

Homodyne Receiver

Introduction

This super-block compresses the function of the following blocks:

- Local Oscillator;
- Balanced Beamsplitter;
- Photodiode;
- Electrical Filter;
- Amplifier;
- Discretizer;
- Delayer
- Bit Decider;

This compression allows for a cleaner code.

Input Parameters

- LocalOscillatorOpticalPower
- LocalOscillatorOpticalPower_dBm
- LocalOscillatorPhase
- TransferMatrix
- Responsivity
- Amplification
- NoiseAmplitude
- SamplingRate
- Delay
- ReferenceValue

Functional Description

The input signal is evaluated and a binary string is generated from this evaluation.

A diagram of the blocks that constitute this super-block, with the corresponding relations is presented in Figure 1.

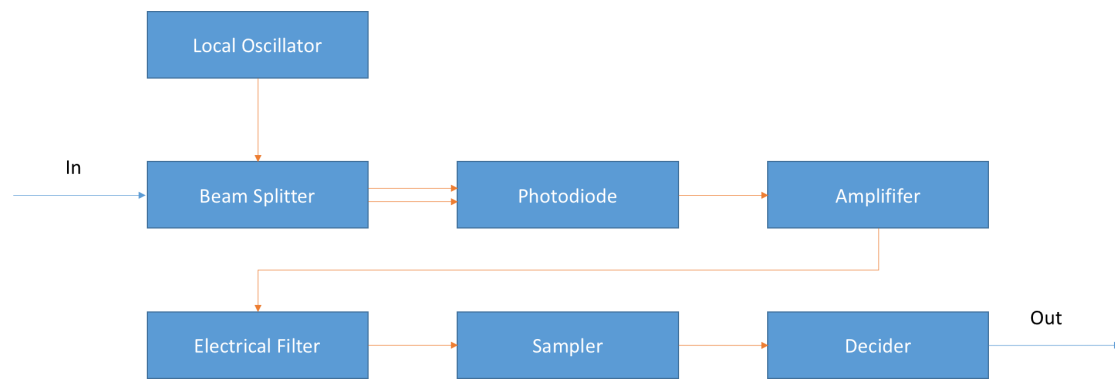


Figure 1: Homodyne Receiver Block Diagram.

Inputs

Number: 1

Type: Sequence of impulses modulated by the filter (OpticalSignal)

Outputs

Number: 1

Type: Binary String (Binary)