Gpixel Begins Prototyping New 25Mp Global Shutter Sensor Based on TowerJazz's 300mm, 65nm Breakthrough Technology for World's Smallest Global Shutter Pixel

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TowerJazz announces first 2.5um global shutter pixel, enabling ultra-low noise and excellent shutter efficiency for Gpixel's new product aimed at high resolution industrial, machine vision, ITS and surveillance applications

MIGDAL HAEMEK, Israel andCHANGCHUN, China, May 29, 2018 - TowerJazz, the global specialty foundry leader, and Gpixel, Inc., a fast-growing CMOS image sensor (CIS) provider focusing on professional applications, announced today that Gpixel's GMAX0505, a new 25Mp global shutter sensor has been developed based on TowerJazz's 2.5um global shutter pixel in a 1.1" optical format with the highest resolution in C-mount optics. This type of lens mount is commonly found in closed-circuit television cameras, machine vision and scientific cameras. Gpixel's new product is optimal for high resolution industrial, machine vision, intelligent transport systems (ITS) and surveillance applications. According to an IC Insights report, the industrial CMOS sensor market is growing at a CAGR of about 18% from $400M in 2015 to $910M in 2020.

TowerJazz's new offering is the smallest in the world; the otherwise currently available smallest pixel for such high-end applications used in the market is 3.2um (65% larger) and demonstrates overall lower performances. TowerJazz's 2.5um global shutter pixel is integrated with a unique light pipe technology, offers great angular response, more than 80dB shutter efficiency in spite of the extreme small size, and extremely low noise (one electron). Gpixel has started prototyping its GMAX0505 using TowerJazz's state of the art, 65nm technology on a 300mm platform in its Uozu, Japan facility.

"TowerJazz has been an important and strategic fab partner of Gpixel for many years. We are very pleased with the support of great technology innovation from TowerJazz with our current global shutter sensor families, backside illuminated scientific CMOS sensor solutions and today, the next generation global shutter industrial sensor product family," said Dr. Xinyang Wang, CEO of Gpixel, Inc. "The GMAX0505 is our second product after our first 2.8um pixel product that is already ramped up into production at TowerJazz's Arai fab in Japan. We are very excited and looking forward to seeing more products using this pixel technology in the near future. The successful introduction of the new 25Mp product will bring our customers a unique advantage in the growing demand of machine vision applications."

Dr. Avi Strum, TowerJazz Senior VP and General Manager of CMOS Image Sensor Business Unit, said, "We are very excited to be the first and only foundry in the world to offer this new technology - the smallest global shutter pixel available. Through our collaboration with Gpixel, we are able to create a compact package design which allows for miniature camera design. We are pleased with our long term relationship with Gpixel and with the way our technology combined with their excellent products allow us to target and gain market share in the growing high resolution industrial markets."

About GMAX0505
GMAX0505 is a charge domain global shutter image sensor which has 70% peak QE and can run up to 150fps frame rate. The sensor integrates on chip sequencer, which reduces the design effort on the camera board. Functions including subsampling and image flipping are also integrated on chip to meet the demands in various applications. The sensor is assembled in a ceramic Land Grid Array (LGA) package, allowing easy integration and mass production. Sample sensors are available for purchase in July 2018. For more information, please contact Gpixel.

About Gpixel, Inc.
Gpixel Inc. is a Chinese company specialized in providing high-end customized and off-the-shelf CMOS image sensor solutions for industrial, medical, and scientific applications. Gpixel's standard off-shelf products include high resolution, fast frame rate sensor series (GMAX), high-end scientific CMOS image sensor series (GSENSE), and line scan imagers (GL series). Gpixel is committed to provide more standard off-shelf products and offer the latest technology to meet the ever-growing demand of the professional imaging market. For more information, please visit http://www.gpixelinc.com, or email info@gpixelinc.com.

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.

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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Attachment

- Press release (PDF).pdf

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