



## SRI International

### **SRI International and TowerJazz Deliver First SoloHI CMOS Imagers to the Naval Research Laboratory for Solar Orbiter Mission**

#### ***Imagers Integral to Studying Sun at Distance Closer than Previous Missions***

**MENLO PARK, and NEWPORT BEACH, Calif. – October 31, 2013** – SRI International, working with specialty foundry leader TowerJazz (NASDAQ: TSEM), has delivered the first complementary metal-oxide semiconductor (CMOS) imager engineering units to the Naval Research Laboratory (NRL) for use on the Solar Orbiter Heliospheric Imager (SoloHI) optical telescope. With its large field of view, SoloHI will make high-resolution images of the corona and solar wind and be able to connect remote sensing observations of the corona to the plasma being measured in situ at the spacecraft.

SoloHI is part of the NASA and European Space Agency (ESA) Solar Orbiter mission. Planned for launch from Cape Canaveral Air Force Station, Florida, in 2017, the spacecraft is expected to study the sun from a closer distance than any previous mission.

The Solar Orbiter mission will be the first time that such a large format CMOS detector has flown. SoloHI's measurements will allow scientists to identify space weather events such as coronal mass ejections (CMEs). CMEs can affect electromagnetic fields on earth impacting power lines, satellite communications and cell phone service.

"This first delivery of our SoloHI high-performance CMOS imager technology to NRL for the Solar Orbiter space mission is an important step toward deploying this technology in a wide range of aerospace applications," said Mark Clifton, vice president, Products and Services at SRI International. "TowerJazz's radiation-hardened CMOS image sensor manufacturing process helped us achieve this innovative solution."

The SoloHI imager is a CMOS image sensor (CIS) built using customized 0.18-um CMOS technology. The radiation-hardened 2k x 2k (4-megapixel) CMOS imagers have passed

engineering testing by SRI and are now ready for NRL test bed integration. The full-flight SoloHI focal plane will incorporate a mosaic of four imagers providing a 4k x 4k (16-megapixel) format.

The manufacturing platform for the SoloHI CMOS imager is the TowerJazz 0.18-um process running in Newport Beach, California. TowerJazz has been working with SRI for several years to support U.S. government imaging applications by developing custom technology with advanced radiation hardness, optimization for low read-out noise, and tailored for both frontside and backside illumination.

“We are pleased to see our 0.18-um CIS process employed in the NRL flight program through our work with SRI,” said Marco Racanelli, senior vice president and general manager of US Aerospace and Defense Business Group at TowerJazz. “The CIS process is the latest example of our strong commitment to innovative manufacturing technology in the U.S. for the use of our space and government related customers.”

### **About SoloHi**

SoloHi is funded by NASA under its Living with a Star Program, which is designed to understand how and why the sun varies, how planetary systems respond and the effect on human space and Earth activities. NASA's Goddard Space Flight Center in Greenbelt, Md., manages the program for the agency's Heliophysics Division of NASA's Science Mission Directorate.



Artist's concept of the Solar Orbiter spacecraft observing the sun (*Illustration: NASA*)

## **About SRI International**

Innovations from SRI International have created new industries, billions of dollars of marketplace value, and lasting benefits to society — touching our lives every day. SRI, a nonprofit research and development institute based in Silicon Valley, brings its innovations to the marketplace through technology licensing, new products, and spin-off ventures. Government and business clients come to SRI for pioneering R&D and solutions in computing and communications, chemistry and materials, education, energy, health and pharmaceuticals, national defense, robotics, sensing, and more. Visit SRI's [website](#) and [Timeline of Innovation](#) to learn more about SRI.

## **About TowerJazz**

Tower Semiconductor Ltd. (NASDAQ: TSEM, TASE: TSEM), 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, the global specialty foundry leader. TowerJazz manufactures integrated circuits, offering a broad range of customizable process technologies including: SiGe, BiCMOS, Mixed-Signal/CMOS, RFCMOS, CMOS Image Sensor, Power Management (BCD), and MEMS capabilities. TowerJazz also provides a world-class design enablement platform that enables a quick and accurate design cycle. In addition, TowerJazz provides (TOPS) Transfer Optimization and development Process Services to IDMs and fabless companies that need to expand capacity. TowerJazz offers multi-fab sourcing with two manufacturing facilities in Israel, one in the U.S., and one in Japan. For more information, please visit [www.towerjazz.com](http://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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