Phasor Solutions and TowerJazz Demonstrate Paradigm Shift in Multi-Billion Dollar Satellite Communications and Radar Market

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Phasor develops world's first communication on the move with novel phased arrays; multiple transceiver ICs manufactured by TowerJazz

Launching new phased array technology at Farnborough International Airshow July 9-13

NEWPORT BEACH, Calif. and LONDON, June 12, 2012 /PRNewswire/ -- TowerJazz, the global specialty foundry leader and Phasor Solutions, today announced a new phased array technology for communications on the move using SiGe process platforms from TowerJazz. Phasor is targeting the multi-billion dollar satellite communications and radar market with a unique, ground breaking design that provides order of magnitude improvement over competing solutions. Phasor recently demonstrated a proprietary technology which allows moving vehicles (aircraft, ships or trucks) to communicate with stationary satellites, or antennas that track moving satellites, with no moving parts. Technically, the system is able to self-align to a desired signal source and track it in real time, which has never been done before.

(Logo: http://photos.prnewswire.com/prnh/20120509/531192)

Phasor is utilizing TowerJazz's high performance 155GHz SiGe BiCMOS process (SBC18HX) to manufacture its innovative transceiver chipset for mobile broadband service on moving platforms such as trains, manned and unmanned airplanes, and military vehicles. Phasor chose TowerJazz's SiGe BiCMOS process over traditional GaAs solutions used in phased array radar due to its ability to operate in the required 12GHz to 15GHz band and for its integration capabilities allowing for multiple analog and digital functions to be integrated into a single chip. As a result, TowerJazz's process provides for a reduction in component count, cost and complexities associated with multiple discrete devices.

Over the past 50 years, conventional phased arrays followed a similar system design. Phasor offers the opportunity to rethink the system design, providing massive efficiencies in cost. Phasor chips include all the radio frequency functions (amplifiers, oscillators) and phase shifting circuits, as well as the logic and data modulation/demodulation required. This groundbreaking approach to phased array technology aims to reduce costs by over 10x and provide added value such as a flat design (less than 1 inch high), conformal to any surface, modular approach, and high reliability as there are no moving parts. One of Phasor's initial targets is wireless internet access on trains, an estimated available market of over 500 million users worldwide, however airborne satcoms and other Comms-On-The-Move (COTM) applications are likely to be larger markets.

The SBC18HX process offered by TowerJazz includes high performance 0.18-micron SiGe bipolar and high quality passive elements combined with high density 0.18-micron CMOS, well-suited for high-speed networking and millimeter wave applications. This leading edge process achieves an Ft of 155GHz and an Fmax of 200GHz, an optimal choice for a variety of high frequency applications. Six layers of metal are standard with deep trench and metal resistor options.

"Phasor is carving the way for the next decades of phased arrays by providing a paradigm shift in satellite communications. It took the industry over 40 years to develop phased arrays which are typically expensive to buy and to operate. But now, with the invaluable support of our partners, and in particular TowerJazz, we have been able to deliver semiconductors which provide an order of magnitude reduction in costs compared to current solutions," said David Garrood, Managing Director, Phasor Solutions. "Phasor has been able to achieve this milestone with the support of the TowerJazz team and relying on the stability and performance of its SBC18HX process."

"We are pleased to continue working with Phasor to enable this novel product. Our advanced SiGe BiCMOS technology provides higher integration at lower cost than GaAs solutions, allowing cost-effective satellite communications on the move to be realized," said Dr. Marco Racanelli, Senior Vice President and General Manager for the RF & High Performance Analog and Aerospace & Defense Business Groups at TowerJazz. "Together, we have begun volume manufacturing to enable a high gain antenna, which consists of 20,000 chips. In addition, we continue to invest in advanced SiGe and recently announced our latest process, SBC18H3, which supports devices with speeds of 270GHz and offers a path for further performance, power, and noise improvement in next-generation products."

Phasor Solutions will be launching the new phased array product at the Farnborough International Airshow in England on July 9-13, 2012 in Hall 3 – Booth D22.

About Phasor Solutions

Phasor Solutions was founded by Anglo Scientific Ltd and Richard Mayo in 2005 to develop flat and conformal high gain antennas to fit on the roof of moving vehicles. Since then, Phasor has raised venture capital funding through a supportive pool of investors and has built a strong team around founder Richard Mayo, a very experienced circuit designer "looking for an opportunity to repeat or exceed previous success." For more information please visit www.phasorsolutions.com.

About TowerJazz

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), its fully owned U.S. subsidiary Jazz Semiconductor Ltd., and its fully owned Japanese subsidiary TowerJazz Japan, Ltd., operate collectively under the brand name TowerJazz, the global specialty foundry leader. TowerJazz manufactures integrated circuits with geometries ranging from 1.0 to 0.13-micron, offering 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 CMOS and MEMS capabilities. TowerJazz also offers a world-class design enablement platform that complements its sophisticated technology and enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Technology Optimization Process Services to IDMs as well as fabless

companies that need to expand capacity, or progress from an R&D line to a production line. 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.

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