

# National Semiconductor demonstrates 28 gbps data center technology

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National Semiconductor Corp. today announced it has achieved a breakthrough in high-speed signal conditioning by becoming the first company to successfully demonstrate 28 Gbps discrete quad-channel retimer technology with ultra-low power consumption to drive 100 Gbps to 400 Gbps interfaces in next-generation data center systems.

"Rapidly increasing Global IP traffic is fueling the need for higher bandwidth interconnect solutions capable of driving high-speed signals and consuming low power over [optical fiber](#) or [copper cables](#)," said Linley Group Senior Analyst Jag Bolaria. "As [transmission rates](#) increase from 10 Gbps to 100 Gbps, signal integrity requirements become more stringent for [interconnects](#) in chip-to-chip, chip-to-module, and backplane applications. [National Semiconductor](#) is addressing this need with long reach, low power retimer technology that includes proven signal integrity."

National will demonstrate this breakthrough 28 Gbps retimer technology in its partner booths at DesignCon 2011 being held Jan. 31 – Feb. 3 at the Santa Clara Convention Center. National's demonstration, in Molex Booth and Amphenol Booth, will use a real-world backplane and cable setup to highlight the retimer's clean output eye, zero bit errors and superior jitter performance essential to enabling 100 Gbps to 400 Gbps interconnects.

"Next-generation data center systems require an ecosystem of ASICs, interconnects and interface ICs to support the 100 Gbps data rate," said

Greg Walz, group product manager for the Integrated Products Division at Molex. "National Semiconductor retimer ICs combined with Molex interconnects will enable system vendors to achieve ultra-high performance 100 Gbps pluggable I/O and backplane solutions for Ethernet and InfiniBand applications."

National's third-generation silicon-germanium (SiGe) BiCMOS process and ground-breaking analog technology enables 28 Gbps data path retimers for chip-to-optics, chip-to-backplane, and chip-to-chip interfaces. The SiGe BiCMOS process produces high bandwidth and low noise transistors that enable low jitter and ultra-low power in high speed analog signal conditioning circuits. These advantages are also built into National's recently announced family of 10 Gbps repeaters, which includes the quad-channel DS100BR410, dual-channel unidirectional DS100BR210 and single-lane bidirectional DS100BR111.

Provided by National Semiconductor

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