GLOBALFOUNDRIES Demonstrates Industry-Leading 56Gbps Long-Reach SerDes on Advanced 14nm FinFET Process Technology

December 13, 2016

Proven ASIC IP solution will enable significant performance and power efficiency improvements for next-generation high-speed applications

Santa Clara, Calif., December 13, 2016 - GLOBALFOUNDRIES today announced that it has demonstrated true long-reach 56Gbps SerDes performance in silicon on the company's 14nm FinFET process. As a part of GF's high-performance ASIC offering, FX-14™, the 56Gbps SerDes is designed for customers seeking to improve power and performance efficiency while handling the most demanding long-reach high-performance applications.

GF's 56Gbps SerDes core supports both PAM4 and NRZ signaling, with the capability to equalize over 35dB of insertion loss, eliminating the need for expensive and power-hungry repeaters currently employed in the most challenging system environments. With a groundbreaking architecture, the 56Gbps SerDes achieves market-leading long-reach performance that will exceed emerging 50Gbps industry standards such as OIF CEI-56G-LR and IEEE 802.3cd.

The FX-14 offering provides a broad range of High-Speed SerDes (HSS) solutions and is manufactured on the company's mature, production-proven 14nm FinFET (14LPP) platform at its Fab 8 facility in Malta, N.Y. The best-in-class architecture for high-performance 56Gbps delivers industry-leading jitter performance and equalization support for enhanced system performance over a wide range of high-speed interface standards and will enable high-speed connectivity and low-power solutions for current and future leading-edge networking, compute and storage applications.

"This milestone demonstrates our ability to design best-in-class ASIC solutions and deliver industry-leading performance at 56Gbps in the most demanding networking and datacenter applications at very competitive power and area," said Mike Cadigan, senior vice president of global sales and business development at GF. "The long history of proven success in SerDes development and ASIC expertise, combined with GF's 14LPP technology, enables our customers to bring new applications to market in a timely and cost-effective manner through integrated and high-performance cores."

"The explosive growth in network bandwidth continues to drive the need for ASIC solutions with industry-leading interface speed and density," said Bob Wheeler, principal analyst at The Linley Group. "GF has delivered a sophisticated SerDes core that enables a fast time to market for best-in-class ASIC solutions that will improve bandwidth capacity, scalability, and power efficiency in next-generation networking equipment."

GF's FX-14 design system extends the company's HSS leadership with an ultra-high performance 56Gbps SerDes, PCI Express, and multiple 30Gbps SerDes designs, as well as support for various external memory interfaces. GF's embedded memory solutions include the industry's fastest and lowest power embedded TCAM, which offers up to 60 percent better performance and 80 percent less leakage than its predecessor, along with density and performance-optimized SRAMs.

Customers are presently designing advanced ASIC solutions in 14LPP process technology using the 56Gbps and other FX-14 SerDes cores. GF is currently demonstrating its 56Gbps SerDes in customer channels and will begin shipping development boards in early Q1 2017. For next-generation data communication networks, GF is developing an advanced electrical solution for ease of migration, as well as optical variants, enabling a broad array of technology to achieve 112Gbps and beyond.

To learn more about GF's high-performance ASIC solutions, go to www.globalfoundries.com/ASICs.

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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