Expansion bus connector

File: expansion_bus.kicad_sch

Buffers and transceivers

File: buffers_transceivers.kicad_sch

Address decoding

File: addr_decode.kicad_sch

CPLD

File: cpld.kicad_sch

Control and status registers

File: con_stat.kicad_sch

CF socket

File: cf_socket.kicad_sch

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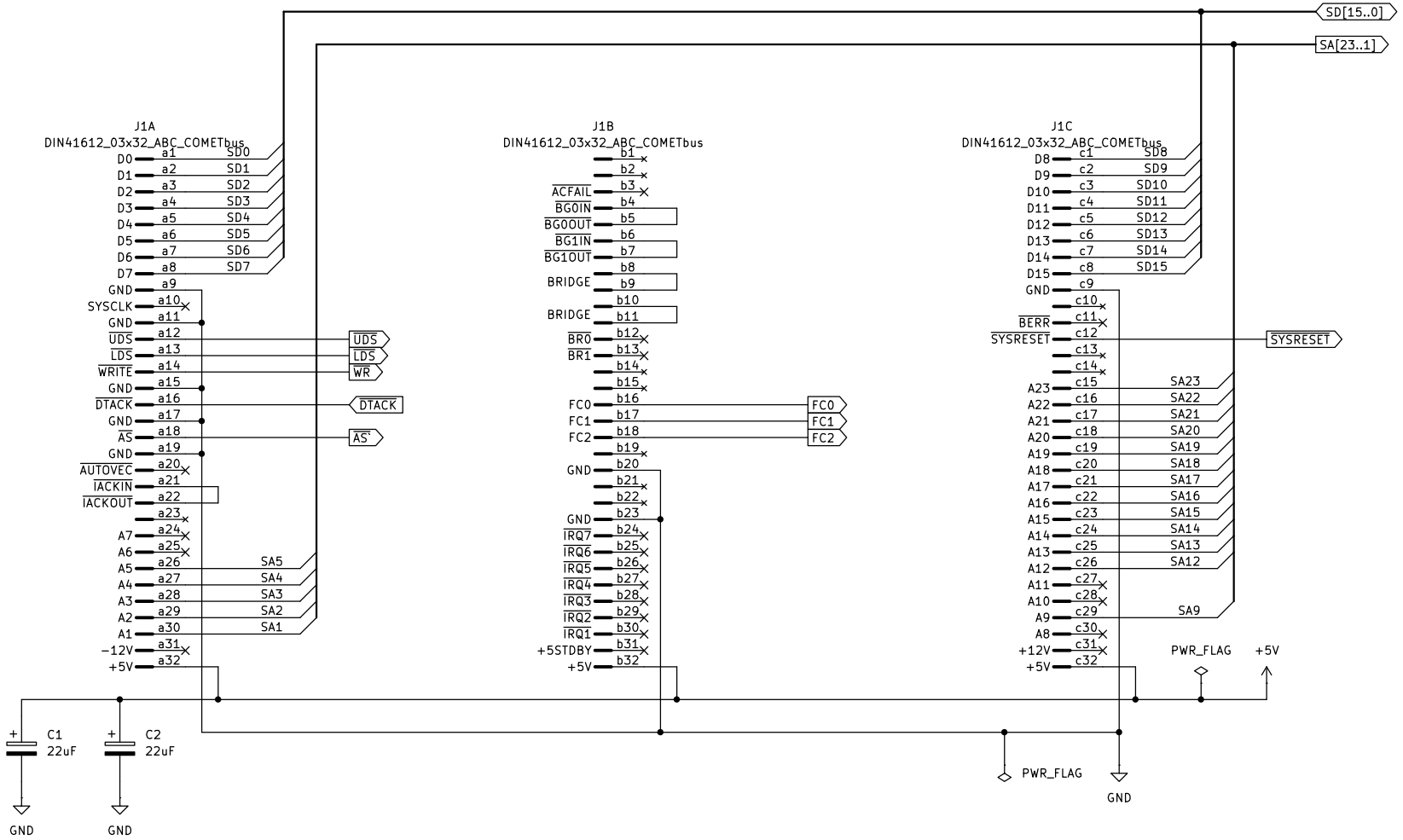
Sheet: /
File: CF_Interface_v2.kicad_sch

Title: COMPACT FLASH INTERFACE V2

Size: A4	Date: 2024-03-13	**Rev: 2**
KiCad E.D.A. 8.0.0-rc3		Id: 1/7



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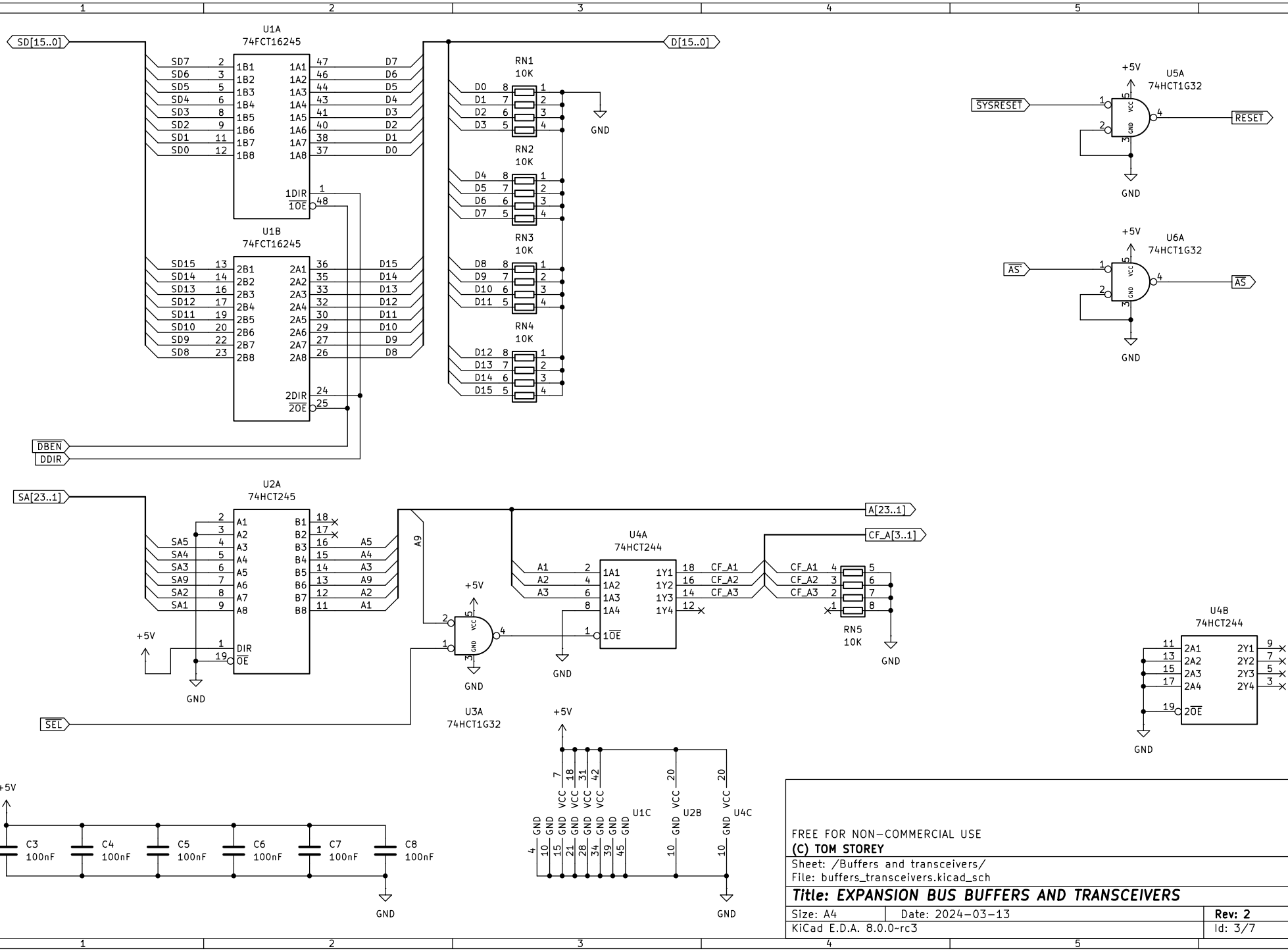
Sheet: /Expansion bus connector/
File: expansion_bus.kicad_sch

Title: EXPANSION BUS CONNECTOR

Size: A4	Date: 2024-03-13	**Rev: 2**
KiCad E.D.A. 8.0.0-rc3		Id: 2/7


SD[15..0]
D[15..0]
U1A
74FCT16245
U1B
74FCT16245
RN1
10K
RN2
10K
RN3
10K
RN4
10K
GND
DBEN
DDIR
U5A
74HCT1G32
SYSRESET
RESET
U6A
74HCT1G32
AS
U2A
74HCT245
SA[23..1]
A[23..1]
CF_A[3..1]
SEL
U4A
74HCT244
RN5
10K
U4B
74HCT244
U3A
74HCT1G32
U1C
U2B
U4C
C3 100nF
C4 100nF
C5 100nF
C6 100nF
C7 100nF
C8 100nF
+5V
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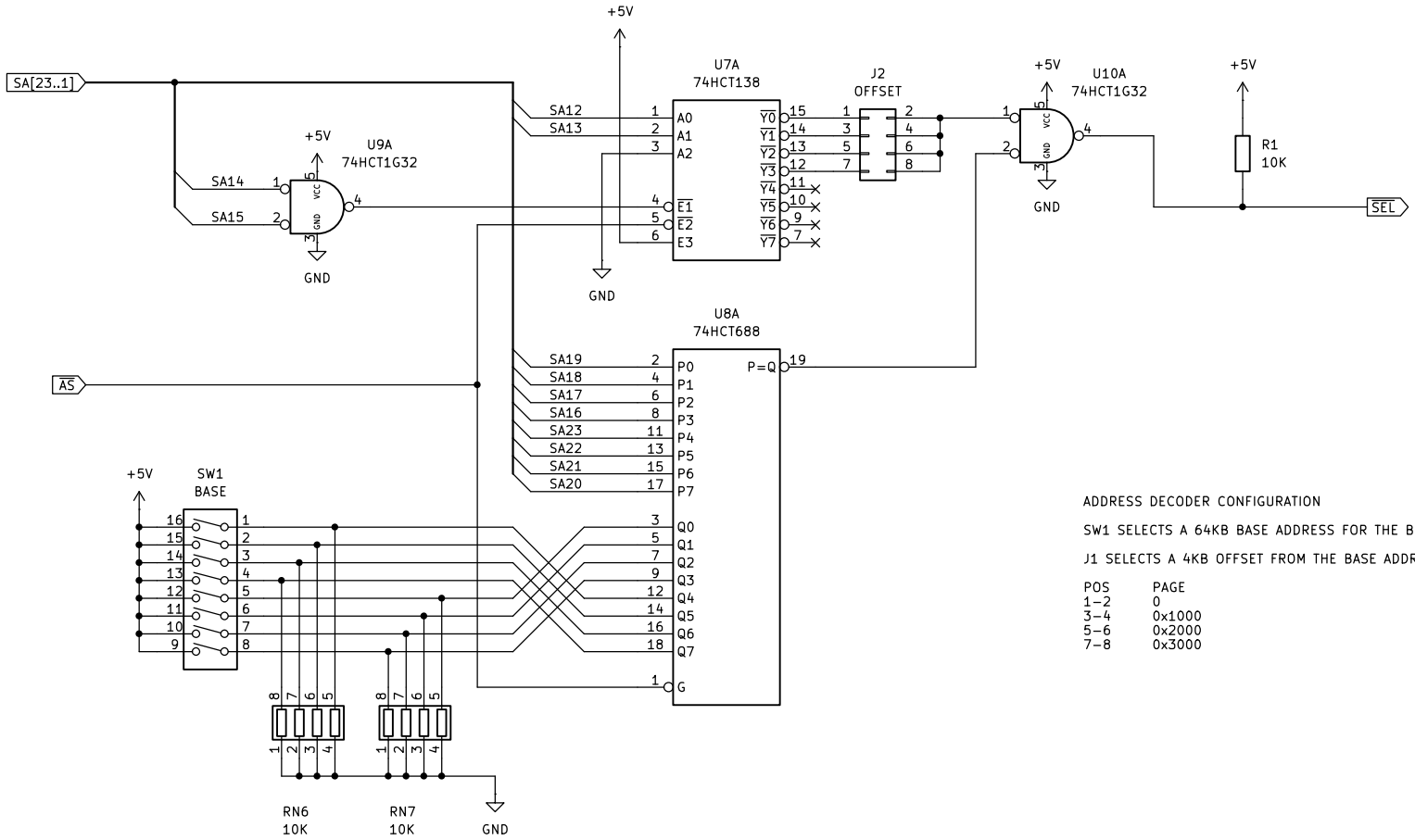
(C) TOM STOREY
Sheet: /Buffers and transceivers/
File: buffers_transceivers.kicad_sch
Title: EXPANSION BUS BUFFERS AND TRANSCEIVERS
Size: A4
Date: 2024-03-13
Rev: 2
KiCad E.D.A. 8.0.0-rc3
Id: 3/7

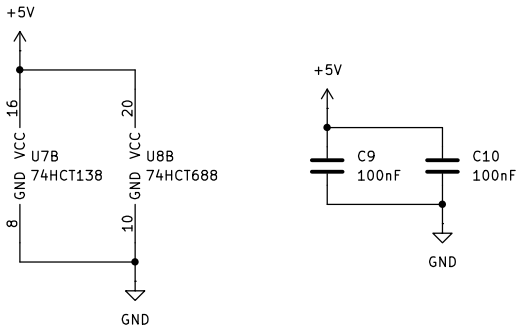


ADDRESS DECODER CONFIGURATION

SW1 SELECTS A 64KB BASE ADDRESS FOR THE BOARD.

J1 SELECTS A 4KB OFFSET FROM THE BASE ADDRESS:

POS	PAGE
1–2	0
3–4	0x1000
5–6	0x2000
7–8	0x3000



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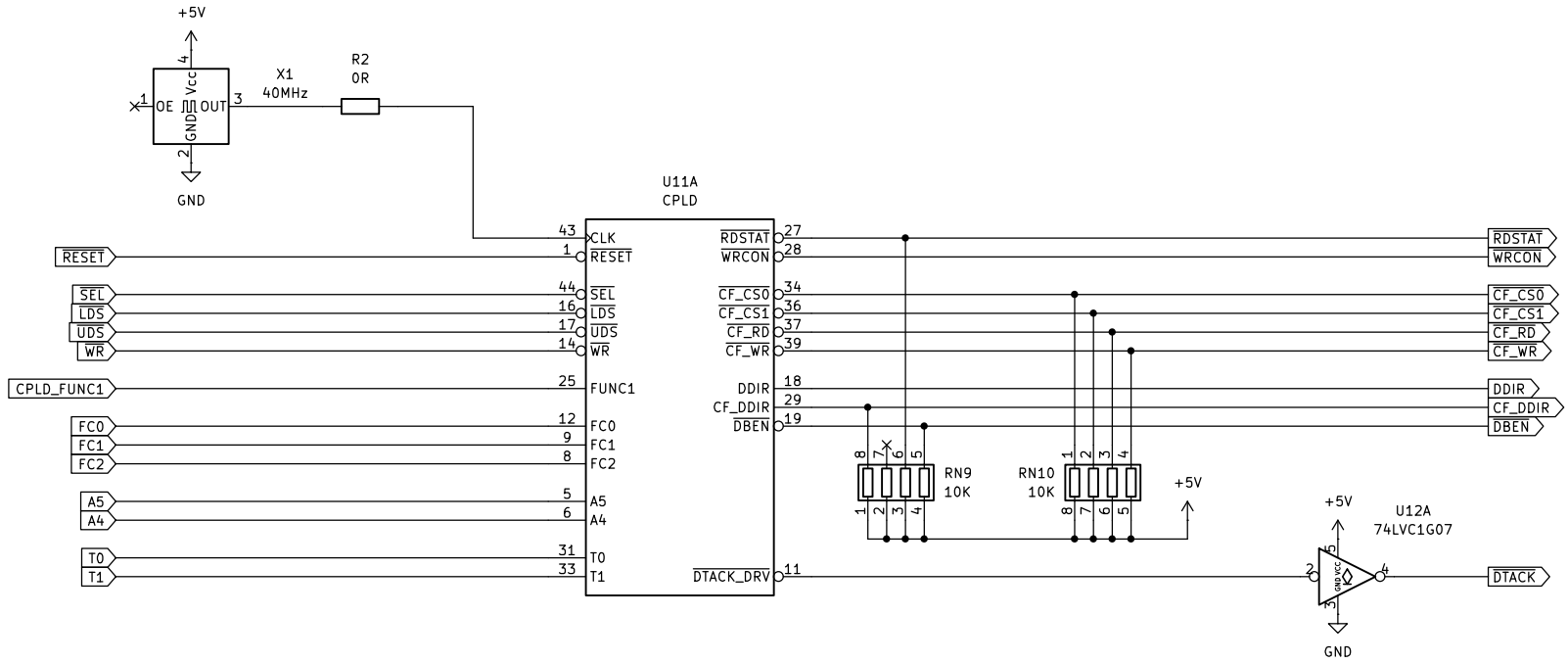
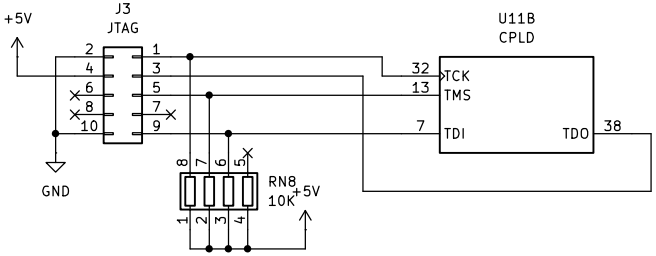
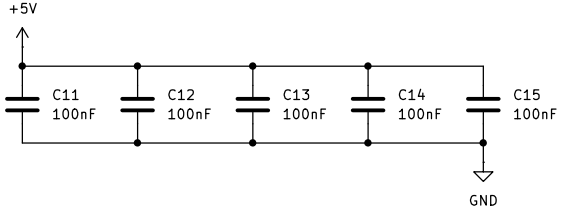
Sheet: /Address decoding/
File: addr_decode.kicad_sch

Title: ADDRESS DECODING

Size: A4	Date: 2024-03-13	Rev: 2
KiCad E.D.A. 8.0.0-rc3		Id: 4/7







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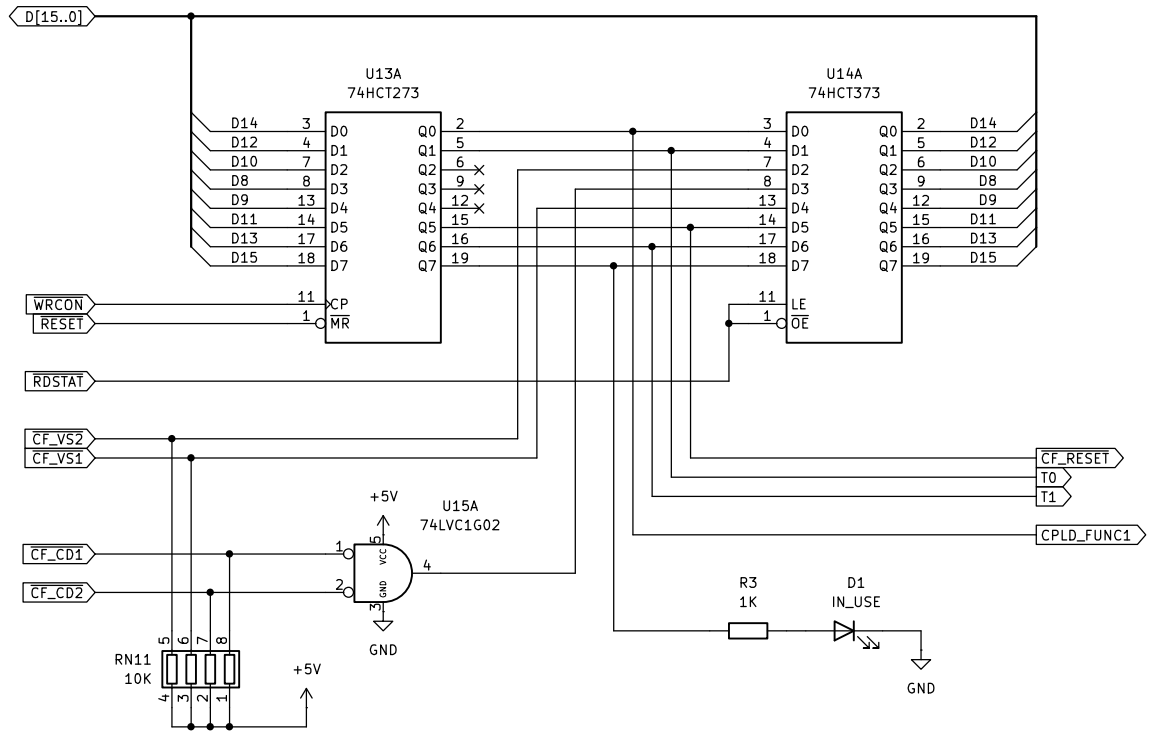
Sheet: /CPLD/
File: cpld.kicad_sch

Title: CPLD

Size: A4	Date: 2024-03-13	**Rev: 2**
KiCad E.D.A. 8.0.0-rc3		Id: 5/7



CONTROL/STATUS REGISTER

RW-0	RW-0	RW-0	RW-0	RW-0	R-x	R-x	R-x
IN_USE	FUNC1	T<1:0>		RESET	VS2	VS1	CD
BIT 7							BIT 0

BIT 7 IN_USE: IN USE LED CONTROL
1 = LED ON
0 = LED OFF

BIT 6 FUNC1: CPLD FUNCTION 1
1 = CPLD FUNCTION 1 PIN IS HIGH
0 = CPLD FUNCTION 1 PIN IS LOW

BIT 5-4 T<1:0>: PIO TIMING MODE SELECTION
11 = RESERVED
10 = PIO MODE 4
01 = PIO MODE 2/3
00 = PIO MODE 0/1

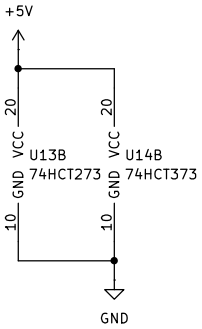
BIT 3 RESET: CF INTERFACE RESET CONTROL
1 = RESET NEGATED
0 = RESET ASSERTED

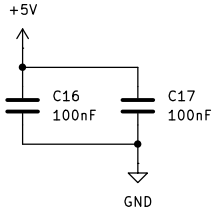
BIT 2 VS2: CF VOLTAGE SENSE 2

BIT 1 VS1: CF VOLTAGE SENSE 1

BIT 0 CD: CF CARD DETECT
1 = CF CARD PRESENT
0 = CF CARD NOT PRESENT

LEGEND:
R = READABLE W = WRITABLE U = UNIMPLEMENTED
-n = VALUE AT RESET 1 = SET 0 = CLEARED x = UNKNOWN





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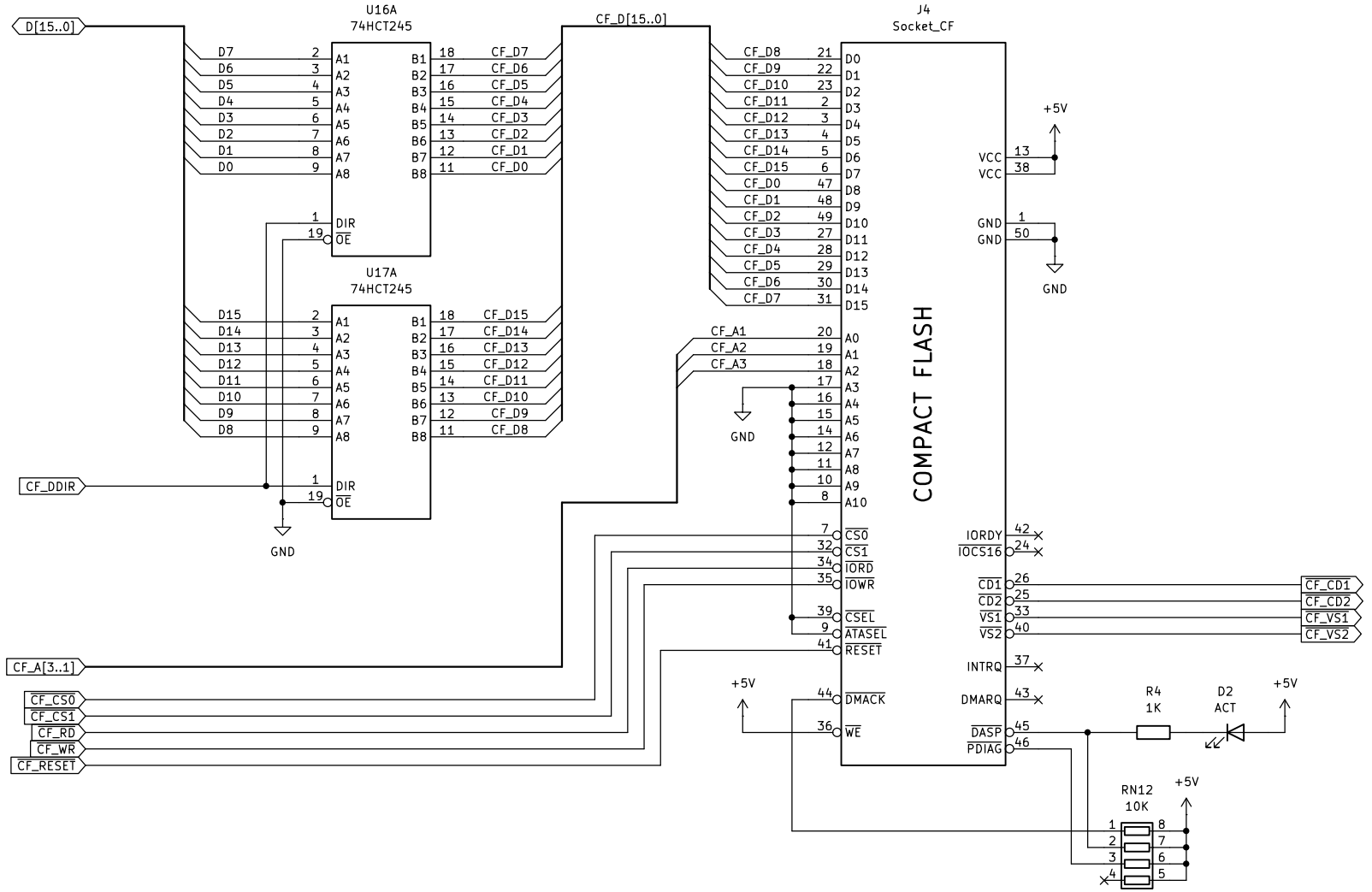
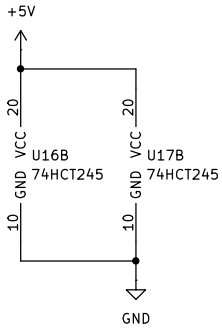
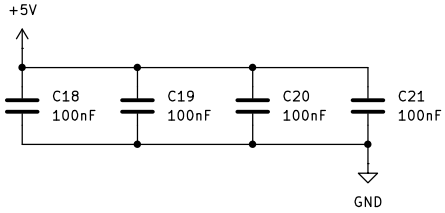
Sheet: /Control and status registers/
File: con_stat.kicad_sch

Title: CONTROL AND STATUS REGISTERS

Size: A4	Date: 2024-03-13	Rev: 2
KiCad E.D.A. 8.0.0-rc3		Id: 6/7







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Sheet: /CF socket/
File: cf_socket.kicad_sch

Title: COMPACT FLASH SOCKET

Size: A4	Date: 2024-03-13	**Rev: 2**
KiCad E.D.A. 8.0.0-rc3		Id: 7/7