



Message from CEO Russell Ellwanger

In the midst of the second half of 2013, we are pleased with several accomplishments that have been achieved year to date — advancements to our specialty process technologies and design enablement, capacity expansion, multi-sourcing capabilities, and importantly, improved quality and excellence in customer service as has been recognized by awards from several of our customers including our most recent honor from ON Semiconductor as its Top Foundry Supplier for the first half of 2013.

As significant as these milestones are, it is essential to acknowledge that success in business is not only measured by strategies and results, but also by the people who envelope all of these activities, going beyond the business initiatives to represent and encompass the humaneness of the business. At TowerJazz we foster a culture of social responsibility to nurture diversity and equity within our worldwide respective communities. We focus on equality of male/female employment and management ratios, on minority population integration into the work force, and we enable educational and vocational development of populations that otherwise have limited exposure to job opportunities.

I am pleased to report that our efforts to communicate our activities and roadmaps to our customers worldwide is well underway as we recently hosted a successful TowerJazz Technical Global Symposium (TGS) in Japan and are gearing up for events in China and Israel as well as the US. The TGS "Around the Globe" series not only provides a forum for business updates, but also celebrates our customers, their success and the role in which our partners play.

We have within each business unit (BU), advancements to our technology offerings. For our SiGe/RF platform, we are ramping a large number of SOI switch designs on our industry-leading SOI process, we are successfully prototyping with many customers on our SBC18H3 (270 GHz) technology, and we are continuing development of our highest speed SiGe technology, SBC18H4 with speeds exceeding 300GHz.



Register today at
www.towerjazz.com

Click on an event to learn more and register.

Manufacturing for a Smart World
TowerJazz Technical Global Symposiums

TGS China
Sept. 24, 2013

TGS Israel
Oct. 9, 2013

TGS USA
Nov. 12-13, 2013

We very recently announced the creation and accreditation of Jazz Semiconductor Trusted Foundry (JSTF) as a Category 1A Trusted Entity by the United States Department of Defense (DoD) as a provider of both classified and unclassified semiconductors in critical defense applications. In doing so, we went beyond our initial commitment to support ITAR customers to further address the crucial needs of our aerospace and defense customers.

Within our power management business, we continue to gain market share in both our low-voltage BCD product line and 700V product lines. We are in production for industrial LED lighting in our 700V process and we have qualified our power management process in our Japanese factory to accommodate growth in the demand for this technology.

Our CMOS image sensor (CIS) business continues to gain market share in both X-ray and high-end camera segments. We are focusing on several initiatives including ramping to production a volume gesture control product; completing the IS11 platform, ramping to production our two major wins in dental and medical X-ray sensors, and completing the development of two mask stitching projects.

We are also focused on broadening our MS/CMOS offering with extended voltage range TS18SL transistors for Tier-1 manufacturers of applications such as LCD drivers and analog switches. We will also start mass producing 0.152µm based products and continue qualification of different technologies for customer production to the fab in Nishiwaki, Japan.

For our MEMS offering, we continue our position as a leading manufacturer and we are pleased to report, we crossed the 100M MEMS parts shipment milestone. We are yielding new design wins of various customers, including major manufacturers of consumer MEMS devices. Recently we announced a major breakthrough in a disruptive magnetic technology that has been co-developed with Crocus Technology. The technology now offers SRAM performance in terms of speed and power with Non-Volatile Memory (NVM) capabilities.

We look forward to sharing the details of these BU updates and more at one of our upcoming TGS events!

Sincerely,

Message from CEO	1
TGS Around the Globe	1
Upcoming Industry Events.....	1
TGS Japan Summary	2
Jazz Semiconductor Trusted Foundry	2
Executive Roundtable.....	2
Financials	3
Social Responsibility	3
Getting to Know Us	3
Press Releases	4
Featured TowerJazz News	4

Industry Events



SNUG Boston
September 12

SNUG Austin
September 18



EOS/ESD Symposium & Exhibits
September 8-13



Microwave Week
October 6-11



Mentor Forum
October 9-11



CDNLive Israel
October 14



COMCAS
October 21-23

TowerJazz Technical Global Symposium (TGS) Japan Summary

July 24, 2013 | Hotel Intercontinental Tokyo Bay



The 2nd annual TowerJazz Technical Global Symposium (TGS) Japan was held in Tokyo on September 24, 2013. Under the theme, "Manufacturing for a Smart World," TowerJazz executives presented technology offerings such as mixed-signal/CMOS, power management, SiGe/RF/HPA, CMOS image sensors, TOPS and MEMS as well as our design enablement capabilities. The half-day event commenced with a keynote speech from our CEO, Russell Ellwanger, who highlighted TowerJazz's latest business achievements while focusing on our strength in supporting Japanese customers' manufacturing needs as the only pure play foundry in Japan.

In addition, Keiichi Kawabata, Representative Director & President/Head of Business

Development/Sales, provided an overview of our business opportunities in Japan and discussed the various analog foundry services we are providing in the Nishiwaki manufacturing facility while strengthening our presence in Japan.

Nearly 130 attendees joined our event and feedback indicated the symposium was very informative and successful.

We would like to thank our sponsors for their support!



Jazz Semiconductor Trusted Foundry **jstf**

In order to further meet our aerospace and defense customers' needs, Jazz Semiconductor Trusted Foundry (JSTF), has been created and accredited as a Category 1A Trusted Supplier by the United States Department of Defense (DoD) as a provider of semiconductors in critical defense applications. JSTF joins a small list of companies accredited by the DoD, established to ensure the integrity of the people and processes used to deliver national security critical microelectronic components, and administered by the DMEA.

With the purpose of addressing the needs of our aerospace and defense customers, we went beyond our initial commitment to the US State Department to continue support of our ITAR customers and engaged in rounds of discussion with the US Department of Defense toward participation in the Trusted program in our Newport Beach facility.

Other recent activities include capacity expansion, a long-term lease extension of our US facility and implementation of leading technologies such as high-speed SiGe, ROICs for IR sensors, CMOS image sensors, and MEMS to continue providing advanced solutions for on-shore manufacturing of semiconductors for our valued aerospace and defense customers.



Roundtable Message from our Executives

Ori Galzur

Vice President of TowerJazz's Worldwide VLSI Design Center

In this issue, we feature a message from **Ori Galzur, Vice President of TowerJazz's Worldwide VLSI Design Center**. He has served with TowerJazz since 1995 and currently oversees the Design Center, PDK, IPs, NVM, DSE, ESD and Global Mask CAD teams.

In the past few years since the merger of Tower and Jazz, my job has focused on integrating all the design enablement activities and the design echo system making our offering global and rich. TowerJazz is a leader in PDK offerings and state of the art modeling and design validation tools. The combination of best-in-class models and PDKs with a complete design team makes our enablement unique and powerful in the industry. Our customers see the fab through the PDK hence making this effort critical to win and sustain business. The design enablement team today resides in three regions: Israel (Migdal Haemek and Netanya Design Center), the US (Newport Beach, California), and Japan (Nishiwaki), making it an exciting multi-cultural experience.

Over the past two years, we have expanded our partnerships with all the leading EDA vendors (such as Synopsys, Mentor and Cadence) to make the most complete and vendor independent design tools and offerings in the industry for 0.18um technologies. In the past year we have released an iPDK (interoperable PDK) for Power and CMOS platforms. This

PDK allows customers to use the same PDK with different design tools giving them maximum flexibility to choose an EDA vendor of their choice. Last quarter, we released PERC (programmable ERC) runsets with Mentor; this unique tool is a "DRC" run that checks ESD and HV rules on a design. TowerJazz is the first foundry to offer such a service making our goal for first pass silicon success easier for our customers.

Recently we have decided to form a Global Mask CAD team at a corporate level. By doing so we believe we can achieve a very efficient and professional mask preparation operation making the tape out experience fast and clean for our customers. Having sites in Israel, the US and Japan allows the forming of a true 24/7 service coverage for our customers. This, along with massive automation efforts, will dramatically improve our cycle time for our customers' tape outs.

Within the NVM team, we have decided to focus our efforts on expanding our Y-Flash offerings to a wider IP space. Currently Y-Flash is widely used by many customers mainly with low bit

count (64b). Within the next year, we will move the design of Y-Flash from a contractor to the design center in Netanya focusing on providing a robust and wide range of Y-Flash modules. Y-Flash has been a major differentiator for power customers and we plan to expand it, maintaining our leadership in this area. Our design team has also released STD cell libraries for our CA18 and SOI platforms in our Newport Beach site, outperforming our competitors' foundry offerings.

Our design team continues developing ICs mainly on our power platform. We have several success stories with major customers designing PMICs as well as ICs on our 700V platform. The SOI switch that was designed in Netanya received impressive traction and is winning business for the RF/HPA business unit. We plan to expand this success and design a PA as well on our Newport Beach platforms.

The design enablement team today consists of about 100 engineers located in Migdal Haemek and Netanya, Israel as well as in Newport Beach, CA and Nishiwaki, Japan.

Q2 2013 Financial Results Highlights

Revenue

- Second quarter revenues of \$125 million, with 11% Q/Q increase
- Third quarter guidance provided continuous growth with revenues of \$130 to \$140 million

Balance Sheet

Very strong balance sheet financial ratios and indicators:

- Current ratio (current assets divided by current liabilities) improved from 1.6X as of March 31, 2012, to 1.8X as of December 31, 2012 and further improved to 2.1X as of June 30, 2013.
- \$117M cash on hand, excluding additional \$18M received in July as part of Company's \$40M Rights Offering
- \$184M shareholders' equity
- No significant bank or bond debt principal payments in 2013 and 2014

Hosting eCamp

July 2013

TowerJazz hosted, for the third time, "eCamp," an international English speaking summer camp in Israel focused on technology, media arts and gaming for children and teens ages 7–18 from 30 different countries who come together to develop their creative and technical skills and to explore the wonders of Israeli innovation.

A group of over 230 youngsters visited our manufacturing facilities in Migdal Ha'emek, Israel in July. Their visit consisted of meetings with our leading engineers, from which they learned about TowerJazz's advanced solutions and our unique and specialized technologies. Later, the

group visited our production line gallery where they became familiar with our manufacturing processes while experiencing what it is like to wear a "bunny suit."

This visit provided a magnificent experience for the kids and teens as well as our employees who were amazed by the excitement and interest of this young and enthusiastic group. We intend to continue this rewarding cooperation with eCamp in upcoming years. We support and believe in the younger generation and understand the importance of their education to the future of society and the semiconductor industry.



Getting to Know Us

Rachel Xie

Sales/FAE Manager, China Region

Rachel joined TowerJazz in March 2012. She has previous foundry experience as an integration engineer after graduating with a Master's Degree. She also worked for over five years as a sales and technical support manager for semiconductor companies in Asia.

Q: Please tell us about your position, focus areas, etc.

A: My focus as Sales/FAE Manager is on supporting China customers' technical questions and requests, making sure every tape out is smooth and collecting competitors' information in the China market.

Q: What do you enjoy about your position and what challenges you?

A: I am happy that my customer base is growing and meanwhile I enjoy the relationships I am developing in this

position. The biggest challenge is judging whether a company is a potential customer according to limited information as well as balancing customers and internal relationships.

Q: What is your focus this year from a business standpoint?

A: 2013 is a key year to make sure that the volume of some of our important customers starts ramping. So, my main focus is on solving any and all technical issues before production begins.

Q: What are some of your hobbies?

A: Reading and doing physical exercises.

Q: What is your favorite travel destination?

A: Egypt. Because Egypt has as long of a history as China, I like comparing what is the same as China and what is different from a historical point of view.

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08/28 — TowerJazz Announces the Creation and Accreditation of Jazz Semiconductor Trusted Foundry, [download](#)
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08/20 — TowerJazz Announces Next Series of Technical Global Symposium Events in China and Israel, [download](#)
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08/13 — TowerJazz Recognized by ON Semiconductor as its Top Foundry Supplier for the First Half of 2013, [download](#)
- 
07/17 — TowerJazz and Crocus Advance on Disruptive Technology Developments, Milestone Reached in Magnetic Memory Implementation, [download](#)
- 
07/15 — International Rectifier and TowerJazz Enter into a Multi-Year Production Agreement through 2020, [download](#)
- 
07/09 — Nujira Extends Foundry Partnership with TowerJazz; Prepares for Volume Production of New Envelope Tracking IC for 4G Smartphones, [download](#)
- 
06/19 — TowerJazz to Service High Volume, Commercial Infrared Markets, [download](#)
- 
06/13 — TowerJazz Announces its Second Half 2013 Global Conference Roadmap; Plenary and Breakout Sessions to Meet Geographic Customer Needs, [download](#)
- 
06/11 — TowerJazz and CMOSIS Announce Ramp to Volume Production for CMOSIS' 12-megapixel CMV12000, [download](#)
- 
06/6 — TowerJazz and Cavendish Kinetics Collaborate to Deliver High Volume Tunable RF MEMS Products for Fast Growing 4G Mobile Market, [download](#)

Featured TowerJazz News



TowerJazz Recognized by ON Semiconductor as its Top Foundry Supplier for the First Half of 2013

TowerJazz (Nasdaq: TSEM), the global specialty foundry leader today announced its long term customer, ON Semiconductor (Nasdaq: ONNN), an innovator in energy efficient electronics, has recognized the foundry as its top foundry supplier for the first half of 2013. The criteria behind this award included both manufacturing excellence and customer service parameters. This latest recognition comes on the heels of four other recently announced awards for TowerJazz from leading customers and an industry analyst firm.



Paultre on Power - a view from the foundry (Podcast)

Dr. Marco Racanelli of TowerJazz on power perspectives from the foundry viewpoint.

In this podcast, Dr. Marco Racanelli, Sr. VP and GM of RF/High Performance Analog and Power Business Groups at TowerJazz talks about the current state of the industry from his perspective for Power Systems Design. In the discussion he talks about industry trends and the challenges facing the design community, and the technologies TowerJazz is working on to address power and performance issues. TowerJazz offers specialty CMOS as well as digital CMOS process technologies with geometries ranging from 1.0- to 0.13-micron.

[Listen to the audio Podcast](#)



RFID Chip Maker Uses RFID to Boost Efficiency, On-Time Delivery

TowerJazz has installed AeroScout's Wi-Fi-based RTLS technology to monitor silicon wafers as they move through workstations at its California plant.

Global silicon chip manufacturer TowerJazz not only produces high-memory radio frequency identification chips used by the aerospace industry, but it is now employing Wi-Fi-based RFID technology at one of its own fabrication facilities to track work in progress. The solution, deployed at TowerJazz's fabrication plant in Newport Beach, Calif., consists of AeroScout's battery-powered Wi-Fi tags, excites to better pinpoint a tag's location, and software to determine at which workstation or on what rack wafers are located during the manufacturing process, based on read events, and to then share that information with the company's dispatch-management system. The system is being installed in various phases, with the first phase (identifying manufacturing station locations) installed in 2011 and a second phase (identifying racks on which carriers filled with wafers are temporarily parked) in late 2012. Light-emitting diodes (LEDs) are now being installed to indicate visually when a batch of wafers has arrived at a specific workstation. To view more, please visit: <http://www.rfidjournal.com/articles/view?10882>



TowerJazz And Crocus Advance On Disruptive Technology Developments, Milestone Reached In Magnetic Memory Implementation

TowerJazz and Crocus Technology, a leading provider of magnetically enhanced semiconductors, today announced a major breakthrough in a disruptive magnetic technology that has been co-developed with Crocus Technology. The technology now offers SRAM performance in terms of speed and power with Non-Volatile Memory (NVM) capabilities. This MRAM solution has demonstrated best-in-class performance and more than two billion cycles of program/erase were demonstrated on a 4M bit NVM product. The first market to be addressed is Battery Backed SRAM (BB-SRAM). Crocus' product provides the best characteristics of current BB-SRAM offerings -- fast access times, low power and unlimited write cycles -- without the need for cost, recharging and long-term disposal of a Lithium battery.