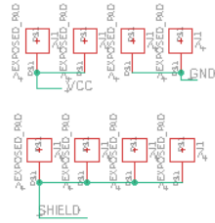
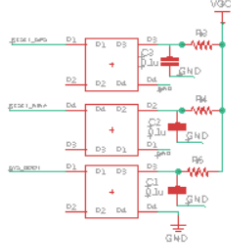


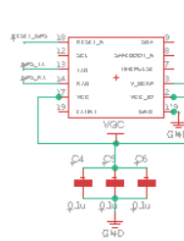
EXPOSED_PADS



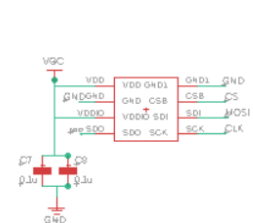
PUSH_BUTTONS



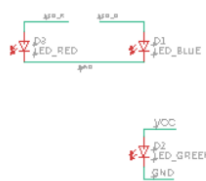
SAM_M8Q



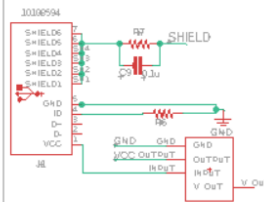
BME_280



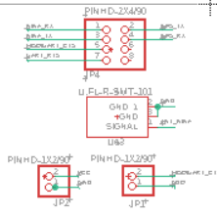
LEDs



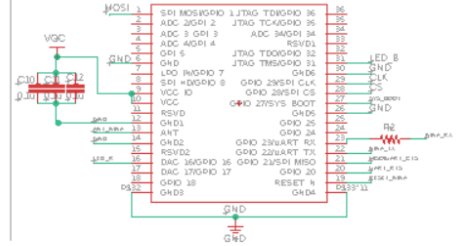
MICRO_USB_B

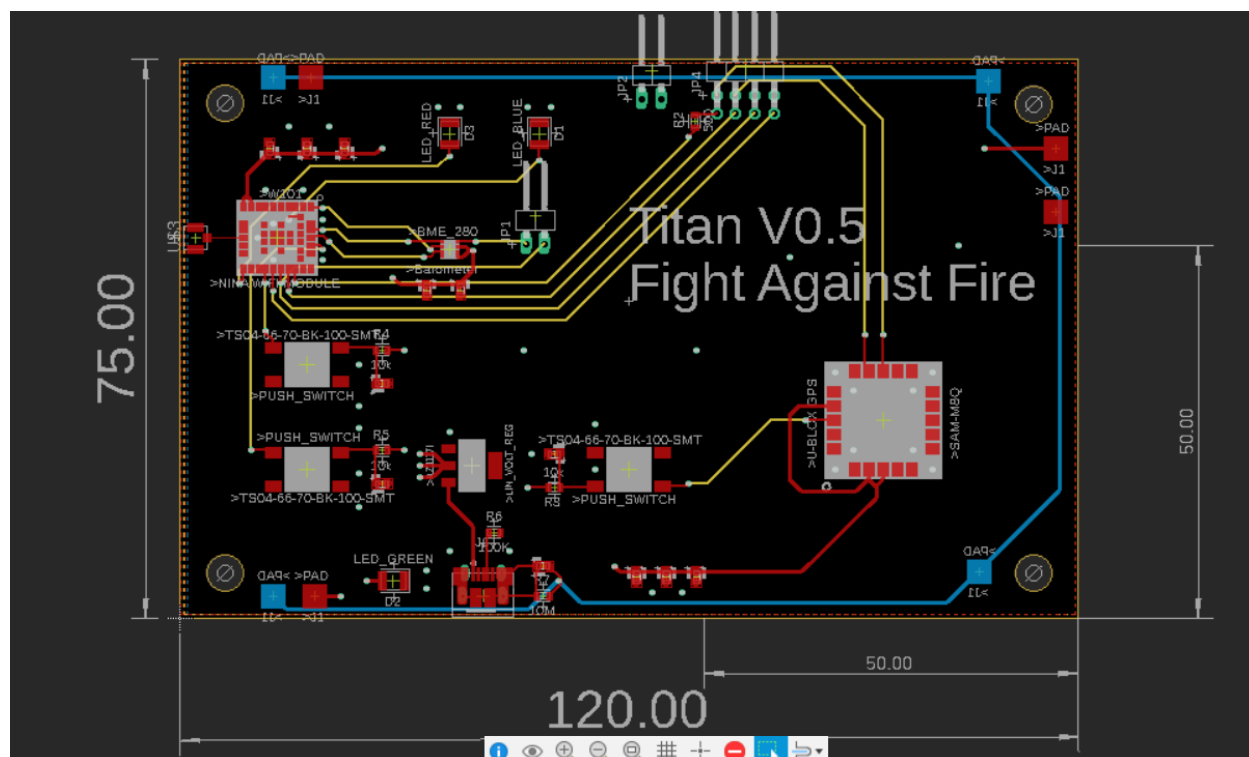


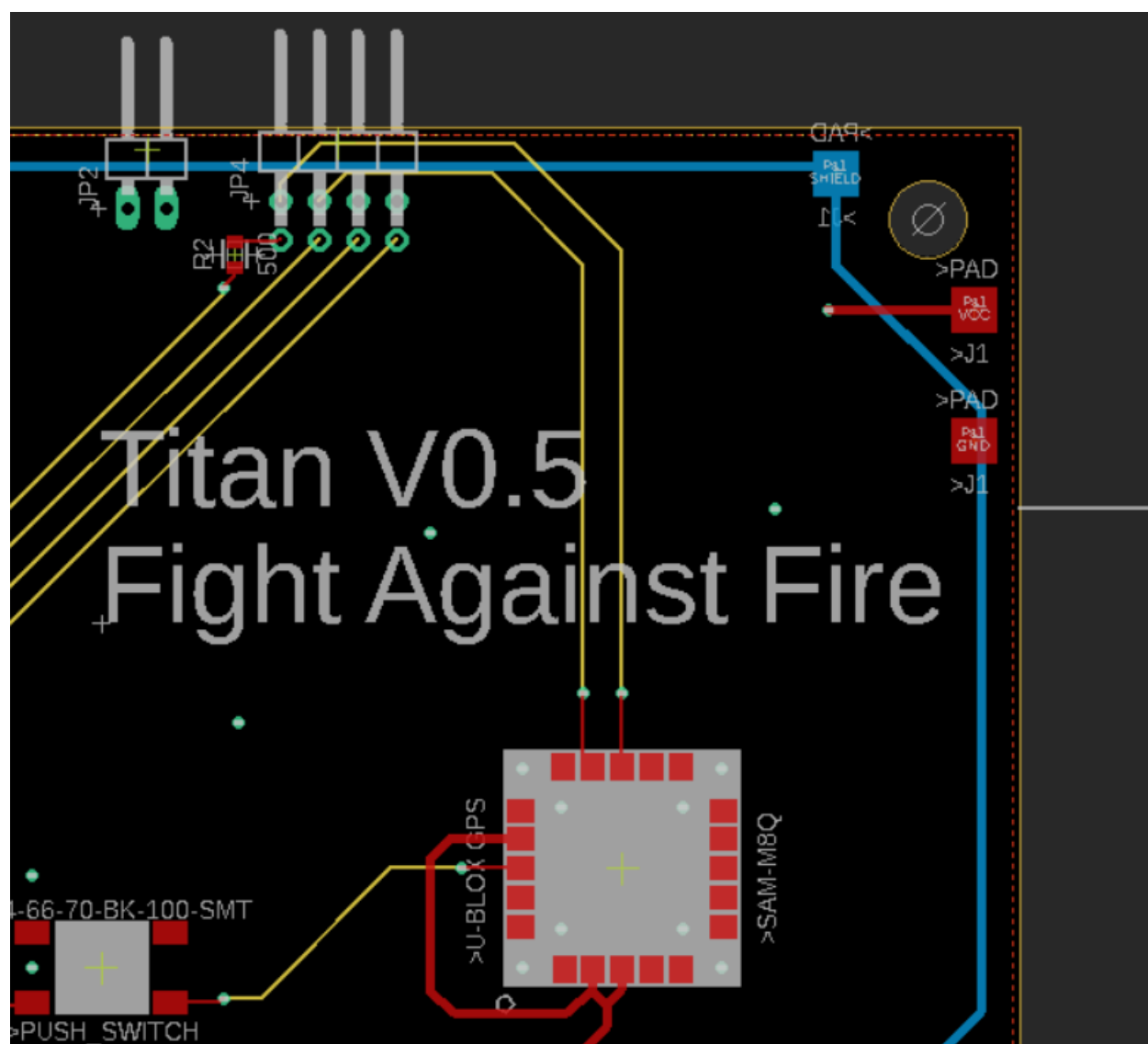
HEADERS

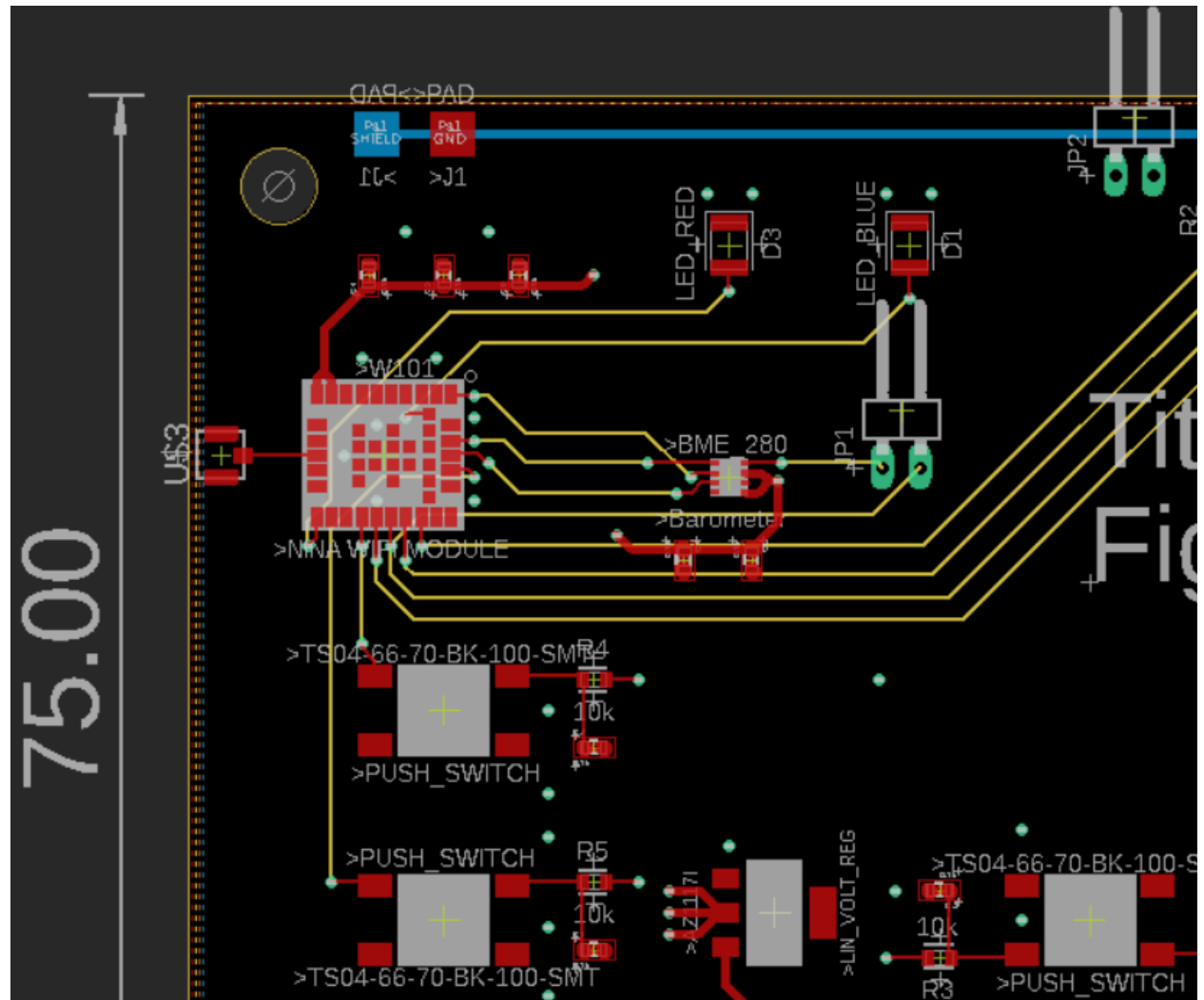


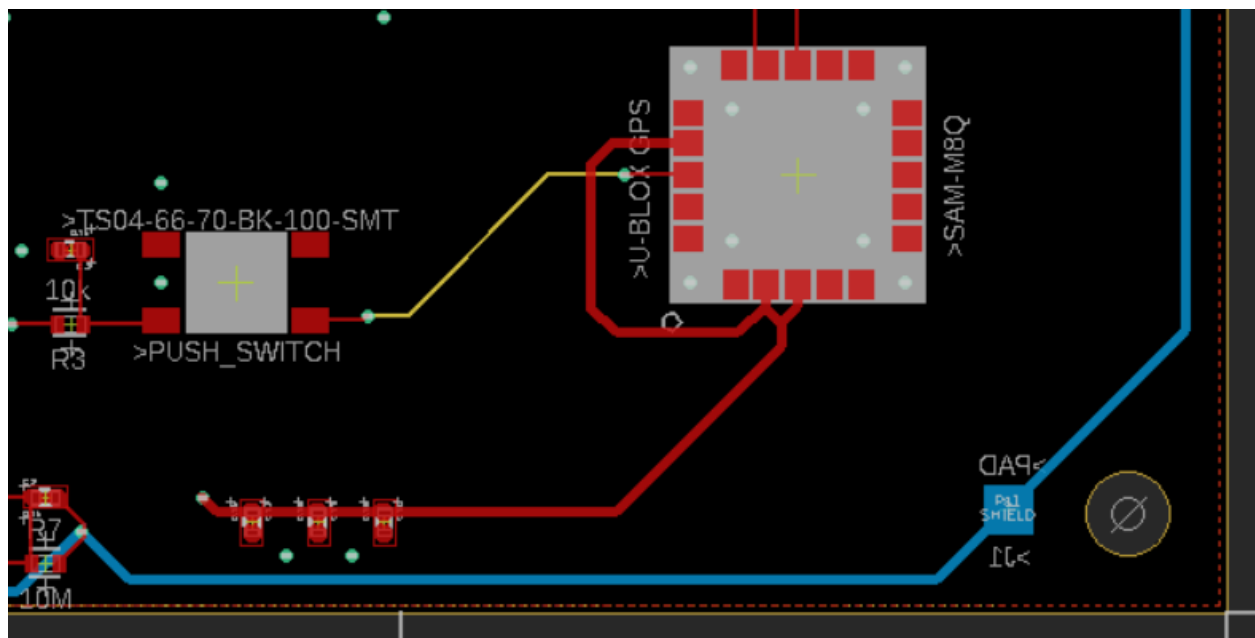
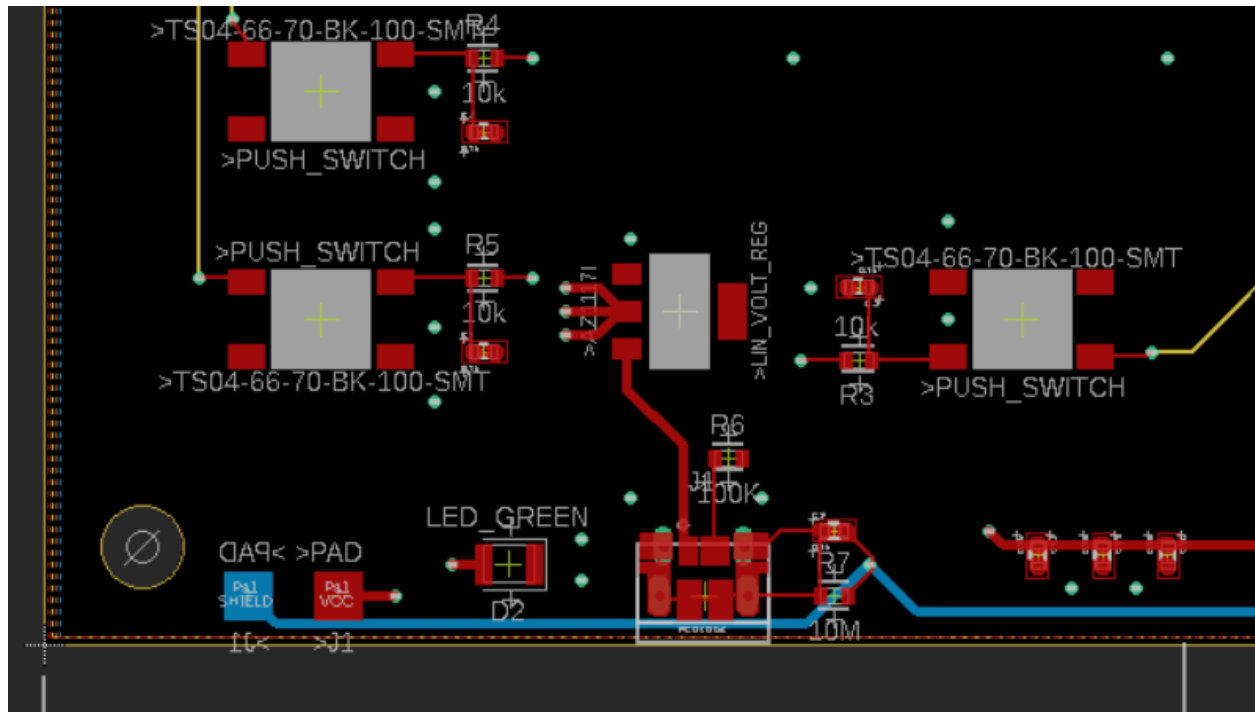
NINA_W101











This is a four layer board with layers from bottom to top: Power->GND->Signal/Power->GND. There are two modules with RF components, the SAM and the W101. The W101 I tried leaving ground space around the antenna terminal, and with the SAM I left 50x50mm of space around it on all layers since it was recommended in the tech docs.

The MCU, the W101, of this device is designed to pull pressure and altitude data from the BME 280 and location data from the SAM then send it off over the antenna. I left several pins exposed because certain lines need to be connected, but to flash the MCU I figured I should leave them disconnected. The device has long UART lines between the W101 and the SAM which isn't ideal but I'm hoping it isn't a problem. The MCU talks with the BME280 via SPI lines. The board has two power options, exposed VCC and GND pins as well as a USB power on. Finally, there are several buttons on the device which are used to flash the MCU and reset the SAM.