# Homodyne Receiver

# November 1, 2016

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

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

This compression allows for a cleaner code.

#### **Input Parameters**

- $\bullet \ \ Local Oscillator Optical Power$
- $\bullet \ LocalOscillatorOpticalPower\_dBm \\$
- LocalOscillatorPhase
- $\bullet$  TransferMatrix
- Responsivity
- Amplification
- $\bullet \ \ Noise Amplitude$
- $\bullet$  SamplingRate
- Delay
- ReferenceValue

# Functional Description

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

# **Input Signals**

Number: 1

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

# **Output Signals**

Number: 1

Type: Binary String (Binary)