The Initial goal is to get the chip modules up and working, then progress can be made developing software code. The follow modules are needed: SPI, UART, ADC.

Module operations needed:

SPI – Chip Select, Data Out, Clock.

UART – TX and RX lines.

ADC – 2 channels, 10 bit conversions.

Module hardware specifications

SPI – Chip select: 1 GPIO.

Data out: SDO pin.

Clock: SCLK pin

First, I need to get UART up and working first. This will allow for robust debugging, and will be critical at early stages to verify the working status of other modules.