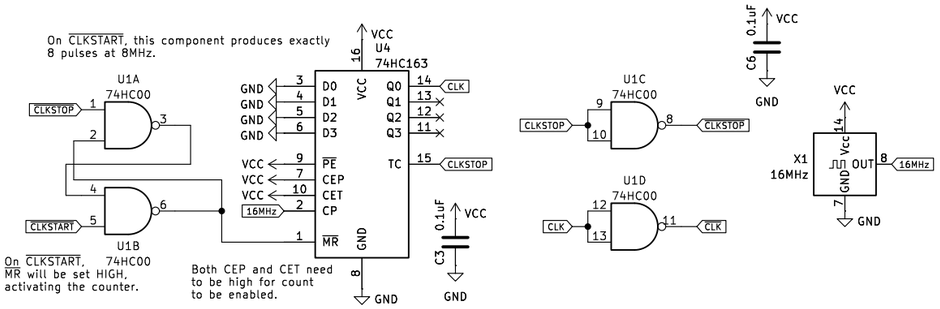
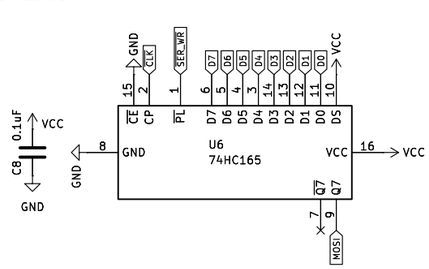
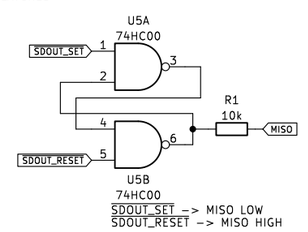
CLOCK COMPONENT

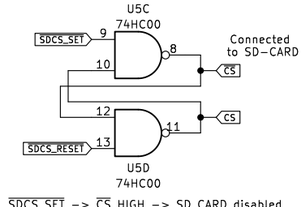


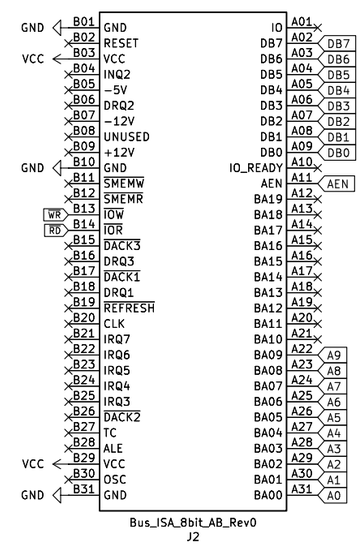
SHIFT REGISTER Z80 -> SD
OUT REGISTER



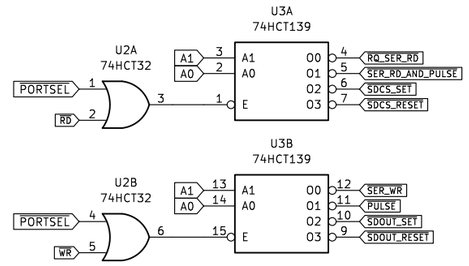
SD CARD
S/R LATCHES



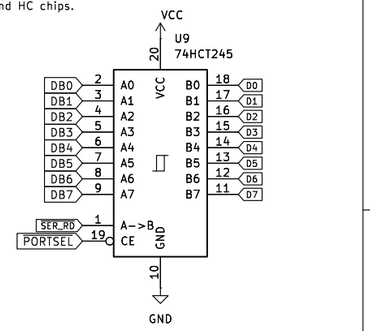




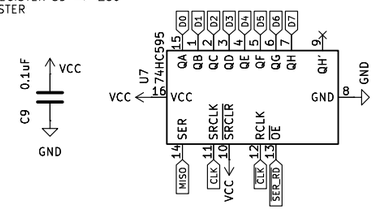
SELECTION COMPONENT

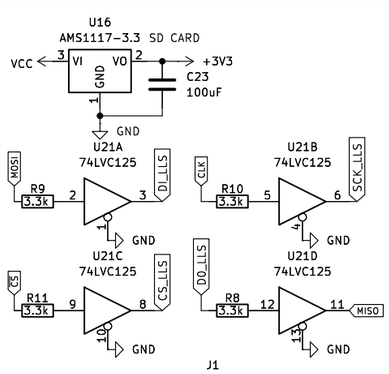


Buffers data bus and ensures
voltage translation between
LS and HC chips.

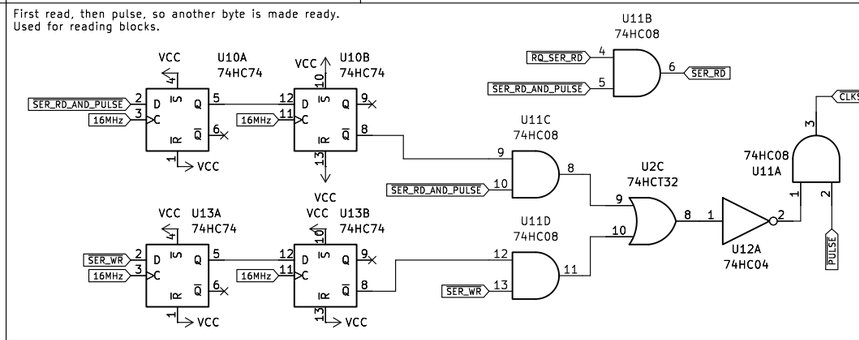


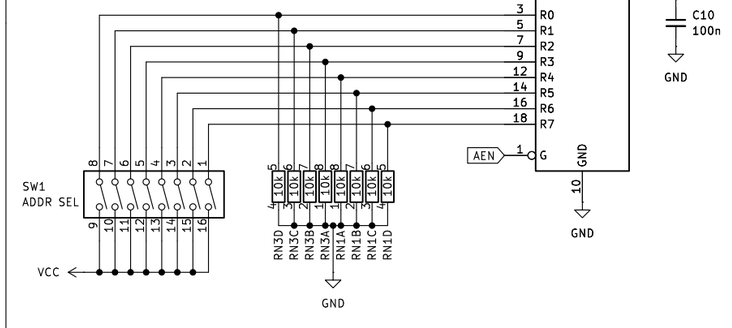
SHIFT REGISTER SD -> Z80
IN REGISTER

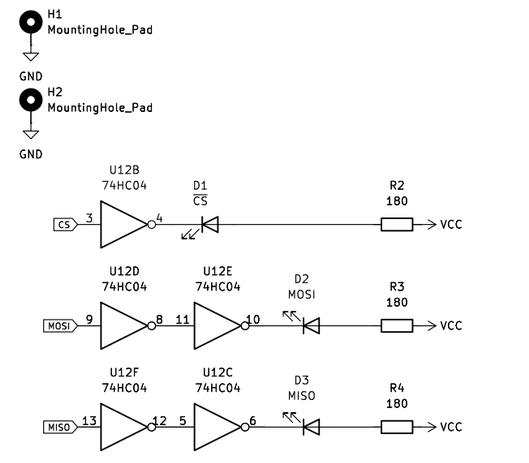




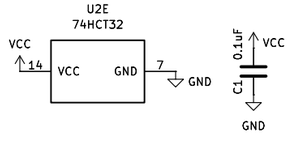
First read, then pulse, so another byte is made ready.
Used for reading blocks.



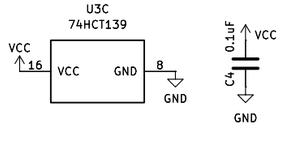


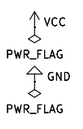


U2E
74HCT32

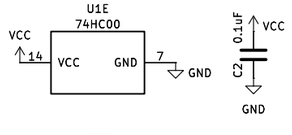


U3C
74HCT139

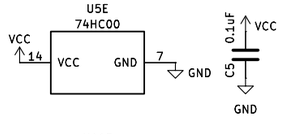




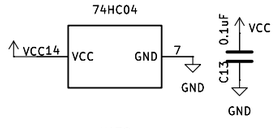
U1E
74HC00



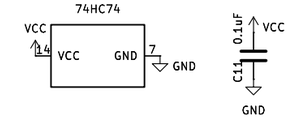
U5E
74HC00



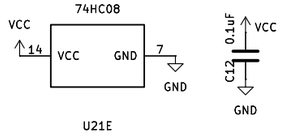
U12G
74HC04



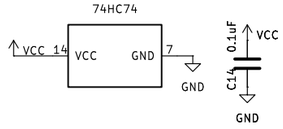
U10C
74HC74



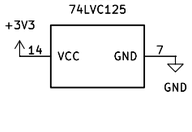
U11E
74HC08



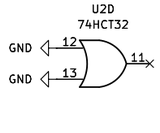
U13C
74HC74



U21E
74LVC125



U2D
74HCT32



out $XX0: SER_WR is pulled low, loading the values on the data bus into the out register.
out $XX1: CLKSTART is pulled low, starting the counter circuit and pushing a byte into the SD card while simultaneously reading a byte.
out $XX2: SDCS_SET is pulled low, pulling CS high, deactivating the SD card.
out $XX3: SDCS_RESET is pulled low, pulling CS low, activating the SD card.

in $XX0: SER_RD is pulled low, reading from the in register.
in $XX1: Does READ and then PULSE
in $XX2: SDOUT_SET is pulled low, pulling MISO low via a 10k resistor.
in $XX3: SDOUT_RESET is pulled low, pulling MISO high via a 10k resistor.

When no card is present, the output of the SD card will follow the output of the SET/RESET latch,
however if a card is present, though unresponsive, it will not follow and the same (high) output
will be received.

Sheet: /	
File: isa-sdcard.kicad_sch	
Title: ISA-TO-SDCARD	
Size: A3	Date: 2025-08-17
KiCad E.D.A. 9.0.2	Id: 1/1

Rev: rev0