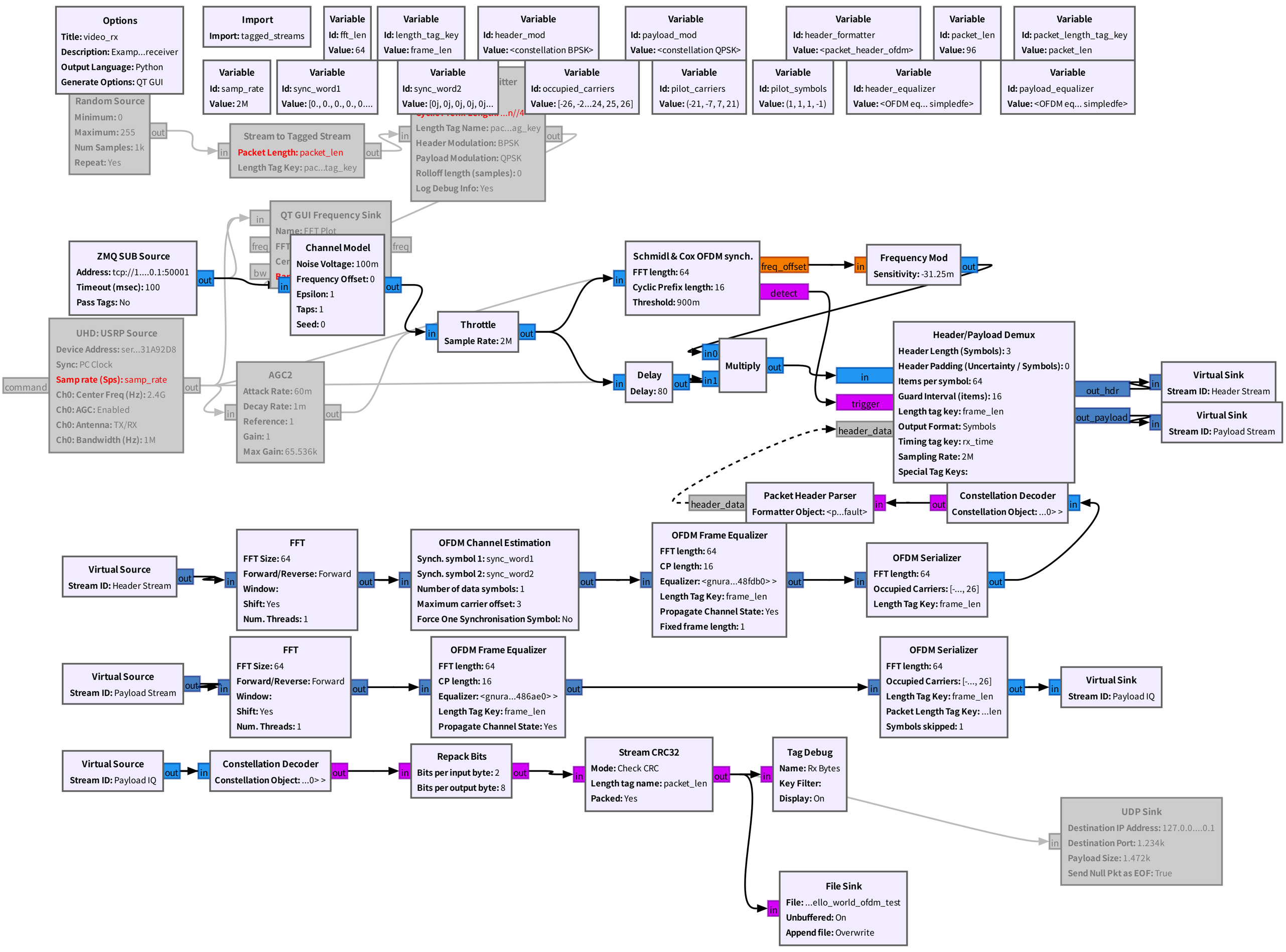
Options
Title: video_rx
Description: Examp...receiver
Output Language: Python
Generate Options: QT GUI
Import
Import: tagged_streams
Variable
Id: fft_len
Value: 64
Variable
Id: length_tag_key
Value: frame_len
Variable
Id: header_mod
Value: <constellation BPSK>
Variable
Id: payload_mod
Value: <constellation QPSK>
Variable
Id: header_formatter
Value: <packet_header_ofdm>
Variable
Id: packet_len
Value: 96
Variable
Id: packet_length_tag_key
Value: packet_len
Variable
Id: samp_rate
Value: 2M
Variable
Id: sync_word1
Value: [0., 0., 0., 0., 0....
Variable
Id: sync_word2
Value: [0j, 0j, 0j, 0j, 0j...
Variable
Id: occupied_carriers
Value: [-26, -2...24, 25, 26]
Variable
Id: pilot_carriers
Value: (-21, -7, 7, 21)
Variable
Id: pilot_symbols
Value: (1, 1, 1, -1)
Variable
Id: header_equalizer
Value: <OFDM eq... simpledfe>
Variable
Id: payload_equalizer
Value: <OFDM eq... simpledfe>
Random Source
Minimum: 0
Maximum: 255
Num Samples: 1k
Repeat: Yes
out
Stream to Tagged Stream
Packet Length: packet_len
Length Tag Key: pac...tag_key
in
out
Length Tag Name: pac...ag_key
Header Modulation: BPSK
Payload Modulation: QPSK
Rolloff length (samples): 0
Log Debug Info: Yes
QT GUI Frequency Sink
Name: FFT Plot
FFT
freq
bw
ZMQ SUB Source
Address: tcp://1....0.1:50001
Timeout (msec): 100
Pass Tags: No
Channel Model
Noise Voltage: 100m
Frequency Offset: 0
Epsilon: 1
Taps: 1
Seed: 0
UHD: USRP Source
Device Address: ser...31A92D8
Sync: PC Clock
Samp rate (Sps): samp_rate
Ch0: Center Freq (Hz): 2.4G
Ch0: AGC: Enabled
Ch0: Antenna: TX/RX
Ch0: Bandwidth (Hz): 1M
command
AGC2
Attack Rate: 60m
Decay Rate: 1m
Reference: 1
Gain: 1
Max Gain: 65.536k
Throttle
Sample Rate: 2M
Schmidl & Cox OFDM synch.
FFT length: 64
Cyclic Prefix length: 16
Threshold: 900m
freq_offset
detect
Frequency Mod
Sensitivity: -31.25m
Delay
Delay: 80
Multiply
in0
in1
Header/Payload Demux
Header Length (Symbols): 3
Header Padding (Uncertainty / Symbols): 0
Items per symbol: 64
Guard Interval (items): 16
Length tag key: frame_len
Output Format: Symbols
Timing tag key: rx_time
Sampling Rate: 2M
Special Tag Keys:
trigger
header_data
out_hdr
out_payload
Virtual Sink
Stream ID: Header Stream
Virtual Sink
Stream ID: Payload Stream
Packet Header Parser
Formatter Object: <p...fault>
Constellation Decoder
Constellation Object: ...0> >
Virtual Source
Stream ID: Header Stream
FFT
FFT Size: 64
Forward/Reverse: Forward
Window:
Shift: Yes
Num. Threads: 1
OFDM Channel Estimation
Synch. symbol 1: sync_word1
Synch. symbol 2: sync_word2
Number of data symbols: 1
Maximum carrier offset: 3
Force One Synchronisation Symbol: No
OFDM Frame Equalizer
FFT length: 64
CP length: 16
Equalizer: <gnura...48fdb0> >
Length Tag Key: frame_len
Propagate Channel State: Yes
Fixed frame length: 1
OFDM Serializer
FFT length: 64
Occupied Carriers: [-..., 26]
Length Tag Key: frame_len
Virtual Source
Stream ID: Payload Stream
FFT
FFT Size: 64
Forward/Reverse: Forward
Window:
Shift: Yes
Num. Threads: 1
OFDM Frame Equalizer
FFT length: 64
CP length: 16
Equalizer: <gnura...486ae0> >
Length Tag Key: frame_len
Propagate Channel State: Yes
OFDM Serializer
FFT length: 64
Occupied Carriers: [-..., 26]
Length Tag Key: frame_len
Packet Length Tag Key: ...len
Symbols skipped: 1
Virtual Sink
Stream ID: Payload IQ
Virtual Source
Stream ID: Payload IQ
Constellation Decoder
Constellation Object: ...0> >
Repack Bits
Bits per input byte: 2
Bits per output byte: 8
Stream CRC32
Mode: Check CRC
Length tag name: packet_len
Packed: Yes
Tag Debug
Name: Rx Bytes
Key Filter:
Display: On
UDP Sink
Destination IP Address: 127.0.0....0.1
Destination Port: 1.234k
Payload Size: 1.472k
Send Null Pkt as EOF: True
File Sink
File: ...ello_world_ofdm_test
Unbuffered: On
Append file: Overwrite