MP-4

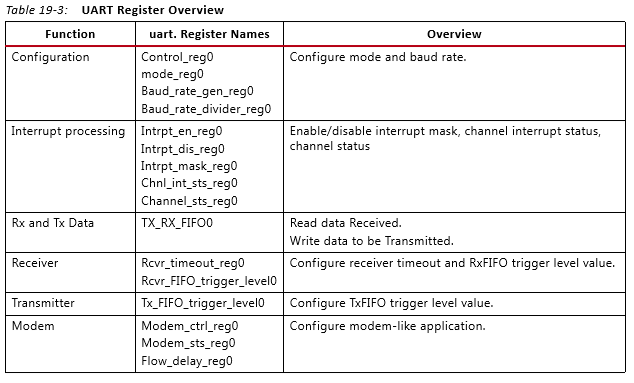
UAV Control

# UART 0

## The simple things

We changed the ucf and the mhs to route the signals to the PMOD.

# Setting up UART 0

This table comes from ug585-Zynq-7000-TRM.pdf. This is all of the registers related to the UART subsystem.

These are the relevant ones:

* Control\_reg0 – controls TX and RX (enables, resets, etc.).
* Mode\_reg0 – set up format of the data (data bits, parity, stop bits, etc.)
* Baud rate regs – Sets the baud rate
* TX\_RX\_FIFI0 – This is where the data is stored upon sending/receiving.
* Modem\_ctrl\_reg0 – sets the modem to automatic mode.

To set all of these registers, we used these functions: XUartPs\_LookupConfig() and XUartPs\_CfgInitialize(). The default config was exactly what we needed so we just used that. We explicitly called XUartPs\_SetBaudRate() to be redundant in setting the baud rate though.

# Command IDs

|  |  |
| --- | --- |
| **Command** | **ID** |
| Request IMU Data | 102 |
| Orientation Information | 108 |
| Send roll, pitch, yaw, and throttle | 200 |