Intel Custom Foundry Demonstrates Industry-Leading 32 Gbps SerDes on 14nm Process

Operating Range Broadened to 1 to 32 Gbps While Extending Power, Performance, Area Leadership

NEWS HIGHLIGHTS

- Builds on the power, performance and area leadership of the 1 to 16 Gbps GP SerDes already demonstrated on 14nm

- Extends operating range to 1 to 32 Gbps while fully supporting the 28 Gbps common electrical I/O (CEI) long-reach specification

- Offers extreme flexibility and programmability to cover the industry's broadest range of SerDes protocols

SANTA CLARA, Calif.--(BUSINESS WIRE)-- Intel Corporation today unveiled silicon characterization results for its 1 to 32 Gbps high-speed SerDes on the 14nm process. This 32 Gbps SerDes is the second SerDes offering and adds to the previously announced 1 to 16 Gbps GP 14nm SerDes. It will be available by end of this year.

Intel's 14nm SerDes family is the second generation of SerDes offering and is built on the success of Intel's 12 and 28 Gbps SerDes, which is currently in production on Intel's 22nm Tri-gate process technology. Intel's 14nm SerDes extends the operating range while reducing power by 20 percent and area by more than 40 percent as compared to Intel's 22nm SerDes offering.

This announcement marks the first time that a 32 Gbps, multiprotocol SerDes has been validated on any sub-20nm foundry process.

"Our SerDes architecture continues to improve with each successive development in the Tri-gate process" said Ali Farhang, vice president, Design and Enablement Services, Intel Custom Foundry. "We are able to meet the 28G CEI LR spec while supporting operation down to 1 Gbps, thus enabling flexibility in our customers' products."

The 1 to 32 Gbps SerDes spans a wide range of protocols, such as USB, PCIe, Ethernet and 10G-KR with extremely low jitter while maintaining power and area efficiency. This efficiency extends to emerging protocols like OIF, 100G Ethernet and 32 Fibre Channel. Intel's SerDes is a complete offering providing orientation flexibility and protocol configurability with extensive documentation for integration, test and verification, enabling ease of integration.

"We evaluated many SerDes suppliers for our high-performance Achronix FPGAs," said Robert Blake, CEO of Achronix. "Both the 12.75G SerDes using Intel's 22nm technology and the 32G SerDes using Intel's 14nm technology met our stringent power/performance requirements and the broad range of features that we needed. The SerDes from Intel Custom Foundry is a key differentiating technology for the growing range of high-speed interfaces that our FPGAs require."

About Intel

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