

System Diagram

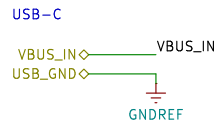
This is a system diagram of SAMWISE, Electrical details quite simplified (and note revision date below); for most updated+detalled info consult schematics of individual boards and Master BOM. Some connections are direct header- socket and are marked "header." Harnesshousing part #(s) and wire count (in red) are labeled next to each harness. Types of cables (labeled): harness (wire count in red, 24AWG w/ exceptions), coax, FFC. Note that mounting holes ground all boards except battery & magnetorquers boards, and provide an additional ground connection but are not labeled in this diagram.

ADCS
File: system_ADCS.kicad_sch
Use 26 AWG for all photodiode connections!

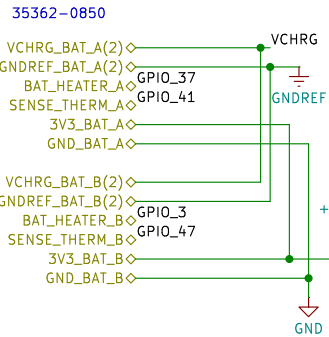
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Power Connections

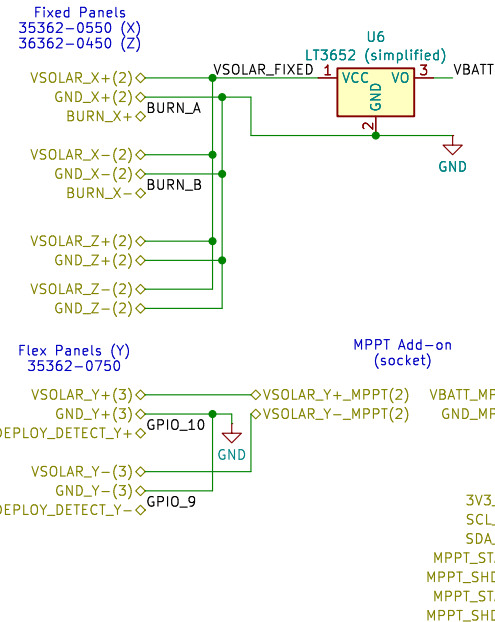
USB (Earth Only)



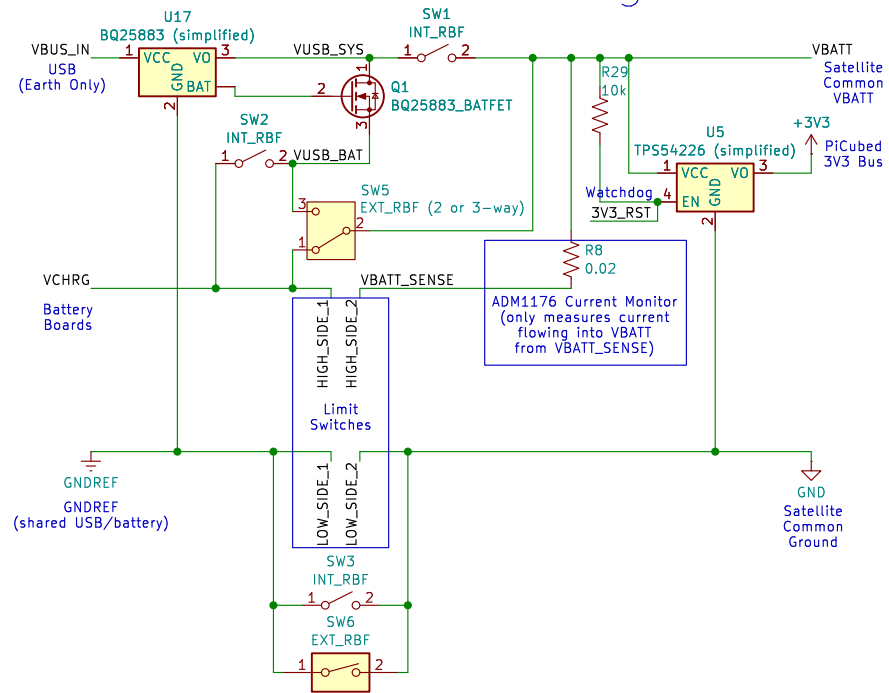
Battery Boards



Solar Panels

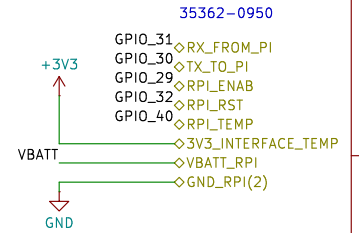


PiCubed Internal Power Switching

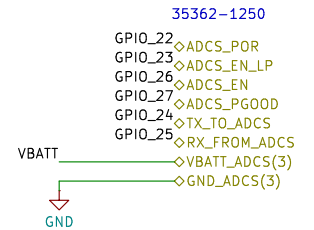


Payload & ADCS

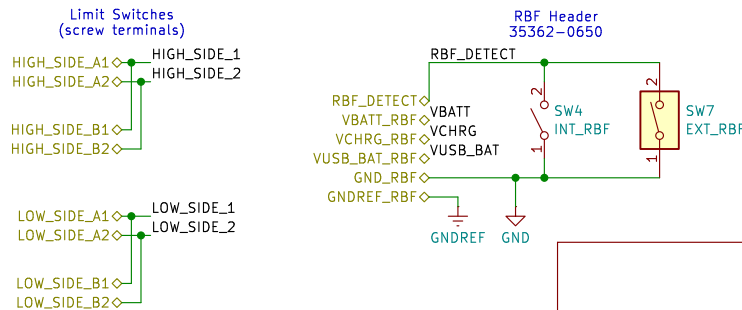
Payload



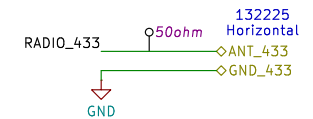
ADCS



Limit Switches & RBF



433 MHz Coax



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Sheet: /PiCubed/

File: system_PiCubed.kicad_sch

Title: PiCubed (system)

Size: A4 Date: 2025-06-09

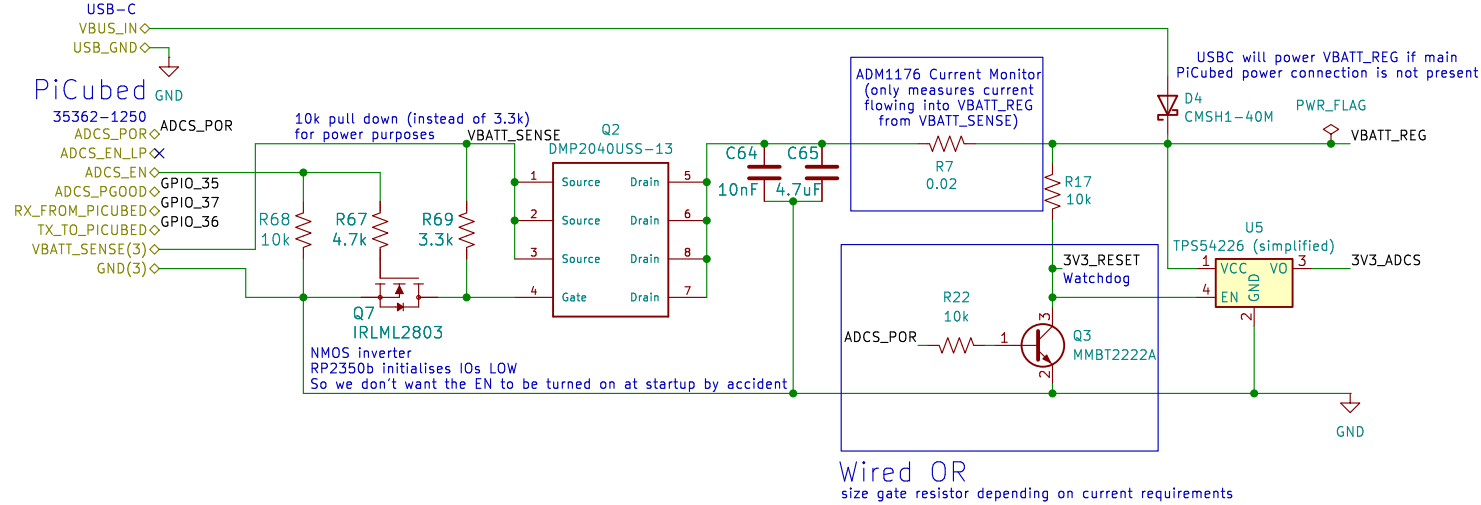
KiCad E.D.A. 9.0.1

Rev: 1.0

Id: 2/3

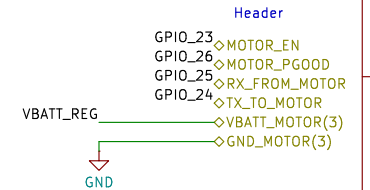
PiCubed, USB, and Power Circuitry

USB (Earth Only)

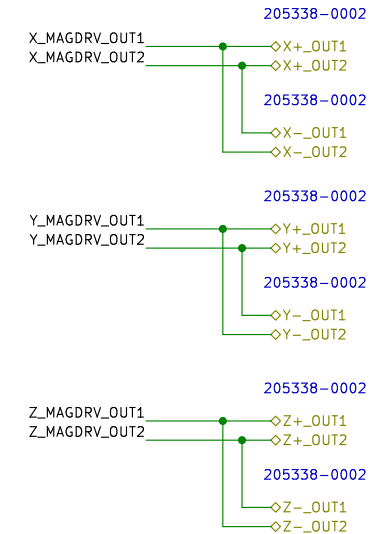


Motor Board & Magnetorquer Outputs

Motor Board

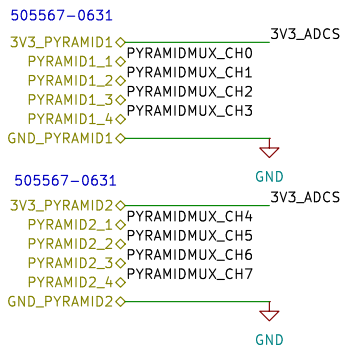


Magnetorquer Coils

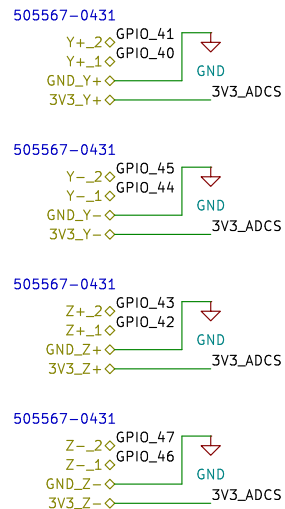


Sun Pyramids & Photodiodes

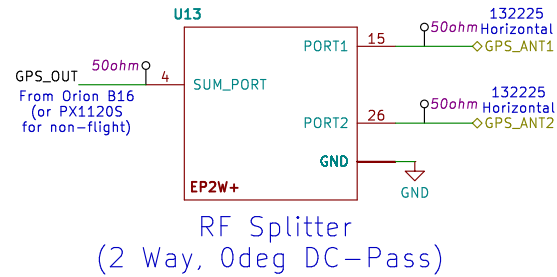
Sun Pyramids



Y/Z Photodiodes



GPS



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Stanford Space Initiative

Sheet: /ADCS/

File: system_ADCS.kicad_sch

Title: ADCS (system)

Size: A4

Date: 2025-06-09

KiCad E.D.A. 9.0.1

Rev:

Id: 3/3