) through TPSCo. For more information, please visit www.towersemi.com.

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