Notes:
LiPo charging is not necessary
12V – 2A barrel power supply comes with camera with pigtail... (Check regulator)
Max enclosure size is 15cm x 8 cm. Will be 3D printed
Will be built by hand with hot air gun. 0804 or 0603 passives
Do we want the headers to be available?
Do we want to remove/set the jumpers?
Use uFL antenna connector or RP–SMA for the 2.4G antenna
Keep LED from ESP board. Put in position to be visible outside enclosure (light pipe?)

Todo:
Clean sheets
Fix annotation
Find where uFL is supposed to be
Create Global labels
Remove MS? designators and extraneous connectors
Check footprints

ESP

File: ../../kicad–import/adafruit–feather/Adafruit ESP32 Feather V2.kicad_sch

Ethernet

File: ../../kicad–import/adafruit–ethernet/Adafruit Ethernet FeatherWing.kicad_sch

RTC

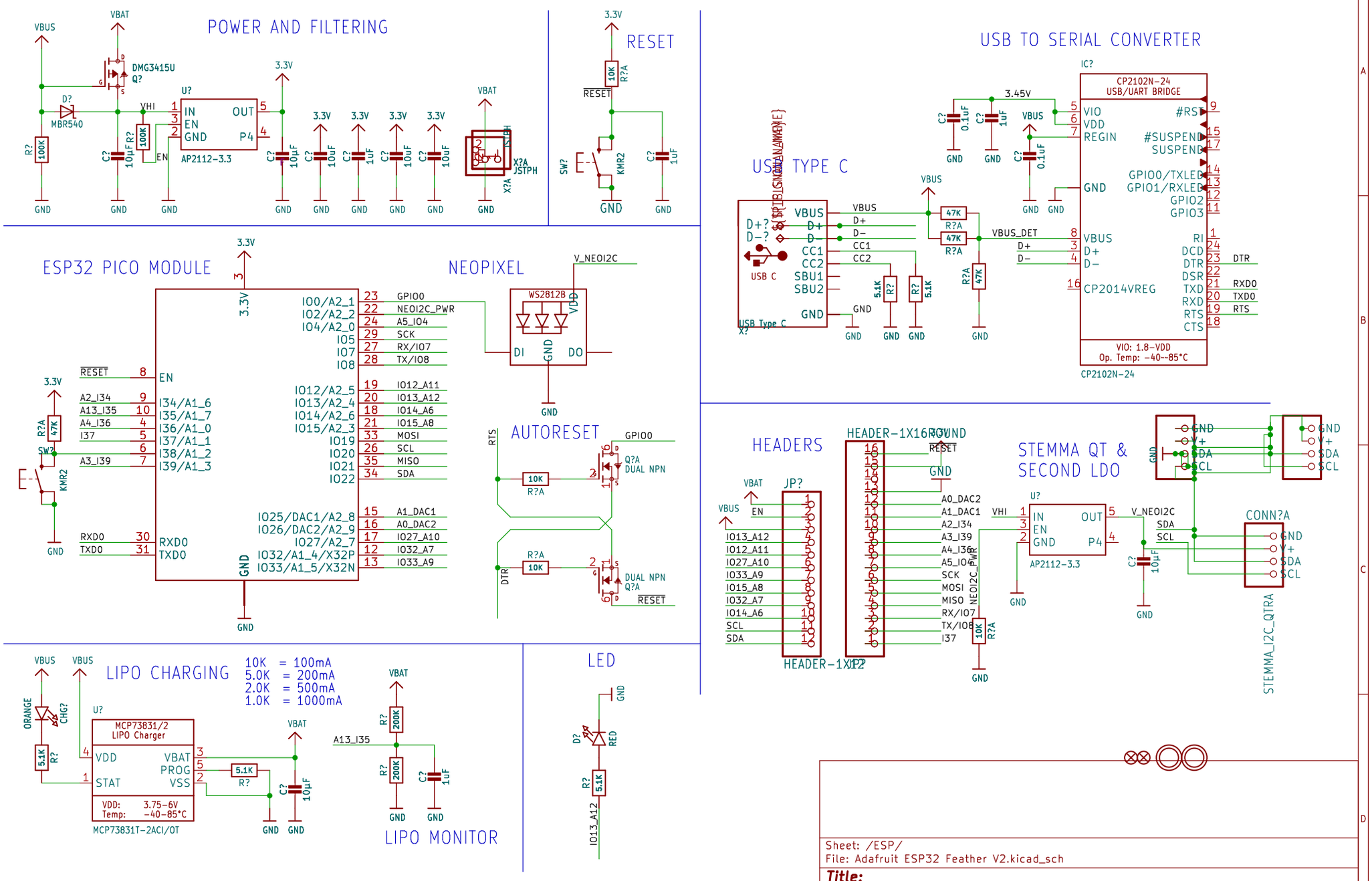
File: ../../kicad–import/adafruit–datalogger/adalogger featherwing.kicad_sch

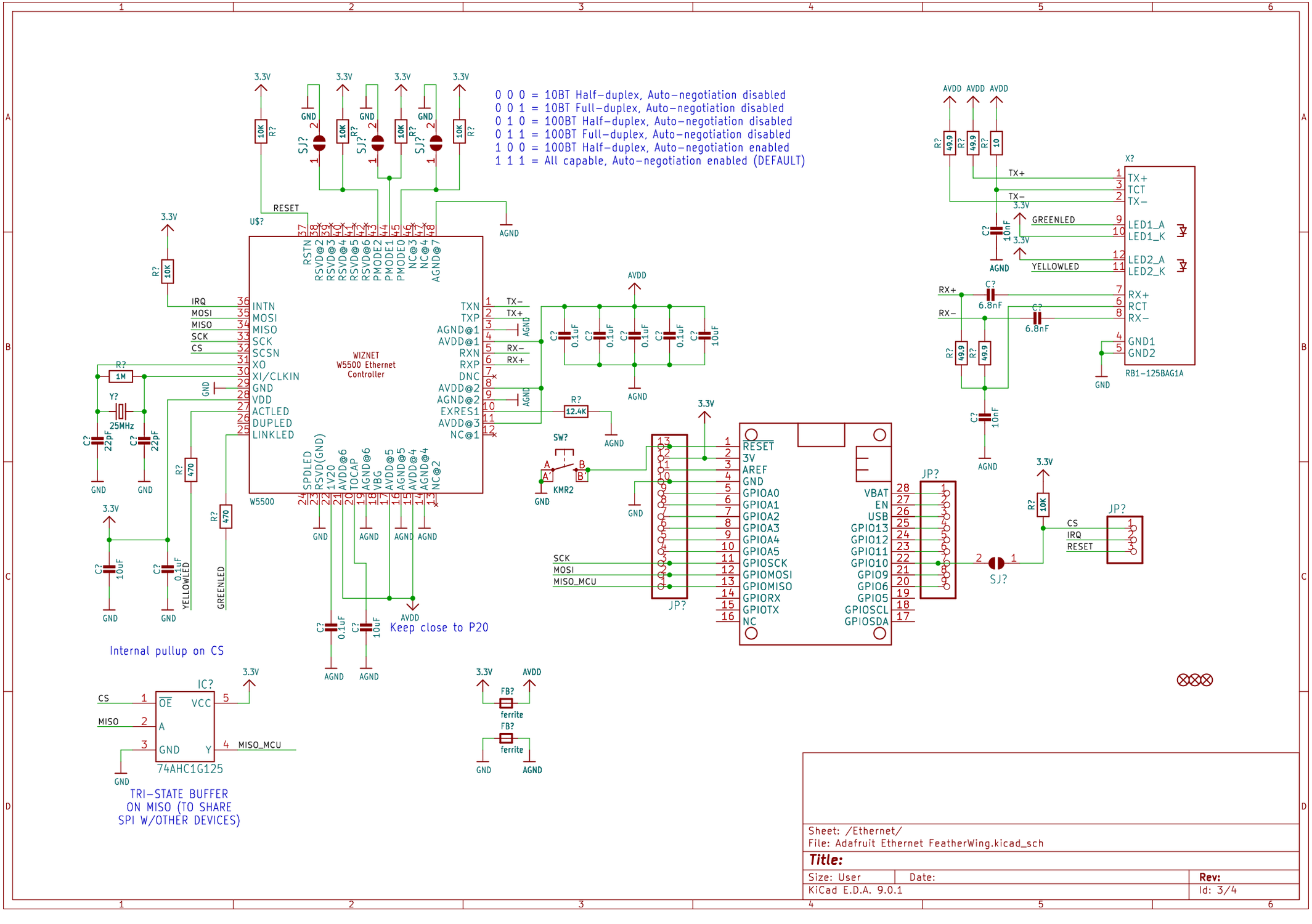
Kingdom Metrics

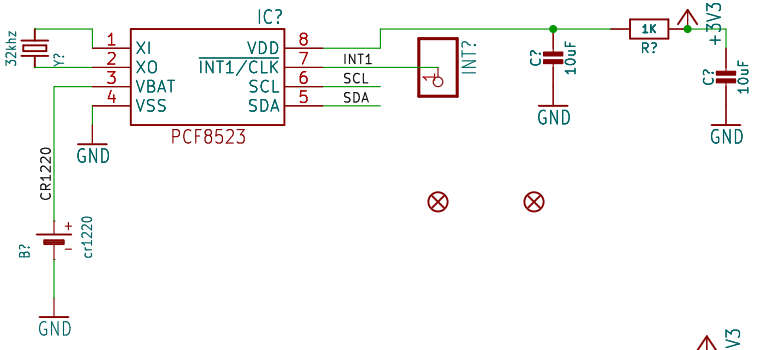
Sheet: /
File: Genesis.kicad_sch

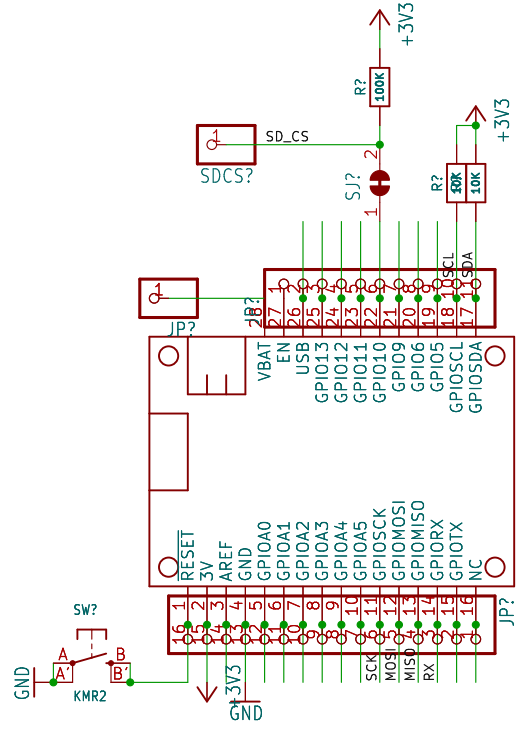
Title: Genesis Board

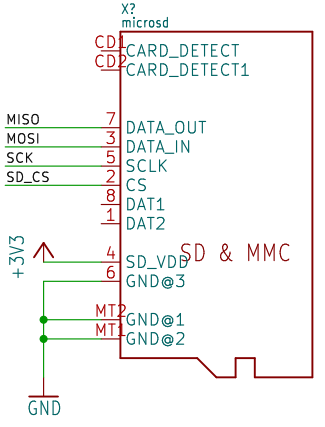
Size: A4	Date: 2025–04–24	**Rev: 0.1**
KiCad E.D.A. 9.0.1		Id: 1/4


POWER AND FILTERING
RESET
USB TO SERIAL CONVERTER
USB TYPE C
ESP32 PICO MODULE
NEOPIXEL
AUTORESET
HEADERS
STEMMA QT &
SECOND LDO
LIPO CHARGING
10K = 100mA
5.0K = 200mA
2.0K = 500mA
1.0K = 1000mA
LIPO MONITOR
LED
DMG3415U
MBR540
AP2112-3.3
CP2102N-24
USB/UART BRIDGE
MCP73831/2
LIPO Charger
MCP73831T-2ACI/OT
WS2812B
HEADER-1X16
HEADER-1X12
Sheet: /ESP/
File: Adafruit ESP32 Feather V2.kicad_sch
Title:
Size: User
Date:
Rev:
KiCad E.D.A. 9.0.1
Id: 2/4


0 0 0 = 10BT Half-duplex, Auto-negotiation disabled
0 0 1 = 10BT Full-duplex, Auto-negotiation disabled
0 1 0 = 100BT Half-duplex, Auto-negotiation disabled
0 1 1 = 100BT Full-duplex, Auto-negotiation disabled
1 0 0 = 100BT Half-duplex, Auto-negotiation enabled
1 1 1 = All capable, Auto-negotiation enabled (DEFAULT)
WIZNET
W5500 Ethernet
Controller
W5500
Keep close to P20
Internal pullup on CS
TRI-STATE BUFFER
ON MISO (TO SHARE
SPI W/OTHER DEVICES)
74AHC1G125
RB1-125BAG1A
Sheet: /Ethernet/
File: Adafruit Ethernet FeatherWing.kicad_sch
Title:
Size: User
Date:
Rev:
KiCad E.D.A. 9.0.1
Id: 3/4







Sheet: /RTC/		
File: adalogger featherwing.kicad_sch		
Title:		
Size: User	Date:	**Rev:**
KiCad E.D.A. 9.0.1		Id: 4/4