QUICK START

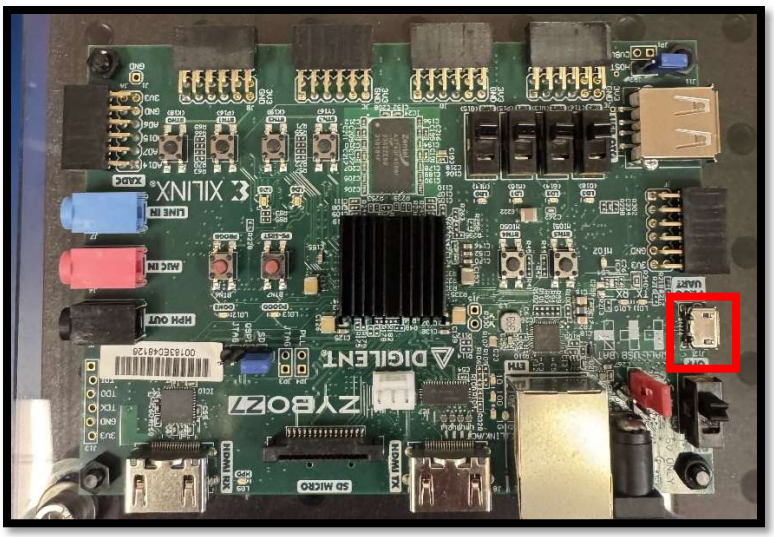
Introduction

This guide provides wiring instructions for powering and connecting the Flight Computer, EPS, GPS, IMU, Reaction Wheel, and Network components. Refer to photos or diagrams where indicated for exact connector placement.

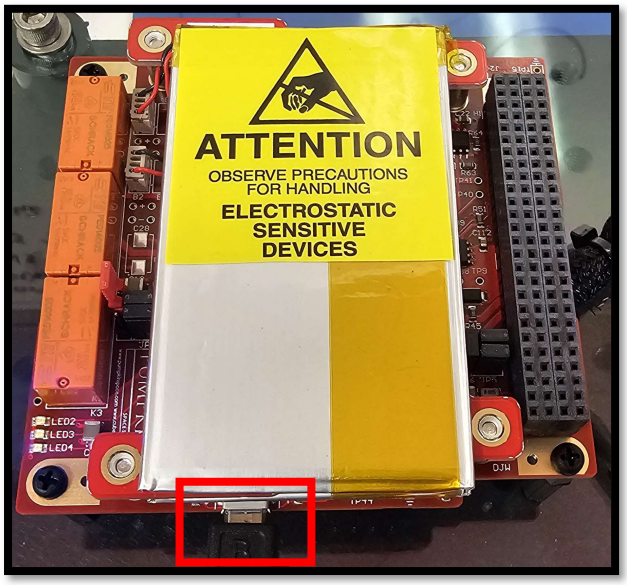
Section 1: Power Connections

1. **Power Supply**
    - Plug in power supply.
    - Connect USB hub to power supply 5V/2A.
    - Note: M1 is already preprogrammed to 10V/1.5A

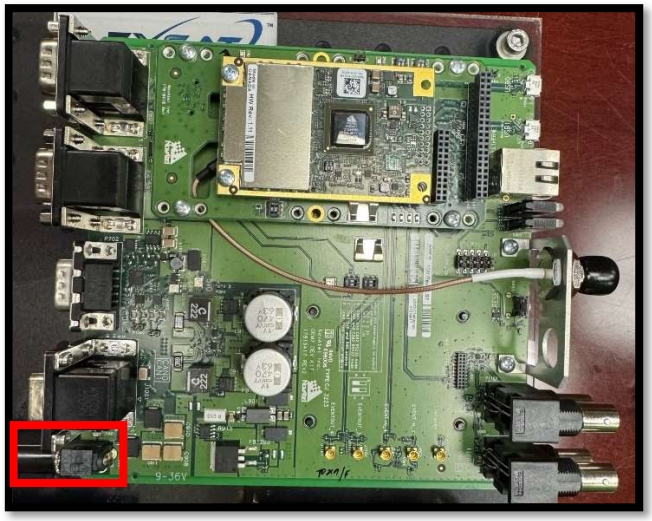
2. **Flight Computer (Zybo Z7):**
    - Connect the Micro-USB power cable to the USB hub.



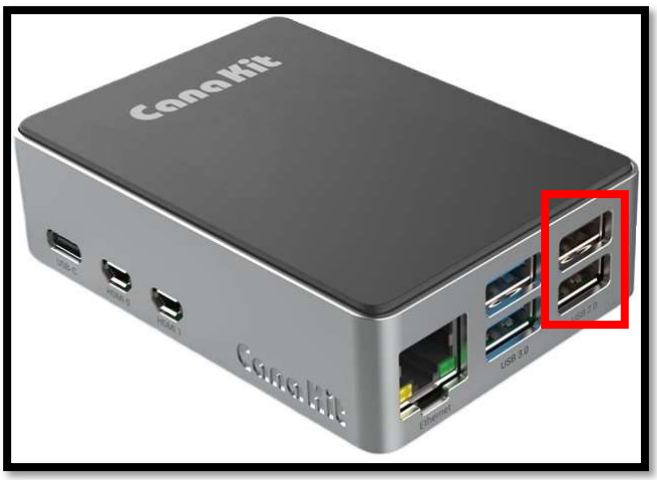
3. **EPS:**
    - Connect the Micro-USB power cable to the USB hub.



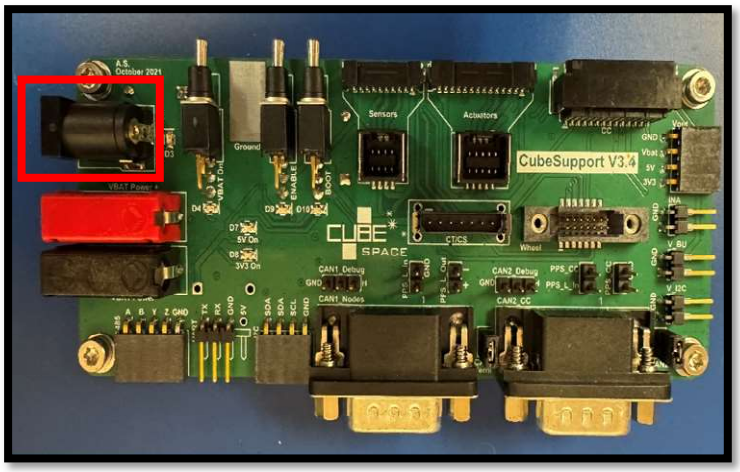
4. **GPS Development Board:**
    - Connect the grey power cable with banana jacks red-to-red and black-to-black to the power supply using a barrel connector.



5. **IMU:**
    - The IMU power and data cables (dual USB-A STIM EVK) will plug into the Sensor System (SS)for power and data.



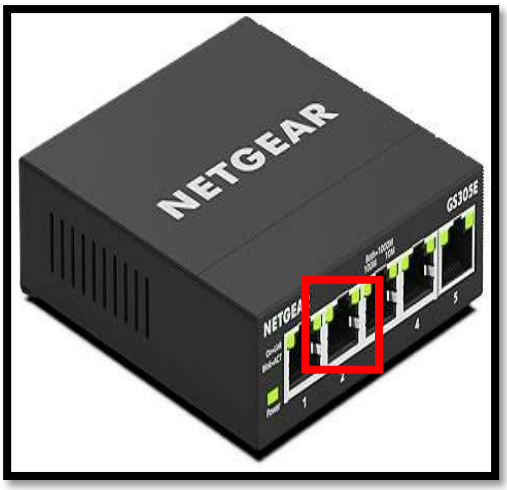
6. **Reaction Wheel Breakout Board:**
    - Connect the breakout board black banana jack cable red-to-red and black-to-black to the power supply. (Note: You can chain the banana plugs)

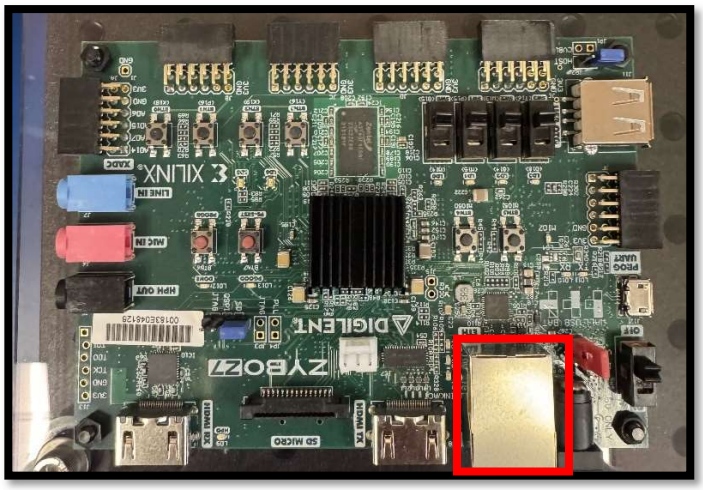


7. **Sensor System (SS):**
    - Connect the Sensor System 45W power adapter (USB-C) to a wall outlet. (Note: Green light should either be flashing or steady when plugged in)
8. **Netgear Network Switch:**
    - Connect the power adapter to a wall outlet.

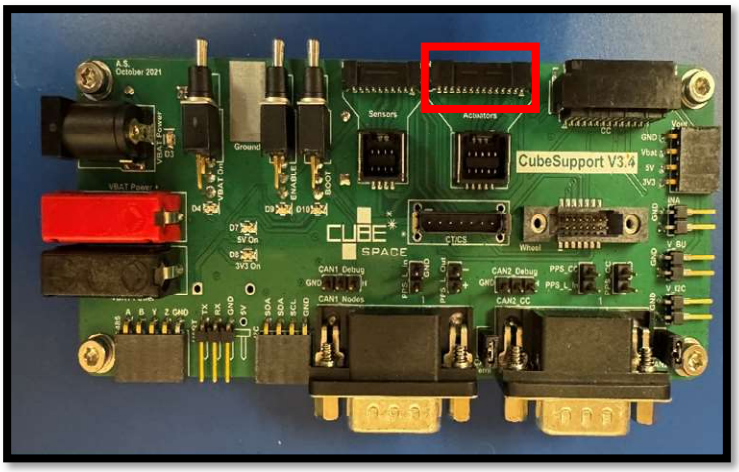
Section 2: Communication Connections

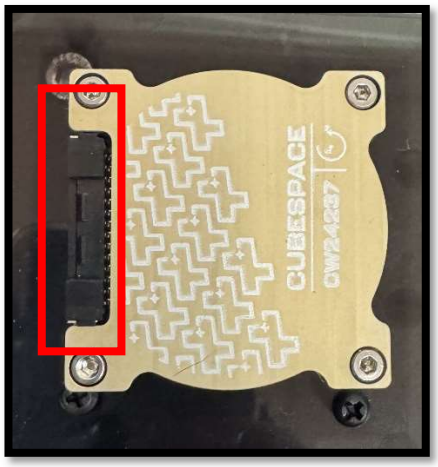
1. **Flight Computer (Zybo Z7):**
    - Connect the Ethernet cable to the Netgear Network Switch.

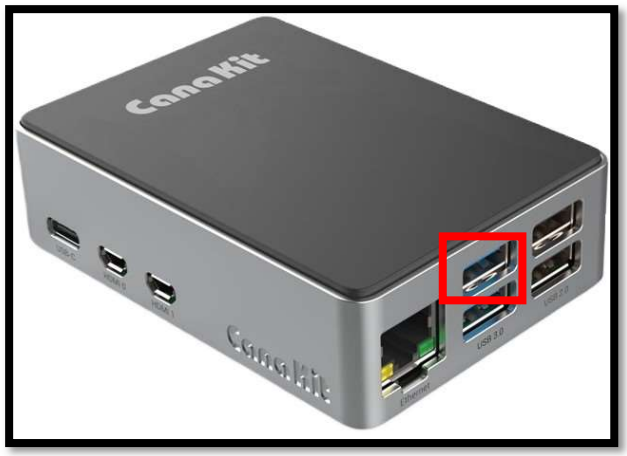


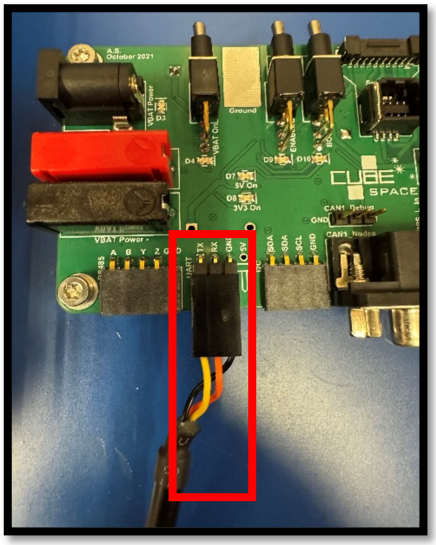


2. **IMU:** (Note: IMU Connection already completed)
3. **Reaction Wheel:**
    - Connect the RW cable to the breakout board.
    - Connect the breakout board data cable to the Sensor System.

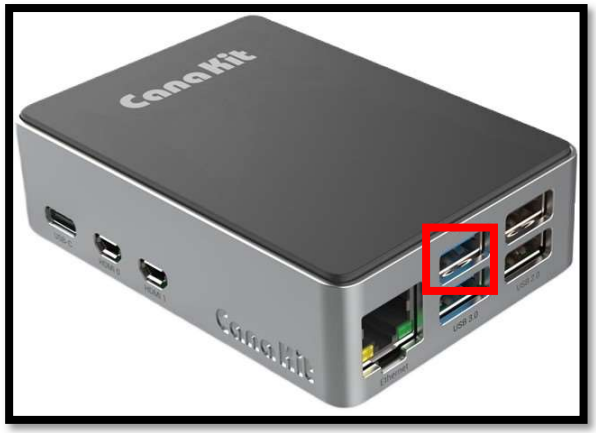


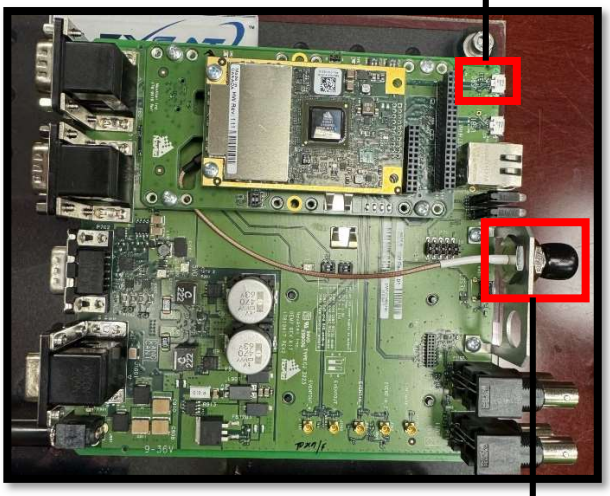




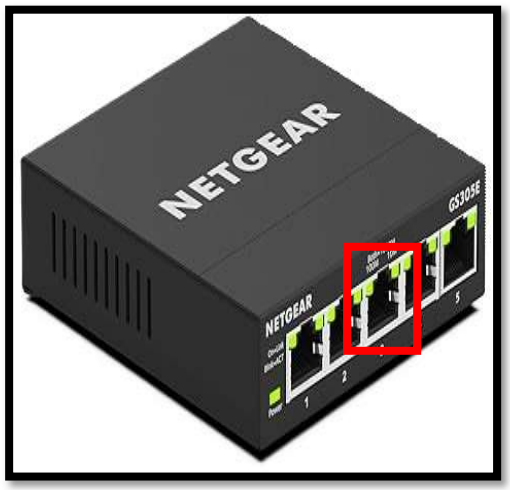


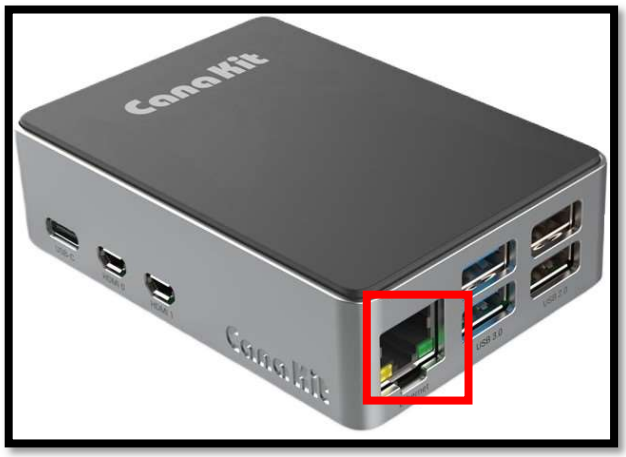
4. **GPS Development Board:**
    - Connect the Micro-USB cable to USB0 on the development board and plug it into the Sensor System.
    - Attach the GPS antenna to the GPS board.



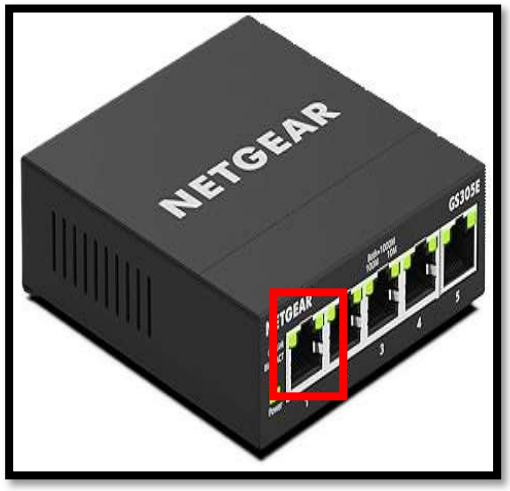


5. **Sensor System (SS):**
    - Connect an Ethernet cable to the Netgear Network Switch.



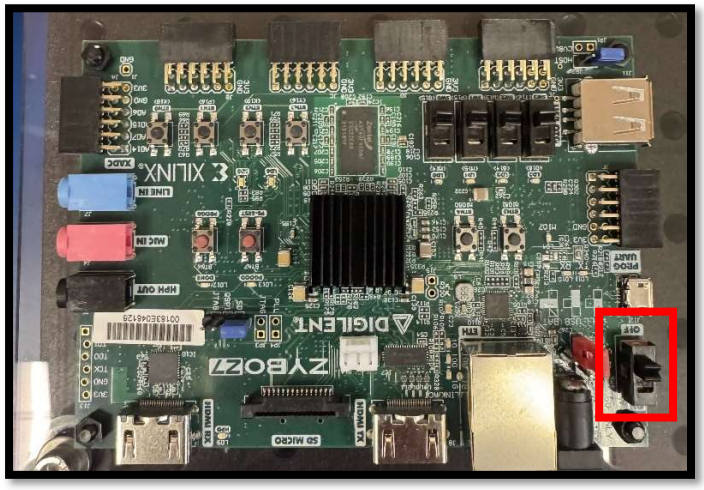


6. **Netgear Network Switch:**
    - Ensure an Ethernet connection to the laptop running the FlexSat software. A USB-C to ethernet adapter might be necessary.



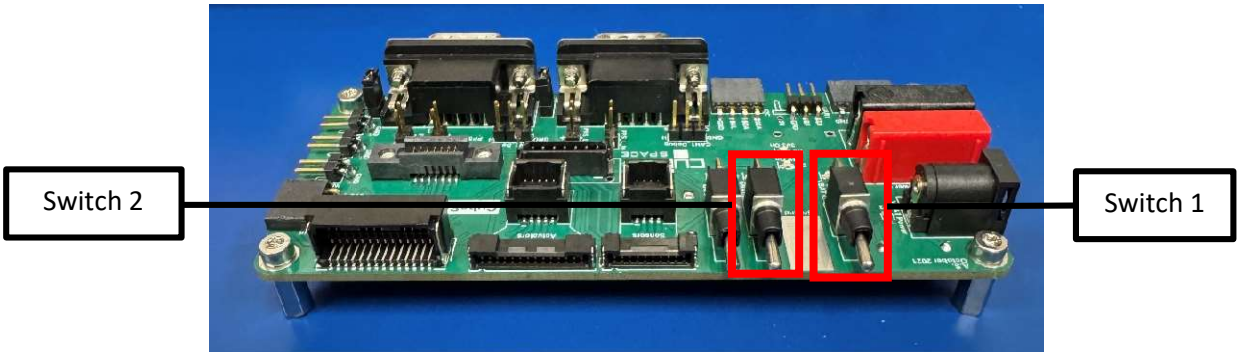
Section 3: Initial Setup

1. **Laptop:**
    - Power on by pressing the button to the right of the backspace key.
        - **Username:** flexsat
        - **Password:** flexsat123!
2. **Flight Computer:**
    - Power on by flipping the switch near the Micro-USB power input. A green LED and red LED should illuminate.



3. **Power Supply:**
    - Power on the power supply by pressing the **on/off button** and click M1 to set the voltage at 10v and 1.5a. The M1 has already been programmed for the correct voltage.
    - Proceed to hit the **output button** once those have been set.

4. **Reaction Wheel:**
    - Power on breakout board with toggle switch 1
    - Power on RW digital electronics with toggle switch 2



5. **Final Steps:**
    - Proceed to the **User's Manual** located on the Laptop's Desktop for software instructions.