Congo Silicon Photonics Technology NRZ

In this paper, we mainly introduce the most widely used devices of silicon photonics technology in communication and combine its advantages with the traditional one in the ...

Silicon Photonics Chip I/O for Ultra High-Bandwidth and Energy-Eficient Die-to-Die Connectivity

PAM-4 acceptable for long links, but NRZ modulation preferred for short, latency sensitive links At 50Gb/s channel speed, Wavelength Division Multiplexing is essential for module scaling

Abstract We demonstrate a low-power (1 pJ/bit), C-band 4x56 Gbit/s NRZ optical receiver constructed from a 28nm CMOS transimpedance amplifier and a Silicon PIC containing a Ge photodetector array.

We demonstrate a scalable C-band silicon photonic platform monolithically integrating ultra-high speed germanium-silicon electro absorption modulators and fin photodiodes.

We present active components developed in imec"s silicon photonics platform that enable 50-Gb/s non-return-to-zero operation using CMOS compatible voltages.

By controlling the voltages of the two arms of the modulator, one controls the flow of photons from source to drain with one major difference - Photons cannot be stopped and hence the unwanted will ...

Summary WDM NRZ CMOS-integrated single-chip TRX solution is considered Presented considerations on cost reductions looks promising Rigorous RCA analysis is required Feasibility requires further ...

In this review paper, we take a look at the development trajectory of the silicon-photonic technology and the state-of-the-art in the capability of silicon-photonic processes available today, in the context of the ...

In this paper, we report for the first time, to the best of our knowledge, a co-packaged O-band silicon microring-based transmitter with a record-high bandwidth distance product of 2080 Gb ...

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