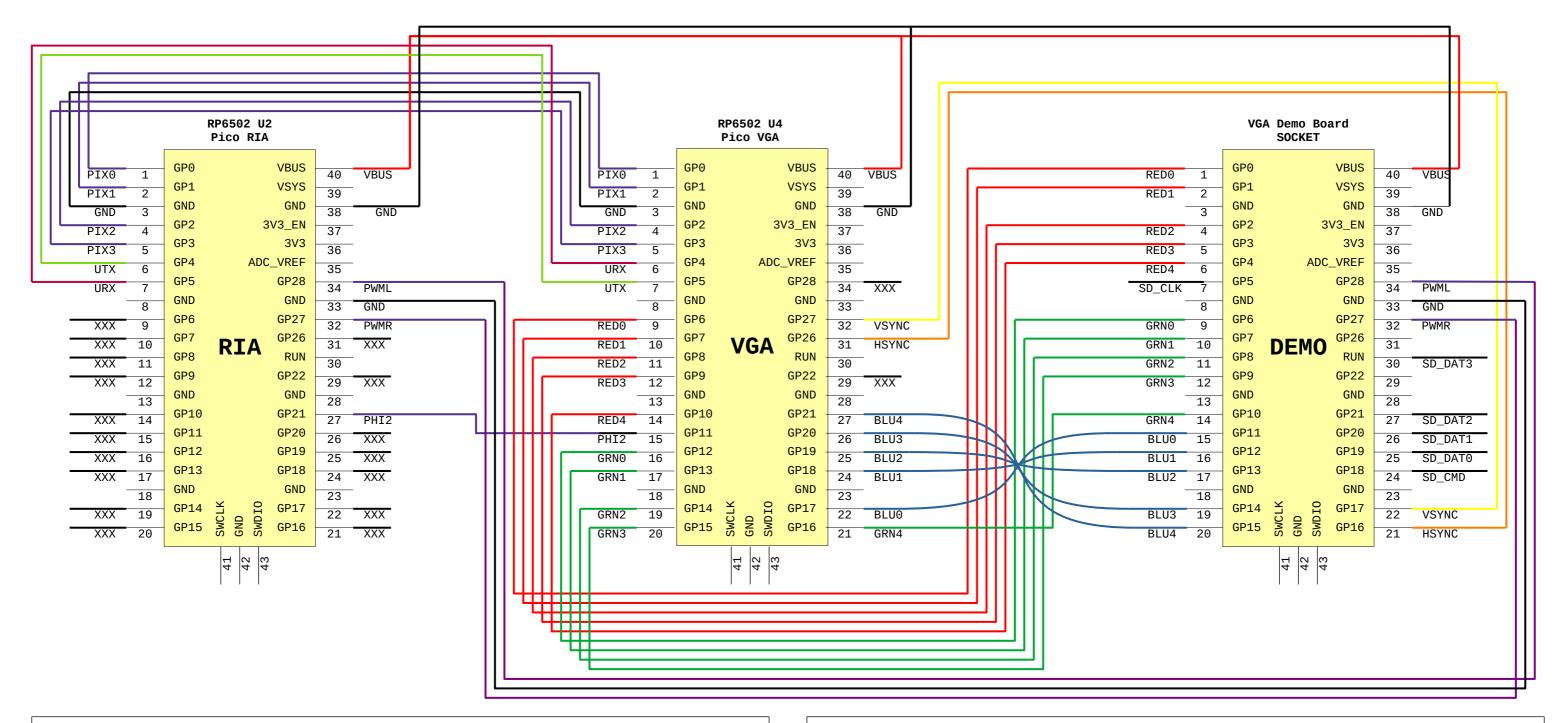# Yet Another Pico Computer ?

From:
- https://picocomputer.github.io/_static/2023-06-07-rp6502.pdf
- https://datasheets.raspberrypi.com/rp2040/vga-for-pico-w-schematics.pdf (no such PDF for original Pico)

RP6502 U2 — Pico RIA

Label	Pin	GPIO		GPIO	Pin	Label
PIX0	1	GP0		VBUS	40	VBUS
PIX1	2	GP1		VSYS	39	
GND	3	GND		GND	38	GND
PIX2	4	GP2		3V3_EN	37	
PIX3	5	GP3		3V3	36	
UTX	6	GP4		ADC_VREF	35	
URX	7	GP5		GP28	34	PWML
	8	GND		GND	33	GND
XXX	9	GP6		GP27	32	PWMR
XXX	10	GP7		GP26	31	XXX
XXX	11	GP8		RUN	30	
XXX	12	GP9		GP22	29	XXX
	13	GND		GND	28	
XXX	14	GP10		GP21	27	PHI2
XXX	15	GP11		GP20	26	XXX
XXX	16	GP12		GP19	25	XXX
XXX	17	GP13		GP18	24	XXX
	18	GND		GND	23	
XXX	19	GP14		GP17	22	XXX
XXX	20	GP15		GP16	21	XXX

SWCLK GND SWDIO — 41 42 43

RP6502 U4 — Pico VGA

Label	Pin	GPIO		GPIO	Pin	Label
PIX0	1	GP0		VBUS	40	VBUS
PIX1	2	GP1		VSYS	39	
GND	3	GND		GND	38	GND
PIX2	4	GP2		3V3_EN	37	
PIX3	5	GP3		3V3	36	
URX	6	GP4		ADC_VREF	35	
UTX	7	GP5		GP28	34	XXX
	8	GND		GND	33	
RED0	9	GP6		GP27	32	VSYNC
RED1	10	GP7		GP26	31	HSYNC
RED2	11	GP8		RUN	30	
RED3	12	GP9		GP22	29	XXX
	13	GND		GND	28	
RED4	14	GP10		GP21	27	BLU4
PHI2	15	GP11		GP20	26	BLU3
GRN0	16	GP12		GP19	25	BLU2
GRN1	17	GP13		GP18	24	BLU1
	18	GND		GND	23	
GRN2	19	GP14		GP17	22	BLU0
GRN3	20	GP15		GP16	21	GRN4

SWCLK GND SWDIO — 41 42 43

VGA Demo Board — SOCKET

Label	Pin	GPIO		GPIO	Pin	Label
RED0	1	GP0		VBUS	40	VBUS
RED1	2	GP1		VSYS	39	
	3	GND		GND	38	GND
RED2	4	GP2		3V3_EN	37	
RED3	5	GP3		3V3	36	
RED4	6	GP4		ADC_VREF	35	
SD_CLK	7	GP5		GP28	34	PWML
	8	GND		GND	33	GND
GRN0	9	GP6		GP27	32	PWMR
GRN1	10	GP7		GP26	31	
GRN2	11	GP8		RUN	30	SD_DAT3
GRN3	12	GP9		GP22	29	
	13	GND		GND	28	
GRN4	14	GP10		GP21	27	SD_DAT2
BLU0	15	GP11		GP20	26	SD_DAT1
BLU1	16	GP12		GP19	25	SD_DAT0
BLU2	17	GP13		GP18	24	SD_CMD
	18	GND		GND	23	
BLU3	19	GP14		GP17	22	VSYNC
BLU4	20	GP15		GP16	21	HSYNC

SWCLK GND SWDIO — 41 42 43

RIA: 17 GPIO pins available on RIA: 6-20, 22 & 26

- 6 for 4bit SD card (4 DAT + CMD + CLK)
- 2 for a DS3231 battery backed-up RTC module (I²C SDA + SCL) ?
- 9 or 11 left for user

VGA: 2 GPIO pins available on VGA: 22 & 28

- 1 or 2 for UART (TX only or TX+RX)?
- 2 for a DS3231 battery backed-up RTC module (I²C SDA + SCL) ?
- 1 or 0 left

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