GLOBALFOUNDRIES To Offer Adapteva's Processor IP For 28nm SoC Designs

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Customers can leverage massively parallel multicore technology in SoCs for next-generation mobile devices

Santa Clara, Calif., February 5, 2013 — At today's Common Platform Technology Forum, GLOBALFOUNDRIES announced a partnership with Adapteva to offer the company's Epiphany IV microarchitecture to customers using GF's leading-edge 28nm-SLP process technology. The agreement will allow chip designers to integrate Adapteva's massively parallel multicore technology into their next-generation system-on-chip (SoC) designs, enabling server-level performance in mobile devices such as smartphones and tablets.

Adapteva, a privately-held semiconductor technology startup, collaborated closely with GF to optimize the Epiphany IV design based on the 28nm Super Low Power (SLP) process, allowing Adapteva to become the first company to demonstrate a processor operating at 50 GFLOPS/Watt. Adapteva's partnership with GF has allowed the company to dramatically improve energy efficiency over multiple generations, maintaining overall power consumption at just 2 Watts while moving from 16 cores at 65nm to 64 cores at 28nm.

GF's 28nm-SLP technology is ideally suited for the next generation of smart mobile devices, enabling designs with faster processing speeds, smaller feature sizes, lower standby power and longer battery life. The technology is based on GF's "Gate First" approach to High-k Metal Gate (HKMG), which has been in volume production for more than two years.

The Epiphany IV microarchitecture is Adapteva's latest design, including 64 high-performance RISC cores operating at up to 800MHz while consuming less than two watts with maximum program activity. The technology is designed for use as low-cost and low-power co-processor for running massively parallel tasks in conjunction with an ARM or x86 CPU.

"At GF, we are constantly seeking opportunities to offer our customers innovative silicon solutions to help them get the most from their SoC designs," said Mike Noonen, executive vice president of marketing, sales, design and quality at GF. "Adapteva's Epiphany IV processor technology is a significant innovation in the realm of parallel computing, and we are excited to give our customers a chance to leverage this technology on our production-proven HKMG process."

"Our close collaboration with GF is helping us bring a whole new class of multicore microprocessors to market," said Andreas Olofsson, CEO at Adapteva. "The Epiphany IV technology is ideally suited for next-generation mobile SoC designs, and using GF's 28nm-SLP process allows us to achieve excellent performance and energy efficiency."

Over the past three years, Adapteva has successfully completed four generations of its Epiphany multicore IP at different process nodes at GF. In September 2012, the company began sampling its first Epiphany IV products based on a limited mask set.

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 the Advanced Technology Investment Company (ATIC). For more information, visit http://www.globalfoundries.com.