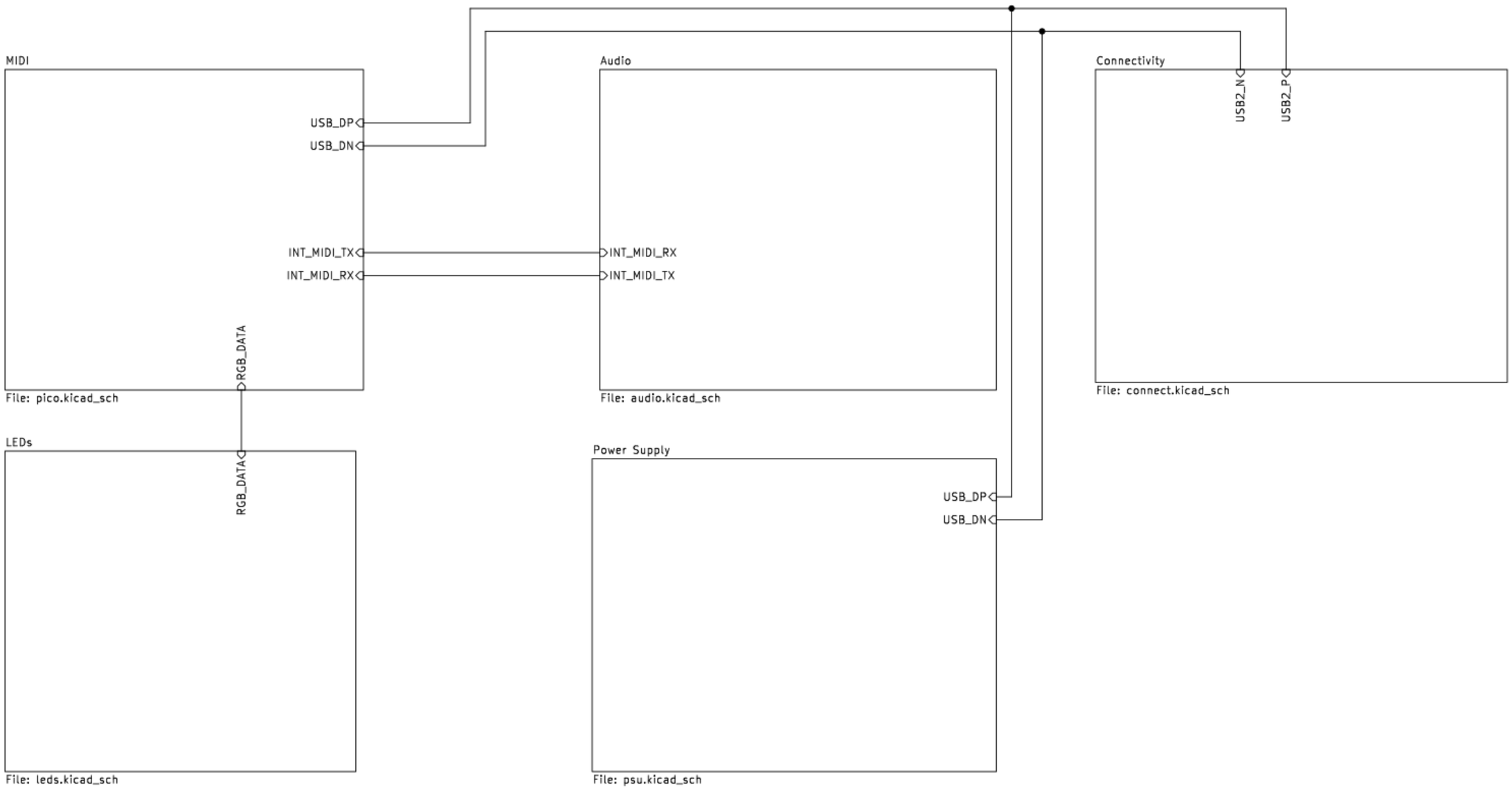
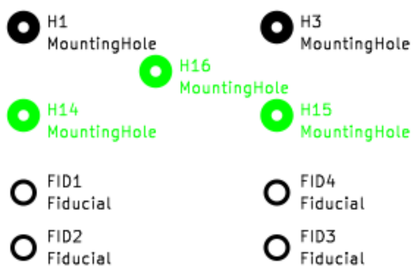
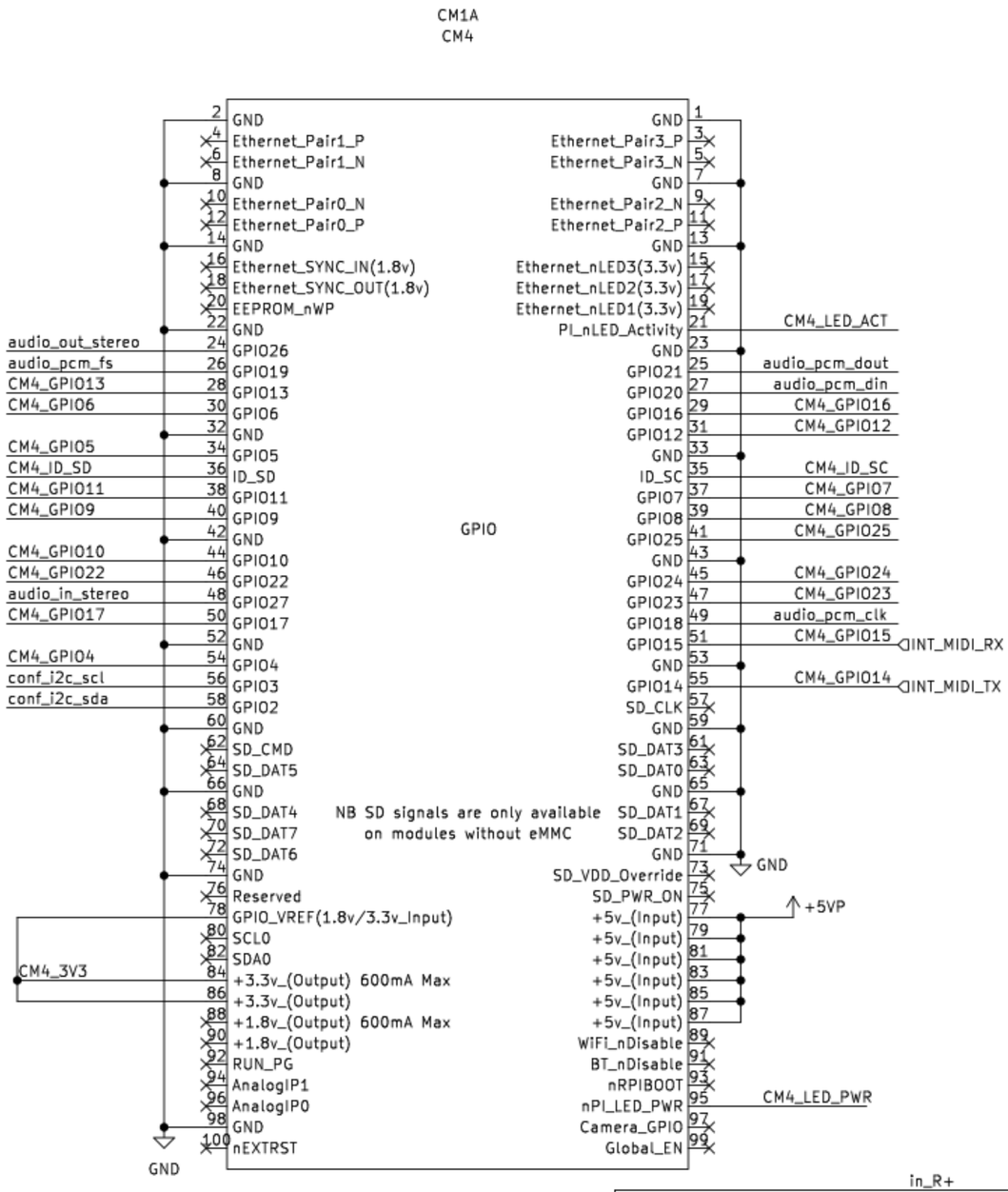
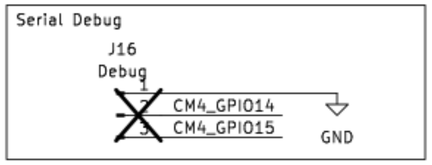
/

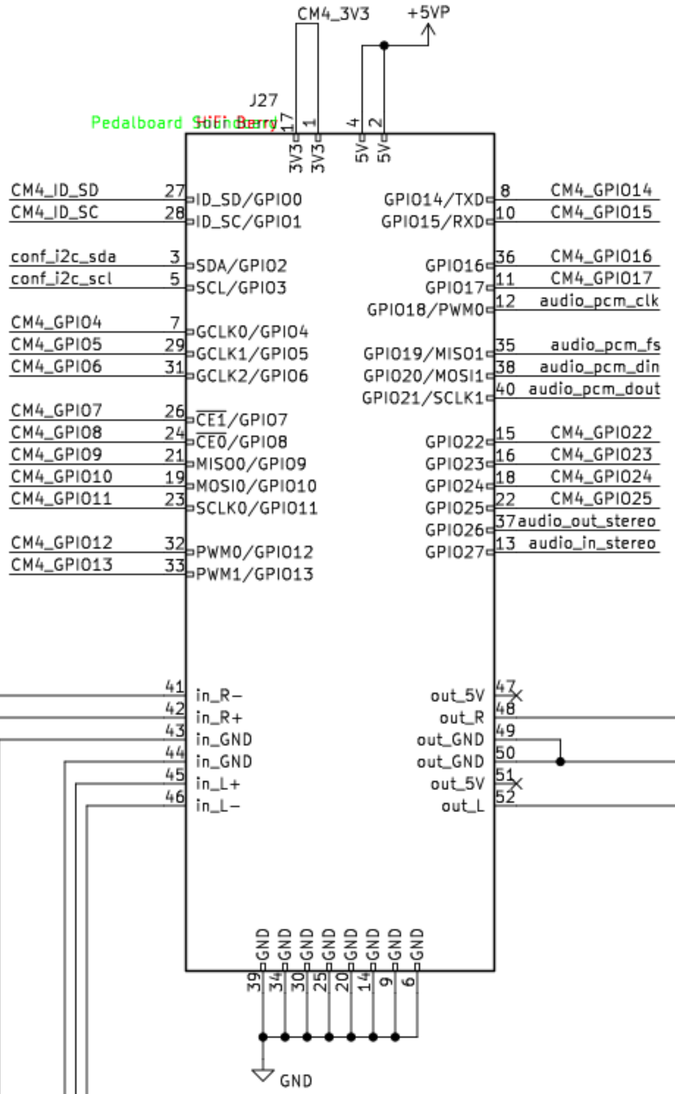

MIDI
USB_DP
USB_DN
INT_MIDI_TX
INT_MIDI_RX
RGB_DATA
File: pico.kicad_sch
Audio
INT_MIDI_RX
INT_MIDI_TX
File: audio.kicad_sch
Connectivity
USB2_N
USB2_P
File: connect.kicad_sch
LEDs
RGB_DATA
File: leds.kicad_sch
Power Supply
USB_DP
USB_DN
File: psu.kicad_sch

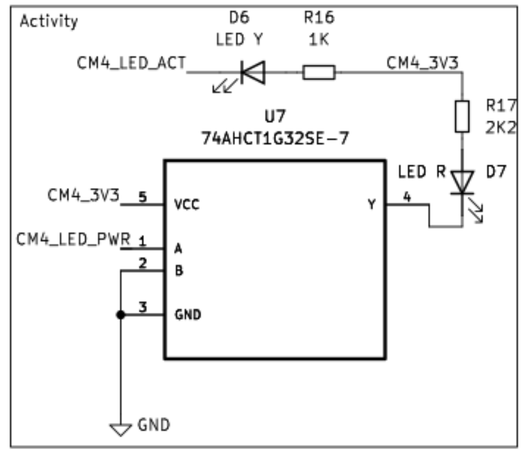

H1
MountingHole
H3
MountingHole
H16
MountingHole
H14
MountingHole
H15
MountingHole
FID1
Fiducial
FID4
Fiducial
FID2
Fiducial
FID3
Fiducial

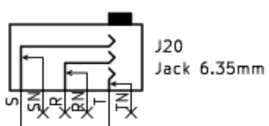
# /Audio

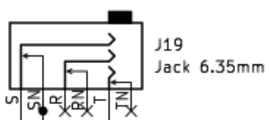

CM1A
CM4
GPIO
NB SD signals are only available on modules without eMMC
GND
Ethernet_Pair1_P
Ethernet_Pair1_N
Ethernet_Pair0_N
Ethernet_Pair0_P
Ethernet_SYNC_IN(1.8v)
Ethernet_SYNC_OUT(1.8v)
EEPROM_nWP
GPIO26
GPIO19
GPIO13
GPIO6
GPIO5
ID_SD
GPIO11
GPIO9
GPIO10
GPIO22
GPIO27
GPIO17
GPIO4
GPIO3
GPIO2
SD_CMD
SD_DAT5
SD_DAT4
SD_DAT7
SD_DAT6
Reserved
GPIO_VREF(1.8v/3.3v_Input)
SCL0
SDA0
+3.3v_(Output) 600mA Max
+3.3v_(Output)
+1.8v_(Output) 600mA Max
+1.8v_(Output)
RUN_PG
AnalogIP1
AnalogIP0
nEXTRST
Ethernet_Pair3_P
Ethernet_Pair3_N
Ethernet_Pair2_N
Ethernet_Pair2_P
Ethernet_nLED3(3.3v)
Ethernet_nLED2(3.3v)
Ethernet_nLED1(3.3v)
PI_nLED_Activity
GPIO21
GPIO20
GPIO16
GPIO12
ID_SC
GPIO7
GPIO8
GPIO25
GPIO24
GPIO23
GPIO18
GPIO15
GPIO14
SD_CLK
SD_DAT3
SD_DAT0
SD_DAT1
SD_DAT2
SD_VDD_Override
SD_PWR_ON
+5v_(Input)
WiFi_nDisable
BT_nDisable
nRPIBOOT
nPI_LED_PWR
Camera_GPIO
Global_EN
CM4_LED_ACT
audio_pcm_dout
audio_pcm_din
CM4_GPIO16
CM4_GPIO12
CM4_ID_SC
CM4_GPIO7
CM4_GPIO8
CM4_GPIO25
CM4_GPIO24
CM4_GPIO23
audio_pcm_clk
CM4_GPIO15
INT_MIDI_RX
CM4_GPIO14
INT_MIDI_TX
+5VP
CM4_LED_PWR
CM4_3V3

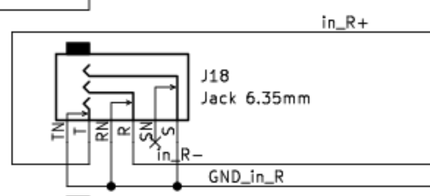

Serial Debug
J16
Debug
CM4_GPIO14
CM4_GPIO15
GND

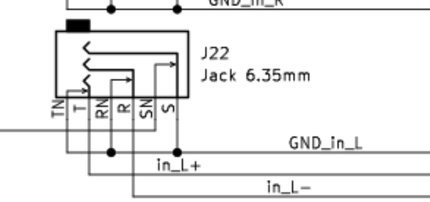

CM4_3V3
+5VP
J27
Pedalboard Switching
3V3
5V
CM4_ID_SD
CM4_ID_SC
conf_i2c_sda
conf_i2c_scl
CM4_GPIO4
CM4_GPIO5
CM4_GPIO6
CM4_GPIO7
CM4_GPIO8
CM4_GPIO9
CM4_GPIO10
CM4_GPIO11
CM4_GPIO12
CM4_GPIO13
ID_SD/GPIO0
ID_SC/GPIO1
SDA/GPIO2
SCL/GPIO3
GCLK0/GPIO4
GCLK1/GPIO5
GCLK2/GPIO6
CE1/GPIO7
CE0/GPIO8
MISO0/GPIO9
MOSI0/GPIO10
SCLK0/GPIO11
PWM0/GPIO12
PWM1/GPIO13
GPIO14/TXD
GPIO15/RXD
GPIO16
GPIO17
GPIO18/PWM0
GPIO19/MISO1
GPIO20/MOSI1
GPIO21/SCLK1
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26
GPIO27
in_R−
in_R+
in_GND
in_GND
in_L+
in_L−
out_5V
out_R
out_GND
out_GND
out_5V
out_L
GND

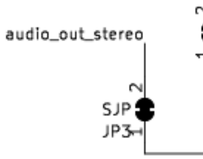

Activity
D6
LED Y
R16
1K
CM4_LED_ACT
CM4_3V3
R17
2K2
U7
74AHCT1G32SE−7
LED R
D7
CM4_3V3
VCC
Y
CM4_LED_PWR
A
B
GND
GND

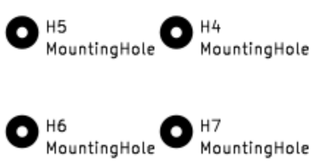

J20
Jack 6.35mm
S
SN
R
RN
T
TN


J19
Jack 6.35mm
S
SN
R
RN
T
TN


J18
Jack 6.35mm
TN
T
RN
R
SN
S
in_R+
in_R−
GND_in_R

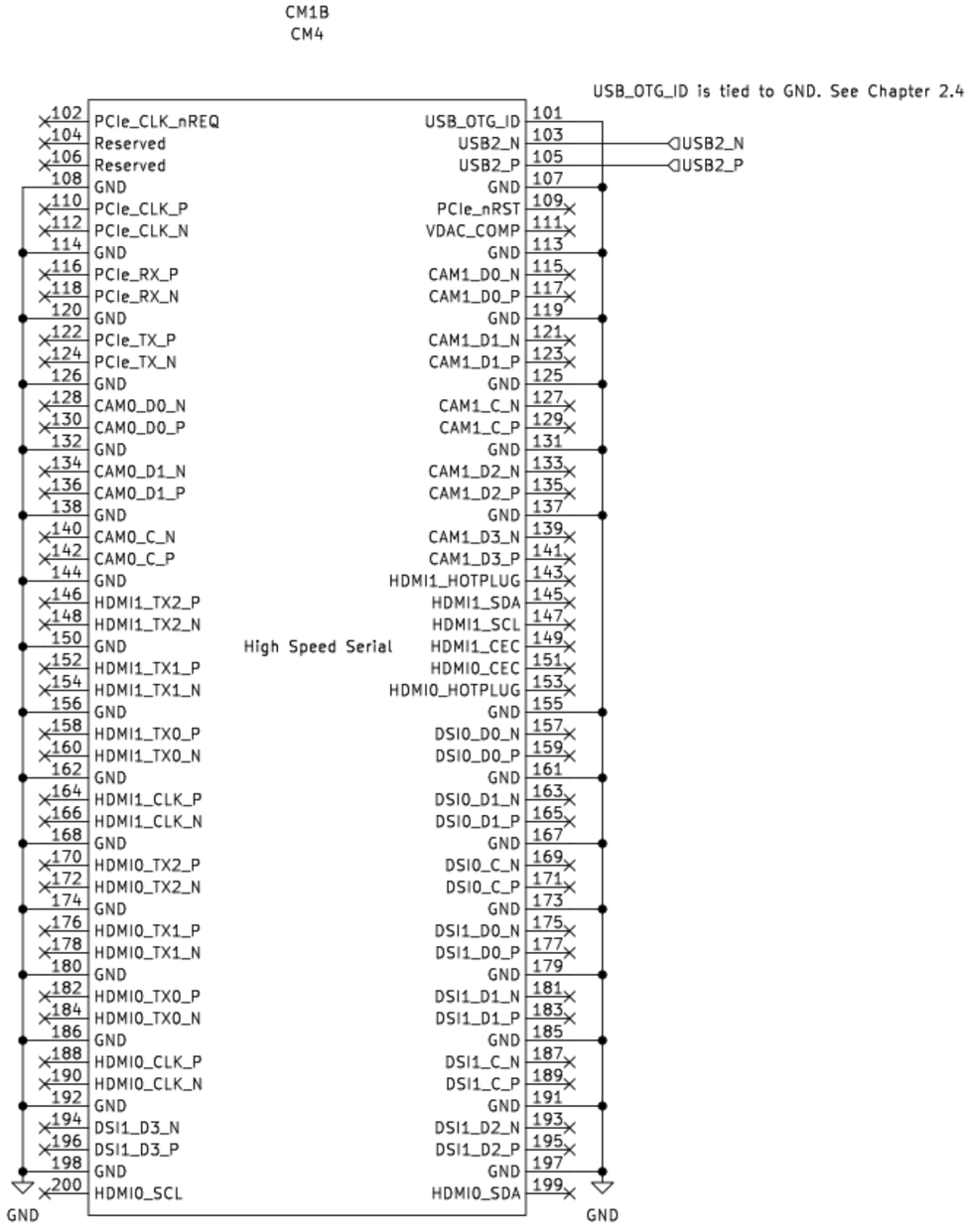

J22
Jack 6.35mm
TN
T
RN
R
SN
S
GND_in_L
in_L+
in_L−


audio_in_stereo
SJP
JP4
audio_out_stereo
SJP
JP3

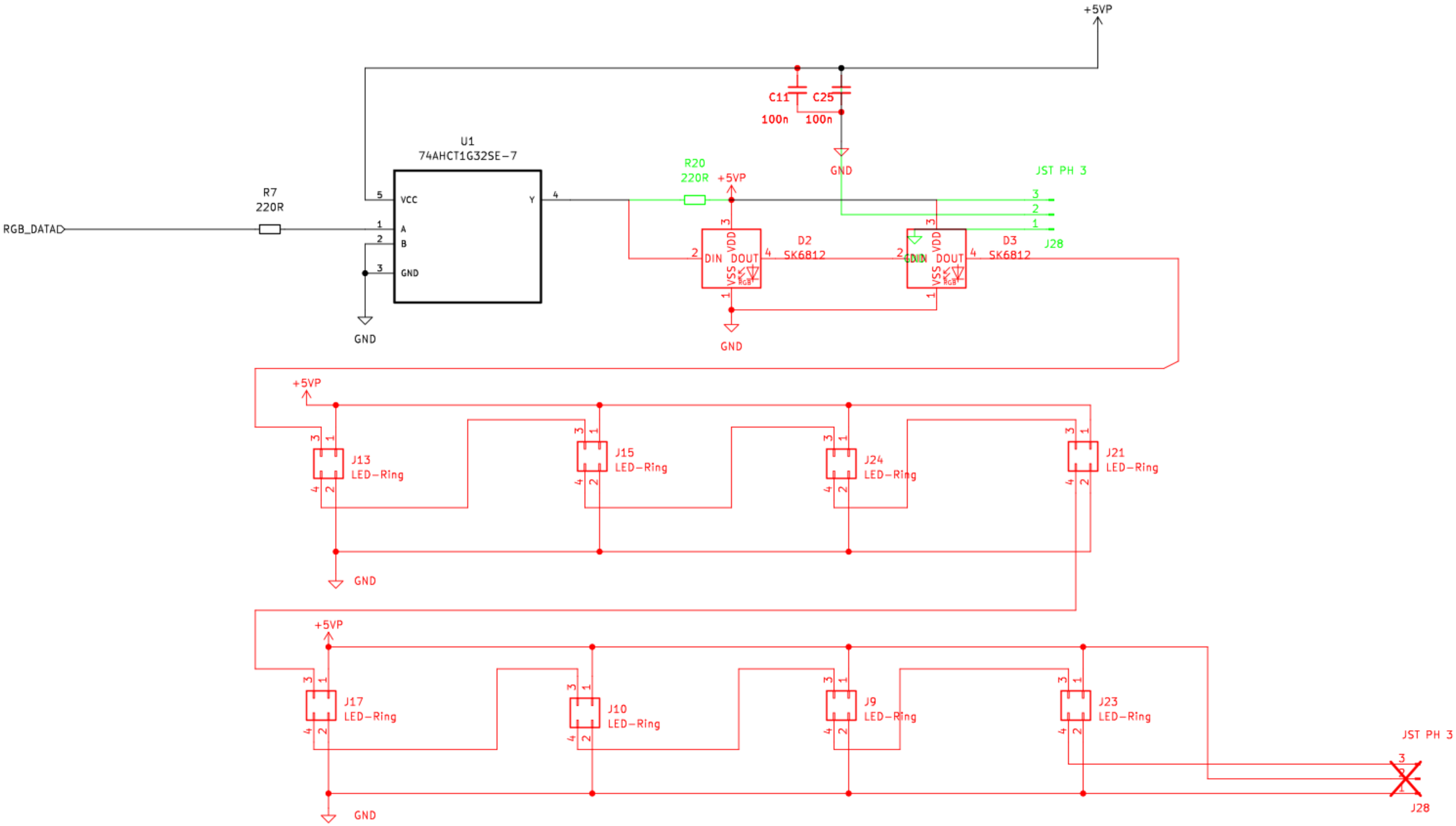

H5
MountingHole
H4
MountingHole
H6
MountingHole
H7
MountingHole


GND_out

/Connectivity

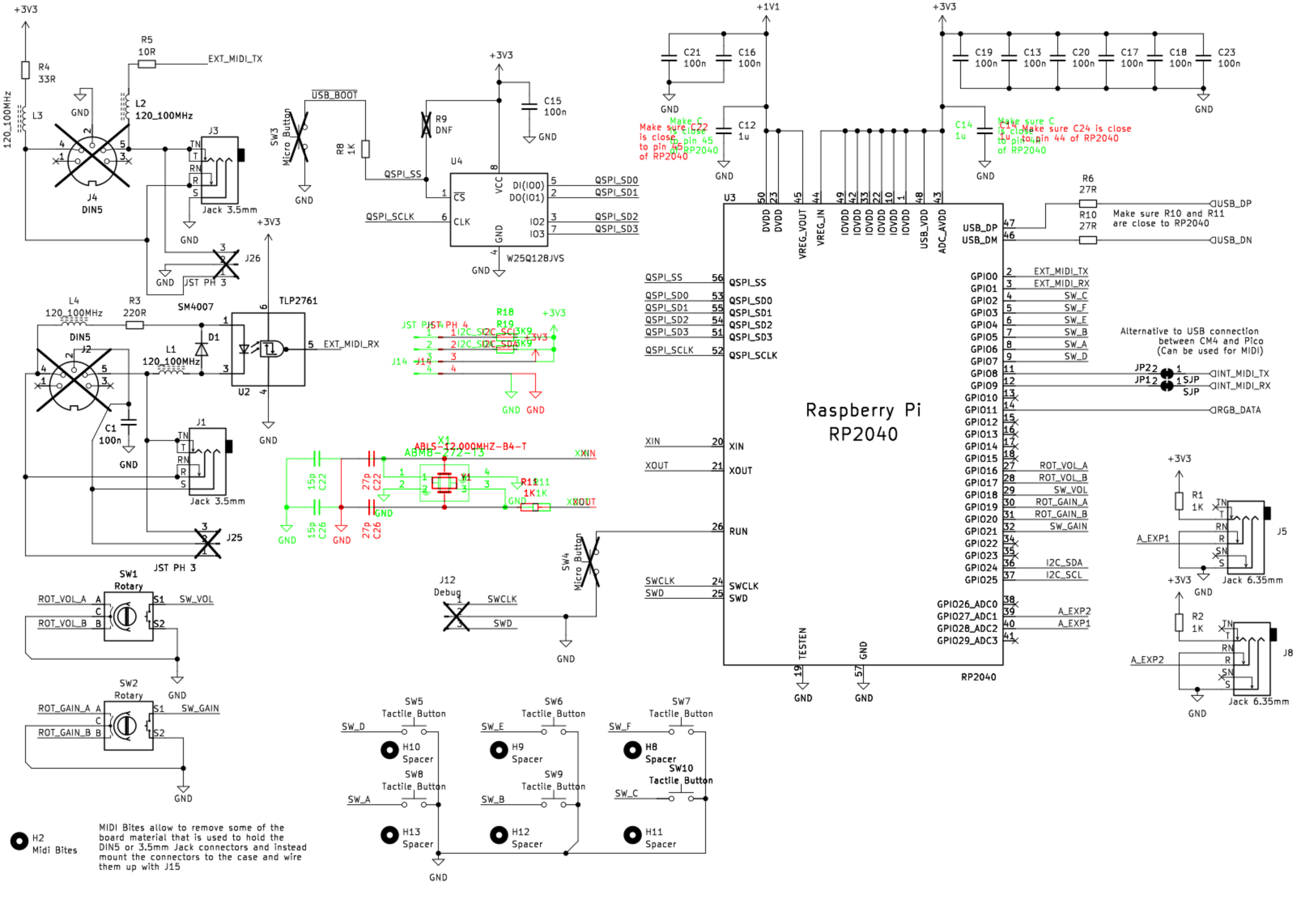
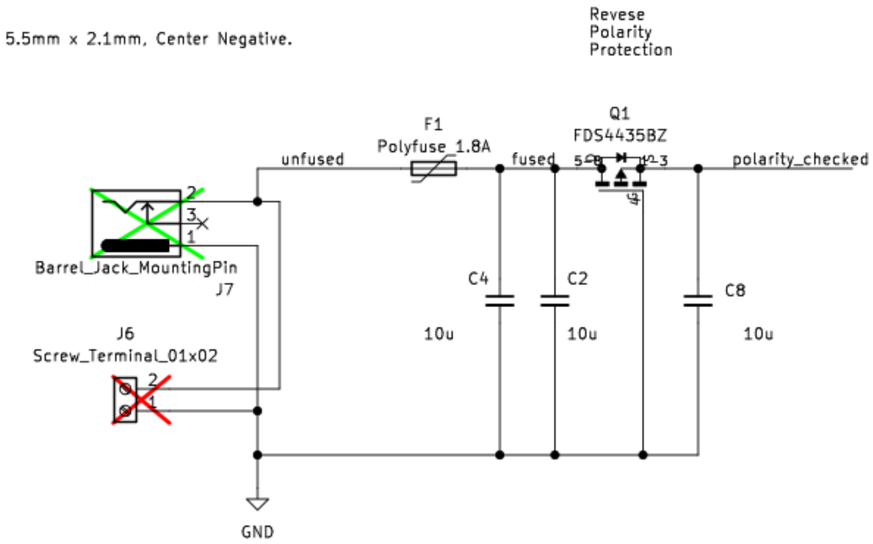
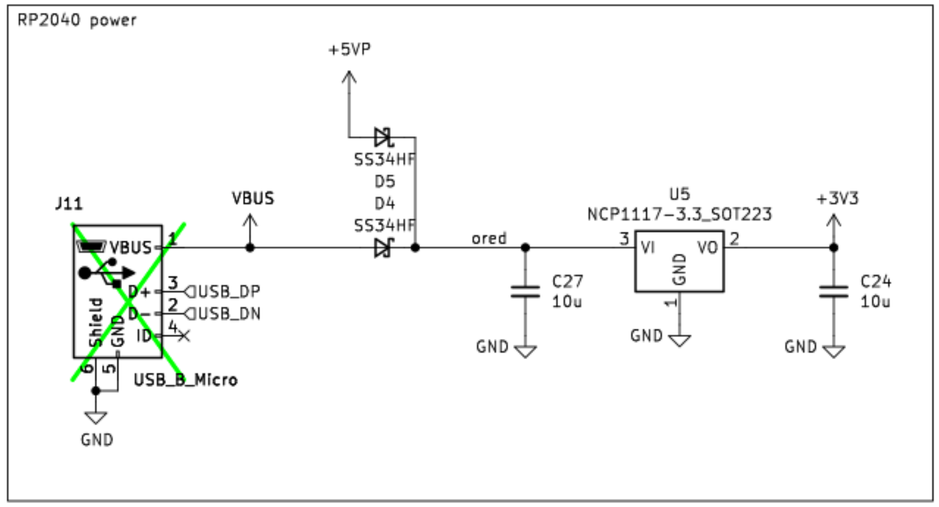
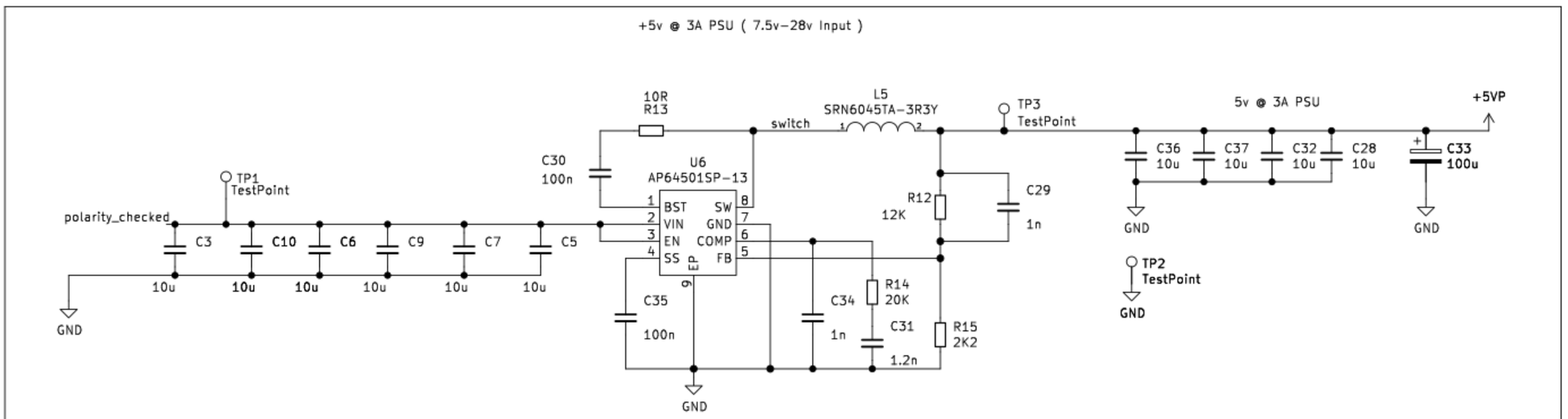


# /LEDs




Either the single LEDs or the LED rings can be populated.

# /MIDI


+3V3
R5
10R
EXT_MIDI_TX
R4
33R
L3
120_100MHz
GND
L2
120_100MHz
J3
TN
T
RN
R
S
J4
DIN5
Jack 3.5mm
USB_BOOT
SW3
Micro Button
R8
1K
R9
DNF
C15
100n
U4
QSPI_SS
QSPI_SCLK
CS
CLK
VCC
GND
DI(IO0)
DO(IO1)
IO2
IO3
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
W25Q128JVS
J26
JST PH 3
L4
120_100MHz
R3
220R
SM4007
D1
TLP2761
U2
L1
120_100MHz
J2
DIN5
C1
100n
J1
Jack 3.5mm
J25
JST PH 3
EXT_MIDI_RX
JST PH 4
R18
R19
3K9
I2C_SCL
I2C_SDA
J14
GND GND
X1
ABLS-12.000MHZ-B4-T
ABM8-272-T3
15p C22
27p C22
15p C26
27p C26
R11
1K
XIN
XOUT
+1V1
C21
100n
C16
100n
C12
1u
Make sure C12 is close to pin 45 of RP2040
C19
100n
C13
100n
C20
100n
C17
100n
C18
100n
C23
100n
C14
1u
Make sure C14 is close to pin 44 of RP2040
U3
DVDD
VREG_VOUT
VREG_IN
IOVDD
USB_VDD
ADC_AVDD
USB_DP
USB_DM
R6
27R
R10
27R
Make sure R10 and R11 are close to RP2040
USB_DP
USB_DN
QSPI_SS
QSPI_SD0
QSPI_SD1
QSPI_SD2
QSPI_SD3
QSPI_SCLK
XIN
XOUT
RUN
SWCLK
SWD
TESTEN
GPIO0
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
GPIO13
GPIO14
GPIO15
GPIO16
GPIO17
GPIO18
GPIO19
GPIO20
GPIO21
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26_ADC0
GPIO27_ADC1
GPIO28_ADC2
GPIO29_ADC3
EXT_MIDI_TX
EXT_MIDI_RX
SW_C
SW_F
SW_E
SW_B
SW_A
SW_D
Alternative to USB connection between CM4 and Pico (Can be used for MIDI)
JP22
JP12
SJP
INT_MIDI_TX
INT_MIDI_RX
RGB_DATA
ROT_VOL_A
ROT_VOL_B
SW_VOL
ROT_GAIN_A
ROT_GAIN_B
SW_GAIN
I2C_SDA
I2C_SCL
A_EXP2
A_EXP1
RP2040
Raspberry Pi
RP2040
SW1
Rotary
SW2
Rotary
J12
Debug
SWCLK
SWD
SW4
Micro Button
R1
1K
R2
1K
J5
J8
Jack 6.35mm
SW5
Tactile Button
SW6
Tactile Button
SW7
Tactile Button
SW8
Tactile Button
SW9
Tactile Button
SW10
Tactile Button
H8
Spacer
H9
Spacer
H10
Spacer
H11
Spacer
H12
Spacer
H13
Spacer
H2
Midi Bites
MIDI Bites allow to remove some of the board material that is used to hold the DIN5 or 3.5mm Jack connectors and instead mount the connectors to the case and wire them up with J15

# /Power Supply