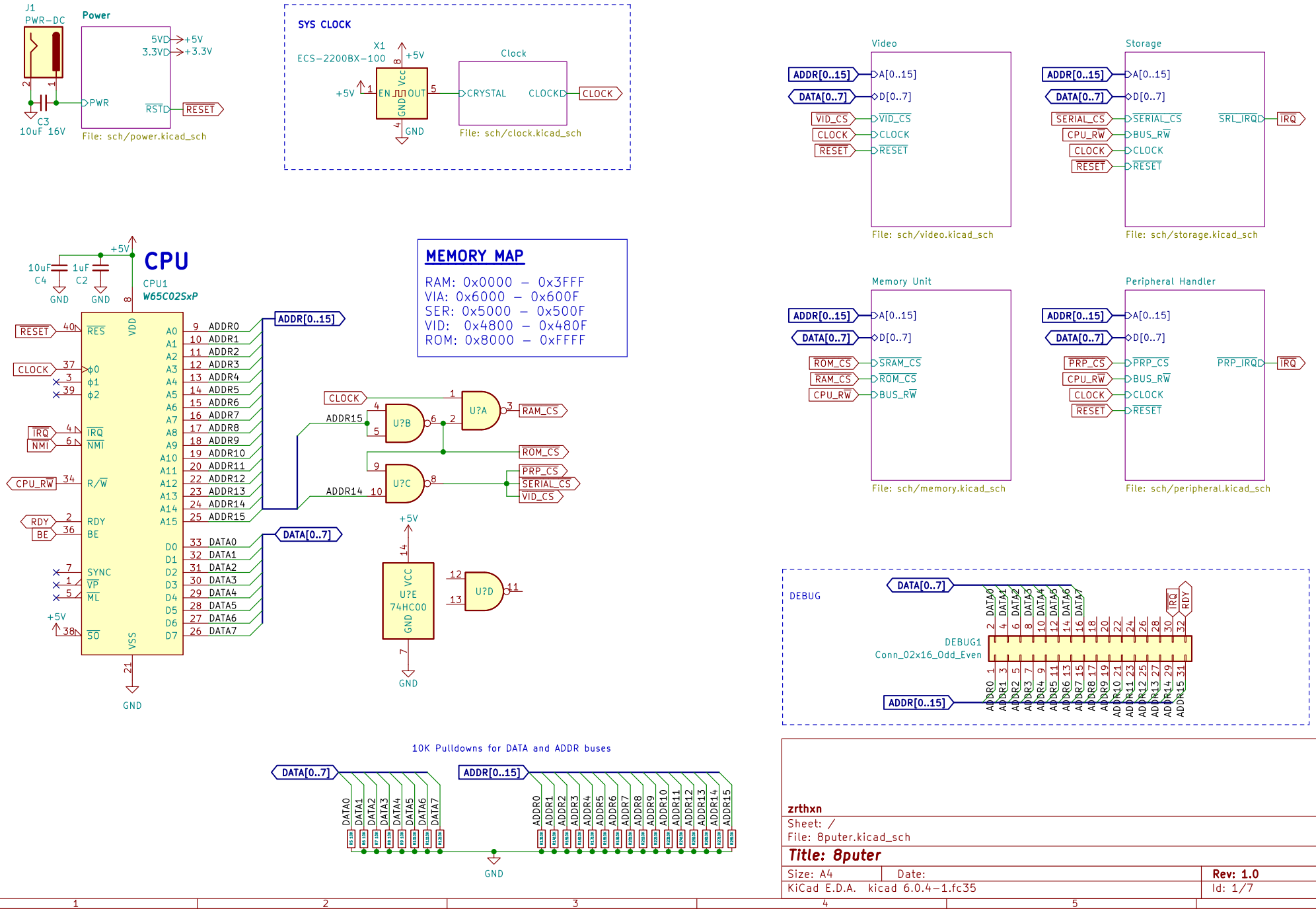
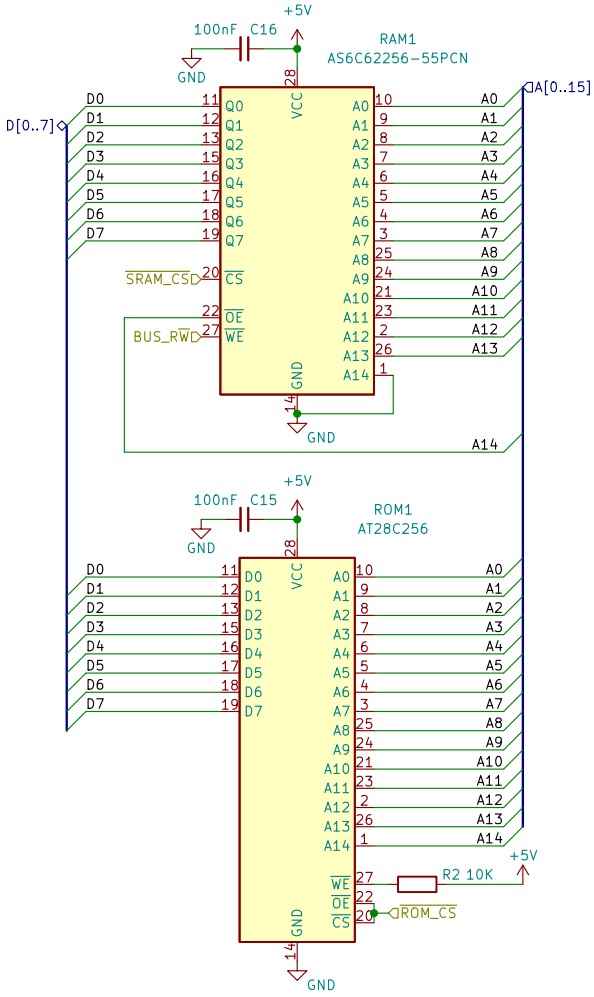

J1
PWR-DC
Power
5VD
3.3VD
+5V
+3.3V
PWR
RST
RESET
C3
10uF 16V
File: sch/power.kicad_sch
SYS CLOCK
X1
ECS-2200BX-100
+5V
Vcc
EN
OUT
GND
Clock
CRYSTAL
CLOCKD
CLOCK
File: sch/clock.kicad_sch
Video
ADDR[0..15]
DATA[0..7]
VID_CS
CLOCK
RESET
A[0..15]
D[0..7]
File: sch/video.kicad_sch
Storage
SERIAL_CS
CPU_RW
SRL_IRQ
IRQ
BUS_RW
File: sch/storage.kicad_sch
Memory Unit
ROM_CS
RAM_CS
SRAM_CS
File: sch/memory.kicad_sch
Peripheral Handler
PRP_CS
PRP_IRQ
File: sch/peripheral.kicad_sch
CPU
CPU1
W65C02SxP
10uF
C4
1uF
C2
RES
VDD
VSS
ϕ0
ϕ1
ϕ2
IRQ
NMI
R/W
RDY
BE
SYNC
VP
ML
SO
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
D0
D1
D2
D3
D4
D5
D6
D7
ADDR0
ADDR1
ADDR2
ADDR3
ADDR4
ADDR5
ADDR6
ADDR7
ADDR8
ADDR9
ADDR10
ADDR11
ADDR12
ADDR13
ADDR14
ADDR15
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
MEMORY MAP
RAM: 0x0000 – 0x3FFF
VIA: 0x6000 – 0x600F
SER: 0x5000 – 0x500F
VID: 0x4800 – 0x480F
ROM: 0x8000 – 0xFFFF
U?A
U?B
U?C
U?D
U?E
74HC00
DEBUG
DEBUG1
Conn_02x16_Odd_Even
10K Pulldowns for DATA and ADDR buses
zrthxn
Sheet: /
File: 8puter.kicad_sch
Title: 8puter
Size: A4
Date:
Rev: 1.0
KiCad E.D.A. kicad 6.0.4-1.fc35
Id: 1/7

System Memory

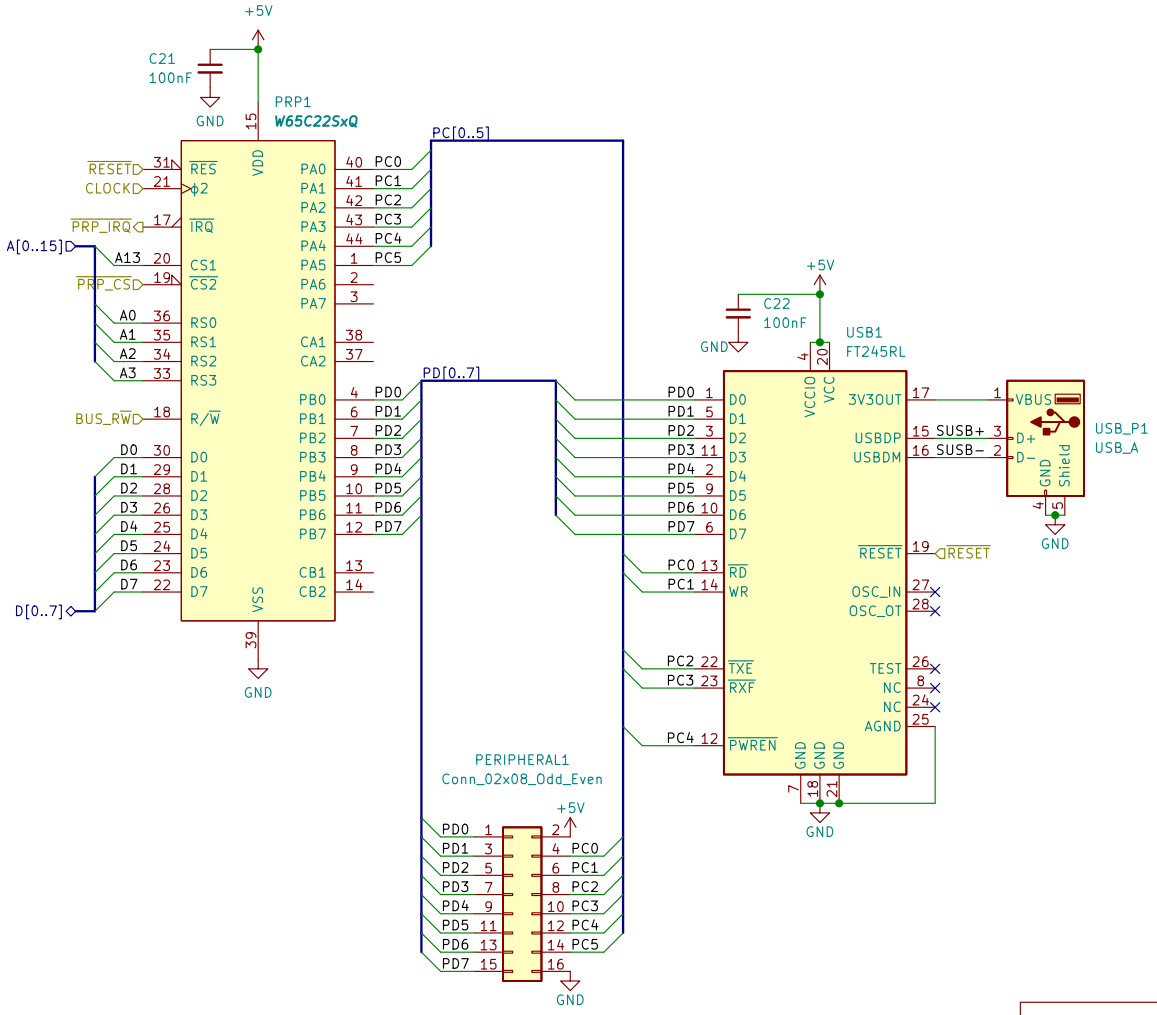
RAM: 0x0000 – 0x3FFF
ROM: 0x8000 – 0xFFFF



zrthxn	
Sheet: /Memory Unit/	
File: memory.kicad_sch	
Title: 8puter	
Size: A4	Date:
KiCad E.D.A. kicad 6.0.4-1.fc35	Rev: 1.0
	Id: 2/7

Peripheral Interface

0x6000 – 0x600F



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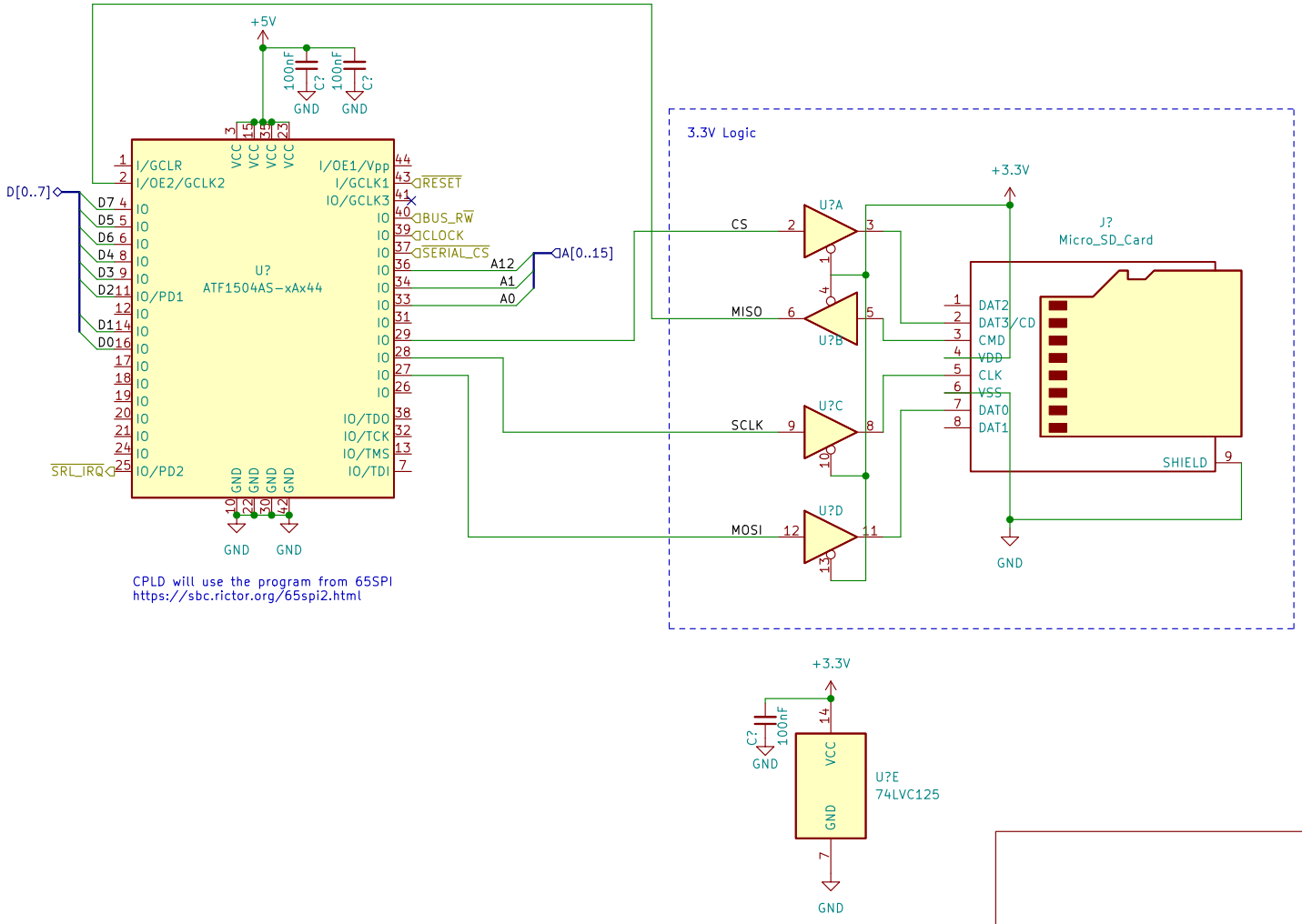
File: peripheral.kicad_sch	
Title: 8puter	
Size: A4	Date:
KiCad E.D.A. kicad 6.0.4−1.fc35	**Rev: 1.0**
	Id: 3/7

SPI SD Card Interface

SER: 0x5000 – 0x500F



Sheet: /Storage/		
File: storage.kicad_sch		
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 6.0.4-1.fc35		Id: 4/7

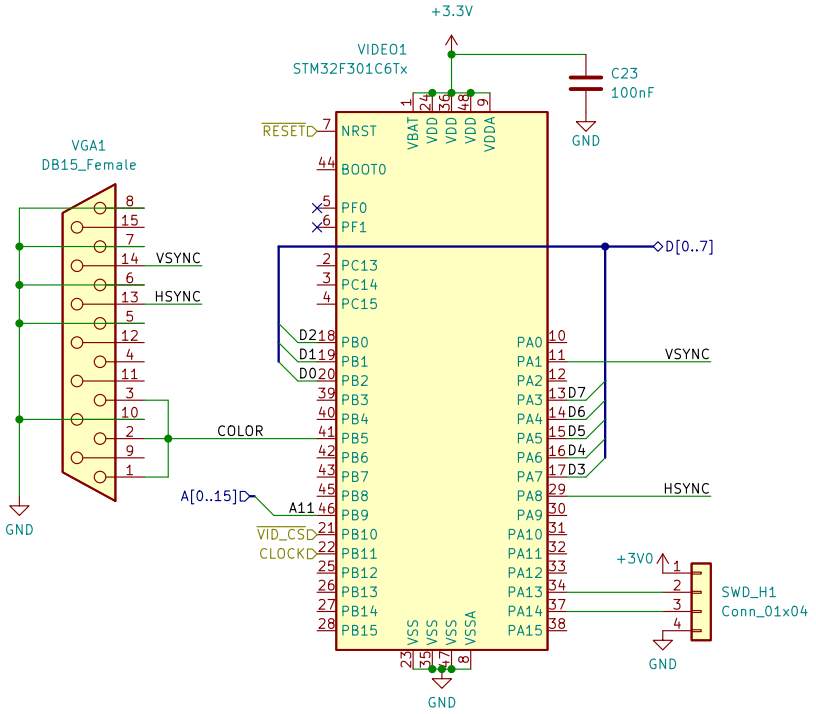
Video Controller

0x4800 – 0x480F

Video will be generated using a microcontroller which is fast enough to generate the VGA timing signals.

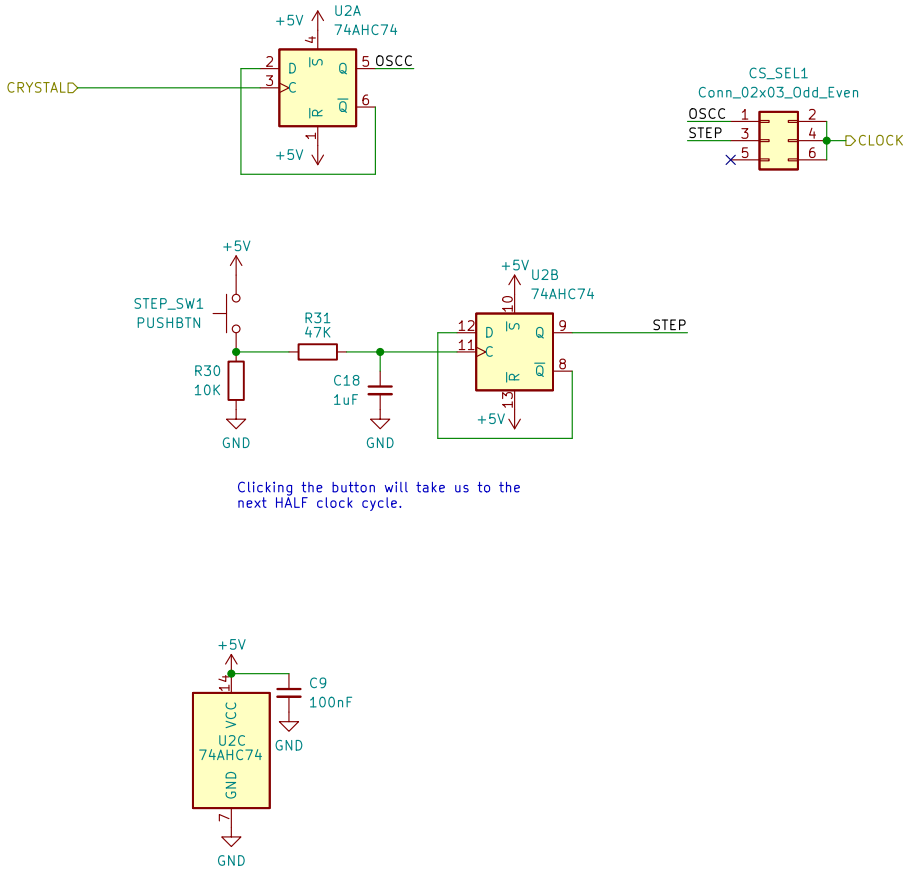
CPU will send a single byte to the MCU which can be be a char code or index of glyph, and the MCU just generates the video signal.

This setup is limited in generating graphics but it avoids having to keep a large framebuffer.



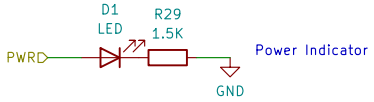
zrthxn		
Sheet: /Video/		
File: video.kicad_sch		
Title: 8puter		
Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad 6.0.4-1.fc35		Id: 5/7

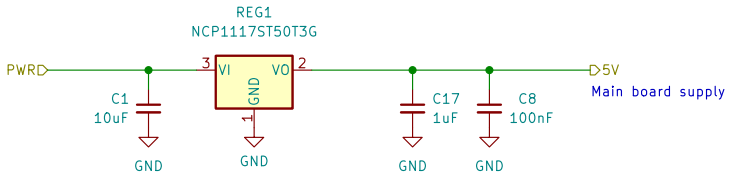
Clock Source Select

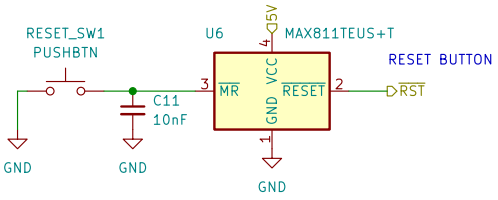


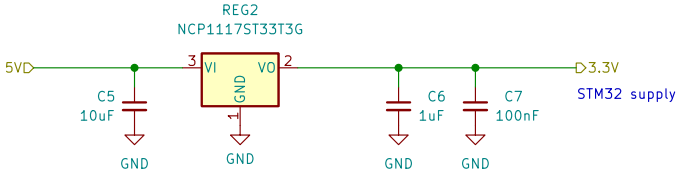
zrthxn		
Sheet: /Clock/		
File: clock.kicad_sch		
Title: 8puter		
Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad 6.0.4-1.fc35		Id: 6/7

Power Delivery









zrthxn		
Sheet: /Power/		
File: power.kicad_sch		
Title: 8puter		
Size: A4	Date:	**Rev: 1.0**
KiCad E.D.A. kicad 6.0.4-1.fc35		Id: 7/7