

The encoded signal is an LVTTTL level signal, which is first converted to a PECL level signal by the level conversion module, and then converted to an optical signal by the optical transmitter and receiver ...

Abstract: This paper proposed a design of optical switching controller using FPGA for OCDMA encoder system. The encoder is one of the new technologies that use to transmit the coded data in the optical ...

We demonstrate a real-time coherent optical receiver based on a single field programmable gate array (FPGA) chip. To strike the balance between the performance and hardware resources, we ...

In order to better serve FPGA users, reduce the difficulty of system development and improve the speed of product development, a general SPDIF receiver controller with low power is designed to realize ...

There are two optical quadrature encoders, each made from a slotted wheel, a light emitter and a pair of photodetectors. The mouse includes an IC responsible for the quadrature decoding and the ...

After combined with domestic and abroad research conditions, this design achieve experimental data transmission by optical fiber, above this basis, this design defining a custom transmission protocol, ...

The low-density-parity-code (LDPC) code has been suggested as a forward error correction code in the ITU-T G975.1 protocol for optical communications. However,

We demonstrate an LDPC encoder/decoder architecture with a maximum throughput of 2229 Mbps. Implemented on an FPGA, the receiver sensitivity achieves -56 dBm@2G.

The main aim of this paper is to present an approach to establish optical fiber communication by employing the standard IEEE 802.3 Ethernet and Optical Sensing circuits that can be implemented ...

At the same time, Optical module 2 converts optical signals into electrical signals and push them to the FPGA"s GTX reception. After the data received by GTX, a 32-bit data alignment operation is ...

The encoding of data is performed together with scramblers to ensure enough transitions between logical ones and zeroes so that the receiver can perform clock recovery (Section 2.5) from a serial ...

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