Observed Issue:

When the atlas sensors are plugged into the main control box, the GPS stops reading properly after some amount of time.

Captured Saleae logic analyzer of the problem happening but didn't see anything immediately obvious. → Need to check timings.

From Zed-F9P datasheet:
"An I2C interface is available for communication with an external host CPU in I2C fast-mode. Backwards compatibility with Standard I2C bus operation is not supported".

Tried setting the clock speed of I2C bus to 400kHz. Issue persists.

From Atlas datasheet:

		5V	3.3V
Electrically Isolated EZO™ Carrier Board	No Load	28mA	22mA
	EZO™ pH	44mA	35mA
	EZO™ ORP	44mA	35mA
	EZO™ Dissolved oxygen	44mA	35mA
	EZO™ Conductivity *(no probe)*	55mA	43mA
	EZO™ RTD Temperature	44mA	35mA

Atlas sensors are using a lot of "no load" current. Is this a power supply issue?

Tried powering atlas sensors from separate 5v power supply. Issue persists.

Current solution:

Use a different I2C bus for the atlas sensors.

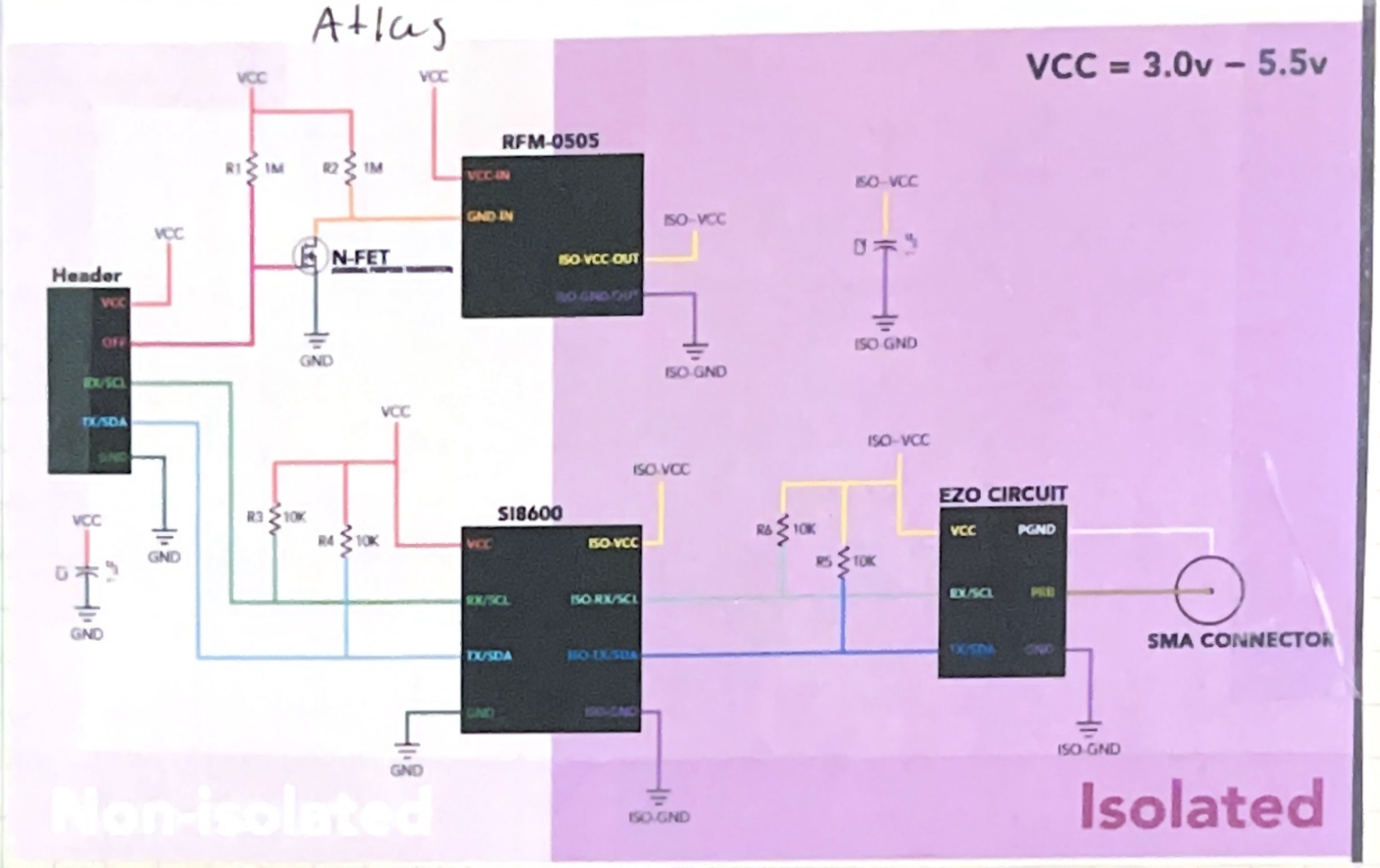
DOpTc I2C Bus Integration

06/06/25
Wesley
coderi

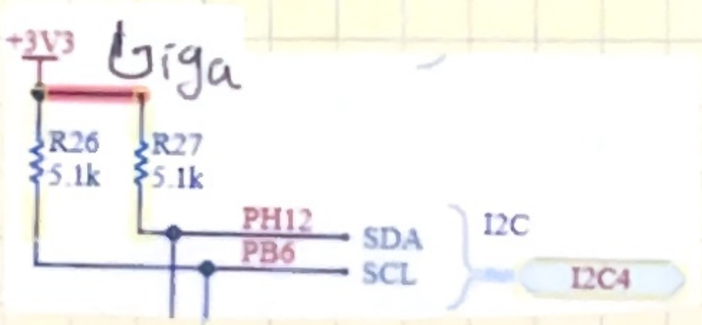
Pull up Resistor Notes:

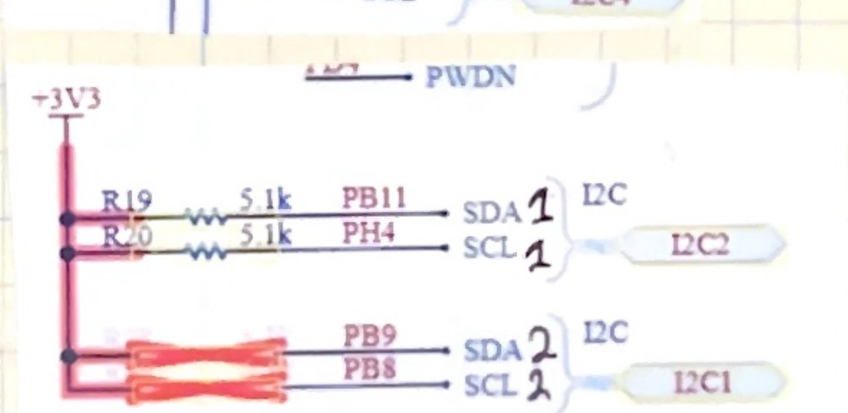
Isolated ground is different from non-isolated ground, these two lines should not be connected together.

Atlas



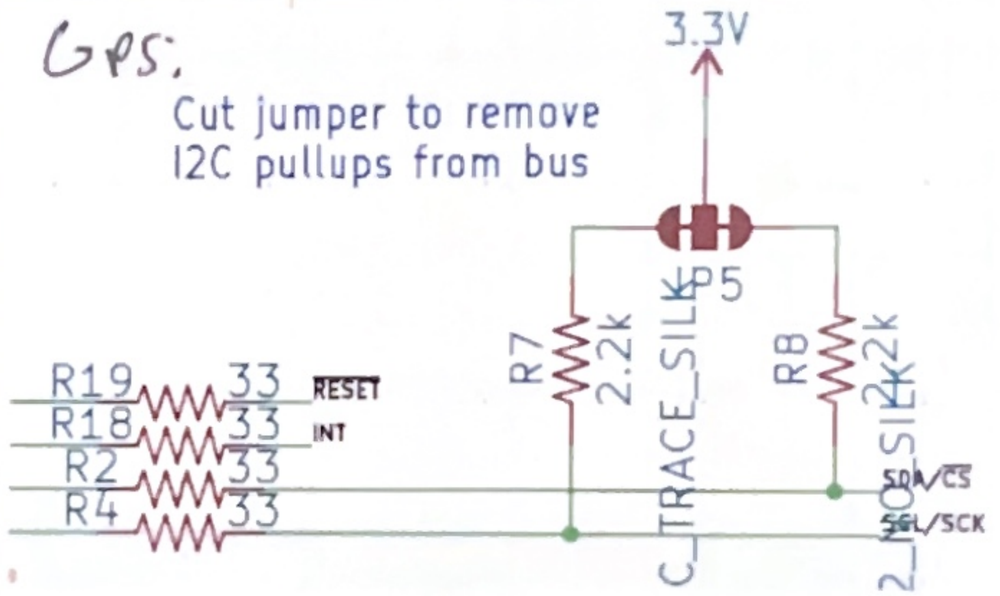
Giga





GPS:

Cut jumper to remove
I2C pullups from bus



BNO: