

Options

Title: Lab 02 -...sign Basics

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Output Language: Python

Generate Options: QT GUI

Variable

ID: samp_rate

Value: 1M

Variable

ID: center_freq

Value: 915M

Variable

ID: sps

Value: 16

Import

Import: math

Variable

ID: display_width

Value: 50

Variable

ID: alpha

Value: 500m

Random Source

Minimum: 0

Maximum:

Num Samples: 50

Repeat: Yes

Constellation Modulator

Constellation: constellation

Differential Encoding: No

Samples/Symbol: 16

Excess BW: 500m

PlutoSDR Sink

IIO context URI: usb:3.3.5

LO Frequency: 915M

Sample Rate: 1M

Buffer size: 32.768k

Cyclic: False

Attenuation TX1 (dB): 10

Filter Configuration: Auto

RF Bandwidth (Hz): 1M

Char To Float

Scale: 1

PlutoSDR Source

IIO context URI: usb:3.4.5

LO Frequency: 915M

Sample Rate: 1M

Buffer size: 32.768k

Quadrature: True

RF DC Correction: True

BB DC Correction: True

Gain Mode (RX1): Slow Attack

Filter Configuration: Auto

RF Bandwidth (Hz): 20M

Signal Source

Sample Rate: 1M

Waveform: Cosine

Frequency: 0

Amplitude: 1

Offset: 0

Initial Phase (Radians): 0

Multiply

FLL Band-Edge

Samples Per Symbol: 16

Filter Rolloff Factor: 500m

Prototype Filter Size: 33

Loop Bandwidth: 3.92699m

Skip Head

Num Items: 1M

Symbol Sync

Timing Error Detector: y[n]y'[n] Maximum likelihood

Samples per Symbol: 16

Expected TED Gain: 1

Loop Bandwidth: 45m

Damping Factor: 1

Maximum Deviation: 100m

Output Samples/Symbol: 1

Interpolating Resampler: Polyphase Filterbank, MF

Filterbank Arms: 32

PFB MF Taps: rcc_taps

RRC Filter Taps

ID: rcc_taps

Gain: 32

Sample Rate (Hz): 32M

Symbol Rate (Hz): 62.5k

Excess BW: 500m

Num Taps: 5.632k

Variable

ID: output_sps

Value: 1

Virtual Sink

Stream ID: RX1

Delay

Delay: 0

QT GUI Range

ID: delay

Default Value: 0

Start: 0

Stop: 50

Step: 1

QT GUI Time Sink

Name: output

Number of Points: 50

Sample Rate: 62.5k

Autoscale: No

Virtual Source

Stream ID: RX1

Costas Loop

Loop Bandwidth: 125.664m

Order: constellation.arity()

Variable

ID: cycles_per_sample

Value: 20m

Char To Float

Scale: 1