Raspberry Pi Pico 4 Port DNVT (Digital Non-secure Voice Terminal) Switch

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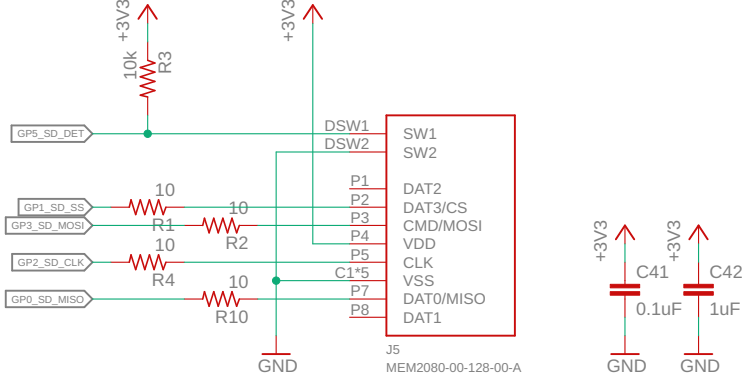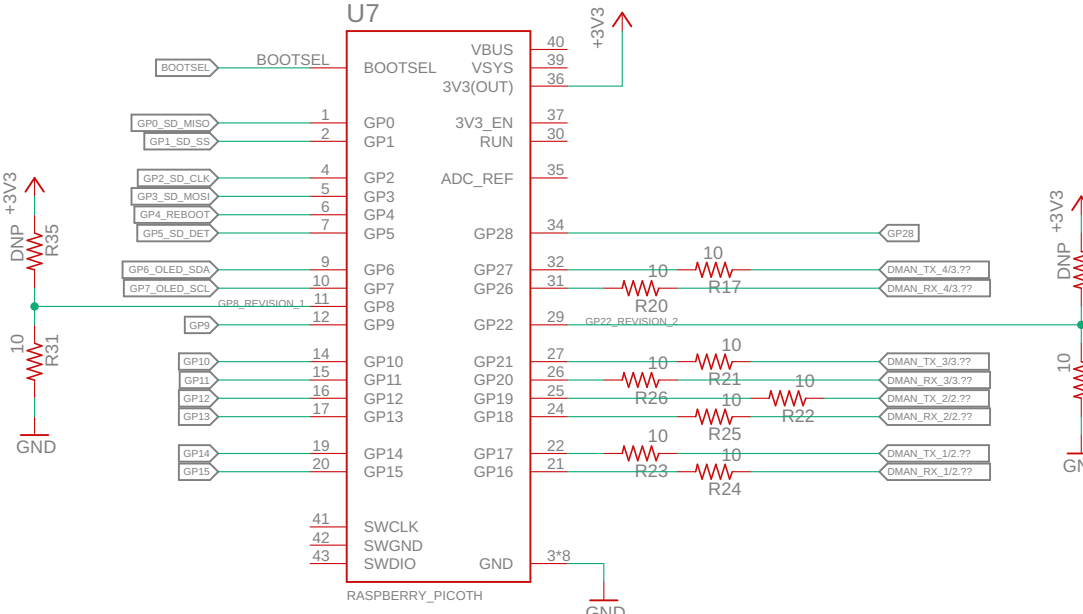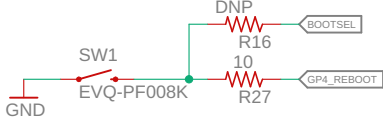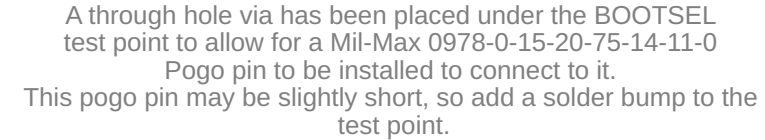
Bootloader Select Switch

Revision Strapping

Raspberry Pi Pico

Revision Strapping

uSD Card Slot

A through hole via has been placed under the BOOTSEL test point to allow for a Mil-Max 0978-0-15-20-75-14-11-0 Pogo pin to be installed to connect to it.
This pogo pin may be slightly short, so add a solder bump to the test point.

By default, the BOOTSEL pogo pin is not used and instead software must monitor GP4 to trigger reboot into USB bootloader mode.

SW1
EVQ-PF008K
DNP
R16
10
R27
GND
BOOTSEL
GP4_REBOOT

U7 RASPBERRY_PICOTH

Pin	Name	Name	Pin
	BOOTSEL	VBUS	40
		VSYS	39
		3V3(OUT)	36
1	GP0	3V3_EN	37
2	GP1	RUN	30
4	GP2	ADC_REF	35
5	GP3		
6	GP4		
7	GP5	GP28	34
9	GP6	GP27	32
10	GP7	GP26	31
11	GP8	GP22	29
12	GP9		
14	GP10	GP21	27
15	GP11	GP20	26
16	GP12	GP19	25
17	GP13	GP18	24
19	GP14	GP17	22
20	GP15	GP16	21
41	SWCLK		
42	SWGND		
43	SWDIO	GND	3*8

BOOTSEL
GP0_SD_MISO
GP1_SD_SS
GP2_SD_CLK
GP3_SD_MOSI
GP4_REBOOT
GP5_SD_DET
GP6_OLED_SDA
GP7_OLED_SCL
GP8_REVISION_1
GP9
GP10
GP11
GP12
GP13
GP14
GP15

GP28
GP22_REVISION_2

DMAN_TX_4/3.?? R17 10 R20 10
DMAN_RX_4/3.??
DMAN_TX_3/3.?? R21 10
DMAN_RX_3/3.?? R26 10 R22 10
DMAN_TX_2/2.?? R25 10
DMAN_RX_2/2.??
DMAN_TX_1/2.?? R23 10 R24 10
DMAN_RX_1/2.??

+3V3
DNP R35 +3V3
10 R31
GND

DNP R30 +3V3
10 R28
GND

GND

uSD Card Slot

10k +3V3 R3
+3V3

GP5_SD_DET
DSW1 SW1
DSW2 SW2
P1 DAT2
P2 DAT3/CS
P3 CMD/MOSI
P4 VDD
P5 CLK
P7 VSS
P7 DAT0/MISO
P8 DAT1

GP1_SD_SS 10 R1
GP3_SD_MOSI 10 R2
GP2_SD_CLK 10 R4
GP5 C1*5
GP0_SD_MISO 10 R10

J5
MEM2080-00-128-00-A
GND

+3V3 +3V3
C41 C42
0.1uF 1uF
GND GND

External Expansion Header

+3V3
JP1
GP10 1 2
GP12 3 4 GP9
GP15 5 6 GP11
GND

Configuration DIP Switch

SW2
GP15 5
GP14 6 4
GP7 7 3
GP2B 8 2
1
GND

OLED Screen Header

10k +3V3 R9
10k R15
+3V3

JP3
1
2
3
4
GP7_OLED_SCL
GP6_OLED_SDA
GND

Supply Protection

V+
CR1 ES1JFL
R29 10
C40 1uF
CR2 ES1JFL
PE

48V DC Barrel Jack

1 V+
3 NO
2 GND
J4
G-1005B
PE PE

6-32 Screw Grounding Leg

J3
8190
PE

Ground Couping

C16 1nF
C38 DNP
C39 DNP
R8 1M
GND PE
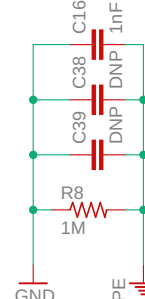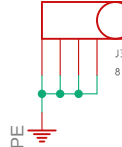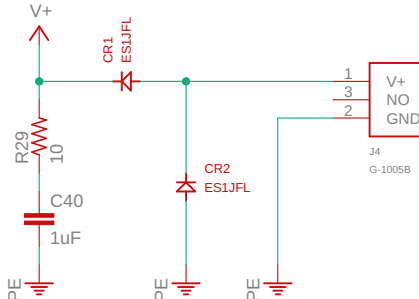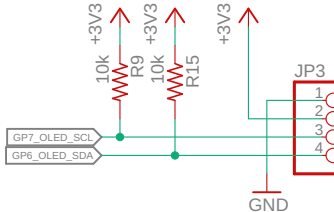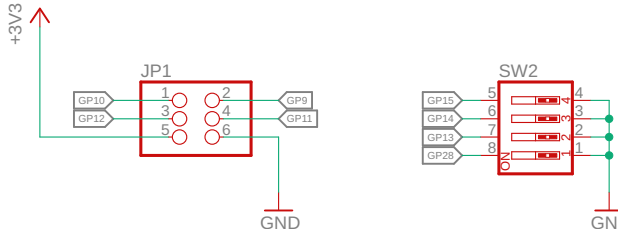
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DNVT Line Interface
Phones 1&2

Raspberry Pi Pico 4 Port DNVT (Digital Non-secure Voice Terminal) Switch

DNVT Line Interface
Phones 3&4