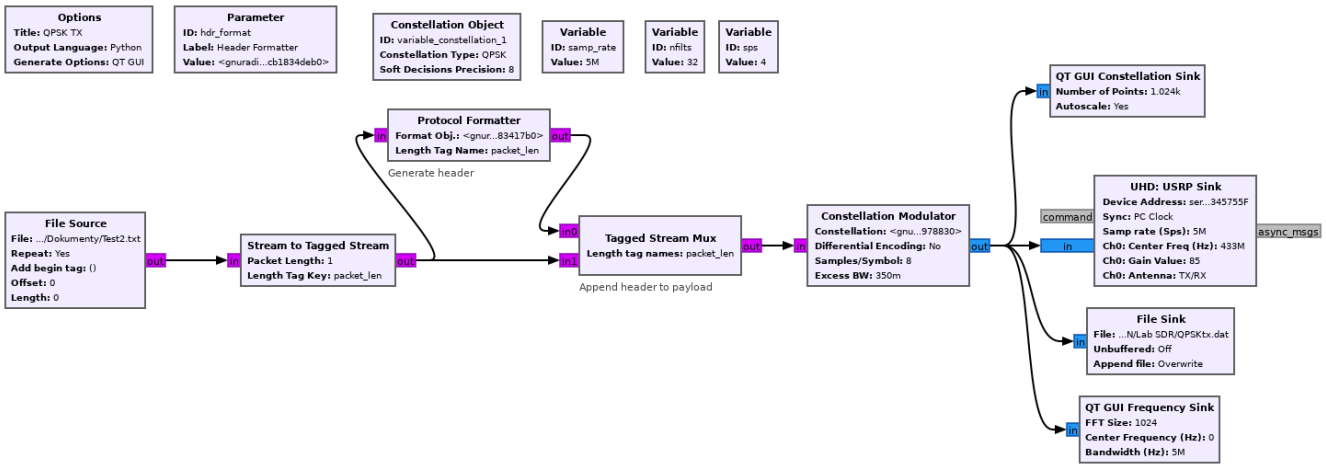
QPSK TX



ID hdr_format
Label Header Formatter
Type None
value digital.header_format_default(digital.packet_utils.default_access_code, 0)

Constellation Object
ID variable_constellation_1
Constellation Type QPSK
Soft Decision Precision 8
Noise Power 1.0
Soft Decisions LUT None

Stream to Tagged Stream
Type Byte
Vector Length 1
Packet Length 1
Length Tag Key "packet_len"

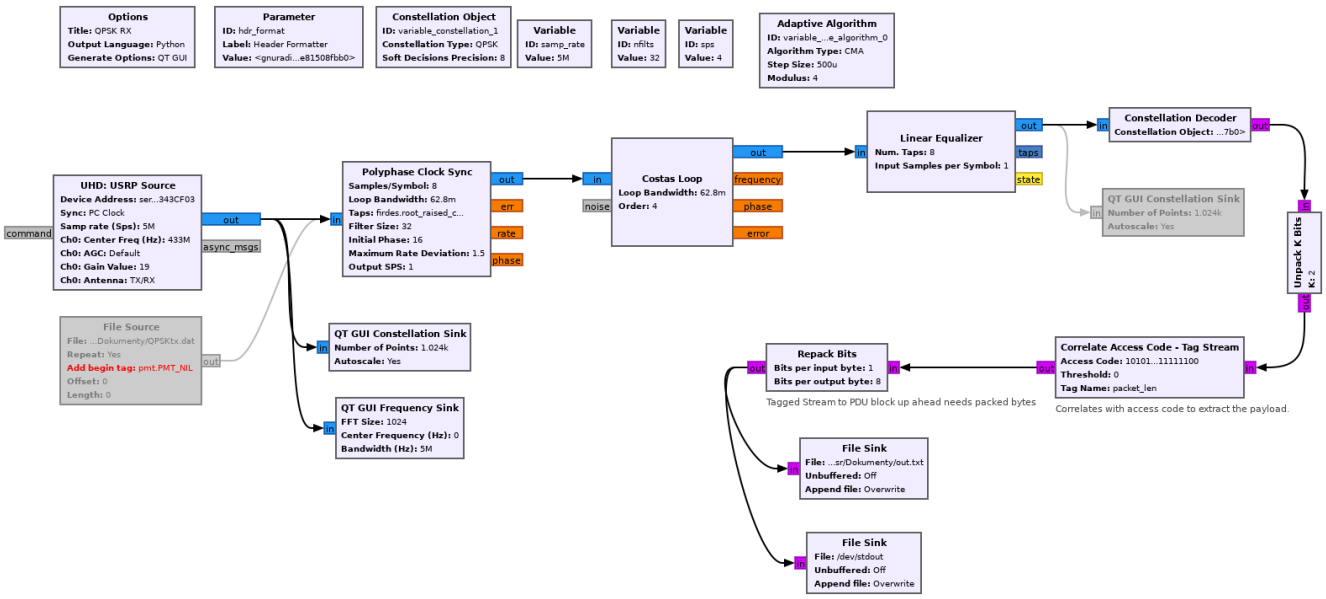
Protocol Formatter
Format Obj. hdr_format
Length Tag Name "packet_len"

Tagged Stream Mux
IO Type Byte
Number of inputs 2
Length tag names "packet_len"
Vector Length 1

Constellation Modulator
Constellation variable_constellation_1
Differential Encoding No
Samples/Symbol 8
Excess BW 0.35
Verbose Off
Log Off

Truncate Filter Transient No

QPSK RX



ID hdr_format
value digital.header_format_default(digital.packet_utils.default_access_code, 0)

Constellation Object
ID variable_constellation_1
Constellation Type QPSK
Soft Decision Precision 8

Adaptive Algorithm
ID variable_adaptive_algorithm_0
Digital Constellation Object variable_constellation_1
Step Size 0.0005
Modulus 4

Polyphase Clock Sync
Type Complex→Complex
Samples/Symbol 8
Loop Bandwith 0.0628
Taps firdes.root_raised_cosine(nfilts, nfilts, 1.0/float(sps), 0.35, 11*sps*nfilts)

Costas Loop

Loop bandwith 0.0628
Order **4**
Use SNR Yes

Linear Equalizer
Num Taps 8
Input Samples per Symbol 1
Adaptive Algorithm Object variable_adaptive_algorithm_0
Adapt After Training 1

Constellation Decoder
Constellation Object variable_constellation_1

Unpack K Bits
K 2

Correlate Access Code
IO Type Byte
Access Code digital.packet_utils.default_access_code
Threshold 0
Tag Name "packet_len"

Repack Bits
Bits per input byte 1
Bits per output byte 8
Length Tag Key "packet_len"
Packet Alignment Input
Endianness MSB