NEWS ANNOUNCEMENT

FOR IMMEDIATE RELEASE

TowerJazz Expands its High Speed SiGe, SOI and RF CMOS Design Kits for use with Agilent Technologies' Advanced Design System 2011 Software Release

Improving time-to-market for cell phone front-end modules, automotive radar, optical networking and other high-speed data interfaces

NEWPORT BEACH, Calif., October 6, 2011 – TowerJazz, the global specialty foundry leader, today announced the availability of additional high speed SiGe, SOI and RF CMOS process design kits (PDKs) for its 0.18um process platform. These kits were developed for use with Agilent Technologies' Advanced Design System (ADS) 2011 software and target cell phone front-end module components such as SOI antenna switches and SiGe power amplifiers as well as high-frequency products for optical networks, automotive, radar, and 60 GHz WiFi, and other high-speed interfaces such as those supporting Light-Peak and Thunderbolt standards. These PDKs are designed to help customers get new products to market faster by providing an accurate and productive work environment for RF CMOS, SiGe MMIC and power amplifier design solutions.

TowerJazz and Agilent plan to demonstrate the new PDKs at the European Microwave Week, October 10-14, in Manchester, UK, booth #515 and the TowerJazz Global Symposium (TGS), November 3, in Newport Beach.

The new ADS design kits are available for SOI-based RF CMOS processes targeting cell phone antenna switch applications, high power SiGe technology targeting power amplifier applications, as well as high-speed SiGe BiCMOS technology with speeds of up to 200GHz (SBC18HA/HXL/H2). ADS 2011 enables multi-technology simulation with multiple PDKs, including modeling of packaging effects for RF module and RF system-in-package circuit co-design. Also included is a power amplifier design library with characterized power cells for use in wireless front-end module applications in cell phones and WiFi devices. The design kits support a complete ADS front-to-back design flow with an embedded TowerJazz Inductor

Toolbox and CNEX netlist definitions for layout-versus-schematic support. The new PDKs work seamlessly with ADS 2011, ADS 2009 Update 1 and all prior ADS releases.

"We are pleased to provide our SOI Switch, SiGe PA, and high-speed SiGe customers this enhanced design platform developed in collaboration with Agilent which, among other benefits, enables the co-simulation of components designed in different process technologies, accelerating module and system-level development," said Dr. Marco Racanelli, Senior VP and GM of TowerJazz's RF and High Performance Analog Business Group and Aerospace & Defense Business Group. "As silicon expands its domain in product areas previously occupied by III-V technology, we are seeing Agilent's ADS platform growing in popularity with our customers and by offering a complete ADS design kit, including layout tools and integrated EM support, we give our customers the advantage of Agilent's proven expertise in RF and microwave design. The outcome is faster design cycles as well as consistent results and possibly higher yields for our mutual customers."

"As a leader in the GaAs MMIC world, we are continually looking for ways to extend our footprint for RF CMOS and SiGe BiCMOS design support," said Juergen Hartung, Foundry Program Manager of Agilent's EEsof EDA organization. "These kits offer us a means to achieve that goal. For our customers, the benefit is substantial: access to the industry's most comprehensive RF and microwave design platform using Momentum, the industry-leading 3D planar EM simulator, our integrated full 3D FEM engine, advanced RF design and analysis support, and industry proven design-for-manufacturing capabilities inside ADS. Such functionality underscores why the majority of MMIC designers now choose ADS to increase performance, consistency and yield."

About TowerJazz
Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), the global specialty foundry leader, its fully owned U.S. subsidiary Jazz Semiconductor, Inc. and its fully owned Japanese subsidiary TowerJazz Japan, LTD, operate collectively under the brand name TowerJazz, manufacturing integrated circuits with geometries ranging from 1.0 to 0.13-micron. TowerJazz provides industry leading design enablement tools to allow complex designs to be achieved quickly and more accurately and offers a broad range of customizable process technologies including SiGe, BiCMOS, Mixed-Signal and RFCMOS, CMOS Image Sensor, Power Management (BCD), and Non-Volatile Memory (NVM) as well as MEMS capabilities. To provide multi-fab sourcing, TowerJazz maintains two manufacturing facilities in Israel, one in the U.S., and one in Japan with additional capacity available in China through manufacturing partnerships. For more information, please visit www.towerjazz.com.

Safe Harbor Regarding Forward-Looking Statements
This press release includes forward-looking statements, which are subject to risks and uncertainties. Actual results may vary from those projected or implied by such forward-looking statements. A complete discussion of risks and uncertainties that may affect the accuracy of forward-looking statements included in this press release or which may otherwise affect TowerJazz's business is included under the heading "Risk Factors" in Tower's most recent filings on Forms 20-F, F-3, F-4 and 6-K, as were filed with the Securities and Exchange Commission (the "SEC") and the Israel Securities Authority and Jazz's most recent filings on Forms 10-K and 10-Q, as were filed with the SEC, respectively. Tower and Jazz do not intend to update, and expressly disclaim any obligation to update, the information contained in this release.

<div align="center">

###

</div>

For TowerJazz:

Company/Media Contact
Lauri Julian
+1 949 435 8181
lauri.julian@towerjazz.com

mailto:**Investor Relations Contact**
Noit Levi
+972 4 604 7066
noit.levi@towerjazz.com