



We control the system with the frequency of the SEND Rate. This frequency is maintained by the LLT. Every time the HLI receives a number of packets, it will respond with the control signals.

$$20 \cdot (6 + 12) + 6 + 12 = 108 \approx 512$$

overhead
IMU
GPS

Buffer should be 350

$$\frac{1920}{512} \approx 3.75 \approx 3 \text{ Hz}$$

$$\frac{20 \text{ Hz}}{3} = 6.66 \approx 7 \times 4 \text{ Hz} \left(\frac{1920}{408} = 4.7 \right)$$

(Maybe possible to increase)

7 IMU message if we sample with 3Hz
Worst case for buffer content.

$$7 \cdot (6 + 12) + 48 = 174$$

IMU GPS

In case no "Request" is received, the HLI should re-request. However there will be a delay before this happens. In this time more measurements can be received. To be safe, the buffer length is doubled.

$$\text{Final buffer length is } 348 \approx \underline{\underline{350}}$$