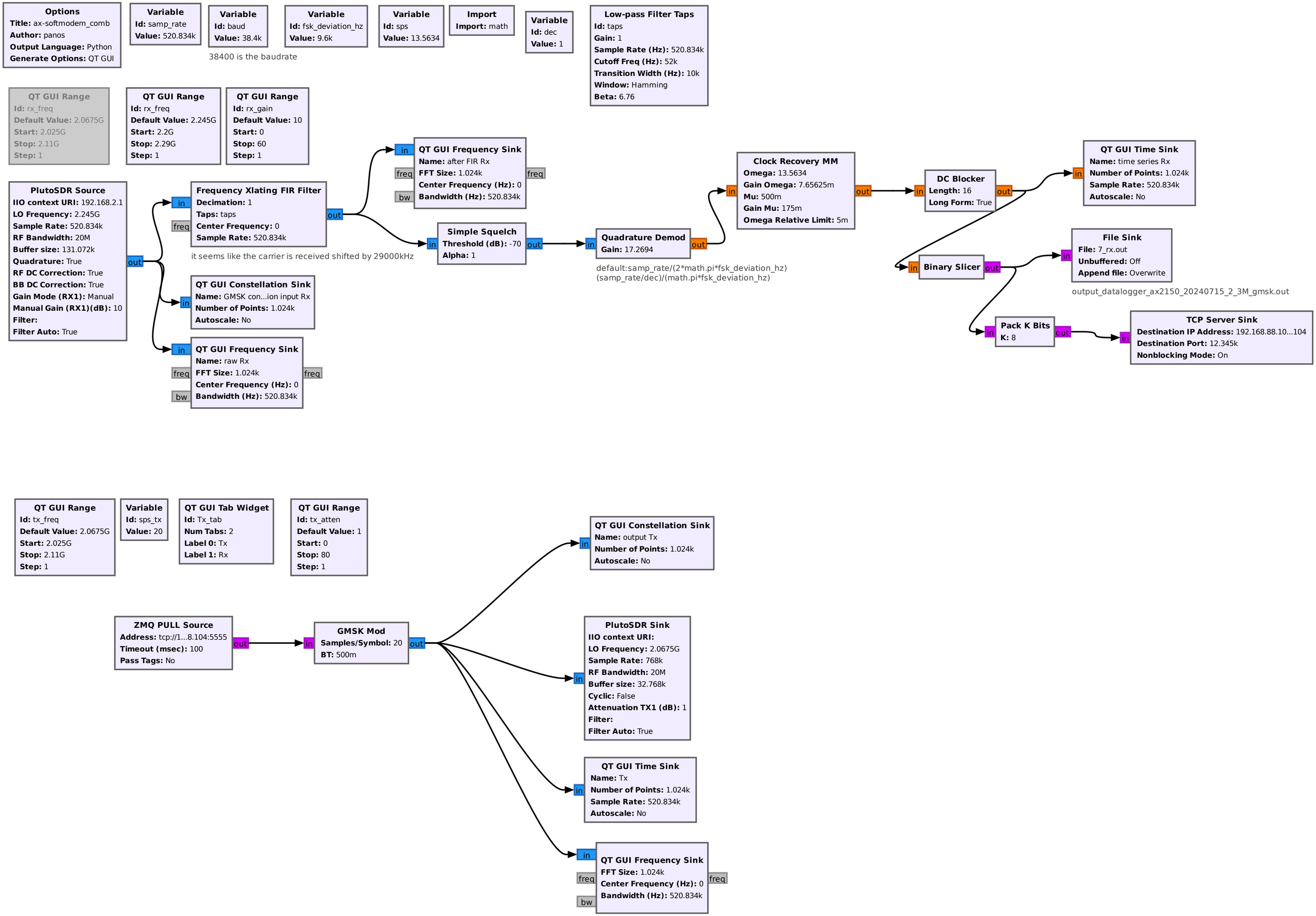
Options
Title: ax-softmodem_comb
Author: panos
Output Language: Python
Generate Options: QT GUI
Variable
Id: samp_rate
Value: 520.834k
Variable
Id: baud
Value: 38.4k
38400 is the baudrate
Variable
Id: fsk_deviation_hz
Value: 9.6k
Variable
Id: sps
Value: 13.5634
Import
Import: math
Variable
Id: dec
Value: 1
Low-pass Filter Taps
Id: taps
Gain: 1
Sample Rate (Hz): 520.834k
Cutoff Freq (Hz): 52k
Transition Width (Hz): 10k
Window: Hamming
Beta: 6.76
QT GUI Range
Id: rx_freq
Default Value: 2.0675G
Start: 2.025G
Stop: 2.11G
Step: 1
QT GUI Range
Id: rx_freq
Default Value: 2.245G
Start: 2.2G
Stop: 2.29G
Step: 1
QT GUI Range
Id: rx_gain
Default Value: 10
Start: 0
Stop: 60
Step: 1
PlutoSDR Source
IIO context URI: 192.168.2.1
LO Frequency: 2.245G
Sample Rate: 520.834k
RF Bandwidth: 20M
Buffer size: 131.072k
Quadrature: True
RF DC Correction: True
BB DC Correction: True
Gain Mode (RX1): Manual
Manual Gain (RX1)(dB): 10
Filter:
Filter Auto: True
Frequency Xlating FIR Filter
Decimation: 1
Taps: taps
Center Frequency: 0
Sample Rate: 520.834k
it seems like the carrier is received shifted by 29000kHz
QT GUI Frequency Sink
Name: after FIR Rx
FFT Size: 1.024k
Center Frequency (Hz): 0
Bandwidth (Hz): 520.834k
Simple Squelch
Threshold (dB): -70
Alpha: 1
Quadrature Demod
Gain: 17.2694
default:samp_rate/(2*math.pi*fsk_deviation_hz)
(samp_rate/dec)/(math.pi*fsk_deviation_hz)
Clock Recovery MM
Omega: 13.5634
Gain Omega: 7.65625m
Mu: 500m
Gain Mu: 175m
Omega Relative Limit: 5m
DC Blocker
Length: 16
Long Form: True
QT GUI Time Sink
Name: time series Rx
Number of Points: 1.024k
Sample Rate: 520.834k
Autoscale: No
Binary Slicer
File Sink
File: 7_rx.out
Unbuffered: Off
Append file: Overwrite
output_datalogger_ax2150_20240715_2_3M_gmsk.out
Pack K Bits
K: 8
TCP Server Sink
Destination IP Address: 192.168.88.10...104
Destination Port: 12.345k
Nonblocking Mode: On
QT GUI Constellation Sink
Name: GMSK con...ion input Rx
Number of Points: 1.024k
Autoscale: No
QT GUI Frequency Sink
Name: raw Rx
FFT Size: 1.024k
Center Frequency (Hz): 0
Bandwidth (Hz): 520.834k
QT GUI Range
Id: tx_freq
Default Value: 2.0675G
Start: 2.025G
Stop: 2.11G
Step: 1
Variable
Id: sps_tx
Value: 20
QT GUI Tab Widget
Id: Tx_tab
Num Tabs: 2
Label 0: Tx
Label 1: Rx
QT GUI Range
Id: tx_atten
Default Value: 1
Start: 0
Stop: 80
Step: 1
ZMQ PULL Source
Address: tcp://1...8.104:5555
Timeout (msec): 100
Pass Tags: No
GMSK Mod
Samples/Symbol: 20
BT: 500m
QT GUI Constellation Sink
Name: output Tx
Number of Points: 1.024k
Autoscale: No
PlutoSDR Sink
IIO context URI:
LO Frequency: 2.0675G
Sample Rate: 768k
RF Bandwidth: 20M
Buffer size: 32.768k
Cyclic: False
Attenuation TX1 (dB): 1
Filter:
Filter Auto: True
QT GUI Time Sink
Name: Tx
Number of Points: 1.024k
Sample Rate: 520.834k
Autoscale: No
QT GUI Frequency Sink
FFT Size: 1.024k
Center Frequency (Hz): 0
Bandwidth (Hz): 520.834k