Description of IMU output data from Rally Car

IMU data scale: +/- 2g (Can be set to +/- 2g, 4g,6g)

IMU data type: int (16-bit int) (+32767 to -32768)

Scale ratio: 2g = 32768

Arduino write data type: String

Arduino write format: "I%+05d%+05d%+05dU", ax, ay, az (20 characters)

I – start byte, U – end byte, 3 accelerations with signs in between (6 char each including sign)

Rest state values: ax ~ 0, ay ~ 0, az ~ 16384 (1g)

Code to read data:

console_ser = serial.Serial('/dev/ttyACM0',115200)

if(console_ser.inWaiting()>0)   //Check if data available

    read = console_ser.read(1);   //The read command

// To read multiple bytes at once,

    readBuf = console_ser.read(n);   //n - number of bytes to read

    // To start reading data

    //Send IMU1 to start receiving IMU data at ~150 Hz

    console_ser.write('IMU1')

    //Send IMU0 to stop receiving IMU data

    console_ser.write('IMU0')