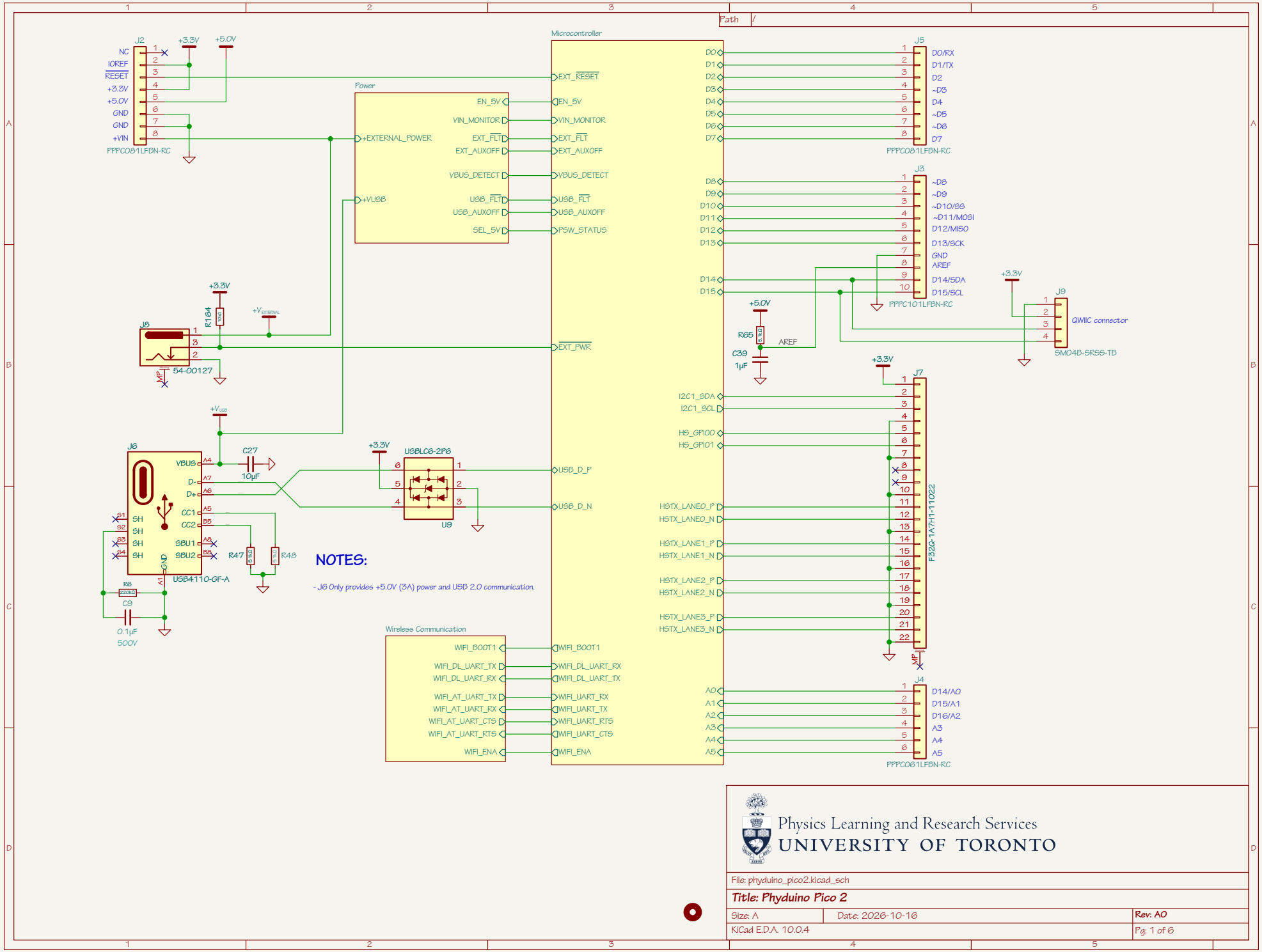
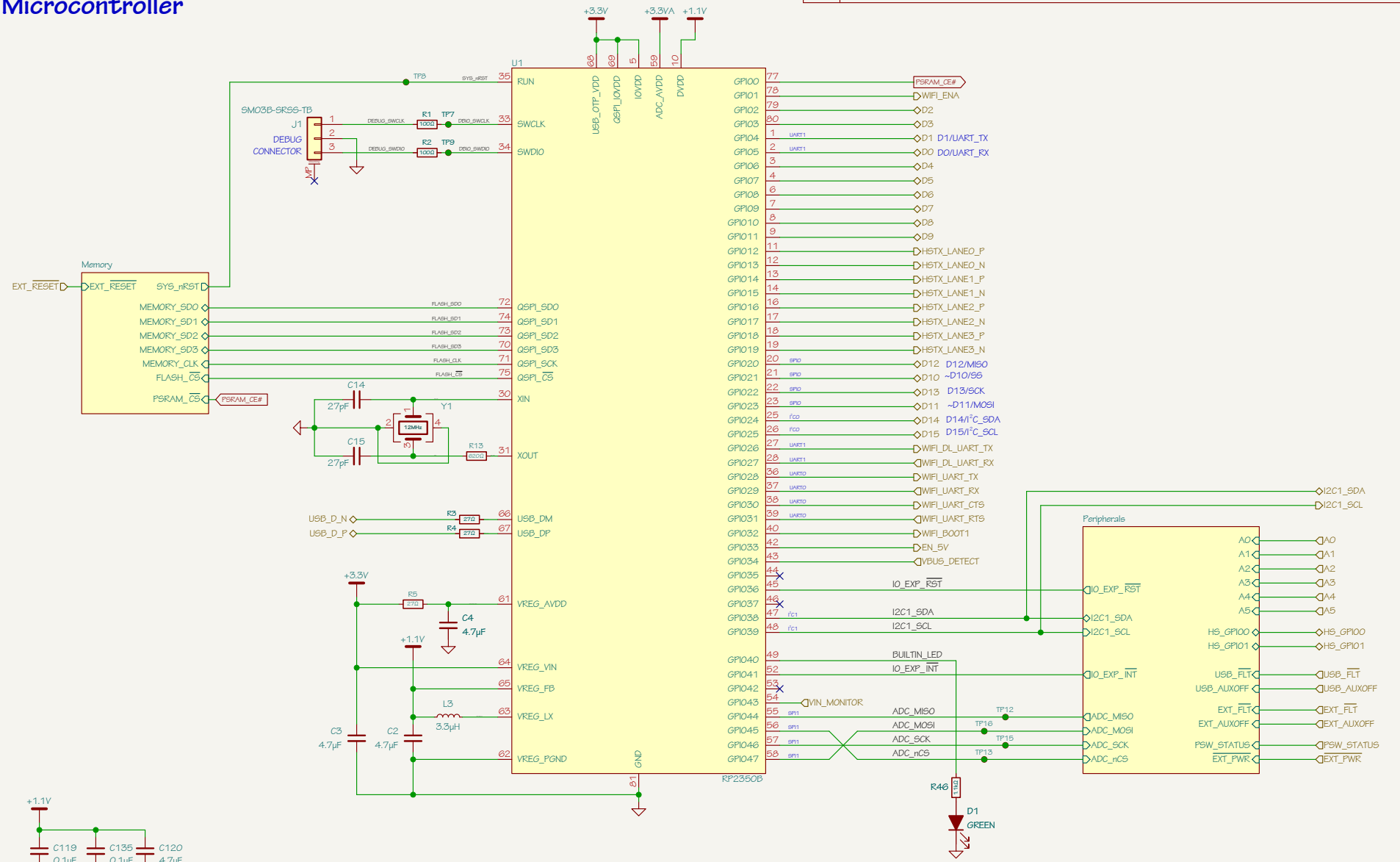

Path /
Microcontroller
Power
Wireless Communication
J2
PPPC081LFBN-RC
J5
PPPC081LFBN-RC
J3
PPPC101LFBN-RC
J9
QWIIC connector
SM04B-SRSS-TB
J7
F32Q-1A7H1-11022
J4
PPPC061LFBN-RC
J8
54-00127
J6
USB4110-GF-A
U9
USBLC6-2P6
NOTES:
- J6 Only provides +5.0V (3A) power and USB 2.0 communication.
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File: phyduino_pico2.kicad_sch
Title: Phyduino Pico 2
Size: A
Date: 2026-10-16
Rev: A0
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Pg: 1 of 6

Microcontroller

Path /Microcontroller/

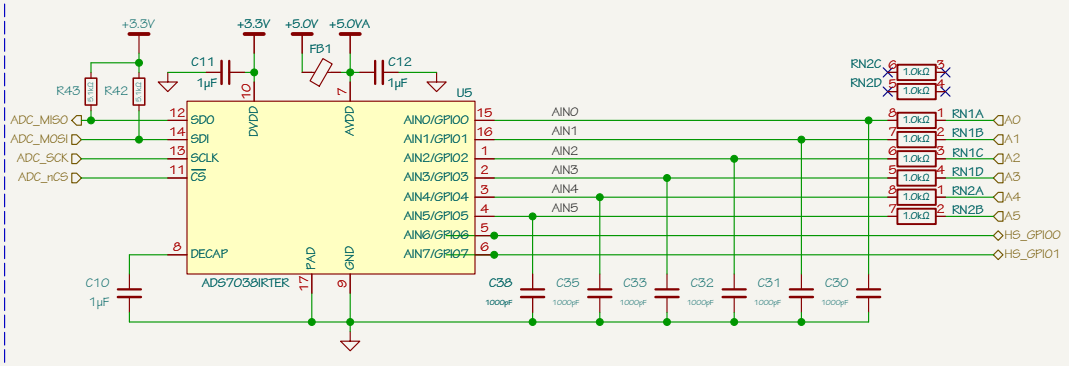


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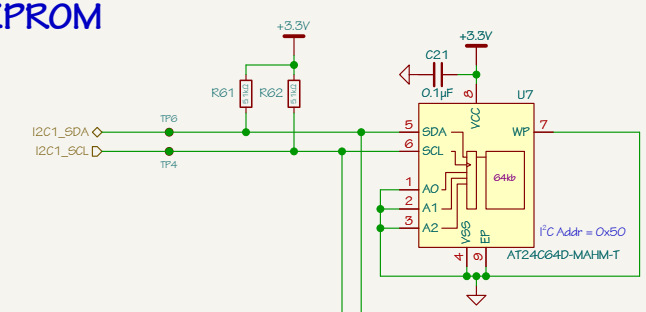
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Path /Microcontroller/Peripherals/

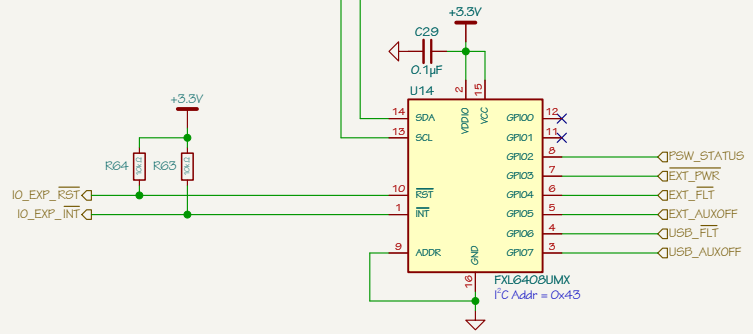
External ADC/GPIO



EEPROM



IO-EXPANDER

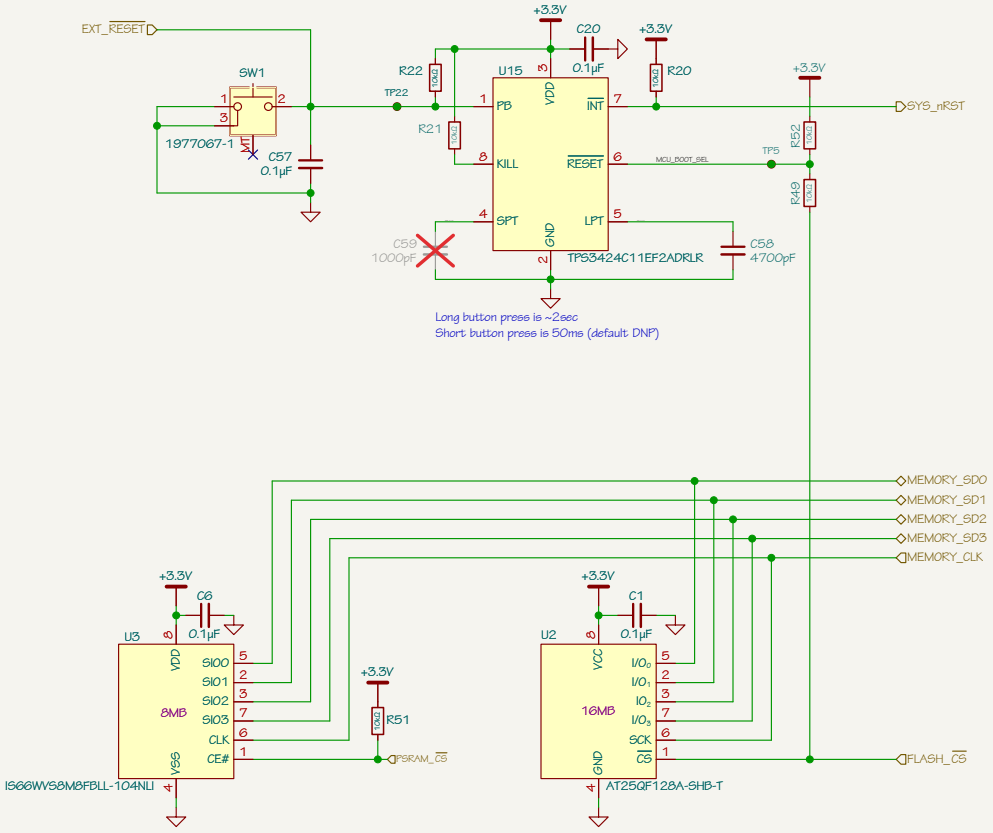


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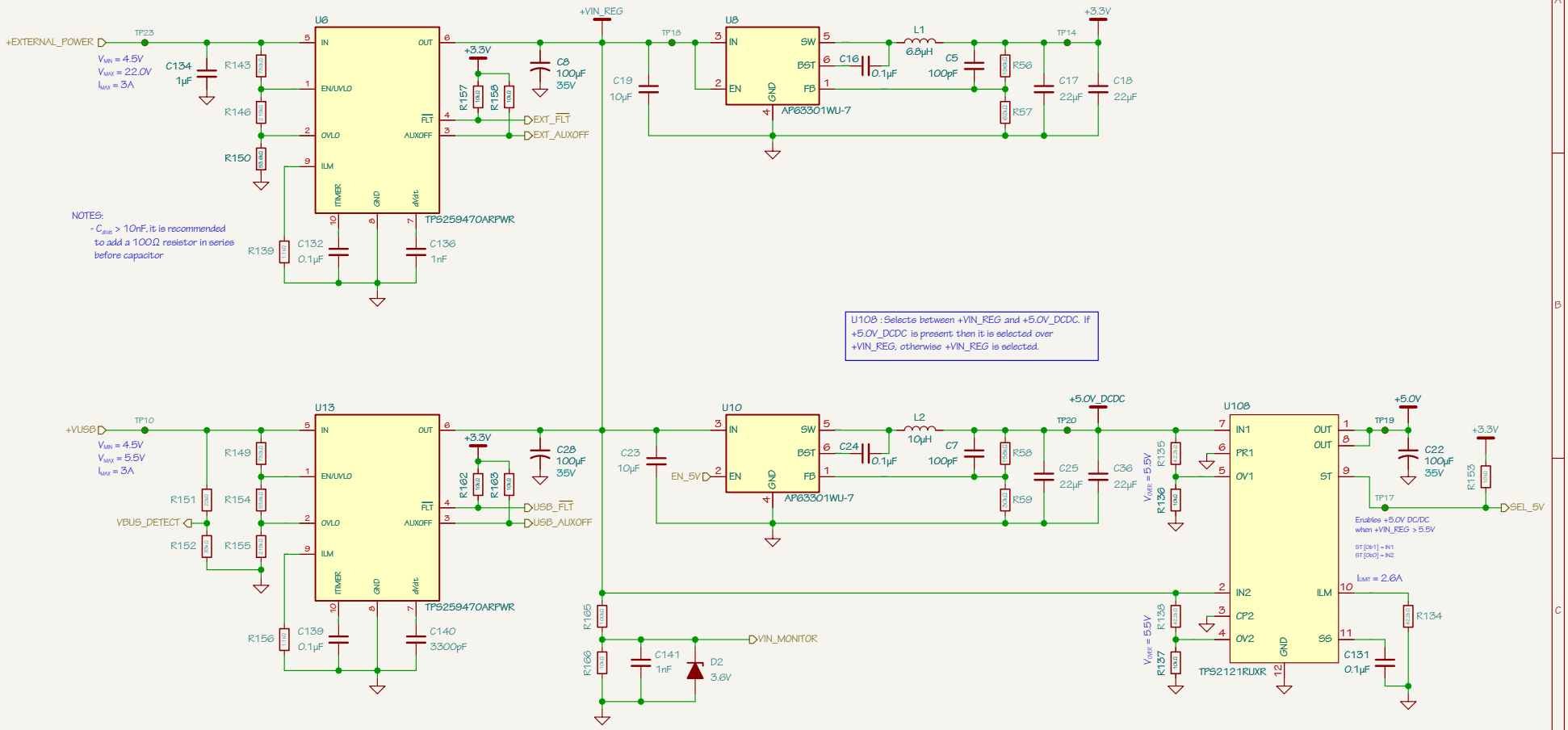
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Title: Phyduino Pico 2		
Size: A	Date: 2026-10-16	Rev: A0
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Path /Power/

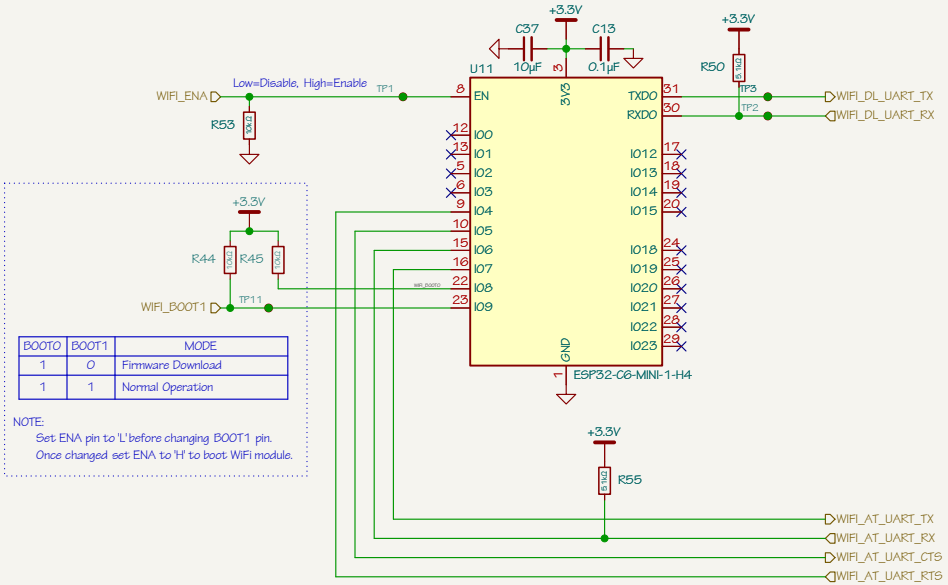


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WiFi Module Interface

Path /Wireless Communication/



BOOT0	BOOT1	MODE
1	0	Firmware Download
1	1	Normal Operation

NOTE:
Set ENA pin to 'L' before changing BOOT1 pin.
Once changed set ENA to 'H' to boot WiFi module.

NOTES:

- To download ESP-AT firmware to ESP32 module use UART0 pins (TXD0 & RXD0).
- Both modules are pin compatiable, either can be used.
- Using ESP-AT as the network interface API.
- GitHub fork repo for ESP-AT: https://github.com/perc-sw/esp-at

ESP32-C61-MINI-1:

- ESP-AT version 5.0.1.0
- Hardware connection guide : https://docs.espressif.com/projects/esp-at/en/latest/esp32c61/Get_Started/Hardware_connection.html

Required Hardware connections

Connection	Pin	Direction
Download/Log RX	RXD0 (GPIO10)	INPUT
Download/Log TX	TXD0 (GPIO11)	OUTPUT
AT command/response RX	IO6 (GPIO6)	INPUT
AT command/response TX	IO7 (GPIO7)	OUTPUT
AT command/response CTS	IO5 (GPIO5)	OUTPUT
AT command/response RTS	IO4 (GPIO6)	INPUT

- 2.4GHz Wi-Fi 6 & BLE 5.0
- **Not for low power applications.**

ESP32-C6-MINI-1:

- ESP-AT version 4.1.1.0
- Hardware connection guide : https://docs.espressif.com/projects/esp-at/en/latest/esp32c6/Get_Started/Hardware_connection.html

Required Hardware connections

Connection	Pin	Direction
Download/Log RX	RXD0 (GPIO17)	INPUT
Download/Log TX	TXD0 (GPIO16)	OUTPUT
AT command/response RX	IO6 (GPIO6)	INPUT
AT command/response TX	IO7 (GPIO7)	OUTPUT
AT command/response CTS	IO5 (GPIO5)	OUTPUT
AT command/response RTS	IO4 (GPIO4)	INPUT

- 2.4GHz Wi-Fi 6 & BLE 5.0

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File: phyduino_pico2_wifi.kicad_sch

Title: Phyduino Pico 2

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