GLOBALFOUNDRIES, Silicon Mobility Deliver the Industry's First Automotive FPCU to Boost Performance for Hybrid and Electric Vehicles

Aug 03, 2017

Silicon Mobility and GF's 55nm LPx -enabled platform, with SST's highly-reliable SuperFlash® memory technology, boosts automotive performance, energy efficiency, and safety levels

Santa Clara, Calif., August 3, 2017 – GLOBALFOUNDRIES and Silicon Mobility today announced they have successfully produced the industry's first automotive Field Programmable Controller Unit (FPCU) solution, called OLEA® T222. The FPCU solution uses GF's 55nm Low Power Extended (55LPx) automotive qualified technology platform, which includes Silicon Storage Technology's (SST) SuperFlash® memory technology, to integrate multiple functions onto a single chip, boosting performance for hybrid and electric vehicles.

Silicon Mobility's OLEA® T222 allows automotive processing to be fully deterministic through embedding a Flexible Logic Unit (FLU), with up-to 40 times acceleration, into the control processor architecture to accelerate the processing and control of real-time events. With FLU acceleration, OLEA® T222 increases the quality of energy conversion controls to increase safety and achieve ASIL-D for ultra-fast safety applications. Moreover, automotive manufacturers can enhance energy efficiency of DC/DC and AC/DC controls as well as increase battery range, durability, and charging speed for electric motors.

"Efficiency of electric motors, power converters, and battery chargers are key factors for hybrid and electric vehicle control systems," said Vincent Cruvellier, vice president of operation at Silicon Mobility. "GF's 55LPx platform, with its fast, low-power logic and Automotive Grade 1 qualification, combined with SST's highly-reliable SuperFlash memory technology, allowed us to integrate multiple functions into a single chip, creating the OLEA® T222 product. Our collaboration with GF, a global foundry committed to the automotive market, helps ensure our customers have the highest quality, reliability and support for the manufacturing of our automotive products."

GF's 55nm LPx RF-enabled, automotive-qualified platform provides a fast path-to-product solution that includes silicon qualified RF IP, SST's highly-reliable SuperFlash memory technology that features:

- Very fast read speed (<10ns)
- Small bitcell size
- Superior data retention (> 20 years)
- Superior endurance (> 200K cycles)
- Fully qualification for Auto Grade 1 operation (AEC-Q100)

"Our platform combined with Silicon Mobility's design has delivered a highly integrated automotive solution at 55nm, achieving the first FPCU in the industry," said David Eggleston, vice president of embedded memory at GF. "This is yet another example that GF's 55LPx platform is becoming the preferred choice for a broad spectrum of markets, including automotive applications that require superior reliability in extreme environments."

GF's 55LPx eFlash platform is in volume production at the foundry's 300mm line in Singapore. The 55LPx eFlash platform is a cost effective solution for a broad range of products, ranging from wearable devices to automotive MCU's.

Process design kits are available now. Customers can start optimizing their chip designs to develop differentiated SuperFlash-enabled solutions that require cost effective performance, low power consumption, and superior reliability in extreme environments.

For more information on GF's mainstream CMOS solutions, contact your GF sales representative or go to www.globalfoundries.com.

About Silicon Mobility:

Silicon Mobility is a technology leader for cleaner, safer and smarter mobility. The company designs, develops and sells flexible, real-time, safe and open semiconductor solutions for the automotive industry used to increase energy efficiency and reduce pollutant emissions while keeping passengers safe.

Silicon Mobility's products control electric motors, battery and energy management systems of hybrid and electric vehicles. By using Silicon Mobility's technologies, manufacturers improve the efficiency, reduce the size, weight and cost of electric motors and increase the battery range and durability. Silicon Mobility technologies and products accelerate the car's powertrain electrification and the deployment of driverless vehicles for OEMs. Silicon Mobility is headquartered in Sophia-Antipolis, France. For more information, visit: www.silicon-mobility.com

About GF

GF is a leading full-service semiconductor foundry providing a unique combination of design, development, and fabrication services to some of the world's most inspired technology companies. With a global manufacturing footprint spanning three continents, GF makes possible the technologies and systems that transform industries and give customers the power to shape their markets. GF is owned by Mubadala Development Company. For more information, visit http://www.globalfoundries.com.

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