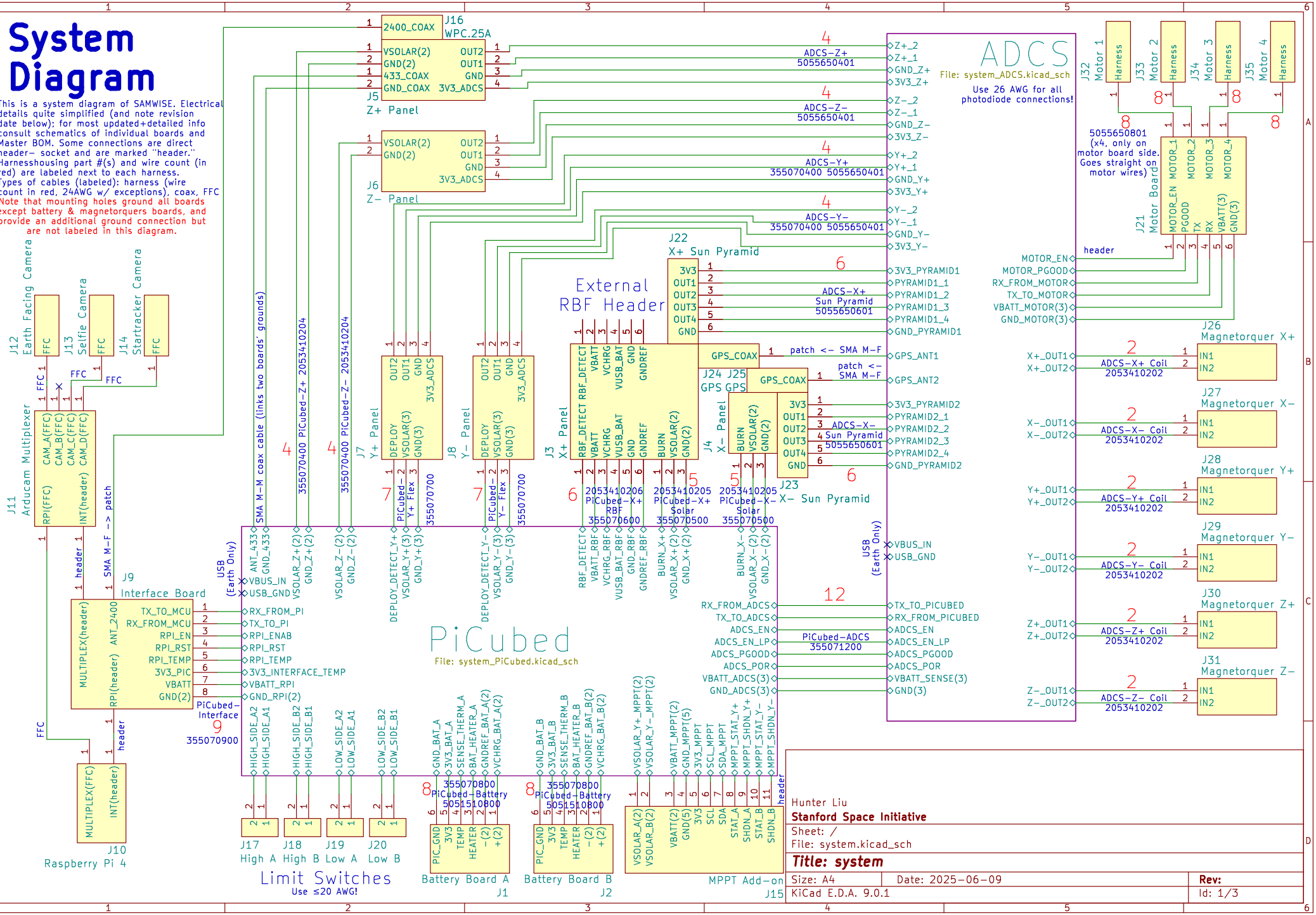
System Diagram

This is a system diagram of SAMWISE. Electrical details quite simplified (and note revision date below); for most updated+detailed 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.



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Sheet: /
File: system.kicad_sch

Title: system

Size: A4	Date: 2025–06–09	**Rev:**
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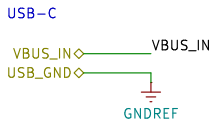
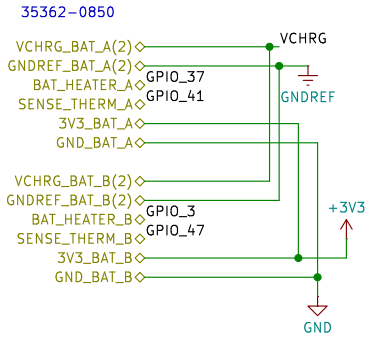
Power Connections

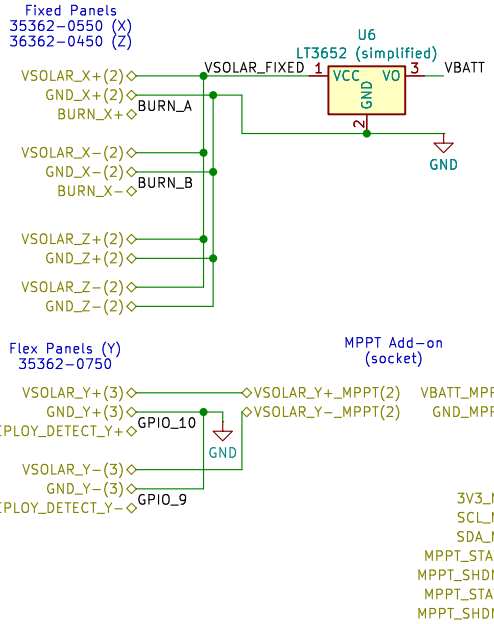
USB (Earth Only)



Battery Boards

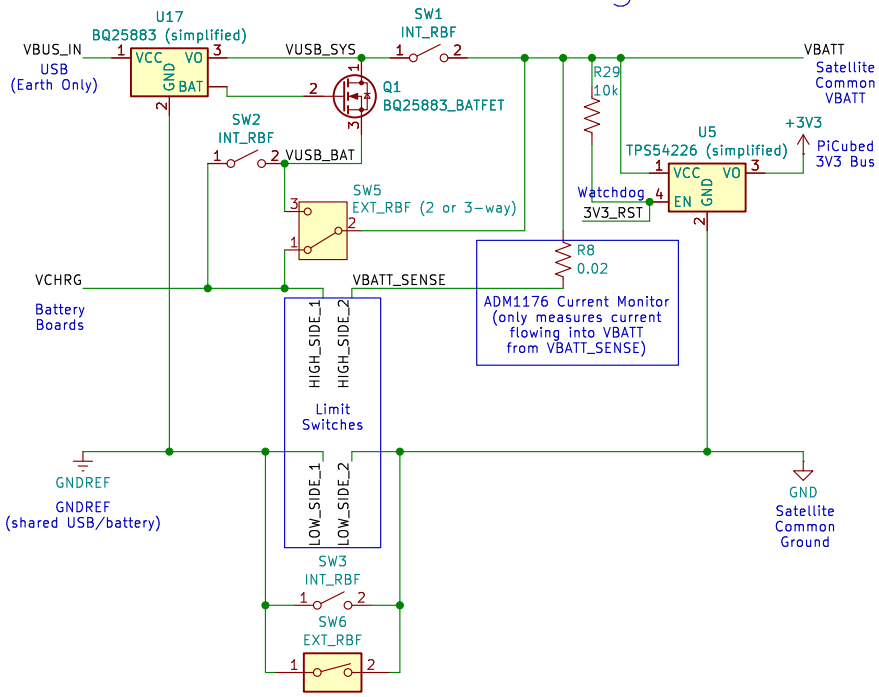


Solar Panels



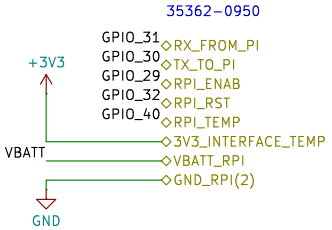
PiCubed Internal Power Switching

Note: INT_RBF and EXT_RBF are headers. EXT_RBF should be implemented on the X+ panel (see main sheet)

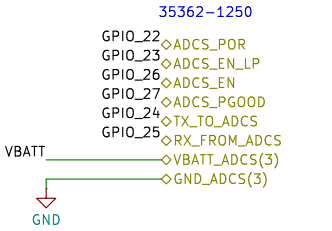


Payload & ADCS

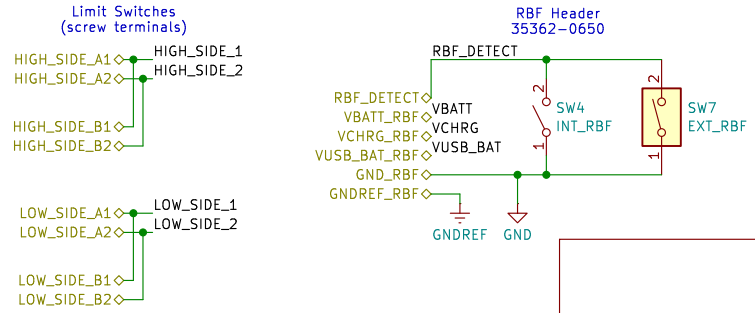
Payload



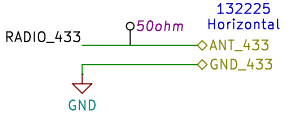
ADCS



Limit Switches & RBF



433 MHz Coax



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Sheet: /PiCubed/
File: system_PiCubed.kicad_sch

Title: PiCubed (system)

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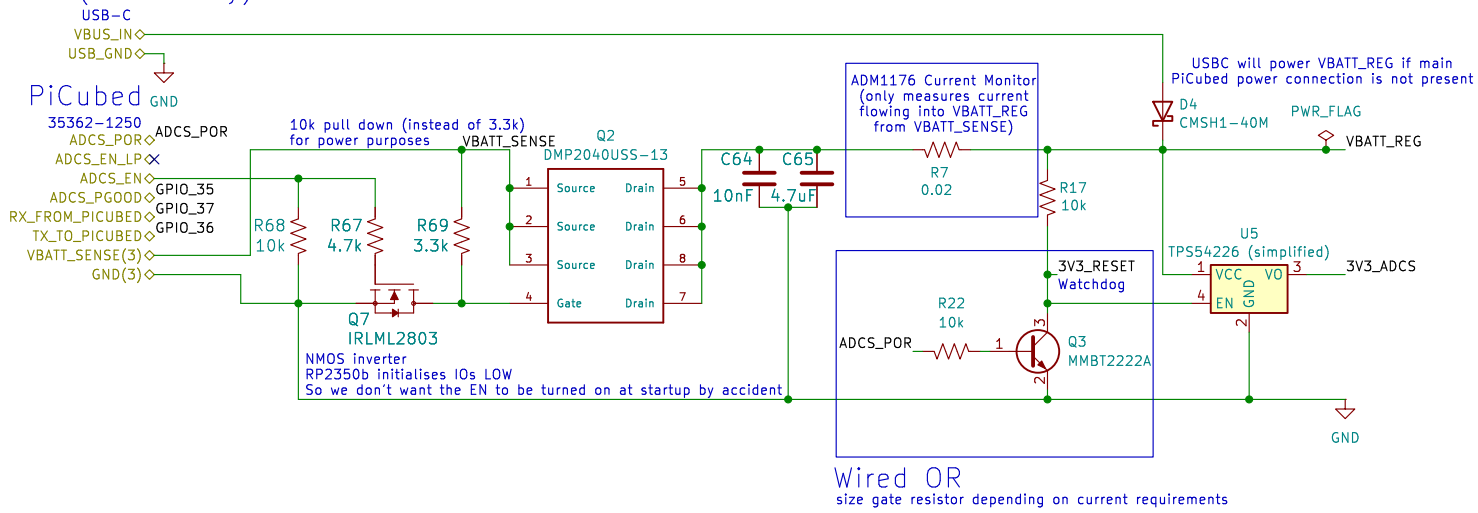
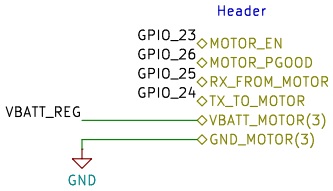
PiCubed, USB, and Power Circuitry

USB (Earth Only)

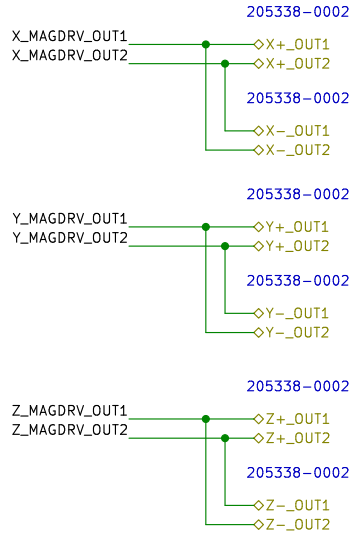


Motor Board & Magnetorquer Outputs

Motor Board

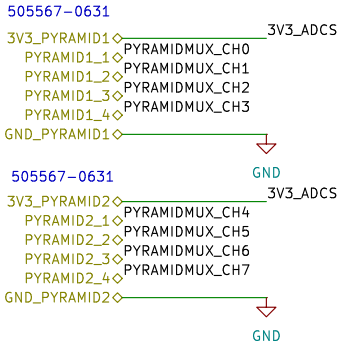


Magnetorquer Coils

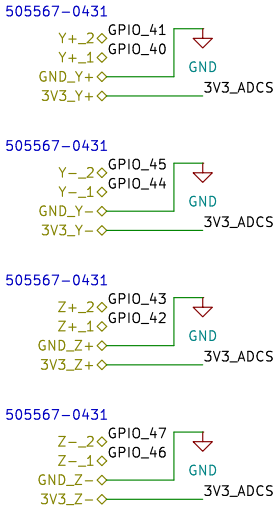


Sun Pyramids & Photodiodes

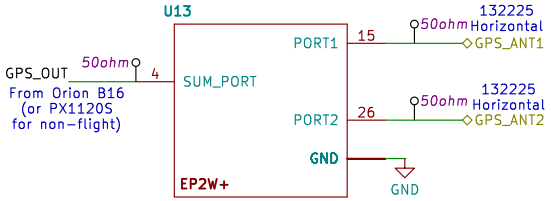
Sun Pyramids



Y/Z Photodiodes



GPS



RF Splitter (2 Way, 0deg DC-Pass)

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Sheet: /ADCS/
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Title: ADCS (system)

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