عنوان مقاله:
A CMOS 3.2-Gb/s New Scheme for Serial Link MPPM Modulator

محل انتشار:
اولین کنفرانس بین المللی دستاوردهای نوین پژوهشی در مهندسی برق و کامپیوتر (سال:1395)

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خلاصه مقاله:
A new efficient modulator circuit for Multi PulsePosition Modulation (MPPM) is presented. MPPM has this potential to benefit in optical communication systems which use photon-counting techniques for direct detection. A new scheme for modulator is designed to send ۴-bit data in a symbol. Data and clock channels are combined in a single channel. Thus, the pin count will be reduced. A novel low power, high speed slot selector circuit is proposed. The proposed MPPM modulator is designed in differential voltage mode to reduce the power supply noise and power dissipation. Due to the use of a MPPM scheme the value of minimum pulse width is increased. Therefore the value of Inter-symbol interference is decreased. CMOS ۰.۱۸-μm technology and ۱.۸-V power supply are used for designing circuits. Clock pulses sets on ۸۰۰-MHz which is provided by a ۰-stages ring oscillator VCO in a PLL block. By dividing each clock pulse to ۰ time slots, the bit rate is obtained as ۳.۲-Gb/s. Simulations are done, using HSPICE software.

کلمات کلیدی:
Multi Pulse Position Modulation; serial link Modulator; MPPM Modulator; Transmitter

لینک ثابت نیت مقاله در سیویلیکا:
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