
FORM 6-K

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

For the month September 2024 No. 1

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 September 10, 2024, the Registrant Announces Tower Semiconductor Sets a New
RFSOI Standard with Broadcom's Wi-Fi RF Front-End Modules for Next-Gen Mobile
Applications**

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: September 10, 2024

By: /s/ Nati Somekh

Name: Nati Somekh

Title: Corporate Secretary

Tower Semiconductor Sets a New RFSOI Standard with Broadcom's Wi-Fi RF Front-End Modules for Next-Gen Mobile Applications

Leading-Edge Wi-Fi 7 RF FEMs based on Tower's Advanced 300mm RFSOI Technology Deliver Enhanced Mobile Connectivity Performance and Efficiency

MIGDAL HAEMEK, Israel, Sept 10, 2024 – Tower Semiconductor (NASDAQ/TASE: TSEM), a leading foundry of high-value analog semiconductor solutions, today announced the production of Wi-Fi 7 RF front-end module (FEM) devices based on its advanced 300mm RFSOI technology. Partnering with Broadcom Inc. (NASDAQ: AVGO), Tower has enabled fully integrated Wi-Fi FEM devices on a single RFSOI die. This innovative solution delivers superior performance and efficiency compared to existing non-SOI technologies, setting a new standard in the market for advanced mobile applications.

"The unique advantages of Tower's RFSOI technology have enabled Broadcom to design and bring to market a set of compact, high-performance FEMs for Wi-Fi 7 mobile applications," said **Vijay Nagarajan, vice president of Marketing, Wireless Communications and Connectivity, Broadcom**. "These FEMs - a product of our long-standing partnership with Tower - are tailored to meet the stringent size and power efficiency requirements for mobile Wi-Fi applications."

"We are thrilled to collaborate with a market leader like Broadcom, extending Tower's leading RFSOI platform to enable innovative architectural options for integrated front-end module designs, including unique devices for LNAs and power amplifiers, and high gate density standard cells for size reduction in logic area," said **Dr. Marco Racanelli, President, Tower Semiconductor**. "Broadcom's premier capabilities in RF FEM product design complement our technological strengths, allowing both companies to achieve unprecedented performance and integration. This partnership underscores our dedication to aligning roadmaps with our customers and advancing groundbreaking products, reinforcing Tower's commitment to delivering superior technology and manufacturing solutions, enabling customers' success."

This highly integrated process reduces chip area despite the complexity of having to support new features and frequency bands. Tower's RFSOI technology platform delivers best-in-class silicon-based switch and LNA performance, as evidenced by its widespread adoption. Integrating a PA device into this technology eliminates the additional signal loss of propagating signals between separate dies, while the high-resistivity SOI substrate enhances PA efficiency by supporting passive elements like inductors with a higher quality factor.

For additional information on Tower's RF & HPA technology platform, please visit [here](#).

About Tower Semiconductor

Tower Semiconductor Ltd. (NASDAQ/TASE: TSEM), the leading foundry of high-value analog semiconductor solutions, provides technology, development, and process platforms for its customers in growing markets such as consumer, industrial, automotive, mobile, infrastructure, medical and aerospace and defense. Tower Semiconductor focuses on creating a 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, displays, integrated power management (BCD and 700V), photonics, 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 facilities in Israel (150mm and 200mm), two in the U.S. (200mm), two in Japan (200mm and 300mm) which it owns through its 51% holdings in TPSCo, shares a 300mm facility in Agrate, Italy, with ST as well as has access to a 300mm capacity corridor in Intel's New Mexico factory. For more information, please visit: www.towersemi.com.

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