

Options		Variable	Variable	Variable	Constellation Object	Variable	Variable	Parameter	Low-pass Filter Taps	Low-pass Filter Taps	Variable
Title: pkt_xmt...ma_16122025	Author: Created...ified by MA	ID: samp_rate	ID: rs_ratio	ID: sps	ID: bpsk	ID: access_key	ID: hdr_format	ID: InFile	ID: low_pass_filter_taps	ID: low_pass_filter_taps	ID: upfactor
Description: packet transmit		Value: 16k	Value: 1.04	Value: 8	Constellation Type: BPSK	Value: 11100001...00010010011	Value: <gnuradi...DE1E5F0BBO>	Label: File Name	Gain: 1	Gain: 1	Value: 40k
Output Language: Python	Generate Options: QT GUI	was 48000 and changed to 16000 as 4 and chang			Soft Decisions Precision: 8	header_format_default	Type: String	Value: default	Sample Rate (Hz): 16k	Sample Rate (Hz): 16k	Value: 12
This is a PSK tx/rx flowgraph update		Variable ID: usrp_rate	Variable ID: excess_bw	Import: math	Variable ID: thresh	Variable ID: phase_bw	Parameter ID: low_pass_filter_taps	Cutoff Freq (Hz): 1.5k	Transition Width (Hz): 300	Window: Hamming	Beta: 6.76
		Value: 768k	Value: 350m		Value: 1	Value: 62.8m			Window: Hamming		

EPB: File Source to Tagged Stream

Filename: default

Pkt_Len: 75

File Source
File: ...filesThe-iliad.txt
Repeat: No
Add begin tag: ()
Offset: 0
Length: 0

Constellation Modulator
Constellation: <gnu...F06830>
Differential Encoding: Yes
Samples/Symbol: 8
Excess BW: 350m

Virtual Source
Stream ID: tdi

Repack Bits
Bits per input byte: 8
Bits per output byte: 1

MSB

Signal Source
Sample Rate: 192k
Waveform: Cosine
Frequency: 40k
Amplitude: 1
Offset: 0
Initial Phase (Radians): 0

Virtual Source
Stream ID: Baseband I

Multiply
in0: Virtual Source
out0: Signal Source

Add
in0: Signal Source
in1: Virtual Source
out: Virtual Source

Virtual Source
Stream ID: Baseband Q

Multiply
in0: Virtual Source
out0: Signal Source

Virtual Source
Stream ID: RIO

Audio Source
Sample Rate: 44.1 kHz

ZMQ SUB Source
Address: tcp://1....0.1:49600
Timeout (msec): 100
Pass Tags: Yes
Filter Key:
Connection: Connect

Virtual Source
Stream ID: RIO

Signal Source
Sample Rate: 192k
Waveform: Cosine
Frequency: 40k
Amplitude: 1
Offset: 0
Initial Phase (Radians): 0

Virtual Source
Stream ID: rx1

Multiply
in0: Virtual Source
out0: Signal Source

Virtual Source
Stream ID: rx2

Low Pass Filter
Decimation: 1
Gain: 1
Cutoff Freq: 1.5k
Transition Width: 300
Window: Hamming
Beta: 6.76

Rational Resampler
Interpolation: 1
Decimation: 12
Taps:
Fractional BW: 0

AGC
Rate: 100u
Reference: 1
Gain: 1
Max Gain: 2

FLL Band-Edge
Samples Per Symbol: 8
Filter Rolloff Factor: 350m
Prototype Filter Size: 44
Loop Bandwidth: 62.8m

Costas Loop
Loop Bandwidth: 62.8m
Order: 2

Symbol Sync
Timing Error Detector: Mueller and Müller
Samples per Symbol: 8
Expected TED Gain: 1
Loop Bandwidth: 62.8m
Damping Factor: 1
Maximum Deviation: 1.5
Output Samples/Symbol: 1
Interpolating Resampler: MMSE, 8 tap FIR

Virtual Source
Stream ID: rd1

Correlate Access Code - Tag Stream
Access Code: 11100...0010011
Threshold: 1
Tag Name: packet_len

Map
Map: 0, 1

UChar To Float
MSB

QT GUI Time Sink
Name: Correlate input
Number of Points: 256
Sample Rate: 16k
Autoscale: No

Virtual Sink
Stream ID: rd1

QT GUI Frequency Sink
Name: Tx Spectrum
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 192k

ZMQ PUB Sink
Address: tcp://1....0.1:49600
Timeout (msec): 100
Pass Tags: Yes
Filter Key:
Connection: Bind

Virtual Sink
Stream ID: RIO

Virtual Sink
Stream ID: rx1

Float To Complex
re: Virtual Sink
im: Virtual Sink

Virtual Sink
Stream ID: rx2

Virtual Sink
Stream ID: rd1

QT GUI Frequency Sink
Name: Rx Spectrum
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 192k

Virtual Sink
Stream ID: rx1

Virtual Sink
Stream ID: rx2

Repack Bits
Bits per input byte: 1
Bits per output byte: 8

UChar To Float
MSB

Stream CRC32
Mode: Check CRC
Length tag name: packet_len
Packed: Yes

Virtual Sink
Stream ID: rd1

QT GUI Constellation Sink
Number of Points: 1.024k
Autoscale: No

Virtual Sink
Stream ID: rd1

File Sink
File: ...t/Desktop/output.tmp
Unbuffered: On
Append file: Overwrite

Virtual Sink
Stream ID: rd1

QT GUI Time Sink
Name: Correlate Output
Number of Points: 256
Sample Rate: 16k
Autoscale: No

Virtual Sink
Stream ID: rd1

QT GUI Frequency Sink
Name: Rx Spectrum
FFT Size: 1024
Center Frequency (Hz): 0
Bandwidth (Hz): 16k

Virtual Sink
Stream ID: rd1

Virtual Sink
Stream ID: rd1