FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month July 2022 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 July 14, 2022, the Registrant and Cadence announces Expanding their Collaboration to Accelerate Automotive IC Development

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 14, 2022

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

Tower Semiconductor and Cadence Expand Collaboration to Accelerate Automotive IC Development

Highlights:

- *Collaboration aimed at enabling mutual customers to design differentiated ICs optimized for cost and performance*
- *Automotive reference flow development to provide a unified design environment for chip and package co-design and simulation*

SAN JOSE, Calif., and MIGDAL HAEMEK, Israel, July 14, 2022 – Cadence Design Systems, Inc. (Nasdaq: CDNS) and Tower Semiconductor (Nasdaq/TASE: TSEM), the leading foundry of high-value analog semiconductor solutions, today announced a collaboration to advance automotive and mobile IC development. Through the collaboration, the companies are developing a new, comprehensive automotive reference design flow using the Cadence® Virtuoso® Design Platform and Spectre® Simulation Platform to provide customers with a faster design cycle, maintaining comprehensive design verification for advanced automotive IC product development.

The unique design challenges and analysis characteristics of automotive ICs require a carefully crafted combination of technologies and methodologies in order to satisfy the demanding ISO 26262 specification. By working to combine Cadence and Tower technologies, mutual customers can meet automotive design goals and achieve a faster path to ISO 26262 certification.

“Cadence and Tower have successfully collaborated for many years, delivering solutions for RF and silicon photonics, which help our mutual customers develop advanced offerings,” said Dr. Anirudh Devgan, president and CEO of Cadence. “The mutual work we’re doing on the automotive reference flow focuses on enabling customers to develop critical automotive ICs, leveraging an integrated workflow using an all-Cadence toolset and a Tower reference design to develop compelling products faster.”

“Our long-term partnership and collaboration with Cadence has enabled us to continuously provide our customers with leading-edge design tools that allow the development of innovative analog ICs that have been co-optimized with the package they reside in,” said Russell Ellwanger, Tower Semiconductor CEO. “This new reference flow provides our customers with a functional toolset for the development and manufacturing of high-performance ICs meeting the high quality and reliability demands of the automotive market and is another testament to our strong commitment to delivering advanced technology solutions that proficiently address our customers’ current and future needs.”

Tower Semiconductor offers a broad range of advanced analog technology platforms addressing the automotive market. These include image sensor, RF, and SiPho for ADAS systems, mixed-signal and advanced analog for multiple application-specific ICs and power management platforms enabling battery management systems, motor drivers, onboard chargers, and power converters for the fast-growing EV market. The new reference flow further solidifies the Company’s comprehensive automotive offering.

The Cadence and Tower collaboration supports automotive SoC design and the broader Cadence Intelligent System Design™ strategy, which enables customers to achieve SoC design excellence. For more information on Cadence automotive solutions, visit www.cadence.com/go/CadenceAutoSol.

For more information about Tower Semiconductor’s foundry technology and design enablement offerings, please visit here.

About Cadence
Cadence is a pivotal leader in electronic systems design, building upon more than 30 years of computational software expertise. The company applies its underlying Intelligent System Design strategy to deliver software, hardware and IP that turn design concepts into reality. Cadence customers are the world’s most innovative companies, delivering extraordinary electronic products from chips to boards to complete systems for the most dynamic market applications, including hyperscale computing, 5G communications, automotive, mobile, aerospace, consumer, industrial and healthcare. For eight years in a row, Fortune magazine has named Cadence one of the 100 Best Companies to Work For. Learn more at cadence.com.

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 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 process transfer

services including development, transfer, and optimization, to IDMs and fabless companies. To provide multi-fab sourcing and extended capacity for its customers, Tower Semiconductor owns two manufacturing facilities in Israel (150mm and 200mm), two in the U.S. (200mm), two facilities in Japan (200mm and 300mm) which it owns through its 51% holdings in TPSCo and is sharing a 300mm manufacturing facility being established in Italy with ST Microelectronics. For information, please visit: www.towersemi.com.

Cadence Newsroom | 408-944-7039 | newsroom@cadence.com
Tower Semiconductor Company Contact: Orit Shahar | +972-74-7377440 | oritsha@towersemi.com
Tower Semiconductor Investor Relations Contact: Noit Levy | +972-4-604-7066 | noitle@towersemi.com