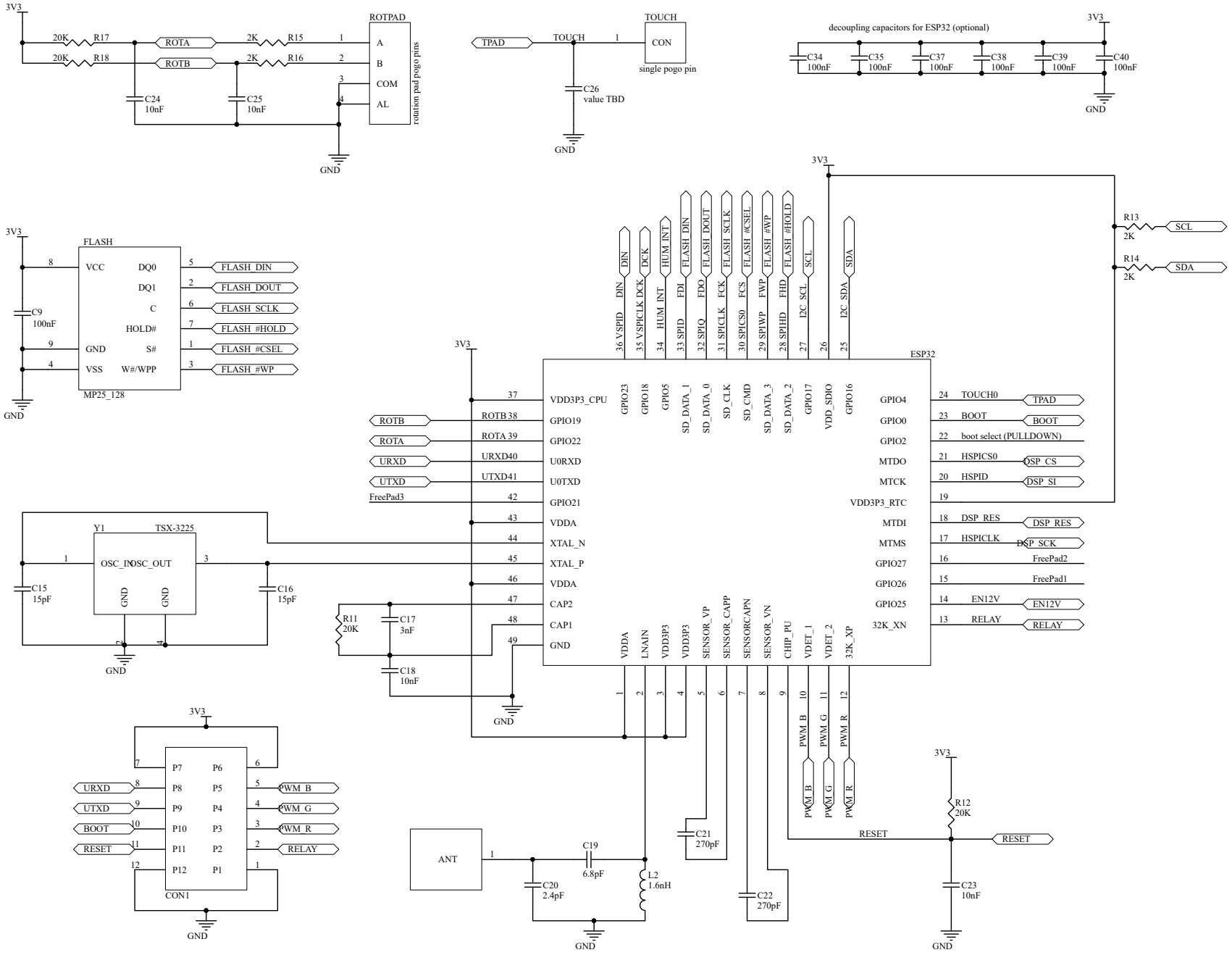
3V3
20K
R17
ROTA
2K
R15
1
A
20K
R18
ROTB
2K
R16
2
B
3
COM
4
AL
ROTPAD
rotation pad pogo pins
C24
10nF
C25
10nF
GND
TPAD
TOUCH
1
CON
TOUCH
single pogo pin
C26
value TBD
GND
decoupling capacitors for ESP32 (optional)
3V3
C34
100nF
C35
100nF
C37
100nF
C38
100nF
C39
100nF
C40
100nF
GND
3V3
FLASH
8
VCC
DQ0
5
FLASH_DIN
DQ1
2
FLASH_DOUT
C
6
FLASH_SCLK
HOLD#
7
FLASH_#HOLD
9
GND
S#
1
FLASH_#CSEL
4
VSS
W#/WPP
3
FLASH_#WP
C9
100nF
MP25_128
GND
3V3
R13
2K
SCL
R14
2K
SDA
DIN
DCK
HUM_INT
FLASH_DIN
FLASH_DOUT
FLASH_SCLK
FLASH_#CSEL
FLASH_#WP
FLASH_#HOLD
SCL
SDA
36 VSPID
35 VSPICLK
34 HUM_INT
33 SPID
32 SPIQ
31 SPICLK
30 SPICS0
29 SPIWP
28 SPIHD
27 I2C_SCL
26
25 I2C_SDA
3V3
ESP32
37
VDD3P3_CPU
GPIO23
GPIO4
24
TOUCH0
TPAD
ROTB
38
GPIO19
GPIO18
GPIO0
23
BOOT
BOOT
ROTA
39
GPIO22
GPIO5
GPIO2
22
boot select (PULLDOWN)
URXD
40
U0RXD
SD_DATA_1
MTDO
21
HSPICS0
DSP_CS
UTXD
41
U0TXD
SD_DATA_0
MTCK
20
HSPID
DSP_SI
FreePad3
42
GPIO21
SD_CLK
VDD3P3_RTC
19
43
VDDA
SD_CMD
MTDI
18
DSP_RES
DSP_RES
44
XTAL_N
SD_DATA_3
MTMS
17
HSPICLK
DSP_SCK
45
XTAL_P
SD_DATA_2
GPIO27
16
FreePad2
46
VDDA
GPIO17
GPIO26
15
FreePad1
47
CAP2
VDD_SDIO
GPIO25
14
EN12V
EN12V
48
CAP1
GPIO16
32K_XN
13
RELAY
RELAY
49
GND
Y1
TSX-3225
1
OSC_IN
OSC_OUT
3
GND
GND
2
4
C15
15pF
C16
15pF
GND
R11
20K
C17
3nF
C18
10nF
GND
VDDA
LNAIN
VDD3P3
VDD3P3
SENSOR_VP
SENSOR_CAPP
SENSORCAPN
SENSOR_VN
CHIP_PU
VDET_1
VDET_2
32K_XP
1
2
3
4
5
6
7
8
9
10
11
12
PWM_B
PWM_G
PWM_R
3V3
P7
P6
7
6
URXD
8
P8
P5
5
PWM_B
UTXD
9
P9
P4
4
PWM_G
BOOT
10
P10
P3
3
PWM_R
RESET
11
P11
P2
2
RELAY
12
P12
P1
1
CON1
GND
ANT
1
C19
6.8pF
C20
2.4pF
L2
1.6nH
GND
C21
270pF
C22
270pF
RESET
3V3
R12
20K
RESET
C23
10nF
GND