UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of September 2023 No.1

Commission File Number 0-24790

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 of Form 20-F or Form 40-F.

Form 20-F \boxtimes Form 40-F \square

On September 5, 2023, the Registrant announced Intel Foundry Services and Tower Semiconductor Announce New US Foundry Agreement

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.

Date: September 5, 2023

TOWER SEMICONDUCTOR LTD.

By: /s/ Nati Somekh

Name: Nati Somekh Title: Corporate Secretary

News Release





Tower Semiconductor Ltd. Ramat Gabriel Industrial Park 20 Shaul Amor Ave. P.O. Box 619 Migdal Haemek, 2310502 Israel

Intel Foundry Services and Tower Semiconductor Announce New US Foundry Agreement

Intel's advanced 300mm manufacturing facility in New Mexico to provide new capacity corridor for Tower, helping fuel future growth.

SANTA CLARA, Calif., and MIGDAL HAEMEK, Israel, Sept. 5, 2023 – Intel Foundry Services (IFS) and Tower Semiconductor (Nasdaq: TSEM), a leading foundry for analog semiconductor solutions, today announced an agreement where Intel will provide foundry services and 300mm manufacturing capacity to help Tower serve its customers globally. Under the agreement, Tower will utilize Intel's advanced manufacturing facility in New Mexico. Tower will invest up to \$300 million to acquire and own equipment and other fixed assets to be installed in the New Mexico facility, providing a new capacity corridor of over 600,000 photo layers per month for Tower's future growth, enabling capacity to support forecasted customer demand for 300mm advanced analog processing.

This agreement demonstrates the commitment from both Intel and Tower to expand their respective foundry footprints with unparalleled solutions and scaled capabilities. Intel will manufacture Tower's highly differentiated 65-nanometer power management BCD (bipolar-CMOS-DMOS) flows, among other flows at Intel's Fab 11X in Rio Rancho, New Mexico.

Stuart Pann, Intel senior vice president and general manager of Intel Foundry Services, said, "We launched Intel Foundry Services with a long-term view of delivering the world's first open system foundry that brings together a secure, sustainable, and resilient supply chain with the best of Intel and our ecosystem. We're thrilled that Tower sees the unique value we provide and chose us to open their 300mm U.S. capacity corridor."

Tower CEO Russell Ellwanger said, "We are excited to continue working with Intel. As we look to the future, our primary focus is to expand our customer partnerships through high-scale manufacturing of leading-edge technology solutions. This collaboration with Intel allows us to fulfill our customers' demand roadmaps, with a particular focus on advanced power management and radio frequency silicon on insulator (RF SOI) solutions, with full process flow qualification planned in 2024. We see this as a first step towards multiple unique synergistic solutions with Intel."

This agreement shows how IFS enables access to corridors of manufacturing capacity across Intel's global factory network, including in the U.S., Europe, Israel and Asia. In addition to existing investments in Oregon and planned investments in Ohio, Intel has been investing and innovating in the Southwest region of the U.S. for more than 40 years, with sites in Arizona and New Mexico. Intel previously announced a \$3.5 billion investment to expand operations in New Mexico and equip its Rio Rancho campus, one of its innovation hubs, for the manufacturing of advanced semiconductor packaging.

For Tower, this is the next step in its path to increased scale, serving an expanding customer base in 300mm technologies led by strong market adoption of its industry-leading 65nm BCD power and RF SOI technologies. Specifically, Tower's 65nm BCD technology offers customers improved power efficiency, die-size and die cost through its best-in-class Rdson figure of merit. Similarly, Tower's 65nm RF SOI technology helps its customers reduce handset battery consumption while improving wireless connections through its best-in-class RonCoff figure of merit. The increased scale resulting from this agreement will enable Tower not only to serve larger opportunities with existing technologies but also enhance partnerships with industry-leading customers that will help forge strong next-generation technology roadmaps.

IFS is a critical pillar of Intel's IDM 2.0 strategy, and today's announcement represents another step forward in Intel's multiyear transformation to regain and strengthen technology leadership, manufacturing scale and long-term growth. IFS has made significant strides over the past year as demonstrated by its more than 300% year-over-year revenue increase in the second quarter of 2023. This momentum is further illustrated by Intel's recent agreement with Synopsys to develop a portfolio of intellectual property on Intel 3 and Intel 18A process nodes. Intel was also awarded the U.S. Department of Defense's Rapid Assured Microelectronics Prototypes - Commercial (RAMP-C) program, with five RAMP-C customers in design engagement on Intel 18A.

Forward-Looking Statements

This release contains forward-looking statements that involve a number of risks and uncertainties. Such statements include those regarding Intel's business plans and strategy and anticipated benefits therefrom, including with respect to its external foundry ambitions, internal foundry model, IDM 2.0 strategy, manufacturing capacity expansion plans, IP portfolio expansion and agreements with Tower and other customers. Such statements involve many risks and uncertainties that could cause Intel's actual results to differ materially from those expressed or implied, including: changes in demand for Intel's products; Intel's failure to realize the anticipated benefits of its strategy, plans, and proposed transactions; the high level of competition and rapid technological change in the semiconductor industry; the significant upfront investments in R&D and Intel's business, products, technologies, and manufacturing capabilities; the complexity and fixed cost nature of semiconductor manufacturing operations; construction delays or changes in plans due to business, economic, or other factors; increases in capital requirements and changes in capital investment plans; adverse changes in anticipated government incentives and associated approval related to Intel's planned capital investments; vulnerability to new product development and manufacturing-related risks, including product defects or errata, particularly as Intel develops next generation products and implements next generation process technologies; risks associated with a highly complex global supply chain, including from disruptions, delays, trade tensions, or shortages; sales-related risks, including customer concentration and the use of distributors and other third parties; potential security vulnerabilities in Intel products; cybersecurity and privacy risks; investment and transaction risk; IP risks and risks associated with litigation and regulatory proceedings; evolving regulatory and legal requirements across many jurisdictions; geopolitical and international trade conditions; Intel's debt obligations; risks of large scale global operations; macroeconomic conditions; impacts of the COVID-19 or similar such pandemic; and other risks and uncertainties described in Intel's earnings release dated July 27, 2023, 2022 Annual Report on Form 10-K and other filings with the U.S. Securities and Exchange Commission (SEC). All information in this press release reflects Intel management's views as of the date hereof, unless an earlier date is specified. Intel does not undertake, and expressly disclaims any duty, to update such statements, whether as a result of new information, new developments, or otherwise, except to the extent that disclosure may be required by law.

About Intel

Intel (Nasdaq: INTC) is an industry leader, creating world-changing technology that enables global progress and enriches lives. Inspired by Moore's Law, we continuously work to advance the design and manufacturing of semiconductors to help address our customers' greatest challenges. By embedding intelligence in the cloud, network, edge and every kind of computing device, we unleash the potential of data to transform business and society for the better. To learn more about Intel's innovations, go to newsroom.intel.com and intel.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 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 by STMicroelectronics. For more information, please visit www.towersemi.com.

Safe Harbor Regarding Forward-Looking Statements

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 Tower's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority. Tower does not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

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