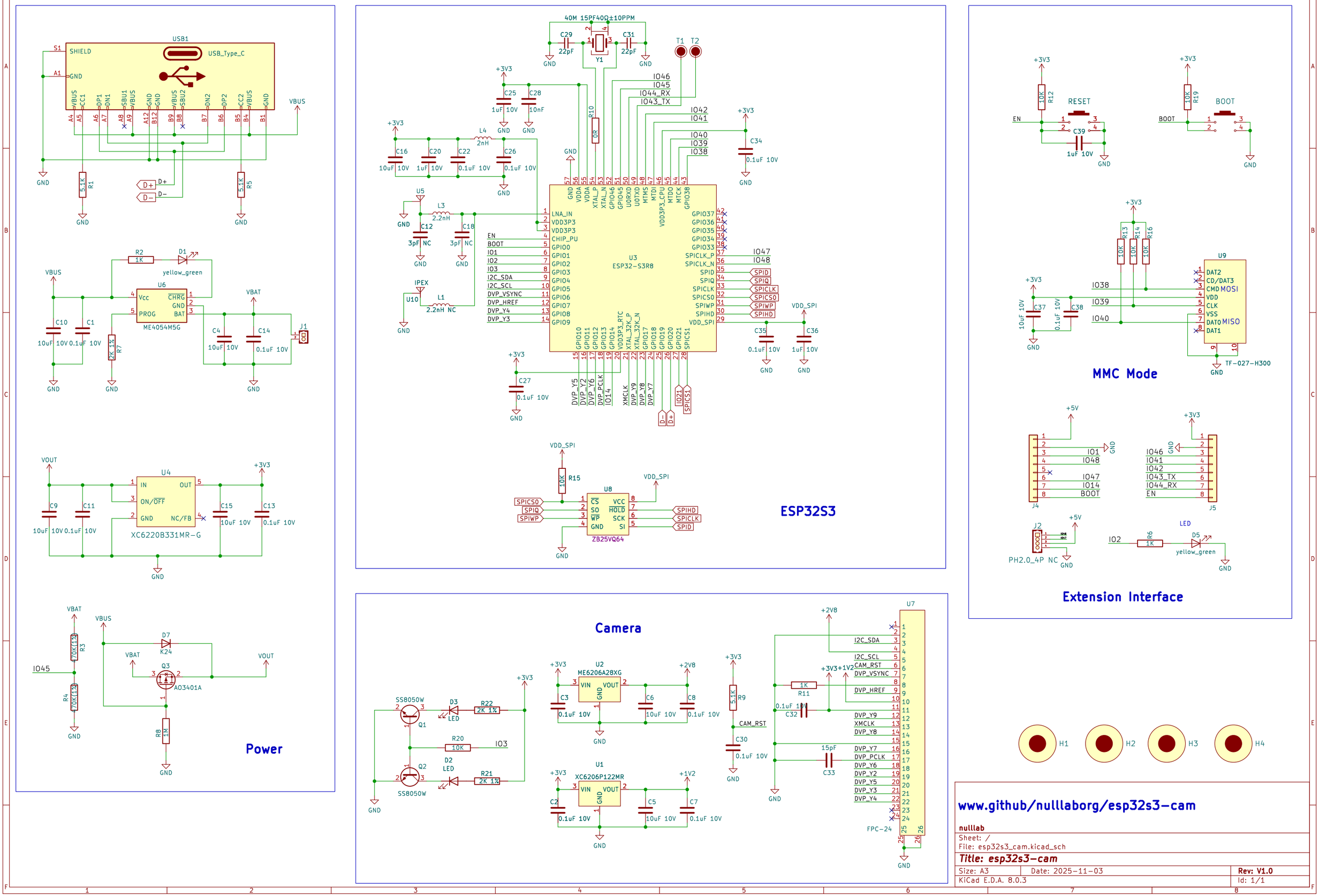
USB1
USB_Type_C
SHIELD
GND
VBUS
R1 5.1K
R5 5.1K
D+
D−
R2 1K
D1 yellow_green
U6
ME4054M5G
Vcc
CHRG
GND
PROG
BAT
C10 10uF 10V
C1 0.1uF 10V
R7 2K 1%
C4 10uF 10V
C14 0.1uF 10V
J1
VBAT
U4
XC6220B331MR-G
IN
OUT
ON/OFF
NC/FB
C9 10uF 10V
C11 0.1uF 10V
C15 10uF 10V
C13 0.1uF 10V
+3V3
VOUT
R3 470K(1%)
R4 470K(1%)
D7 K24
Q3 AO3401A
R8 1M
I045
Power
40M 15PF40Ω±10PPM
Y1
C29 22pF
C31 22pF
T1
T2
C25 1uF 10V
C28 10nF
R10 0R
L4 2nH
C16 10uF 10V
C20 1uF 10V
C22 0.1uF 10V
C26 0.1uF 10V
C34 0.1uF 10V
U5
L3 2.2nH
C12 3pF NC
C18 3pF NC
IPEX
U10
L1 2.2nH NC
U3
ESP32-S3R8
LNA_IN
VDD3P3
CHIP_PU
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
VDD3P3_RTC
XTAL_32K_P
XTAL_32K_N
GPIO17
GPIO18
GPIO19
GPIO20
GPIO21
SPICS1
VDD3P3_CPU
MTDI
MTDO
MTCK
MTMS
UOTXD
UORXD
GPIO45
GPIO46
XTAL_N
XTAL_P
VDDA
GPIO38
GPIO37
GPIO36
GPIO35
GPIO34
GPIO33
SPICLK_P
SPICLK_N
SPID
SPIQ
SPICLK
SPICS0
SPIWP
SPIHD
VDD_SPI
EN
BOOT
I01
I02
I03
I2C_SDA
I2C_SCL
DVP_VSYNC
DVP_HREF
DVP_Y4
DVP_Y3
DVP_Y5
DVP_Y2
DVP_Y6
DVP_PCLK
I014
XMCLK
DVP_Y9
DVP_Y8
DVP_Y7
I046
I045
I044_RX
I043_TX
I042
I041
I040
I039
I038
I047
I048
C35 0.1uF 10V
C36 1uF 10V
C27 0.1uF 10V
R15 10K
U8
ZB25VQ64
CS
SO
WP
GND
VCC
HOLD
SCK
SI
ESP32S3
RESET
BOOT
R12 10K
R19 10K
C39 1uF 10V
R13 10K
R14 10K
R16 10K
U9
TF-027-H300
DAT2
CD/DAT3
CMD MOSI
VDD
CLK
VSS
DAT0 MISO
DAT1
C37 10uF 10V
C38 0.1uF 10V
MMC Mode
J4
J5
J2
PH2.0_4P NC
LED
R6 1K
D5 yellow_green
Extension Interface
H1
H2
H3
H4
Camera
U2
ME6206A28XG
VIN
VOUT
C3 0.1uF 10V
C6 10uF 10V
C8 0.1uF 10V
U1
XC6206P122MR
C2 0.1uF 10V
C5 10uF 10V
C7 0.1uF 10V
+2V8
+1V2
SS8050W
Q1
Q2
D3 LED
D2 LED
R22 2K 1%
R21 2K 1%
R20 10K
R9 5.1K
C30 0.1uF 10V
CAM_RST
R11 1K
C32 0.1uF 10V
C33 15pF
U7
FPC-24
www.github/nulllaborg/esp32s3-cam
nulllab
Sheet: /
File: esp32s3_cam.kicad_sch
Title: esp32s3-cam
Size: A3
Date: 2025-11-03
Rev: V1.0
KiCad E.D.A. 8.0.3
Id: 1/1