Optical Module DSP Algorithm

To achieve non-integer baudrate oversampling DSP in coherent optical communication systems, this paper for the first time analyzes the principle of modified-Godard algorithm, then ...

10.3 Optical Components In this section, we describe the implementation of the functionalities of the optical M-PSK transmitter and receiver using various photonic devices, i.e., a QM, a balanced ...

This textbook details the architecture of coherent optical systems while covering the main digital signal processing algorithms and advanced modulation.

This article provides a comprehensive overview of the different functions within the electronic engine of the coherent transceiver, with a focus on the DSP, and summarizes the latest ...

Abstract A coherent optical receiver digital signal processing (DSP) scheme is proposed based on spectral clustering, which utilises spectral clustering to cluster the signals outputted by the ...

This passage delves into the crucial role of Digital Signal Processors (DSP) in coherent optical modules. Explore how DSP improves signal integrity, accelerates data transmission, and ...

We outline the application-specific in-tegrated circuit (ASIC) implementation flow for DSP algorithms and discuss approaches to reducing the digital ASIC power dissipation of high-throughput DSP ...

A real-time implementation of a coherent optical pluggable module using digital sub-carrier (DSC) multiplexing has recently been demonstrated.

In this paper, we provide an overview of recent progress on advanced digital signal processing (DSP) techniques for high-capacity long-haul coherent ...

In this paper, we provide an overview of recent progress on advanced digital signal processing (DSP) techniques for high-capacity long-haul coherent optical fiber transmission systems.

In this section, the chromatic dispersion compensation, polarization mode dispersion equalization and carrier phase noise compensation are analyzed and discussed using corresponding DSP algorithms.

Methods of machine learning are increasingly being used for these applications. The working group Digital Signal Processing has extensive experience in the development and real-time implementation ...

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