



GLOBALFOUNDRIES Introduces 55nm Automotive-Specific Advanced Semiconductor Manufacturing Platform

May 7, 2014

55nm solution provides advanced technology and comprehensive design enablement support optimized to meet unique requirements of in-vehicle ICs

Santa Clara, Calif., May 7, 2014 – GLOBALFOUNDRIES today introduced an optimized semiconductor manufacturing platform aimed specifically at meeting the stringent and evolving needs of the automotive industry. Built on the company's 55-nanometer (nm) Low Power process and AEC-Q100 Group D qualified, the solution includes a comprehensive set of technology and design enablement capabilities tailored to improve the efficiency, performance, and power consumption of automotive ICs while maintaining adherence to the industry's strict safety and quality standards.

The automotive platform is a comprehensive solution consisting of the necessary design tool support, IP, technology, and services to leverage GF's 55nm low power process. It allows customers to quickly migrate their automotive microcontrollers, ASSPs and ASICs to a more advanced technology, leveraging the significant area, performance and power benefits of the process. The platform supports the implementation of non-volatile memory (NVM) in MCUs and SoC designs, as well as best-in-class SST-based embedded flash technology of automotive grade with an endurance of 100K erase/program cycles or higher and data retention of more than 20 years.

GF, a member of the Automotive Electronics Council (AEC), has developed the 55nm automotive platform to address critical industry trends, such as increased fuel economy and safety standards, along with higher consumer demand for in-vehicle information and entertainment. By delivering a foundry-based solution, the company is providing needed advanced manufacturing capabilities and services to OEMs and IDMs that are developing more sophisticated and efficient semiconductors to power safety, body, powertrain and infotainment applications in vehicles.

"Vehicle manufacturers and their suppliers are facing extremely challenging requirements by both regulators and customers. Better fuel efficiency, higher safety standards, increased in-vehicle communications capabilities and more demanding consumer requirements are all driving the need for more performance and lower power ICs for these systems," said Paul Colestock, director of segment marketing at GF. "We are applying our advanced manufacturing technology to address these requirements directly with our focused automotive platform. This provides OEMs and IDMs with a full-service, cost-effective and reduced-risk foundry solution that enables an efficient implementation of advanced capabilities within the unique demands of the automotive electronics segment."

Design enablement focused on unique needs of automotive sector

The platform's complete design enablement support through certified models and design rules, PDKs and EDA tools support streamline the automotive IC design process. Its automotive-specific flow includes defect detection, defect reduction and outlier controls to provide significant improvement in quality and reliability. Robust design-for-manufacturing (DFM) support for automotive builds in quality and yield at the design stage.

The automotive platform supports the use of ARM core technology with a variety of standard cell and compilers, as well as IP blocks for GPIO, interface, and oscillator functions.

The platform is backed by an automotive services package to meet automotive grade quality and reliability requirements. The services offering includes 15 years record retention, a continuous improvement program with the aim to achieve "Zero Defects", and comprehensive failure analysis and 8D problem resolution.

The 55nm low power process PDK, embedded flash PDK, and flash macro design service are available now.

ABOUT GF

GF is the world's first full-service semiconductor foundry with a truly global footprint. Launched in March 2009, the company has quickly achieved scale as the second largest foundry in the world, providing a unique combination of advanced technology and manufacturing to more than 160 customers. With operations in Singapore, Germany and the United States, GF is the only foundry that offers the flexibility and security of manufacturing centers spanning three continents. The company's three 300mm fabs and five 200mm fabs provide the full range of process technologies from mainstream to the leading edge. This global manufacturing footprint is supported by major facilities for research, development and design enablement located near hubs of semiconductor activity in the United States, Europe and Asia. GF is owned by Mubadala Development Company. For more information, visit <http://www.globalfoundries.com>.

Contact:

Jason Gorss
GF
(518) 305-9022
jason.gorss@globalfoundries.com