J1 EXPSLOT

D1#	2 1	D0#
D3#	4 3	D2#
D5#	6 5	D4#
D7#	8 7	D6#
	10 9	PWR_FLAG
A1#	12 11	A0#
A5#	14 13	A4#
A7#	16 15	A6#
A9#	18 17	A8#
A11#	20 19	A10#
A13#	22 21	A12#
A15#	24 23	A14#
R/W#	26 25	RESET#
	28 27	
	30 29	PH0#
	32 31	
	34 33	

U2 GAL16V8

A4#	1	I0/CLK	IO0	19 DEVSEL#
A5#	2	I1	IO1	18 PICOWR
A6#	3	I2	IO2	17 PH0#
A7#	4	I3	IO3	16 R/W#
A8#	5	I4	IO4	15 A15#
A9#	6	I5	IO5	14 A14#
A10#	7	I6	IO6	13 BUF_DIR#
A11#	8	I7	IO7	12 BUF_OE#
A12#	9	I8		
A13#	11	I9/OE		

U4 Pico — Raspberry Pi

	1	GPIO0	VBUS	40
	2	GPIO1	VSYS	39
	3	GND	GND	38
SPIO_SCK	4	GPIO2	3V3_EN	37
SPIO_TX	5	GPIO3	3V3	36
SPIO_RX	6	GPIO4	ADC_VREF	35
SPIO_CS0	7	GPIO5	GPIO28_ADC2	34
	8	GND	AGND	33
A0	9	GPIO6	GPIO27_ADC1	32
A1	10	GPIO7	GPIO26_ADC0	31
	11	GPIO8	RUN	30
	12	GPIO9	GPIO22	29
	13	GND	GND	28
R/W	14	GPIO10	GPIO21	27 RESET
D0	15	GPIO11	GPIO20	26 DEVSEL
D1	16	GPIO12	GPIO19	25 PH0
D2	17	GPIO13	GPIO18	24 D7
	18	GND	GND	23
D3	19	GPIO14	GPIO17	22 D6
D4	20	GPIO15	GPIO16	21 D5

SWCLK GND SWDIO — 41 42 43

SPIO_CS1
PICOWR

U1 74LVCH16T245DLR

VCCA VCCA VCCB VCCB — 42 31 7 18

A0#	47	1A1	1B1	2 A0
A1#	46	1A2	1B2	3 A1
	44	1A3	1B3	5
	43	1A4	1B4	6
PH0#	41	1A5	1B5	9 PH0
R/W#	40	1A6	1B6	10 R/W
RESET#	39	1A7	1B7	11 RESET
DEVSEL#	37	1A8	1B8	12 DEVSEL
	1	1DIR		
	48	1OE		
D7#	36	2A1	2B1	13 D7
D6#	35	2A2	2B2	14 D6
D5#	33	2A3	2B3	16 D5
D4#	32	2A4	2B4	17 D4
D3#	30	2A5	2B5	19 D3
D2#	29	2A6	2B6	20 D2
D1#	27	2A7	2B7	21 D1
D0#	26	2A8	2B8	23 D0
BUF_DIR#	24	2DIR		
BUF_OE#	25	2OE		

GND: 45 39 34 28 — GND: 4 10 15 21

U3 AMS1117-3.3

VI 3 — VO 2 — GND 1

C4 22uF, C5 22uF

D1 SS12 — PWR_FLAG

C1 0.1u, C2 0.1u, C3 0.1u — +5V / GND
C6 0.1u, C7 0.1u — +3.3V / GND
C8 0.1u, C9 0.1u — +3.3V_P / GND

RN1 47k — 8 7 6 5 / 1 2 3 4

U5 W25Q01JVZE

SPIO_CS0	1	CS	VCC 8
SPIO_SCK	6	CLK	
SPIO_TX	5	DI(IO0)	
SPIO_RX	2	DO(IO1)	
BUF_OE#	3	WP(IO2)	
DEVSEL#	7	HOLD(IO3)	

GND 4

U6 W25Q01JVZE

SPIO_CS1	1	CS	VCC 8
SPIO_SCK	6	CLK	
SPIO_TX	5	DI(IO0)	
SPIO_RX	2	DO(IO1)	
	3	WP(IO2)	
	7	HOLD(IO3)	

GND 4

D2 SS12 — PWR_FLAG / +5V_A / +3.3V_P

1) Power can be supplied to USB port of Pico. The diodes make sure
the current from Pico USB port cannot flow into Apple.
2) The flash chips are powered by 3.3V from Pico so that
they can be accessed when Apple is turned off but Pico is powered
by USB port.
3) A 3.3V regulator provides power to 5V-to-3.3V level shifter
to make sure the level shifter is powered when Pico is removed.

Sheet: /
File: megaflash.kicad_sch
Title: MegaFlash
Size: A4 Date: 2024-05-25 Rev: 1
KiCad E.D.A. 8.0.9 Id: 1/1