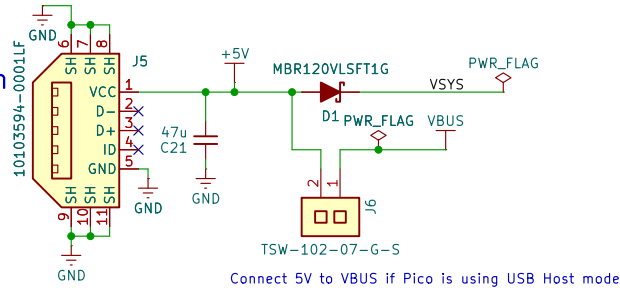
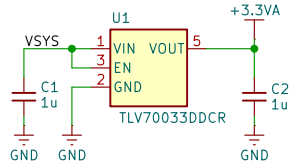


Power Options:
1) Connect J5 to 5V uUSB power supply. This provides power for this board & Pico, via diode D1 to VSYS.
2) Connect uUSB power supply to Pico directly. VSYS will then power this board.
N.B. If USB Host functionality is required on Pico, then use option 1, and also fit Jumper J6 to provide VBUS for Pico.

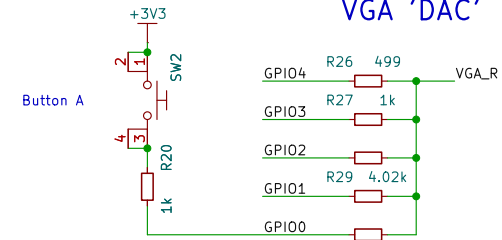
5V Power In



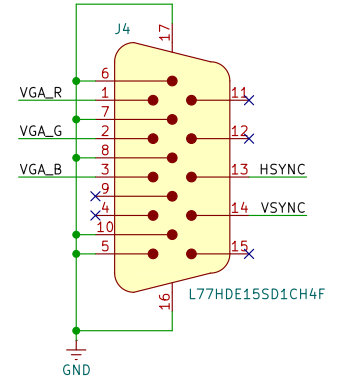
Audio Power



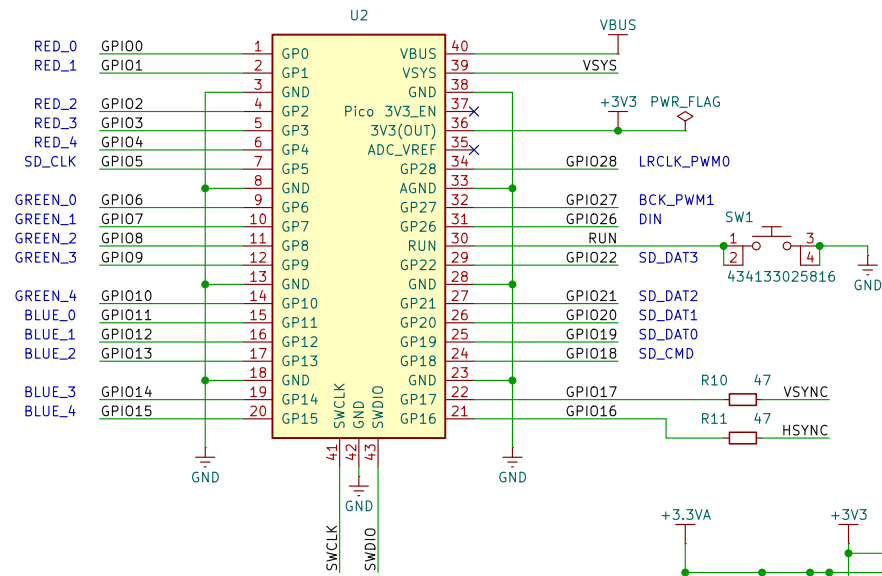
VGA 'DAC'



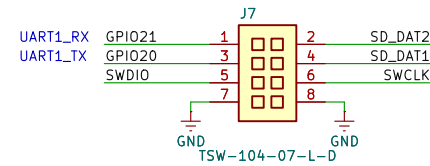
VGA



Pico

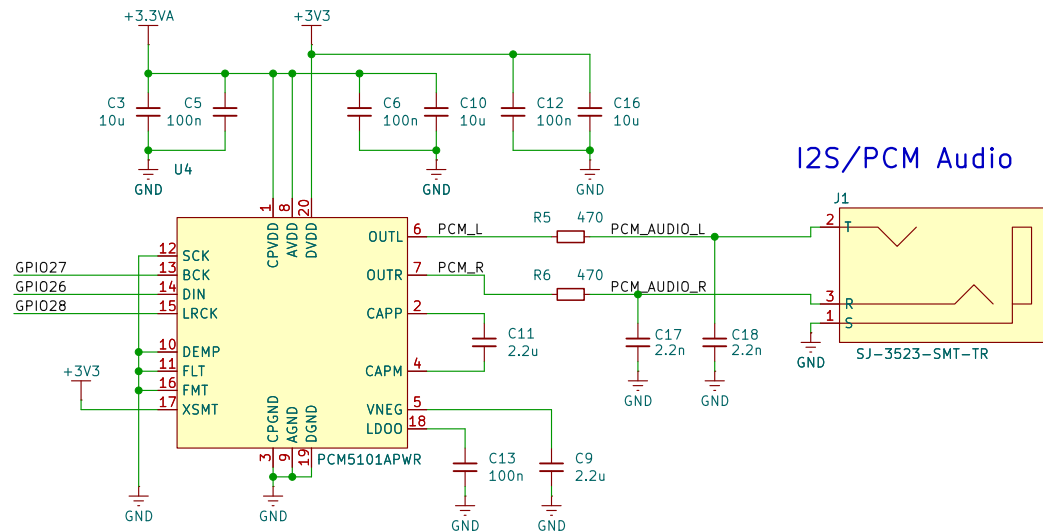


UART / 4-bit SD Selector & Debug

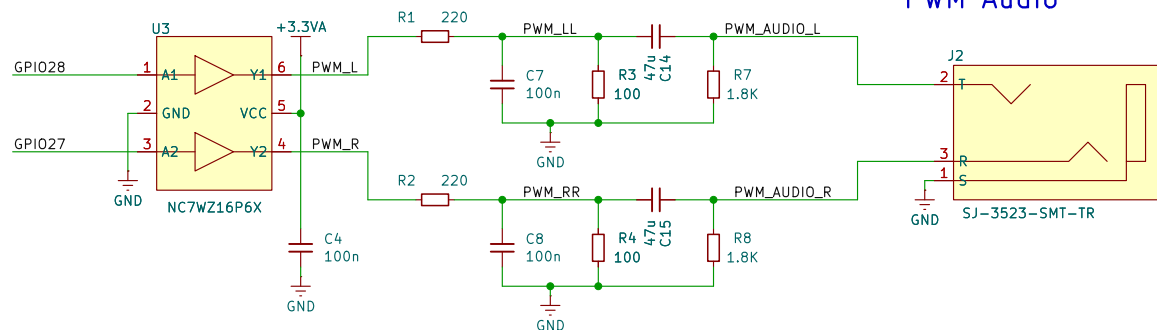


For 4-bit SD Card operation, place jumpers between 1-2 and 3-4.
To use as a UART, remove the jumpers and attach a suitable UART device.
Ensure TX is connected to RX and vice versa.

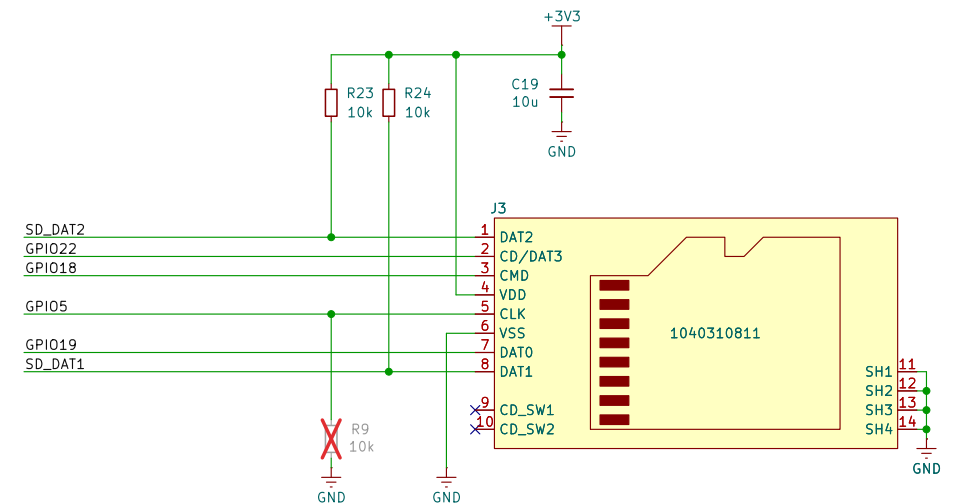
I2S/PCM Audio



PWM Audio



Micro SD Card



Note: S1 schematic revision indicates that this is the 1st revision of the schematic/BOM associated with the R3 PCB.
R3-S1 therefore uniquely identifies the fully built PCB Assembly (PCBA).
This is a change from the previous revision numbering to align with the internal Raspberry Pi product revisioning scheme

VARIANT: VARIANT1
REF: RPI-PVSA
DESCR: VGA, SD Card & Audio Demo Board for Pico

SCHEMATIC/BOM REVISION: S1

BOM is autogenerated from schematic.
Either I2S/PCM audio or PWM audio may be used, but NOT both at the same time, as they share the same I/Os.
If PWM is to be used, the Pico software must be built as such, and similarly with I2S/PCM.
Keep Titleblock rev. in sync with above.
Reset to 1 when creating new R num.

PCB/PWB REVISION: R3

<- PCB/PWB rev this schematic is for

MANUFACTURER: XXX
MANUF. PN: XXX
CIRCUITS/PANEL: XXX
DESCRIPTION: XXX



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TITLE	VGA, SD Card & Audio Demo Board for Pico				
DATE	2026-07-03	REF	RPI-PVSA_R3	REV	S1
SIZE	A3	DRAWN	Mike Stimson	SHEET	1/1