

The logo for TowerJal, featuring the word "TOWERJAL" in a bold, white, sans-serif font with a slight 3D effect. The background is a vibrant blue with a complex pattern of white lines radiating from a central point, creating a globe-like or network-like appearance.

*The Global Specialty Foundry Leader*

# **2017 ANNUAL REPORT**

Corporate and Business Overview

NASDAQ & TASE: TSEM

# TOWERJAZZ 2017 ANNUAL REPORT

Corporate and Business Overview

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## VISION

To be the world leader in specialty foundry solutions as measured by our customers, employees and investors.

## MISSION

TowerJazz's mission is to bring to market specialty foundry solutions that provide unique value to our customers by attentively listening to and proactively providing for their needs, through attracting and retaining the best global talent to serve them.

## VALUES



Embrace a Customer Centric Mentality



Foster a Culture Built on Mutual Trust and Respect



Demand Quality and Excellence in Everything We Do



Exemplify a Data Driven and Results-Oriented Mindset



Emphasize Collaboration and Innovation



Focus on the Right Knowledge, Skills and Attitude

# 2017

With record business, strategic and financial achievements,

## TowerJazz is proud to summarize 2017 as a successful year with substantial value creation.

The Company continues to proudly lead the specialty analog foundry landscape, enhancing its position as the foundry of choice for the technology megatrends driving the world.

In 2018 and beyond,

## TowerJazz's focus is to converge upon and optimize the great opportunities that lie ahead,

continuing to create value for all its stakeholders - customers, shareholders, employees and partners.

# 2018

## CHAIRMAN LETTER TO SHAREHOLDERS

### Dearest Shareholders and Friends,

What a year! The board and I are so pleased with 2017 achievements; the culmination of tactics having brought a multi-year strategic plan to fruition. Our thanks to the employees and the management team for their outstanding performance and contribution, as well as appreciation to our shareholders for believing in the Company.

We posted industry leading year-over-year organic growth of over 20%, building upon the three megatrends in the industry, namely seamless connectivity, power efficiency and smart sensing. In each of these areas, we have demonstrated and publicly released substantial achievements. We also made significant progress, as previously announced, with new strategic initiatives in China.

Looking ahead, and building upon the strong foundations we have established, we possess the right resources and capabilities to aim higher. As a team, we will continue to push TowerJazz towards further growth and greater heights. We continue to eye and pursue strategic and value add opportunities that are now available to us due to our strong business and financial position.

As the Board and I look forward to 2018 and beyond, we are ever more confident in the Company's abilities to continue to structure and attain even higher goals. As always, our focus is to create and realize value for you, our very loyal shareholders, who continue to support our efforts.

Sincerely,



**Amir Elstein**  
Chairman of the Board



### BOARD OF DIRECTORS

**Mr. Amir Elstein**  
Chairman of the Board

**Mr. Yoav Z. Chelouche**  
Director, Chairman of the Audit Committee

**Mr. Ilan Flato**  
Director, Chairman of the Compensation Committee

**Mr. Kalman Kaufman**  
Director, Chairman of the Nomination Committee

**Ms. Iris Avner**  
Director

**Mr. Russell Ellwanger**  
Director, CEO

**Ms. Dana Gross**  
Director

**Mr. Rami Guzman**  
Director

**Mr. Alex Kornhauser**  
Director

**Ms. Rony Ross**  
Director

# CEO LETTER TO SHAREHOLDERS

## Dear Shareholders, Customers, Partners and Employees,

2017 was an exceptional year for TowerJazz, not only in achieving record results, but also having created strong foundations for future growth.

### Our Achievements

During 2017, we spotlighted our corporate theme of “full circle value creation.” This was driven by three main fundamentals: (1) our *technology leadership*, providing a wide range of differentiated and advanced specialty analog solutions; (2) our *market leadership*, remaining well-positioned in rapidly growing markets, while maintaining long-term customer relationships and roadmap alignment; both of which lead to (3) our *proven analog business model*, as demonstrated by our continued business and financial growth.

Our 2017 performance is strong evidence of having achieved our goal of creating and delivering value to our customers through focusing on their needs to create mutual success. The Company presented outstanding financial results with record revenues of \$1.387 billion, record EBITDA of \$425 million, record net profit of \$298 million and record free cash flow of \$191 million. In addition, we announced multiple new partnerships and technology offerings, among which are some major agreements in China. Our performance and these achievements have created a remarkable platform for the realization of further growth opportunities.

### Our Focus

An essential part of continued success is to understand what truly is happening, in real-time, in order to be able to respond properly and rapidly. *Gemba* is a Japanese concept, referring to “the place where value is created.” In manufacturing, it means to be at the production floor, where problems are visible and relevant data is accessible, and hence where valuable learning and problem-solving processes can be driven.

In managing a company, it can relate to “walking among the people,” receiving and providing valuable insights through exposure to opportunities for growth and improvement. This can be done both externally and internally:

- External – *focus on customers*: we establish and maintain relationships at all levels, holding formal activity reviews on a regular basis, while also focusing on frequent informal updates. This enables us to understand where issues may or already have occurred, and then to provide quick solutions and respond to the on-going needs of our customers.

- Internal – *focus on employees*: having a strong executive team that can drive and execute short and long-term strategies, while in parallel identifying and developing young stars with high impact and high potential who can drive the business towards new heights. In addition, it is essential to hold regular reviews with a cross-section of presenters and “walk in the hallways,” to enable informal information flows. This provides additional insights and better understanding of challenges, providing all levels of management increased capability to address issues in a timely manner.

The most important part is to always listen, evaluate, act and “close the circle.” This energizes cycles of learning, at all levels, and generates real time actions. This is our focus for this year – being at the right place (*Gemba*) and taking the right actions to maximize value creation.

### Forthcoming

We continue, as a team, to be committed and passionate towards creating value. We are confident in the strength and capabilities of the Company based on our achievements, technology offerings, market positioning, long-term customer and partner relationships, financial position and our devoted worldwide employee base. We thank you, our shareholders, for your continued support. We are looking forward to continuing our rewarding journey together towards even greater mutual successes.

Sincerely,



**Russell Ellwanger**

TowerJazz Chief Executive Officer  
TPSCO Chairman of the Board



“We continue, as a team, to be committed and passionate towards creating value. We are confident in the strength and capabilities of the Company.”

“Our focus for this year – being at the right place (*Gemba*) and taking the right actions to maximize value creation.”

# LEADERSHIP TEAM

## Executive Management

**Dr. Itzhak Edrei**  
President

**Rafi Mor**  
Chief Operating Officer

**Guy Eristoff**  
Chief Executive Officer, TPSCo



**Oren Shirazi**  
Chief Financial Officer  
Senior Vice President of Finance

**Nati Somekh**  
Senior Vice President  
Chief Legal Officer and  
Corporate Secretary

**Ilan Rabinovich**  
Worldwide Senior Vice  
President of Quality  
and Reliability

**Dalit Dahan**  
Senior Vice President of  
Human Resources and  
Information Technology

**Yossi Netzer**  
Senior Vice President  
of Corporate Planning

**Russell Ellwanger**  
Chief Executive Officer

## Business Unit General Management



**Dr. Marco Racanelli**  
Senior Vice President  
and General Manager of RF/  
HPA and US A&D Business  
Groups, Newport Beach  
Site Manager



**Dr. Avi Strum**  
Senior Vice President  
and General Manager,  
CMOS Image Sensor  
Business Unit



**Zmira Shternfeld-Lavie**  
Senior Vice President  
of Process Engineering R&D  
General Manager of TOPs  
Business Unit



**Shimon Greenberg**  
Vice President and  
General Manager of Power  
Management and Mixed-  
Signal Business Unit

## Worldwide Sales



**Gary Saunders**  
Senior Vice President of  
Worldwide Sales

## Investor Relations



**Noit Levy-Karoubi**  
Vice President,  
Investor Relations and  
Corporate Communications

TowerJazz's leadership team brings together variegated backgrounds and experiences in technology, leadership and success formulations, enabling a keen eye to identify and "light tower" the best core competencies within a vast culturally diverse global organization. This has yielded the leading global specialty foundry with value propositions towards an ever growing market, that no other single foundry can provide.

# THE GLOBAL SPECIALTY FOUNDRY LEADER

**With a proven business model and technology leadership within multiple growth markets, TowerJazz has consistently presented strong business, operational and financial performance. Focusing on long-term customer relationships, while gaining new and exciting business, TowerJazz is well-positioned to fulfill current and future technology market needs, while providing its customer with full circle value creation.**

TowerJazz, the global specialty foundry leader, manufactures advanced analog integrated circuits for a diversified and strong customer base in various growing markets such as consumer, automotive, medical, industrial, and aerospace & defense.

Deeply rooted in proven technologies, the Company continues to drive innovation within silicon rather than solely by technological node shrinkage. TowerJazz specializes in customized analog solutions for differentiated products and offers leading edge specialty process technologies including Radio Frequency (RF), High Performance Analog (HPA), integrated Power Management (PM), CMOS Image Sensors (CIS), Mixed-Signal/CMOS, and Micro-Electro-Mechanical Systems (MEMS) capabilities. In addition, the Company provides world-class design enablement and Transfer Optimization and development Process Services (TOPS).

TowerJazz is geographically and culturally diverse with broad and profound experience in developing and manufacturing many different types of technologies. As the Company continues to expand its global presence and mature its operations, it leverages "local" best-in-class performance into worldwide standards, providing additional capabilities that allow the Company not just to meet, but to exceed its customer expectations.

**TowerJazz pursues excellence in all aspects of its business by pullulating industry expertise and cultivating a collective culture of quality, innovation, and trust.**

To ensure business continuity and operational flexibility, TowerJazz operates seven manufacturing facilities in three geographic regions: two fabs (150mm and 200mm) located in Migdal Haemek, Israel, two 200mm fabs in the US (one in Newport Beach, California, and one in San Antonio, Texas), and three additional fabs (two 200mm and one 300mm) through TowerJazz Panasonic Semiconductor Co., Ltd. (TPSCo) located in Japan. The Company has also announced the establishment of an eighth manufacturing facility in Nanjing, China, as part of a partnership with Tacoma Technology, Ltd.

TowerJazz remains focused on enhancing its strong financial foundation, enabling the Company to pursue and realize its goals and emerging opportunities. By expanding its advanced technology offerings and capabilities, manufacturing capacity and global reach, TowerJazz continues its path of value creation, realizing market and technology leadership, enhancing its position as the global specialty foundry leader.

# TOWERJAZZ AT A GLANCE



**The global specialty foundry leader**, manufacturing advanced analog integrated circuits for more than 300 customers worldwide in growing markets such as automotive, consumer, medical, industrial and aerospace & defense.



Offering the **widest range of customized analog technologies** to provide cutting edge market solutions, enabling a diversified, strong and continually growing customer base. Aligned with leading customers' technology roadmaps to ensure long-term business relationships.



Continuous focus on margin expansion and free cash flow generation; **Strong financial foundation**, enabling continuous realization of growth and value-added opportunities.



**Seven worldwide manufacturing facilities**, fulfilling growing customer demand and providing capacity assurance, operational flexibility, and dual-sourcing capabilities, with an eighth in latter stages of build out.



**Over 5,500 worldwide highly devoted, talented and skilled employees** with broad knowledge, in-depth expertise and wide-ranging experience.

# FINANCIAL OVERVIEW

2017 was a remarkable year, demonstrating continuous progress and success for TowerJazz. With a strong business and operating model, the Company again realized top and bottom line quality growth combined with cash generation and strong financial metrics.

In 2017, TowerJazz broke multiple financial records, achieving its highest annual revenues, EBITDA, gross profit, operating profit, net profit and free cash flow, among other records. The company presented incremental net profit, robust free cash flow generation and a strong balance sheet.

## Main financial achievements in 2017:



### RECORD REVENUE

Record full year revenues of \$1.387 billion; Up 11% year-over-year



### INCREASED MARGINS

Increase in gross and operating margins - gross profit up from \$303 million to a record of \$354 million; operating profit up from \$175 million to a record of \$220 million



### RECORD EBITDA

Record \$425 million in EBITDA, reflecting 31% EBITDA margin; Up 16% year-over-year



### RECORD NET PROFIT

Record net profit of \$298 million representing net margin of 21%, resulting in \$3.08 and \$2.90 basic and diluted earnings per share, respectively



### RECORD CASH GENERATION

Generated record free cash flow of \$191 million as compared with \$118 million in 2016

## Main Financial Parameters Summary

All data in millions of dollars

	2017	2016	2015
Total Revenue	\$1,387	\$1,250	\$961
EBITDA	\$425	\$367	\$248
Net Profit (Loss)	\$298	\$204	(\$30)
Net Profit (Excluding one-time items*)	\$203	\$154	\$51
Cash from Operations	\$356	\$327	\$170
Free cash flow (Cash from operations less Cap-Ex investments)	\$191	\$118	\$5
Shareholders' Equity	\$1,030	\$683	\$386
Total Assets	\$1,674	\$1,380	\$965

\* For 2017: \$82 million income tax benefit resulting from Israeli deferred tax asset realization following valuation allowance release and \$13 million income tax benefit related to US tax reform

\* For 2016: \$50 million net gain from the San Antonio factory acquisition from Maxim

\* For 2015: \$81 million non-cash financing expense, net associated with Bonds Series F accelerated conversion

## The financial results of 2017 provide solid evidence for the strength and execution of TowerJazz's business strategy and financial focuses.

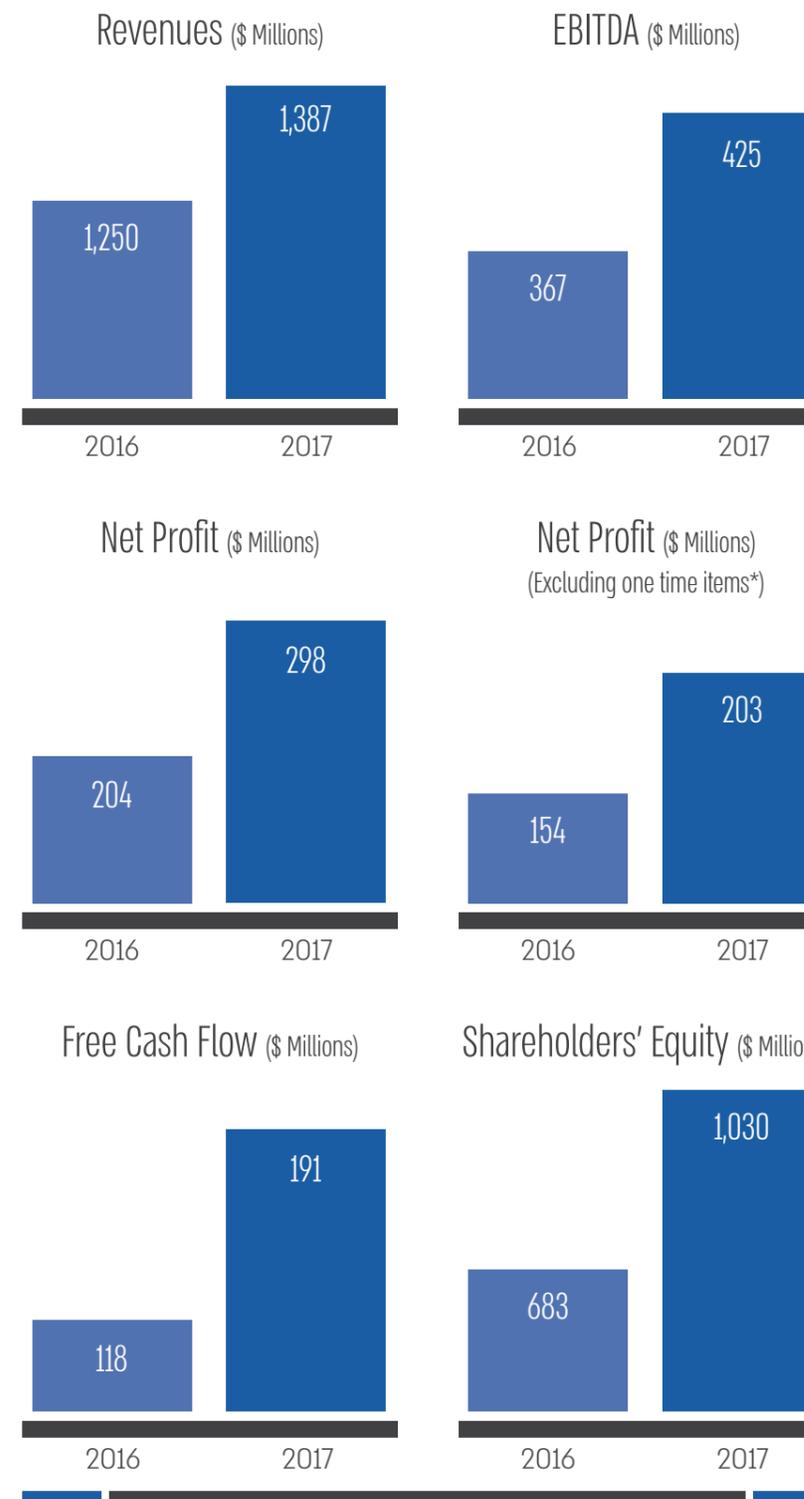
The Company constantly takes action to enhance and optimize its production mix using best manufacturing capabilities and geographic capacity flexibility, enabling greater margins and stronger free cash flow generation.



"As 2018 begins, we look forward to enhancing our industry and financial position, focusing on our long-term value and growth strategy, while continuing to create and sustain value for our shareholders."

### Oren Shirazi

Chief Financial Officer  
Senior Vice President  
of Finance



# GLOBAL OPERATIONS

TowerJazz continues to expand its broad manufacturing capabilities to enhance capacity utilization and flexibility, serving its ever-growing customer demand.

TowerJazz provides high quality manufacturing in its seven worldwide fabrication facilities (fabs). By continuously focusing on operational performance, manufacturing quality, and corporate cost structure, TowerJazz is able to better serve its customers while enhancing its financial corporate performance. The Company drives operational excellence and optimization by reducing complexity, improving efficiency and effectiveness of processes, procedures and systems, maximizing transparency, shortening lead times and minimizing the cost of operations to satisfy customer needs.

## Manufacturing Technology and Quality

TowerJazz is constantly adding process capabilities into its fabs to support new and cutting edge advanced and specialized technologies. In addition, the Company cross qualifies major process flows between fabs to increase operational flexibility and geographic diversity.

Focusing on the highest of standards, TowerJazz has attained several ISO certifications including: Quality–ISO9001; Environmental–ISO14001; IP Security–BS/ISO27001; Safety–OHSAS 18001; and Automotive–ISO/TS 16949.



## Green initiatives

In 2017, TowerJazz broadened its presence into renewable energy and green initiatives. Several key projects enable reduction in water and electricity consumption. Solar panels are currently installed at its headquarters in Migdal Haemek, Israel. Other initiatives at TowerJazz facilities include installing smart devices that regulate power usage, upgrading chillers, replacing the cooling tower and replacing neon light bulbs with LED bulbs. The total electricity savings per year is 20 GWh/year and is equivalent to yearly electricity consumption of about 1,600 private households or 16 million pounds of coal burned. The total water savings is equal to the annual water consumption of a town with a population of 2,100 people.



## Worldwide Manufacturing Facilities

TowerJazz operates seven manufacturing facilities in three geographic regions, providing global capacity assurance and flexibility: two fabs located in Migdal Haemek, Israel, one fab in Newport Beach, California, USA, one fab in San Antonio, Texas, USA, and three factories in the Hokuriku region of Japan through TowerJazz Panasonic Semiconductor Company (TPSCo), a company established with Panasonic in March 2014.



“TowerJazz continues to focus on high asset utilization while maintaining fab performance. Enhanced manufacturing capabilities, top quality standards and geographical flexibility extend our leading position as the specialty foundry of choice.”

**Rafi Mor**  
Chief Operating Officer

### ISRAEL Migdal Haemek



6" (150mm)  
CMOS, CIS, Power, Power Discrete  
1µm to 0.35µm  
Planarized BEOL, W and Oxide CMP

### ISRAEL Migdal Haemek



8" (200mm)  
CMOS, CIS, Power, Power Discrete, MEMS  
0.18µm to 0.13µm  
Cu and Al BEOL, EPI, 193nm Scanner

### USA Newport Beach, CA



8" (200mm)  
CMOS, CIS, MEMS, RF Analog  
0.18µm to 0.13µm  
Al BEOL, SiGe, EPI

### USA San Antonio, TX



8" (200mm)  
Power, RF Analog  
0.18µm  
Al BEOL

### JAPAN Arai



8" (200mm)  
Analog, CIS  
0.13µm to 0.11µm  
Thick Cu RDL

### JAPAN Tonami



8" (200mm)  
Power, Power Discrete,  
NVM, CCD  
0.35µm to 0.15µm

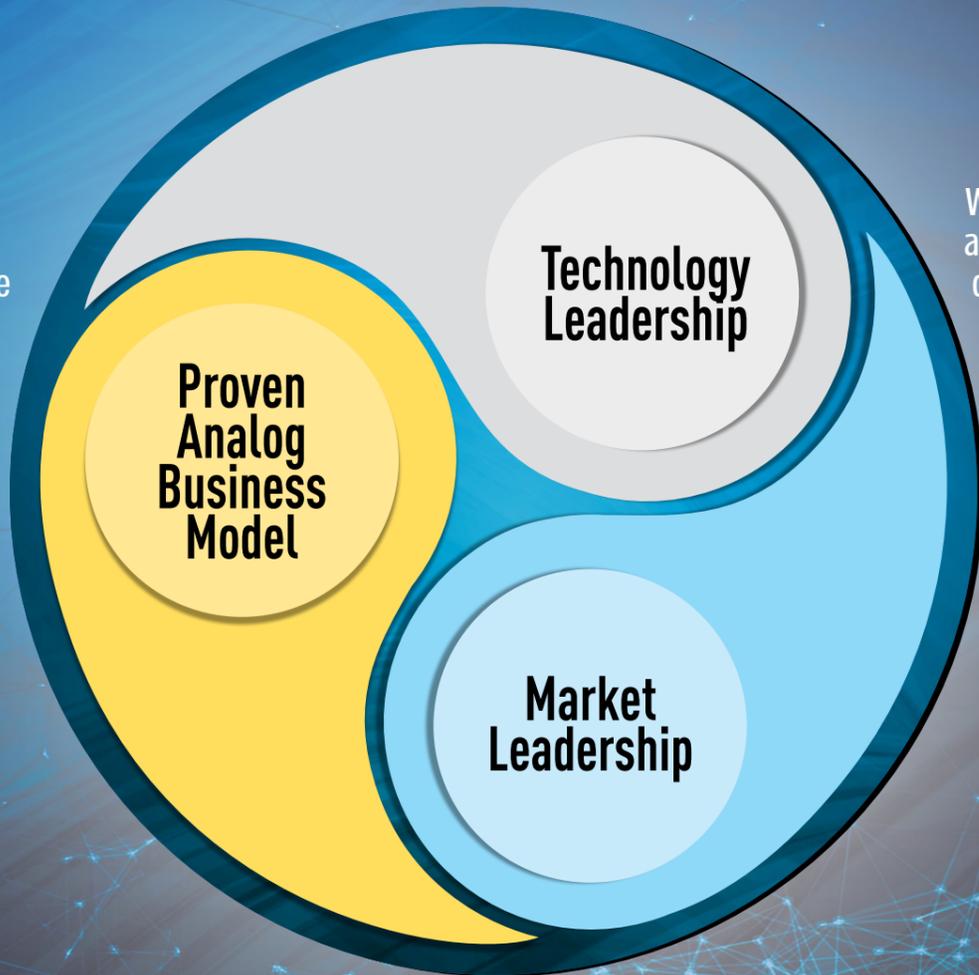
### JAPAN Uozu



12" (300mm)  
CMOS, CIS, RF, Power  
65nm to 45nm

# Full Circle Value Creation

Fastest growing foundry in the world with proportional growth in all financial metrics



Wide range of advanced and differentiated specialty analog offerings

Well-positioned in the fastest growing markets with long-term customer relationships and roadmap alignment

## TECHNOLOGY AND MARKET LEADERSHIP

TowerJazz provides enhanced and comprehensive technology solutions for various dominant and growing markets, positioning the Company at the forefront of the most innovative technologies.

Best-in-class specialty technology platforms are the core of TowerJazz's competitiveness and value proposition for markets such as connectivity, power management, CMOS image sensors, among others, enabling TowerJazz to achieve continuous growth. This, complemented by vast expertise in process development and design services, empowers long-term customer relationships and close roadmap alignment. The Company is confident in its ability to further expand its leading capabilities in these key, and additional segments, ensuring future success for TowerJazz, its customers and its partners.

The Company is continuously looking towards new horizons of disruptive technologies, driving R&D activities and developing a wide-range of offerings to best serve rising markets such as automotive and sensors, presenting many new opportunities for TowerJazz across all its business units.

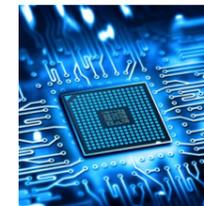


“Committed to maintaining our prominent position as the global specialty foundry leader, we are focused on strong alliances with our customers, to provide advanced technology solutions for their current and future technology and manufacturing needs.”

**Dr. Itzhak Edrei**  
President



RADIO FREQUENCY/  
HIGH PERFORMANCE  
ANALOG



POWER MANAGEMENT/  
MIXED-SIGNAL



CMOS IMAGE SENSOR



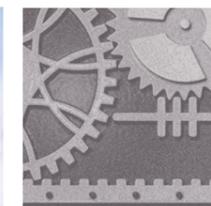
AEROSPACE AND  
DEFENSE



TRANSFER,  
OPTIMIZATION &  
DEVELOPMENT  
PROCESS SERVICES



AUTOMOTIVE



MICRO-ELECTRO-  
MECHANICAL SYSTEMS



DESIGN ENABLEMENT

### 2017 Main Announcements

**February 23**

UCSD and TowerJazz Demonstrate Best-in-Class 5G Mobile Transmit-Receive Chips with Greater than 12 Gbps Data Rates

**February 28**

TowerJazz and Cavendish Kinetics Deliver High Volume RF MEMS with Unprecedented Reliability

**March 13**

TowerJazz Expands Support for its Fast Growing Base of Chinese Customers with Leading SiGe BiCMOS Technologies for Wireless and Wireline Communication Systems

**March 20**

TowerJazz Announces H5: a Leading 300GHz SiGe Technology Optimized for 400GbE Communications

**March 23**

TowerJazz Announces New Foundry Silicon Photonic (SiPho) Process Targeting Optical Transceiver Electronics Market

**March 27**

TowerJazz and TPSCO Release Enhanced up to 200V 180nm BCD on SOI Power Management Process

**April 12**

TowerJazz and Aisin Seiki Announce Mass Production of New Generation Automotive Body Products

**August 9**

TowerJazz to Provide Advanced RF and High Performance Analog Solutions for the Fast Growing Automotive Analog Device Markets

**August 14**

TowerJazz Announces DENSO Corporation utilized its Advanced 0.18um SiGe Technology to Develop a 24GHz Rear and Side Radar Sensor, used by Toyota

**August 21**

TowerJazz and Tacoma Announce a Partnership for a New 8-inch Fabrication Facility in Nanjing, China

**September 14**

TowerJazz Announces Release of its Advanced 5V 65nm CMOS and Low Voltage Power Process Addressing LED Lighting, Analog Switch, DC/DC Converter and Load Switch Applications

**September 27**

TowerJazz and Crocus Expand Presence in Magnetic Sensors Market through Successful Licensing of Crocus' IP and Volume Manufacturing by TowerJazz

**October 30**

TowerJazz and Yuanchen Microelectronics Announce Partnership for Backside Illumination (BSI) Manufacturing in Changchun, China

**November 20**

TowerJazz Broadens Green Initiatives in its Specialty Analog Foundry Business by Increasing Renewable Energy Sources

# RADIO FREQUENCY & HIGH-PERFORMANCE ANALOG

TowerJazz continues to play a substantial role as a leading RF manufacturer, maintaining long-term relationships and growing its business with the market's top players.

TowerJazz continues to offer and enhance the most prominent RF platforms in the industry, providing customers with advanced and unique RF (radio frequency) and HPA (high performance analog) technologies, addressing the ever-growing needs and demands for seamless connectivity. This includes:

- **RF SOI** for smartphone and IoT front-end modules with best-in-class Ron x Coff (Sub-100fs) enabling RF switches with the lowest insertion loss and best linearity and smartphones with improved reception, battery life and data rates.
- **RF SiGe (silicon-germanium)** for low-noise-amplifiers (LNAs) and power amplifiers enabling GaAs-like performance at silicon-based cost while enabling integration of a full front-end module on a single chip (PA, LNA, PA controller, MIPI interface, switch).

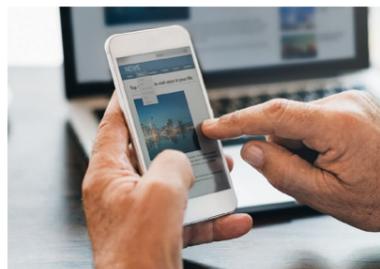
- **High Performance SiGe** offering speeds at 300GHz enabling today's fastest optical transceivers operating at 100 to 400Gb/s for data centers and fiber optic networks.

- **New Silicon Photonic (SiPho)** offering to complement the Company's high performance SiGe and enable integration of optical waveguides, receivers and modulators for data center fiber optic links.

With the best performing SiGe and RF SOI (Silicon-On-Insulator) technology, as well as a long legacy of accurate models and process design kits (PDKs), TowerJazz enables its customers an unmatched rate of first time silicon success.

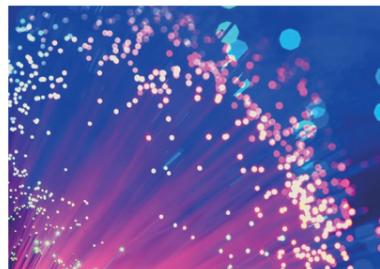
Providing strong know-how and IP, together with the highest manufacturing capabilities and expertise, drives market leaders to create long-term roadmap alignment with TowerJazz to ensure their future growth.

## Main applications



### Mobile data communications

The mobile market consists of the multi-billion unit per year smartphone market as well as the even larger emerging IoT market. Here, TowerJazz supplies switches, low-noise amplifiers, and power amplifiers that enable higher speed wireless communication.



### Infrastructure

TowerJazz estimates to own over 60% market share of SiGe fiber optic front-end components, such as trans-impedance amplifiers, laser drivers and clock and data recovery circuits that enable high-speed fiber optics data connections throughout networks, as well as in data and cloud computing centers.



### Automotive

TowerJazz's SiGe technologies are enabling state of the art radar and LiDAR sensor solutions for the rapidly growing multi-billion dollar Advanced Driver Assistance Systems (ADAS) market, establishing strong partnerships with market leaders.

## Value creation in 2017

The primary strategic achievements of 2017 included:

- Launched H5, a leading SiGe technology that is now part of TowerJazz's high performance SiGe Terabit platform enabling next-generation data communications in networks and data centers supporting the dramatic increase of wireline data traffic. Announced key design wins with Broadcom, a leading designer, developer and global supplier of a broad range of digital and analog semiconductor connectivity solutions.
- Qualified RF SOI platform in multiple manufacturing sites, offering increased capacity to meet growing customer demand.
- Enhanced advanced automotive offering with leading technology for the complex requirements of ADAS and autonomous driving in the wireless connectivity and automotive radar markets; announced strong partnership with Denso, entering production on RF radar sensors for the Toyota Camry released in North America.
- Launched a new foundry Silicon Photonic (SiPho) process. This new SiPho offering adds new serviceable content to the optical fiber market already served by the Company's high performance SiGe technology in data and cloud computing centers.

## 2018 Opportunity Leadership Realization

The RF & HPA business unit is investing heavily to capture several emerging opportunities, the most significant being the advent of 5G for higher wireless data rates. 5G will increase the RF content in smartphones and improve performance, benefitting from the Company's most advanced RF SOI and SiGe technologies. The higher data rates will also provide an infrastructure growth boost which TowerJazz will serve with its High Performance SiGe and new SiPho platforms. Beyond 5G, automotive sensors will continue to provide new business opportunities as advanced safety systems give way to autonomous vehicles in the future. TowerJazz will continue to expand its strong offering and presence within these rapidly growing markets.



“The insatiable appetite for mobile data ensures a bright future for our RF business as we have top-tier customers in mobile platforms, data infrastructure, and automotive applications that are poised to win with us, as 5G and other next-generation technologies take hold.”

### Dr. Marco Racanelli

Senior Vice President and General Manager of RF/HPA and US A&D Business Groups, Newport Beach Site Manager



# CMOS IMAGE SENSOR TECHNOLOGY

TowerJazz provides a high-end, value-added CMOS image sensor (CIS) platform, specially customized per specific product, application needs and customer requirements.

TowerJazz's silicon proven leading specialty CIS platform is tailored for the benefit of its customers in numerous leading markets. The Company's worldwide recognized, best-in-class offering meets the growing demand for the advanced capabilities of CIS technology for optical sensors used in high-end photography, industrial, medical, and automotive applications, as well as consumer applications that include security cameras and 3D imaging for gesture recognition and augmented

reality (AR) markets. In addition, new applications such as drone photography, biometric identification, and event driven sensors rely on current and future CIS innovation.

The Company's advanced CIS technology is being offered in its various manufacturing facilities, including 8 inch and 12 inch platforms, allowing customers both capacity flexibility and long-term technology roadmap alignment.

## Value creation in 2017

The primary strategic achievements of 2017 include:

- Backside illumination: Partnership with YuanChen Microelectronics (YCM) for backside illumination (BSI) manufacturing in Changchun, China provides the BSI process segment for CIS 8 inch wafers produced by TowerJazz, serving its worldwide customers. In addition, TowerJazz developed BSI and stacked wafers technology on 12 inch wafers in its Japanese facility (TPSCo) serving as the next-generation platform for the high-end photography and high-end security markets.
- A 2.8um global shutter pixel advanced offering on a 110nm platform for the industrial sensor market, the smallest global shutter pixel in the world, already in the manufacturing stage. In addition, a 2.5um global shutter pixel in development on the Company's 65nm 300mm platform with several leading customers, allowing higher sensor resolution for a given sensor size, and enabling TowerJazz to maintain its market leadership.
- SPAD (Single Photon Avalanche Diode) state of the art technology and ultra-fast global shutter pixels for automotive LiDARs based on ToF (Time of Flight) principles, answering the automotive market's needs. The Company has engaged with several customers in the development of their automotive LiDAR, and expects to be a major player in this market in the coming future.

## Opportunity Leadership Realization for 2018

TowerJazz's leading CIS expertise and well-proven reputation strongly positions the Company to take advantage of this anticipated high growth market. TowerJazz develops and provides advanced solutions while focusing on new developments and innovative solutions for multiple emerging segments such as: (1) an improved LiDAR technology, allowing higher sensitivity in near-infrared for the automotive market; (2) development of high-end DSLR technology, in collaboration with a leading player in this field, for both front-side illumination and stacked wafers (backside illumination) for the high-end photography market; (3) next generation family of sensors with multiple customers for industrial applications, based on the Company's newly developed, state of the art global shutter pixels, and (4) entering into the new rising market of augmented reality (AR).



## Main applications



### Automotive

ADAS and autonomous driving are propelling the automotive market to increased CIS usage. TowerJazz's advanced technology is used for high dynamic range CMOS camera sensors to perform wide ranging tasks such as road signs detection, lane departure warning, and parking assist. TowerJazz also offers near-infrared enhanced imaging used in dark conditions or in active sensing that uses near infrared pulsed lasers as a synchronized light source, and LiDAR, a detection system using a laser light radar providing much finer resolution than a radar system, allowing 3D fine mapping of the surrounding area.



### Industrial/Machine Vision

Driven by the need for automation of factories, as well as household intelligent robots, 2D barcode readers, traffic control cameras and more, the industrial/machine vision market requires a very fast, high frame rate, global shutter operation, provided by TowerJazz's state of the art global shutter pixel technology.



### High-end Photography and Cinematography

TowerJazz is a leader in these markets, with sensors used in many films including Oscar winners, and is growing its market share in the still photography area of DSLR and Mirror Less (ILC) cameras, based on its superb technology on the 65nm process node.



### Medical and Dental X-ray

TowerJazz works with leading customers in the medical and dental X-ray markets using its unique stitched technology for up to one die per wafer (150mm x 125mm) that can be tiled into large panels to meet the specific requirements of these applications.



### 3D sensing and Augmented Reality/ Virtual Reality (AR/VR)

These areas are viewed as extremely fast growing for CMOS image sensors. TowerJazz's expertise in global shutter pixel technology has enabled unique, near-infrared sensitive global shutter pixels that are required for this market segment.



### Security

The need for cameras at every street corner and in every building is increasing very fast and the cameras are moving to HD, Full HD and QHD (4Mp). TowerJazz uses its state of the art pixel technology to provide the best security sensors in the market.



“Through R&D, innovation and partnership with market leaders, we are in a strong position to grow our share of the anticipated high growth CIS markets of next-generation global shutter technology for industrial sensors, backside illumination and stacked wafers for high-end photography, and special pixel technology for automotive applications.”

### Dr. Avi Strum

Senior Vice President and General Manager, CMOS Image Sensor Business Unit

# POWER MANAGEMENT & MIXED-SIGNAL CMOS

TowerJazz's advanced power management offering provides a unique, modular and flexible technology platform achieving best-in-class efficiency and performance with low die size, enabling customers to best compete across multiple market segments.

The Company provides an extensive and competitive technology offering for a wide range of operating voltages and devices with specific features developed to meet customers' precise requirements, including:

- A **novel 200V SOI technology** which provides superior performance for a broad range of analog and power high voltage industrial and automotive applications such as motor drivers, home and industrial appliances, battery management systems, electric vehicles (EVs), ultra-fast GaN drivers, industrial motor controllers, and many more.
- **Low voltage power management** (up to 5V) for widely used products such as LED drivers, fingerprint sensors and multiple other ICs. These types of products, which are highly sensitive to cost, can now benefit from the unique advantages of the Company's 65nm 300mm wafer process platform in Uozu Japan, that includes low mask count and small design rules which drive significantly smaller die size, meeting this market's predominant need for a better cost

structure from which both the company and the customers benefit.

- A recently developed drain isolation that is well-suited for the **automotive market** toward hybrid 48V architecture which is expected to cover ~50% of hybrid cars by 2025. In addition, TowerJazz offers a unique process platform for battery management systems that can sustain up to 140V on bulk wafers that is already being used by a leading electric vehicle manufacturer. This process platform is in mass production in two of TowerJazz's manufacturing sites.

TowerJazz's worldwide design enablement services provide fast and accurate support for its customers' needs, helping them to achieve first-pass silicon success for faster time to market.

Through close partnerships and roadmap alignment with market leaders, TowerJazz provides distinctive value enabling its customers to best compete across multiple growing market segments.

## Value creation in 2017

The primary strategic achievements of 2017 included:

- Significantly expanded power management offering by wider coverage of voltages and capabilities, increasing the Company's addressable market. The power management platform is already available in two of TowerJazz's worldwide manufacturing facilities and is currently in final stages of qualification in an additional manufacturing site.
- Newly developed state of the art BCD (Bipolar-CMOS-DMOS) SOI (Silicon-On-Insulator) power management technology platform supporting applications with up to 200V breakdown voltage, providing superior performance for a significant number of high voltage end applications within the automotive and industrial power management IC markets.
- Released advanced 5V 65nm CMOS and low voltage power process platform addressing

LED lighting, analog switch, DC/DC converter and load switch applications, offering enhanced RDS(on) efficiency with an attractive die cost. This technology is based on TowerJazz's automotive 300mm 65nm process platform manufactured in its Uozu, Japan facility and supports both best-in-class quality and manufacturing cycle time.



## Opportunity Leadership Realization for 2018

The Company is investing in two main directions: (1) development of its 65nm BCD on 300mm wafers to offer the most competitive platform with better efficiency and cost structure, for voltages of up to 16V, and (2) expanding its presence in the automotive market, with its drain isolation offering and 200V SOI platforms. Those new developments, together with best-in-class RDS(on), wide voltage coverage up to 200V, a smart and flexible process design kit, design support for first time silicon success, and more, well-positions TowerJazz to continue increasing its market share.

## Main Applications



### Consumer & Communication

TowerJazz addresses the power requirements of mobile phones, laptops, set top boxes, drones, vacuum robots and more. In these markets, the two main needs are cost and battery life time. Using its leading low RDS(on) and high frequency LDMOS, TowerJazz offers smaller die size which enables a lower cost solution, and higher power efficiency which improves battery life.



### Industrial

TowerJazz provides solutions for the industrial market including cordless power tools, motor drivers, load switches and DC-DC converters. Most of these applications require customized solutions and must support high voltages of up to 200V breakdown. TowerJazz addresses these needs with multiple platforms, low RDS(on), drain isolation and SOI platforms.



### Automotive

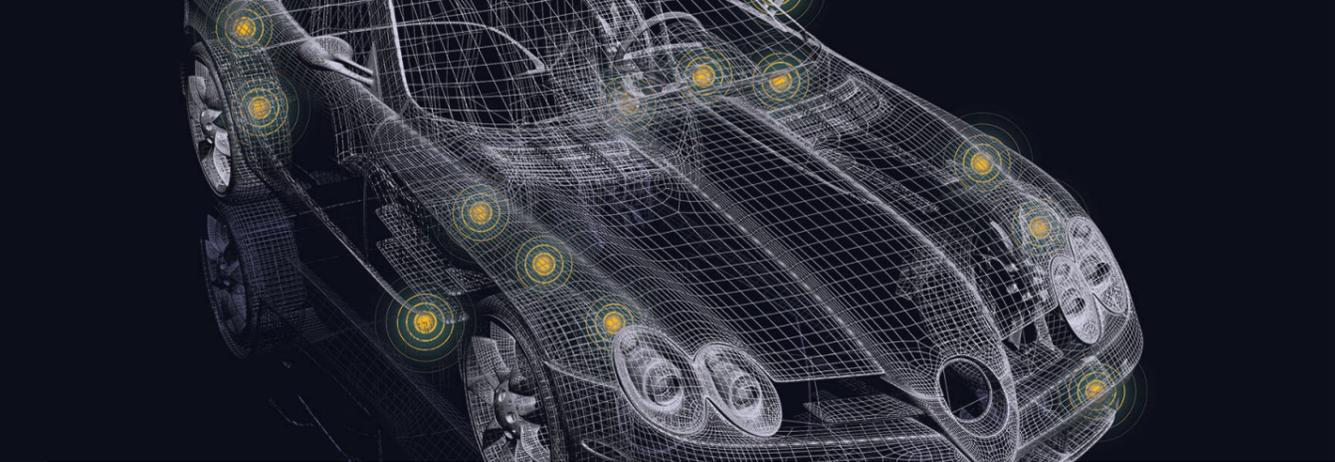
Driven by the increasing amount of power electronic devices in each new car, this market is fast growing. TowerJazz supports the new requirements for 48V voltages in hybrid and EVs and the need for lower cost power management solutions in the 5V automotive domain. These needs are addressed with 65nm, drain isolation and 200V SOI platforms with attention to the aggressive operating conditions and quality requirements of the automotive market.



“TowerJazz’s power management offering is one of the broadest and most competitive in the foundry arena – from consumer to industrial to automotive markets, we address a wide range of operating voltages and applications. Our customers well recognize the unique value we offer.”

### Shimon Greenberg

Vice President and General Manager of Power Management and Mixed-Signal Business Unit



## RISING MARKETS AND EMERGING TECHNOLOGY OFFERINGS: AUTOMOTIVE AND SENSORS

TowerJazz's commitment for ongoing technology development ensures success in continuously providing advanced solutions for existing and future market trends.

### Automotive

The automotive market displays a nearly endless span of development opportunities that utilize semiconductor-based solutions – a trend set to continue due to the market's advancement towards autonomous driving, Advanced Driver Assistance Systems (ADAS) and sophisticated powertrain electrification.

As the automotive industry moves toward higher levels of ADAS integration, autonomy, and electrification, the automotive semiconductor content is expected to grow rapidly, dominated by analog, creating an increased

need for differentiated and state-of-the-art analog foundry solutions. TowerJazz's advanced specialty technology platforms, including power management, CMOS image sensor, connectivity and MEMS, together with its design services, are well positioned to provide comprehensive offerings to address this growing market.

TowerJazz has invested extensively and strategically to provide a variety of advanced technological and manufacturing capabilities across all of its key business units.

### Advanced Imaging Technologies Designed for Next-Generation Automotive Systems

In today's automobiles, cameras based on visible light image sensors perform a wide range of tasks such as road signs' detection, lane departure warning, light beam control, and parking assist. Two additional complementary imaging technologies significantly augment the imaging capabilities of visible light sensors: MEMS based bolometer technology for infrared enhanced imaging, and LiDAR, a detection system that works on the principle of detection and ranging using laser light, thus providing much finer resolution than a conventional radar system, allowing high fidelity 3D mapping of the surrounding area.

TowerJazz addresses current and next-generation automotive system needs by offering an advanced CMOS image sensor platform which includes:

- Visible light high dynamic range (HDR) CMOS image sensors with low dark current and rolling and global shutter pixels enable imaging with HDR, high frame rate and high-resolution cameras.
- Near-infrared enhanced sensors for low light conditions that allow detection in near darkness
- Active gated pixel and Single Photon Avalanche Photodiode (SPAD) technologies to enable time of flight (ToF) sensing in ultra-low light conditions for LiDAR or similar imaging. By using the ToF information of the photons reflected from the targets, the imaging system can build a 3D image of the surrounding area through sophisticated signal processing algorithms.

TowerJazz CMOS image sensor technologies are offered in its Israel and Japan fabs and are available on both 200mm and 300mm wafer sizes.

### Leading RF and High-Performance Analog Solutions for the automotive radar, wireless communication and automotive ethernet markets

Automotive radar sensors become a necessity when detection and distance measurement is required in low light / adverse weather conditions (rain/fog/snow). Indeed, automotive radar systems have become a relatively standard feature in today's premium and mid-range automobiles for performing safety and driver assistance tasks such as forward collision avoidance/warning, lane departure warnings, blind spot detection, and parking assist. In addition, today's automobiles are themselves smartphones on wheels and communicate with surroundings (V2X) wirelessly for navigation, entertainment and safety LiDAR signal processing. As the number of ADAS sensors in an automobile increases, it is becoming clear that there is a need for a sensor network within the automobile that allows high-speed, low latency communication among various sensors and a central DSP and CPU.] To address this need, best practices and technologies from datacom optical networks are being incorporated to create automotive ethernet. TowerJazz RF HPA technology offers a one-stop-shop for all these growing needs:

- **Automotive radar** – TowerJazz's SiGe Terabit Platform is ideally suited to serve this growing radar market. As an example, TowerJazz today

manufactures sensors for Denso deployed in the North America Toyota Camry.

- **Wireless communication** – The Company's SiGe BiCMOS Front-End Module-on-a-Chip RF platform is tailored for WiFi / Bluetooth communications and has been in high volume production for many years. In addition, TowerJazz's advanced RF SOI technology offers best-in-class Ron-Coff and noise figure for RF switching and low-noise amplifiers. TowerJazz's Terabit SiGe platform is ideally suited for various low noise amplification for GPS, cellular and WiFi communications.
- **Automotive ethernet** – TowerJazz's versatile SiGe Terabit Platform is the technology of choice for today's 100Gbps Datacom optical networks and is ideally suited for automotive ethernet based on similar communication standards. The Company has recently announced availability of PH18, the silicon Photonics platform, that can further enable high-speed optical communications in a car.

TowerJazz RF HPA technologies are offered in its US, Israel and Japan fabs, with each technology node cross-qualified in at least two fabs.

### Best-in-class Power Management differentiated solutions for tomorrow's automobiles

The need to maximize miles driven per gallon, or per electric charge for hybrid/EVs, is incentivizing manufacturers to optimize the performance of power-train and body electronic systems, for example, by offering multiple optimum voltage levels for different

devices and thus increasing the efficiency of power electronic components. In addition, with the conversion of motor controls, LED headlight drivers and LiDARs to 48V power architecture in new cars, TowerJazz enables its leading automotive customers to efficiently electrify tomorrow's automobiles.

With over 35 years of automotive production experience and more than half a billion ICs shipped, TowerJazz's industry leading power management platform offers best-in-class RDS(on), with scalable voltage ranges, multiple substrate isolation technologies, and is well-positioned to serve the growing market.

TowerJazz offers one of the richest, most mature and modular power management platforms with voltages ranging from 5V to 120V, offering multiple isolation schemes and scalable LDMOS devices with record RDS(on) values. This platform is ideally suited for smart power ICs, EV battery management ICs and primary power converters.

The Company's 300mm 65nm 5V BCD platform (currently in advanced stages of development) offers the lowest RDS(on) solution at optimized cost for multiple secondary PMIC applications in automotive power management.

TowerJazz also manufactures state of the art discrete power devices, including high voltage/high power transistors and protection components widely used in the automotive industry.

The Company has qualified all major 200mm power management flows in at least two geographically distinct production sites to ensure manufacturing flexibility.

## Sensors

### Disruptive Sensor Technologies

The broad semiconductor sensor market continues to grow rapidly providing a wide range of sensing solutions in embedded-control applications and smart-systems. The developing multi-billion dollar markets of IoT, robotics, smart automotive and personal medicine markets require precise, inexpensive, and low power consuming semiconductor sensors.

Sensors measure various physical parameters, such as temperature, pressure, and gas content of the environment, position and angles of different parts in vehicles, and chemical parameters of blood. The diversity of application fields stimulates the search for the most appropriate sensor solutions specific for each application domain and suitable for mass production in semiconductor foundries.

TowerJazz positions itself as a "sensor hub" and offers sensor manufacturing platforms for customers interested in fabricating stand-alone and embedded sensors of different types, as well as ASICs for processing the information from various sensors. The Company is already working with leading partners to develop and manufacture differentiated sensing technologies to address these applications.

**CMOS Image Sensors:** TowerJazz is known for the advanced and proven CMOS image sensor technology featuring pixels with record size, sensitivity, broad spectral response and low noise for different application fields.

**TMR Magnetic Sensors:** TowerJazz has integrated Tunnel MagnetoResistance (TMR) sensors into its 0.13um CMOS process and is partnering with a tier-1 customer for volume manufacturing using this platform. TowerJazz is the only foundry offering embedded TMR sensors with record sensitivity and reliability. The TMR based magnetic-field sensors are widely being deployed for accurate, contactless measurements and control in multiple automotive, industrial systems and navigation applications.

**MEMS:** TowerJazz MEMS technologies allow fabrication of high-end accelerometers, gyro, oscillators, audio sensors and actuators.

Broad market environment sensors: TowerJazz is also developing an "Environmental Sensor System", with a broad offering for gas/temperature/pressure and radiation sensing based on standard CMOS processes and fab capabilities. TowerJazz has developed high sensitivity, ultra-low power consuming ionizing radiation sensors integrated into CMOS process flows without additional masks. The radiation sensors are used as standalone devices and embedded by TowerJazz customers into the chips intended for operation in harsh environments.

TowerJazz is leveraging close partnerships with academia, government and start-ups to bring these highly differentiated solutions to market, and respond to the demanding challenges of tomorrow.



“2017 was an excellent year for the TOPS business unit. We grew together with our loyal customers, introduced new projects, and expanded capacity and presence in TowerJazz global manufacturing facilities. We are looking forward to continuing our long-term relationships with our leading customers, as well as establishing new and differentiated win-win business models both in our traditional and newly developed technologies.”

**Zmira Shternfeld-Lavie**

Senior Vice President of Process Engineering R&D General Manager of TOPS Business Unit

# TRANSFER, OPTIMIZATION AND DEVELOPMENT PROCESS SERVICES (TOPS)

With established process transfer methodologies, a world-class engineering team, and vast manufacturing experience, TowerJazz provides high-end transfer, process development and manufacturing services through its TOPS business unit (BU) for three major kinds of customers: Integrated Device Manufacturers (IDMs), fabless companies and those needing to develop from R&D to production. In addition, the Company supports those that are looking for external services such as technology licensing and manufacturing capabilities management. The combination of reputable IP protection, know-how in diverse technologies, and process flexibility to adapt business models and production flows to customer requirements, enables TowerJazz to guarantee fast time to market and ramp to volume production.

TowerJazz preserves customer confidence and satisfaction by successfully accommodating customers' unique requirements. With established methodologies, including "copy smart" to use existing toolsets, and the use of an internal library of recipes or "copy exact" where necessary, process transfers achieve high yields and exceptional performance.

The Company offers the following main business models under this BU:

- For **IDMS**: high volume, secured process transfer, with technical flexibility and future generation developments.
- For **fabless companies**: unique processes and tools to fabricate customers' specialty products.
- **Special business models**: targeting co-development of novel products based on customer needs, including full technical support and project management.
- **External Services**: technology licensing and management.

The Company continues to increase its TOPS business in multiple manufacturing facilities, on three continents, maintaining long-term utilization stability and cost efficiency. TowerJazz is a trusted partner for customers to transfer their proprietary technology in order to grow their business through additional available capacity and internal offloading optimization.

In addition, and in parallel to the existing CMOS and power management (PM) silicon technology, the TOPS BU develops original production platforms allowing the transfer and/or integration of novel products designed by its customers. This includes sensor platforms with nanowires formed on SOI, MEMS technologies, GaN on silicon PM and sensor process flows. Many of the targeted applications are in the field of rapidly expanding IoT and smart automotive markets.

# RESEARCH & DEVELOPMENT

Aligned with its market leading customers, TowerJazz is focused on developing disruptive technologies for emerging applications, enabling future commercialization.

TowerJazz R&D activities are tied to the rapidly developing semiconductor markets, such as:

- **IoT**: Developments include original gas sensors and UV sensors for wearables (control of adverse environments, protection against the sun, etc.), and unique array-type FG sensors of ionizing radiation for applications such as dosimetry in industry and medicine, sterilization, security and safety.
- **Automotive**: TowerJazz and partners developed MEMS based bolometer technology allowing best of breed night vision. Also, TowerJazz has been developing infrared sensing devices for LiDARs (sensing of light from targets illuminated with near IR lasers) to be used in locating, ranging, and vision in inclement weather and for guiding autonomous cars. Besides sensors themselves, specialized BiCMOS platforms have been developed for integrating sensor devices and processing of the analog information obtained.

TowerJazz fosters a culture of global innovation, providing its highly talented employees worldwide with a platform to cross-fertilize disruptive ideas, while working in tight cooperation with academia, governments and start-ups to advance development of commodity and specialized ASICs.

In 2017, the Company's R&D projects were supported by customers, internal funding, government and international programs.

## Opportunity Leadership Realization for 2018

By combining the experience of R&D engineers from diverse fields, TowerJazz seeds novel ideas that enable breakthrough technical solutions. Successful feasibility studies of several innovative ideas in the fields of switching devices, sensors, silicon photonics and neuromorphic computing were performed that strengthen the Company's business direction and open new opportunities for TowerJazz customers.

## TowerJazz Innovation Partnerships

- TowerJazz and UCSD demonstrated a next-generation wireless **5G** communication – for both transmit and receive chipsets – with data wirelessly transmitted at greater than 12 Gbps, more than 10x today's 4G LTE standard. The technology targets the FCC's newly released 28GHz band for next-generation wireless communication.
- TowerJazz is part of the CC-SENS (German-Israeli consortium on CMOS compatible nanosensors) program launched to develop **novel gas sensors** for advanced automotive and IoT applications. The consortium consists of TowerJazz, Technion and Tel Aviv University on the Israeli side, and Singulus Technologies and Friedrich-Alexander-University (FAU) on the German side.
- Optimized the Company's leading **300GHz SiGe** technology (H5) for 400GbE communications.
- Partnered with **Cavendish Kinetics** to develop high volume RF MEMS with unprecedented reliability.
- Announced the TowerJazz foundry **Silicon Photonics (SiPho) platform** that includes waveguides, modulators and photodiodes to guide and manipulate light for optical communication and high speed data transmission in networks and data centers.
- Expanded R&D cooperation in magnetic sensors in partnership with **Crocus Technologies** (volume manufacturing of novel TMR sensors) and with several companies and research institutions within the H2020 European Commission GREAT consortium.
- Announced a partnership with **YCM** for backside illuminated CMOS image sensor (BSI) manufacturing in Changchun, China; enables TowerJazz to offer state of the art BSI flow for high-end image sensor markets.
- Maintained valuable relationships with USGov and **DARPA**, through which TowerJazz is involved with many programs in sensors, high speed electronics, and novel devices.

## Latest Grants & Project Wins

TowerJazz has won prestigious grants within the German-Israeli program on nanosensors (CC-SENS) and for an internal Israeli program on gas sensors for the IoT. TowerJazz also participated in projects associated with the US Department of Defense (DoD), including new programs for the branches of the US armed services.

## Patents

In 2017, TowerJazz was granted 22 US patents and filed multiple new applications. The protected technologies include original back-side illuminated and global shutter imagers, power management devices, advanced antenna switches on SOI, MEMS technologies, gas sensors, and methods for increasing performance of CMOS and BiCMOS products.

## Talks & Publications

TowerJazz gave several invited talks at international conferences/roundtables with its engineers serving in Technical/Steering Committees and as Section Chairs of IEDM, IEEE IMW, as well as other highly prestigious international venues. Numerous research papers were published in well-known international journals and conference proceedings such as IEEE ED, Microelectronics Reliability and others. Several invited papers were published, and Company representatives acted as editors and reviewers in leading international journals. Internally, Vol. 8 of the TowerJazz Technical Journal (TJ<sup>2</sup>) was released, featuring technical papers by employees from TowerJazz fabs and R&D divisions.



**Dr. Yakov Roizin**  
Director of Emerging Technologies and Technical Fellow



**Dr. David Howard**  
Executive Director and Technical Fellow

# CORPORATE SOCIAL RESPONSIBILITY

TowerJazz is an equal opportunity employer with a corporate culture that emphasizes respect, recognition and opportunity for all employees to grow as individuals and to thrive. Our employee base is comprised of individuals from various cultures and backgrounds and as one global company, we focus on ethical and moral behavior in all of our engagements, including customers, partners and employees.

Our business initiatives are realized through our valued 5,500 employees worldwide. Our employees are our greatest strength – their capabilities, dedication, loyalty and passion are primary factors in the Company's collective achievements. We believe that organizational motivation is created when employees gain confidence by being given the tools and opportunities to meet big challenges. Our diverse employee base provides a broad foundation for knowledge sharing and a platform for new ideas and innovation.

## Leading with a Social Purpose

Realizing that corporate social responsibility is an integral building block of our success, TowerJazz aims to enrich and improve not only individuals' lives, but enhance society as a whole. We believe that social responsibility is essential for a healthy and balanced corporate culture. The Company's goal is to inspire youth to pursue careers in science and technology by creating a synergy between educators and corporate resources. TowerJazz also supports local educational institutions whose mission is to improve public awareness of science and technology.



TowerJazz supports a wide range of health, education, social and community activities that affect and involve its employees and the community's well-being. TowerJazz's social contributions are focused on education, environmental preservation, funding various programs, donating goods, and providing other services, with the involvement of our dedicated and caring employee volunteers.

## In 2017, TowerJazz social responsibility involvement included:

### Global Awareness Investigation and Action (GAIA) Program

For the past eight years, TowerJazz has sponsored the GAIA international program, worked with and mentored students with varied cultural backgrounds, both within and outside of Israel. The GAIA program is led through initiatives of Dr. Stuart Fleisher at the American International School (AIS) in Israel to focus and involve students in environmental awareness and responsibility. TowerJazz provides financial support, access to onsite equipment, engineering support and collaboration on a variety of research projects. Currently, TowerJazz is directly involved in groundbreaking research through a GAIA project where young student researchers from AIS in Israel and the local Ha'Kfar HaYarok School are the lead stakeholders in solving critical questions through technology to increase diversity in the genetic variations of plant food species in Israel.

### First Lego League

TowerJazz sponsors teams in both Israel and the US. Guided by adult coaches, kids are challenged to think like scientists and engineers. The teams research a real-world problem and are challenged to develop a solution. They also build, test, and program an autonomous robot using LEGO® MINDSTORMS® technology to solve a set of missions in the Robot Game. First Lego League includes over 30,000 teams from over 85 countries around the world.

### English and Math Classes Volunteering

This is the fourth year TowerJazz employees in Israel have participated in an English learning project, giving the youth in Israel an opportunity to learn English, improve their communication skills, and broaden their English vocabulary to help open their minds to the opportunities their future can offer. In addition, this year, TowerJazz entered into a new project teaching Math at a high school in Migdal Haemek, Israel.

### Youth Clubs for kids

Employees at the Migdal Haemek, Israel facility support youth clubs for kids who need help with homework or need emotional support. This program has been in effect for the past eight years with a team of about 25 volunteers that participate in this activity once a week.

### Working Wardrobes

In Newport Beach, CA, TowerJazz donated funds and employees volunteered at Working Wardrobes – an organization that assists survivors of domestic violence and other adults, such as veterans looking to re-enter the workforce – through life skills education, career counseling and providing suitable attire.

### Food Bank Events

In Newport Beach, CA, TowerJazz employees participated in a Corporate Social Responsibility Day at the Second Harvest Food Bank of Orange County. Employees volunteered to help with various activities such as sorting and boxing perishables and helping with other activities.

At the Company's San Antonio, TX facility (TowerJazz Texas), employee volunteers contributed to the community by supporting a Food Bank event. They packed over 19,000 lbs. of food which translates to over 15,000 meals for people in the area who are in dire need of food for their families.

### Educational Supplies

At TowerJazz Texas, to support children in need within the community, school supplies were purchased, and employees filled 250 backpacks. During the holiday season, TowerJazz Texas also purchased 400 educational toys and employees donated their time wrapping these gifts.

### Good Deeds Day

Good Deeds Day is an international celebration of DOING GOOD! This past year in April, TowerJazz participated in "Good Deeds Day" activities around the world. Employees collaborated with environmental organizations and retirement institutions, renovated buildings, prepared food packages for families in need and participated in blood drives.



**"We focus on empowering our employees and are proud of their continuous involvement to enhance the communities near our facilities and take part in our corporate social responsibility initiatives."**

### Dalit Dahan

Senior Vice President of Human Resources and Information Technology

## FOURTH QUARTER AND FISCAL YEAR 2017 FINANCIAL RESULTS PRESS RELEASE

## TOWERJAZZ REPORTS FISCAL YEAR 2017 RECORD RESULTS IN REVENUES, GROSS PROFIT, OPERATING PROFIT, EBITDA, NET PROFIT, CASH FROM OPERATIONS AND FREE CASH FLOW

**MIGDAL HAEMEK, ISRAEL – February 22, 2018 –** TowerJazz (NASDAQ: TSEM & TASE: TSEM) reported today its results for the fourth quarter and full year ended December 31, 2017.

### Highlights of the Full Year 2017:

- Record revenues of \$1.39 billion, up 11% year over year;
- Organic revenues up 23% year over year.
- Record EBITDA of \$425 million, up 16% year over year;
- Record net profit of \$298 million, as compared to \$204 million for the full year of 2016;
- Record free cash flow of \$191 million, as compared to free cash flow of \$118 million for the full year of 2016.

### Highlights of the Fourth Quarter of 2017:

- Record revenues of \$358 million, as compared with \$340 million in the fourth quarter of 2016;
- EBITDA of \$107 million and net profit of \$147 million, as compared to \$105 million and \$48 million in the fourth quarter of 2016, respectively;
- Free cash flow of \$44 million, as compared to free cash flow of \$39 million for the fourth quarter of 2016.

### CEO End of Year Commentary

**Mr. Russell Ellwanger, Chief Executive Officer of TowerJazz, commented:** "2017 was the best year for the Company to date, as seen in the across the board record financial results, as well as, and maybe more importantly, the realization of several key strategic initiatives, providing a palpable foundation for growth well into the next decade. We continue, as a team, to be committed and passionate to create value. We are confident that the strength and capabilities of the Company - our technology offerings, long-term customer and partner relationships, and devoted worldwide employee base, will propel us to even greater heights."

### Full Year 2017 Financial Results

Revenues for 2017 were at a record of \$1.39 billion, reflecting an 11% growth as compared to \$1.25 billion for the prior year. Year over year organic growth, excluding the Panasonic and Maxim long-term committed contracts, was 23%.

Gross profit for 2017 was at a record of \$354 million, an increase of 17% as compared to \$303 million in the prior year.

Operating profit for 2017 was at a record of \$220 million, an increase of 26% as compared to \$175 million in 2016.

EBITDA for 2017 totaled to a record \$425 million, or 31% EBITDA margin, representing a 16% increase as compared to \$367 million in 2016.

Net profit for 2017 was at a record of \$298 million, representing a record of \$3.08 basic earnings per share and a record of \$2.90 diluted earnings per share. Net profit for 2017 included two one-time income tax benefit items as follows: (i) \$82 million income tax benefit resulting from Israeli deferred tax asset realization following the release of a valuation allowance, which the Company had over the net operating loss carry forward for tax in the Israeli parent Company, and (ii) \$13 million income tax benefit resulting from the US tax reform and the reduction in federal income tax rate from 35% to 21%, which will reduce the Company's future tax payments and already caused a reduction of certain deferred tax liabilities (net of certain deferred tax assets).

Net profit for 2016 was \$204 million, representing \$2.33 basic earnings per share and \$2.09 diluted earnings per share. Net profit for 2016 included \$50 million net gain from the San Antonio fab acquisition and \$6 million income tax benefit related to the Nishiwaki fab closure offset by \$7 million non-cash financing expense relating to the Israeli banks' loans early repayment.

On an adjusted basis, as described and reconciled in the tables below, net profit for the full year of 2017 was \$226 million, a 29% increase as compared to \$175 million in 2016.

Free cash flow for 2017 was a record of \$191 million, with a record \$356 million cash flow from operations and \$165 million investments in fixed assets, net. The other main cash activities during the year were

comprised of the following: \$115 million invested in marketable securities, \$31 million received from the exercise of warrants and options and \$50 million debt repaid.

### Fourth Quarter Results Overview

Revenues for the fourth quarter of 2017 were a record \$358 million, as compared to \$340 million in the fourth quarter of 2016.

Gross and operating profits for the fourth quarter of 2017 were \$89 million and \$54 million, respectively, as compared to \$88 million and \$55 million, respectively, in the fourth quarter of 2016.

EBITDA for the fourth quarter of 2017 was \$107 million, or 30% EBITDA margin, as compared to \$105 million in the fourth quarter of 2016.

Net profit for the fourth quarter of 2017 was a record of \$147 million as compared to \$48 million in the fourth quarter of 2016. Basic earnings per share for the quarter was a record \$1.50 and diluted earnings per share was a record \$1.40, as compared to \$0.53 and \$0.49, respectively, in the fourth quarter of 2016. Net profit for the fourth quarter of 2017 included the two one-time income tax benefit items of \$82 million and \$13 million, as described above.

On an adjusted basis, as described and reconciled in the tables below, net profit for the fourth quarter of 2017 was \$60 million, as compared to \$53 million in the fourth quarter of 2016.

Free cash flow for the fourth quarter of 2017 was \$44 million, with \$85 million cash flow from operations and \$41 million investments in fixed assets, net. The other main cash activities during the fourth quarter of 2017 were \$65 million invested in marketable securities, \$17 million debt repaid and \$3 million received for the exercise of warrants and options.

Cash (including short-term marketable securities), net of gross debt as of December 31, 2017, totaled to a record of \$226 million, as compared to net cash of \$37 million as of December 31, 2016.

In February 2018, Wells Fargo and Jazz Semiconductor, the US wholly-owned subsidiary of the Company, signed a 5-year extension of the existing credit line agreement, which has been originally set to mature in December 2018, under which Jazz Semiconductor

will be able to drawdown up to \$70 million through 2023. Any such drawdown will bear an interest rate ranging from Libor + 1.25% to Libor + 1.75%. As of December 31, 2017, and the date hereof, there were no loans drawdown under this credit line.

Shareholders' equity as of December 31, 2017 was a record of \$1.03 billion, as compared to \$683 million as of December 31, 2016.

### Business Outlook

TowerJazz expects revenues for the first quarter of 2018 ending March 31, 2018 to be \$325 million, with an upward or downward range of 5%, in line with present industry seasonality, and forecasts growth throughout the year.

### Teleconference and Webcast

TowerJazz will host an investor conference call today, February 22, 2018, at 10:00 a.m. Eastern time (9:00 a.m. Central time, 8:00 a.m. Mountain time, 7:00 a.m. Pacific time and 5:00 p.m. Israel time) to discuss the Company's financial results for the fourth quarter of 2017, for fiscal year 2017 and its outlook.

This call will be webcast and can be accessed via TowerJazz's website at [www.towerjazz.com](http://www.towerjazz.com), or by calling: 1-888-668-9141 (U.S. Toll-Free), 03-918-0609 (Israel), +972-3-918-0609 (International). For those who are not available to listen to the live broadcast, the call will be archived on TowerJazz's website for 90 days.

*The Company presents its financial statements in accordance with U.S. GAAP. The financial information included in the tables below includes unaudited condensed financial data. Some of the financial information in this release, which we describe in this release as "adjusted financial measures", is non-GAAP financial measures as defined in Regulation G and related reporting requirements promulgated by the Securities and Exchange Commission as they apply to our Company. These adjusted financial measures are calculated excluding one or more of the following: (1) amortization of acquired intangible assets; (2) compensation expenses in respect of equity grants to directors, officers and employees; (3) financing costs resulted from banks loans early repayment; (4) gain from acquisition, net; (5) non-recurring items related to long-term investments; (6) income tax benefit resulted from Israeli deferred tax asset realization following valuation allowance release; (7) income tax benefit related to U.S. tax reform; (8) income tax benefit related to Nishiwaki closure; and (9) acquisition related costs. These adjusted financial measures should be evaluated in conjunction with, and are not a substitute for, GAAP financial measures. The tables also present the GAAP financial measures, which are most comparable to the adjusted financial measures, as well as a reconciliation between the adjusted financial measures and the comparable GAAP financial measures. As used and/or presented in this release, as well as calculated in the tables herein, the term Earnings Before Interest Tax Depreciation and Amortization (EBITDA) consists of net profit in accordance with GAAP, excluding gain from acquisition, net, interest and other financing expense, net, other income, net, taxes, non-controlling interest, depreciation and amortization expense, stock based compensation expense, acquisition related costs and Nishiwaki Fab restructuring and impairment cost (income), net. EBITDA is reconciled in the tables below from GAAP operating profit. EBITDA is not a required GAAP financial measure and may not be comparable to a similarly titled measure employed by other companies. EBITDA and the adjusted financial information presented herein should not be considered in isolation or as a substitute for operating profit, net profit or loss, cash flows provided by operating, investing and financing activities, per share data or*

other profit or cash flow statement data prepared in accordance with GAAP. The term Net Cash, as used and/or presented in this release, is comprised of cash, cash equivalents, short-term deposits and short-term marketable securities (in the amounts of \$560 million and \$389 million as of December 31, 2017 and December 31, 2016, respectively) less the outstanding principal amount of bank loans (in the amounts of \$138 million and \$166 million as of December 31, 2017 and December 31, 2016, respectively), the outstanding principal amount of capital leases (in the amounts of \$16 million as of December 31, 2017) and the outstanding principal amount of debentures including the related hedging effect (in the amounts of \$180 million and \$186 million as of December 31, 2017 and December 31, 2016, respectively). The term Net Cash is not a required GAAP financial measure, may not be comparable to a similarly titled measure employed by other companies and should not be considered in isolation or as a substitute for cash, debt, operating profit, net profit or loss, cash flows provided by operating, investing and financing activities, per share data or other profit or cash flow statement data prepared in accordance with GAAP. In addition, the term Free Cash Flow, as used and/or presented in this release, is calculated to be cash from operating activities (in the amounts of \$356 million and \$327 million for the years ended December 31, 2017 and December 31, 2016, respectively and in the amounts of \$85 million and \$82 million for the three months periods ended December 31, 2017 and December 31, 2016, respectively) less cash for investments in property and equipment, net (in the amounts of \$165 million and \$209 million for the years ended December 31, 2017 and December 31, 2016, respectively and in the amounts of \$41 million and \$43 million for the three months periods ended December 31, 2017 and December 31, 2016, respectively). The term Free Cash Flow is not a required GAAP financial measure, may not be comparable to a similarly titled measure employed by other companies and should not be considered in isolation or as a substitute for operating profit, net profit or loss, cash flows provided by operating, investing and financing activities, per share data or other profit or cash flow statement data prepared in accordance with GAAP.

### About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM) and its subsidiaries operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures next-generation integrated circuits (ICs) in growing markets such as consumer, industrial, automotive, medical and aerospace and defense. TowerJazz's advanced technology is comprised of a broad range of customizable process platforms such as: SiGe, BiCMOS, mixed-signal/CMOS, RF CMOS, CMOS image sensor, integrated power management (BCD and 700V), and MEMS. TowerJazz 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 that need to expand capacity. To provide multi-fab sourcing and extended capacity for its customers, TowerJazz 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). For more information, please visit [www.towerjazz.com](http://www.towerjazz.com).

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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 and you should not place any undue

reliance on such forward-looking statements. Potential risks and uncertainties include, without limitation, risks and uncertainties associated with: (i) demand in our customers' end markets; (ii) over demand for our foundry services and/or products that exceeds our capacity; (iii) maintaining existing customers and attracting additional customers; (iv) high utilization and its effect on cycle time, yield and on schedule delivery which may cause customers to transfer their product(s) to other fabs; (v) operating results fluctuate from quarter to quarter making it difficult to predict future performance; (vi) impact of our debt and other liabilities on our financial position and operations; (vii) our ability to successfully execute acquisitions, integrate them into our business, utilize our expanded capacity and find new business; (viii) fluctuations in cash flow; (ix) our ability to satisfy the covenants stipulated in our agreements with our lender banks and bondholders (as of December 31, 2017 we are in compliance with all such covenants included in our banks' agreements, bond G indenture and others); (x) obtaining new customer engagements, products qualification and production ramp-up of the TPSCo facilities and our San Antonio facility; (xi) the closure of TJP within the scope of restructuring our activities and business in Japan, settling any future claims or potential claims; (xii) meeting the conditions set in the approval certificates received from the Israeli Investment Center under which we received a significant amount of grants in past years; (xiii) receipt of orders that are lower than the customer purchase commitments; (xiv) failure to receive orders currently expected; (xv) possible incurrence of additional indebtedness; (xvi) effect of global recession, unfavorable economic conditions and/or credit crisis; (xvii) our ability to accurately forecast financial performance, which is affected by limited order backlog and lengthy sales cycles; (xviii) possible situations of obsolete inventory if forecasted demand exceeds actual demand when we manufacture products before receipt of customer orders; (xix) the cyclical nature of the semiconductor industry and the resulting periodic overcapacity; fluctuations in operating results and future average selling price erosion; (xx) the execution of debt re-financing and/or fundraising to enable the service of our debt and/or other liabilities; (xxi) operating our facilities at high utilization rates which is critical in order to cover a portion or all of the high level of fixed costs associated with operating a foundry, and our debt, in order to improve our results; (xxii) the purchase of equipment to increase capacity; the timely completion of the equipment installation, technology transfer and raising the funds therefor; (xxiii) the concentration of our business in the semiconductor industry; (xxiv) product returns; (xxv) our ability to maintain and develop our technology processes and services to keep pace with new technology, evolving standards, changing customer and end-user requirements, new product introductions and short product life cycles; (xxvi) competing effectively; (xxvii) use of outsourced foundry services by both fabless semiconductor companies and integrated device manufacturers; (xxviii) achieving acceptable device yields, product performance and delivery times; (xxix) our dependence on intellectual property rights of others; our ability to operate our business without infringing others' intellectual property rights and our ability to enforce our intellectual property against infringement; (xxx) retention of key employees and recruitment and retention of skilled qualified personnel; (xxxi) exposure to inflation, currency rates (mainly the Israeli Shekel and Japanese Yen) and interest rate fluctuations and risks associated with doing business locally and internationally; as well fluctuations in the market price of our traded securities; (xxxii) issuance of ordinary shares as a result of conversion and/or exercise of any of our convertible securities; as well as any sale of shares by any of our shareholders; or any market expectation thereof, which may depress the market price of our ordinary shares and may impair our ability to raise future capital; (xxxiii) meeting regulatory requirements worldwide, including environmental and governmental regulations; (xxxiv) negotiation and closure of definitive agreements in relation to the fab establishment in China, as well as implementation of this project and licensing of technologies, subject to obtaining required funding and receipt of payment milestones, qualification and ramp of process flows and products to enable mass production for customers and attain revenue to levels that would cover the facility's fixed costs; and (xxxv) business interruption due to fire and other natural disasters, the security situation in Israel and other events beyond our control such as power interruptions. We note that the risk disclosure included in previous releases related to the shareholder class action pending in Israel has been removed as a result of the Israeli court decision in February 2018 granting the Company's motion to dismiss the action in its entirety.

A more 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 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. Future results may differ materially from those previously reported. The Company does not intend to update, and expressly disclaims any obligation to update, the information contained in this release.

## TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES CONDENSED CONSOLIDATED BALANCE SHEETS (dollars in thousands)

	<u>December 31,</u> <u>2017</u>	<u>September 30,</u> <u>2017</u> <u>(unaudited)</u>	<u>December 31,</u> <u>2016</u>
<b>A S S E T S</b>			
<b>CURRENT ASSETS</b>			
Cash, cash equivalents and short-term deposits	\$ 445,961	\$ 480,407	\$ 389,377
Marketable securities	113,874	49,738	--
Trade accounts receivable	149,666	150,039	141,048
Inventories	143,315	143,300	137,532
Other current assets	21,516	21,465	30,041
<b>Total current assets</b>	<b>874,332</b>	<b>844,949</b>	<b>697,998</b>
<b>LONG-TERM INVESTMENTS</b>	<b>26,073</b>	<b>27,091</b>	<b>25,624</b>
<b>PROPERTY AND EQUIPMENT, NET</b>	<b>635,124</b>	<b>633,107</b>	<b>616,686</b>
<b>INTANGIBLE ASSETS, NET</b>	<b>19,841</b>	<b>21,627</b>	<b>28,129</b>
<b>GOODWILL</b>	<b>7,000</b>	<b>7,000</b>	<b>7,000</b>
<b>DEFERRED TAX AND OTHER LONG-TERM ASSETS</b>	<b>111,269</b>	<b>18,484</b>	<b>4,447</b>
<b>TOTAL ASSETS</b>	<b>\$ 1,673,639</b>	<b>\$ 1,552,258</b>	<b>\$ 1,379,884</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>			
<b>CURRENT LIABILITIES</b>			
Short-term debt	\$ 105,958	\$ 45,664	\$ 48,084
Trade accounts payable	115,347	109,385	99,262
Deferred revenue and customers' advances	14,338	26,454	26,169
Other current liabilities	66,730	64,259	73,600
<b>Total current liabilities</b>	<b>302,373</b>	<b>245,762</b>	<b>247,115</b>
<b>LONG-TERM DEBT</b>	<b>228,723</b>	<b>295,485</b>	<b>296,144</b>
<b>LONG-TERM CUSTOMERS' ADVANCES</b>	<b>31,908</b>	<b>37,674</b>	<b>41,874</b>
<b>LONG-TERM EMPLOYEE RELATED LIABILITIES</b>	<b>14,662</b>	<b>14,170</b>	<b>14,176</b>
<b>DEFERRED TAX LIABILITY AND OTHER LONG-TERM LIABILITIES</b>	<b>66,267</b>	<b>85,380</b>	<b>97,961</b>
<b>TOTAL LIABILITIES</b>	<b>643,933</b>	<b>678,471</b>	<b>697,270</b>
<b>TOTAL SHAREHOLDERS' EQUITY</b>	<b>1,029,706</b>	<b>873,787</b>	<b>682,614</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>\$ 1,673,639</b>	<b>\$ 1,552,258</b>	<b>\$ 1,379,884</b>

(Financial tables follow)

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)**  
(dollars and share count in thousands, except per share data)

	Three months ended		
	December 31, 2017	September 30, 2017	December 31, 2016
REVENUES	\$ 357,614	\$ 354,557	\$ 340,379
COST OF REVENUES	<u>268,256</u>	<u>265,439</u>	<u>252,648</u>
GROSS PROFIT	<u>89,358</u>	<u>89,118</u>	<u>87,731</u>
OPERATING COSTS AND EXPENSES:			
Research and development	18,370	17,094	16,320
Marketing, general and administrative	<u>16,502</u>	<u>16,822</u>	<u>16,209</u>
	<u>34,872</u>	<u>33,916</u>	<u>32,529</u>
OPERATING PROFIT	54,486	55,202	55,202
INTEREST EXPENSE, NET	(1,783)	(1,776)	(2,230)
OTHER FINANCING INCOME (EXPENSE), NET	(2,270)	(2,266)	1,215
OTHER EXPENSE, NET	<u>(3,027)</u>	<u>(253)</u>	<u>(948)</u>
PROFIT BEFORE INCOME TAX	47,406	50,907	53,239
INCOME TAX BENEFIT (EXPENSE), NET	101,236 (a)	3,334	(986)
PROFIT BEFORE NON CONTROLLING INTEREST	148,642 (a)	54,241	52,253
NON CONTROLLING INTEREST	(1,431)	1,033	(3,972)
NET PROFIT	<u>\$ 147,211 (a)</u>	<u>\$ 55,274</u>	<u>\$ 48,281</u>
BASIC EARNINGS PER SHARE	\$ 1.50 (a)	\$ 0.56	\$ 0.53
Weighted average number of shares	<u>98,312</u>	<u>97,947</u>	<u>91,235</u>
DILUTED EARNINGS PER SHARE	\$ 1.40 (a)	\$ 0.54	\$ 0.49
Net profit used for diluted earnings per share	\$ 149,502 (a)	\$ 57,519	\$ 50,397
Weighted average number of shares	<u>106,776</u>	<u>106,384</u>	<u>103,613</u>

(a) Three months ended December 31, 2017 included \$82,370 Israeli deferred tax asset realization following valuation allowance release and \$12,970 income tax benefit related to U.S. tax reform.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
(dollars and share count in thousands, except per share data)

	Year ended December 31,	
	2017	2016
REVENUES	\$ 1,387,310	\$ 1,249,634
COST OF REVENUES	<u>1,033,005</u>	<u>946,534</u>
GROSS PROFIT	<u>354,305</u>	<u>303,100</u>
OPERATING COSTS AND EXPENSES:		
Research and development	67,664	63,134
Marketing, general and administrative	66,799	65,439
Nishiwaki Fab restructuring and impairment cost (income), net	<u>--</u>	<u>(627)</u>
	<u>134,463</u>	<u>127,946</u>
OPERATING PROFIT	219,842	175,154
INTEREST EXPENSE, NET	(7,840)	(11,857)
OTHER FINANCING EXPENSE, NET	(7,607)	(12,492)
GAIN FROM ACQUISITION, NET	--	50,471 (c)
OTHER INCOME (EXPENSE), NET	<u>(2,627)</u>	<u>9,322</u>
PROFIT BEFORE INCOME TAX	201,768	210,598 (c)
INCOME TAX BENEFIT (EXPENSE), NET	99,888 (b)	(1,432)
PROFIT BEFORE NON CONTROLLING INTEREST	<u>301,656 (b)</u>	<u>209,166 (c)</u>
NON CONTROLLING INTEREST	(3,645)	(5,242)
NET PROFIT	<u>\$ 298,011 (b)</u>	<u>\$ 203,924 (c)</u>
BASIC EARNINGS PER SHARE	\$ 3.08 (b)	\$ 2.33 (c)
Weighted average number of shares	<u>96,647</u>	<u>87,480</u>
DILUTED EARNINGS PER SHARE	\$ 2.90 (b)	\$ 2.09 (c)
Net profit used for diluted earnings per share	\$ 306,905 (b)	\$ 212,160 (c)
Weighted average number of shares	<u>105,947</u>	<u>101,303</u>

(b) Year ended December 31, 2017 included \$82,370 tax benefit resulted from Israeli deferred tax asset realization following valuation allowance release and \$12,970 income tax benefit related to U.S. tax reform.

(c) Year ended December 31, 2016 included \$50,471 net gain from San-Antonio fab acquisition from Maxim.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**UNAUDITED RECONCILIATION OF CERTAIN FINANCIAL DATA**  
(dollars and share count in thousands, except per share data)

	Three months ended		
	December 31,	September 30,	December 31,
	2017	2017	2016
<b>RECONCILIATION FROM GAAP NET PROFIT TO ADJUSTED NET PROFIT:</b>			
<b>GAAP NET PROFIT</b>	\$ 147,211	\$ 55,274	\$ 48,281
Stock based compensation	3,481	3,750	2,381
Amortization of acquired intangible assets	1,564	2,161	2,777
Non-recurring items related to long term investments	3,009	--	--
Income tax benefit resulted from Israeli deferred tax asset realization following valuation allowance release as described above	(82,370)	--	--
Income tax benefit related to U.S. tax reform	(12,970)	--	--
<b>ADJUSTED NET PROFIT</b>	<u>\$ 59,925</u>	<u>\$ 61,185</u>	<u>\$ 53,439</u>
<b>ADJUSTED NET PROFIT PER SHARE:</b>			
Basic	\$ 0.61	\$ 0.62	\$ 0.59
Diluted	\$ 0.58	\$ 0.60	\$ 0.54
Fully diluted	\$ 0.58	\$ 0.59	\$ 0.52
<b>ADJUSTED NET PROFIT USED TO CALCULATE PER SHARE DATA:</b>			
Basic	\$ 59,925	\$ 61,185	\$ 53,439
Diluted	\$ 62,216	\$ 63,430	\$ 55,555
Fully diluted	\$ 62,216	\$ 63,430	\$ 55,555
<b>NUMBER OF SHARES AND OTHER SECURITIES USED TO CALCULATE PER SHARE DATA:</b>			
Basic	98,312	97,947	91,235
Diluted	106,776	106,384	103,613
Fully diluted	107,721	107,729	107,121
<b>EBITDA CALCULATION:</b>			
<b>GAAP OPERATING PROFIT</b>	\$ 54,486	\$ 55,202	\$ 55,202
Depreciation of fixed assets	47,741	47,544	44,874
Stock based compensation	3,481	3,750	2,381
Amortization of acquired intangible assets	1,564	2,161	2,777
<b>EBITDA</b>	<u>\$ 107,272</u>	<u>\$ 108,657</u>	<u>\$ 105,234</u>

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**UNAUDITED RECONCILIATION OF CERTAIN FINANCIAL DATA**  
(dollars and share count in thousands, except per share data)

	Year ended	
	December 31,	
	2017	2016
<b>RECONCILIATION FROM GAAP NET PROFIT TO ADJUSTED NET PROFIT:</b>		
<b>GAAP NET PROFIT</b>	\$ 298,011	\$ 203,924
Stock based compensation	11,648	9,406
Amortization of acquired intangible assets	8,307	9,780
Financing cost resulted from banks loans early repayment	--	6,653
Gain from acquisition, net	--	(50,471)
Non-recurring items related to long term investments	3,009	2,378
Income tax benefit resulted from Israeli deferred tax asset realization following valuation allowance release as described above	(82,370)	--
Income tax benefit related to U.S. tax reform	(12,970)	--
Income tax benefit in relation to Nishiwaki closure	--	(6,472)
<b>ADJUSTED NET PROFIT</b>	<u>\$ 225,635</u>	<u>\$ 175,198</u>
<b>ADJUSTED NET PROFIT PER SHARE:</b>		
Basic	\$ 2.33	\$ 2.00
Diluted	\$ 2.21	\$ 1.81
Fully diluted	\$ 2.18	\$ 1.71
<b>ADJUSTED NET PROFIT USED TO CALCULATE PER SHARE DATA:</b>		
Basic	\$ 225,635	\$ 175,198
Diluted	\$ 234,529	\$ 183,434
Fully diluted	\$ 234,529	\$ 183,434
<b>NUMBER OF SHARES AND OTHER SECURITIES USED TO CALCULATE PER SHARE DATA:</b>		
Basic	96,647	87,480
Diluted	105,947	101,303
Fully diluted	107,721	107,121
<b>EBITDA CALCULATION:</b>		
<b>GAAP OPERATING PROFIT</b>	\$ 219,842	\$ 175,154
Depreciation of fixed assets	185,464	169,958
Stock based compensation	11,648	9,406
Amortization of acquired intangible assets	8,307	9,780
Non-recurring items related to long term investments	--	2,378
<b>EBITDA</b>	<u>\$ 425,261</u>	<u>\$ 366,676</u>

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONSOLIDATED SOURCES AND USES REPORT (UNAUDITED)**  
(dollars in thousands)

	Three months ended	
	December 31,	December 31,
	2017	2016
Cash and short-term deposits - beginning of period	\$ 480,407	\$ 362,833
Cash from operations	85,285	81,835
Investments in property and equipment, net	(41,349)	(42,929)
Exercise of warrants and options, net	3,278	10,644
Debt repaid, net	(16,863)	(5,653)
Effect of Japanese Yen exchange rate change over cash balance	70	(17,353)
Investments in marketable securities and deposits	(64,867)	--
Cash and short-term deposits - end of period	<u>\$ 445,961</u>	<u>\$ 389,377</u>
Free Cash Flow	<u>\$ 43,936</u>	<u>\$ 38,906</u>

	Year ended	
	December 31,	December 31,
	2017	2016
Cash and short-term deposits - beginning of period	\$ 389,377	\$ 205,575
Cash from operations	355,635 (d)	327,468
Investments in property and equipment, net	(164,717)	(209,624)
Exercise of warrants and options, net	31,315	38,803
Debt received (repaid), net	(50,255)	37,091
Effect of Japanese Yen exchange rate change over cash balance	3,720	5,635
TPSCo dividend to Panasonic	(4,378)	(2,563)
Investments in marketable securities and deposits	(114,736)	(13,008)
Cash and short-term deposits - end of period	<u>\$ 445,961</u>	<u>\$ 389,377</u>
Free Cash Flow	<u>\$ 190,918 (d)</u>	<u>\$ 117,844</u>

(d) Cash from operations for the year ended December 31, 2017 included \$18,000 received from Tacoma as announced on August 21, 2017.

**TOWER SEMICONDUCTOR LTD. AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(dollars in thousands)

	Year ended		Three months ended	
	December 31,	December 31,	December 31,	December 31,
	2017	2016	2017	2016
			(unaudited)	(unaudited)
<b>CASH FLOWS - OPERATING ACTIVITIES</b>				
Net profit for the period	\$ 301,656	\$ 209,166	\$ 148,642	\$ 52,253
Adjustments to reconcile net profit for the period to net cash provided by operating activities:				
Income and expense items not involving cash flows:				
Depreciation and amortization	208,411	197,606	51,310	51,776
Effect of indexation, translation and fair value measurement on debt	12,865	8,442	2,281	(2,532)
Other expense (income), net	2,627	(9,322)	3,027	948
Gain from acquisition, net	--	(50,471)	--	--
Changes in assets and liabilities:				
Trade accounts receivable	(6,564)	(30,104)	788	(18,200)
Other current assets	(8,321)	(265)	445	61
Inventories	(4,277)	(22,069)	92	(300)
Trade accounts payable	(8,649)	5,550	(2,786)	(7,347)
Deferred revenue and customers' advances	(21,803)	23,581	(17,882)	5,634
Other current liabilities	(8,219)	(145)	1,765	(2,448)
Long-term employee related liabilities	(3,247)	(798)	(2,482)	(385)
Deferred tax, net	(108,844)	(3,703)	(99,915)	2,375
Net cash provided by operating activities	<u>355,635 (d)</u>	<u>327,468</u>	<u>85,285</u>	<u>81,835</u>
<b>CASH FLOWS - INVESTING ACTIVITIES</b>				
Investments in property and equipment, net	(164,717)	(209,624)	(41,349)	(42,929)
Investments in marketable securities and deposits, net	(114,736)	16,992	(64,867)	--
Net cash used in investing activities	<u>(279,453)</u>	<u>(192,632)</u>	<u>(106,216)</u>	<u>(42,929)</u>
<b>CASH FLOWS - FINANCING ACTIVITIES</b>				
Debt received (repaid), net	(50,255)	37,091	(16,863)	(5,653)
Exercise of warrants and options, net	31,315	38,803	3,278	10,644
Dividend payment to Panasonic	(4,378)	(2,563)	--	--
Net cash provided by (used in) financing activities	<u>(23,318)</u>	<u>73,331</u>	<u>(13,585)</u>	<u>4,991</u>
EFFECT OF FOREIGN CURRENCY EXCHANGE RATE CHANGE	<u>3,720</u>	<u>5,635</u>	<u>70</u>	<u>(17,353)</u>
INCREASE (DECREASE) IN CASH AND SHORT-TERM DEPOSITS	56,584	213,802	(34,446)	26,544
CASH AND SHORT-TERM DEPOSITS - BEGINNING OF PERIOD	389,377	175,575	480,407	362,833
CASH AND SHORT-TERM DEPOSITS - END OF PERIOD	<u>\$ 445,961</u>	<u>\$ 389,377</u>	<u>\$ 445,961</u>	<u>\$ 389,377</u>

(d) Net cash provided by operating activities for the year ended December 31, 2017 included \$18,000 received from Tacoma as announced on August 21, 2017.

The logo for TowerJazz, featuring the word "TOWERJAZZ" in a bold, white, sans-serif font. The letters "J" and "Z" are stylized with a dot and a horizontal line respectively, giving it a dynamic, musical feel.

*The Global Specialty Foundry Leader*

[www.towerjazz.com](http://www.towerjazz.com)

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