Glue

File: file60340596.kicad_sch

IO

File: file5FFCE1F7.kicad_sch

Sound

File: file5FFCD08B.kicad_sch

Video

File: file5FFCBF10.kicad_sch

BusInterface

File: file60341279.kicad_sch

CPU

File: file5FFCADA1.kicad_sch

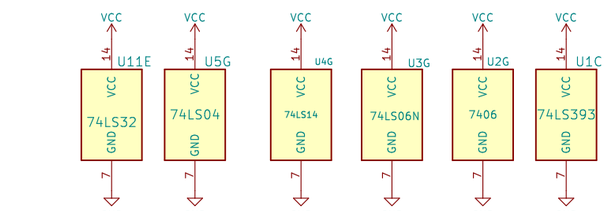
H1 MountingHole

H2 MountingHole

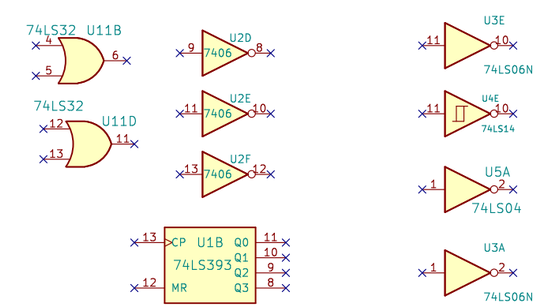
H3 MountingHole

H4 MountingHole

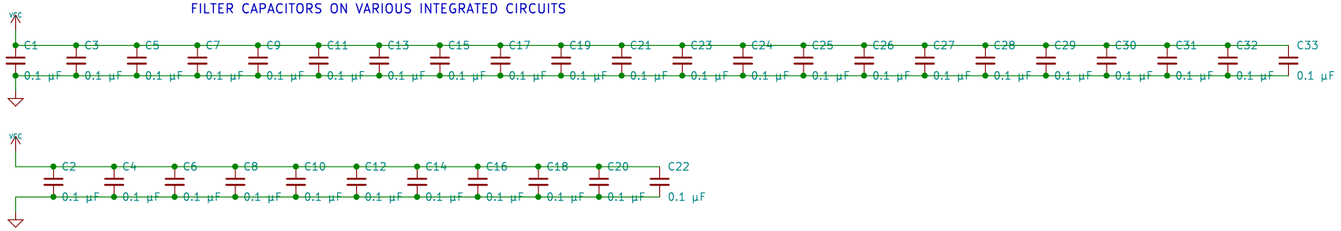
H5 MountingHole



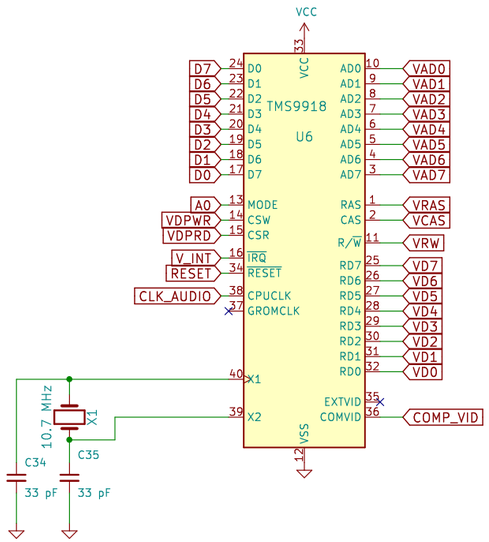
SPARES

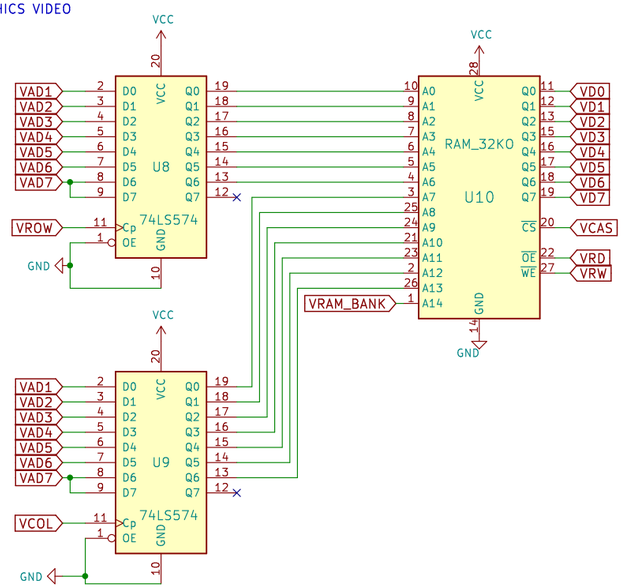


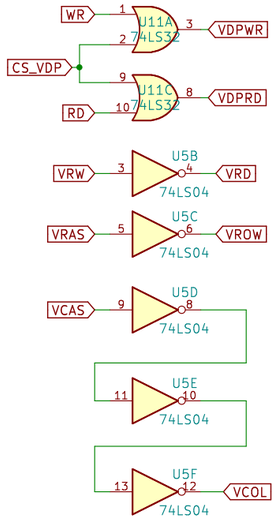
FILTER CAPACITORS ON VARIOUS INTEGRATED CIRCUITS

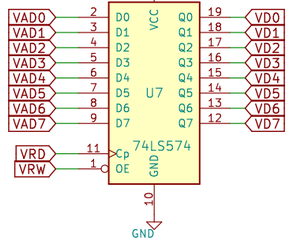


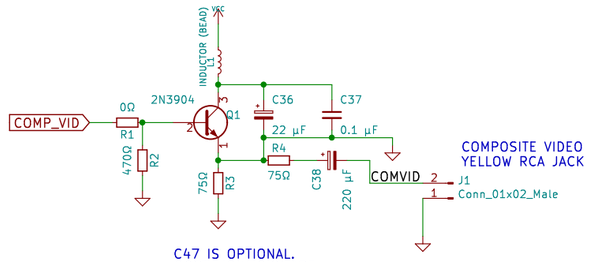
SPRITE AND COLOR GRAPHICS VIDEO



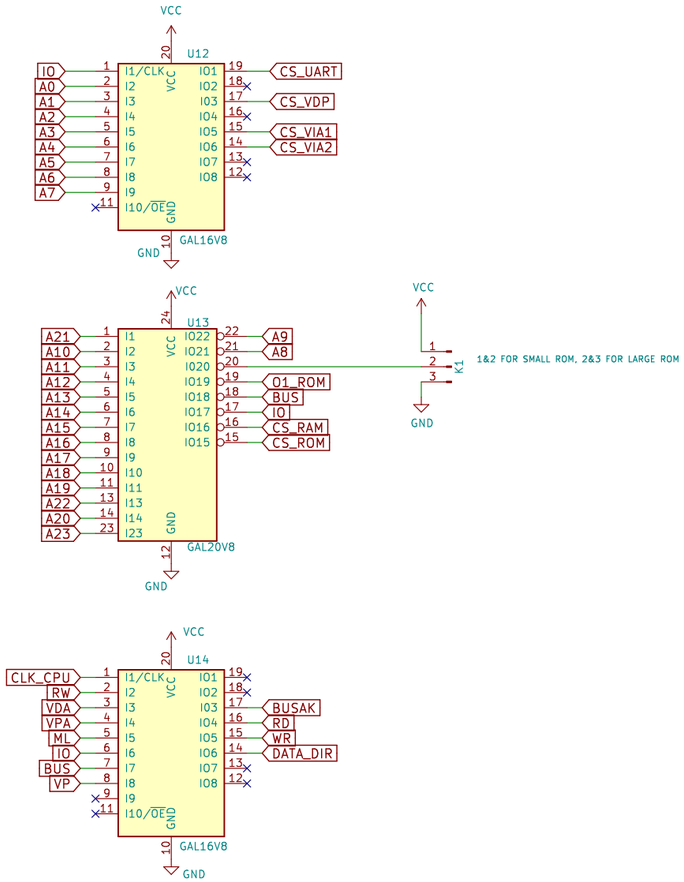




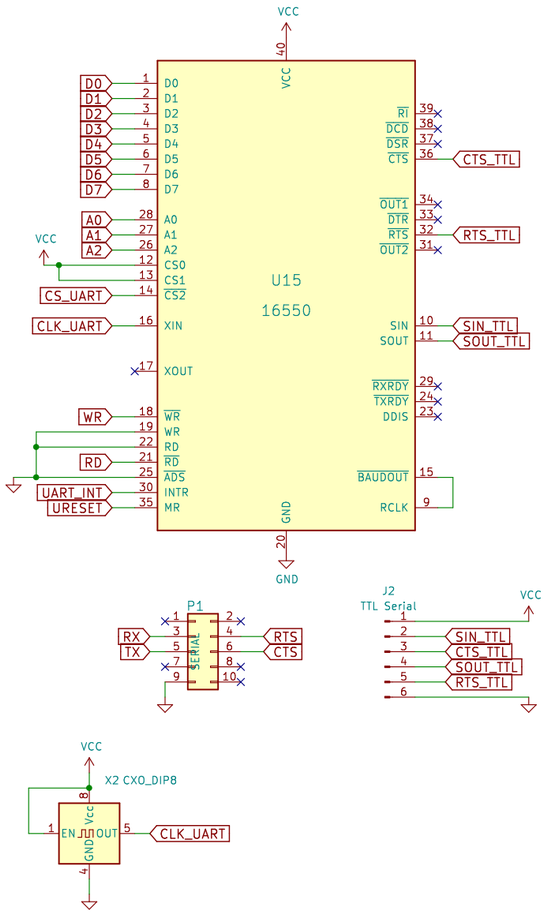


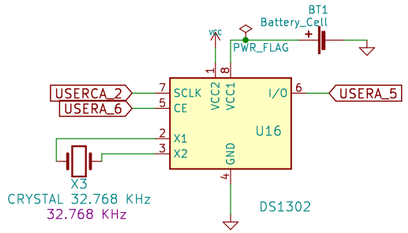


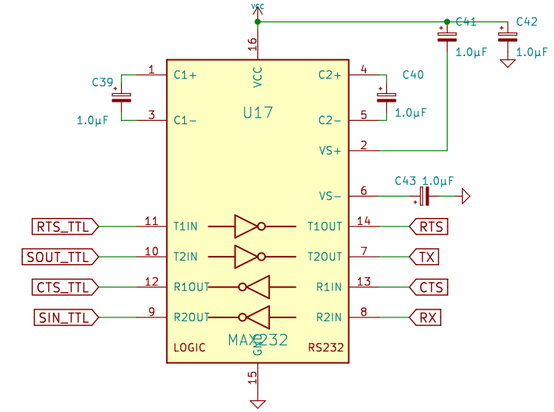
C47 IS OPTIONAL.
MOST MONITORS ARE
CAPACITIVELY COUPLED
ALREADY.

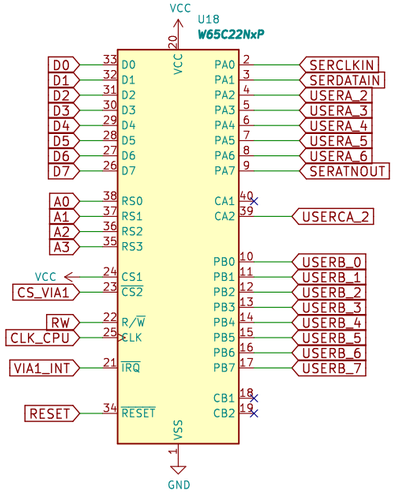

VCC
U12
IO
A0
A1
A2
A3
A4
A5
A6
A7
I1/CLK
I2
I3
I4
I5
I6
I7
I8
I9
I10/OE
VCC
GND
IO1
IO2
IO3
IO4
IO5
IO6
IO7
IO8
CS_UART
CS_VDP
CS_VIA1
CS_VIA2
GAL16V8
VCC
U13
A21
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A22
A20
A23
I1
I2
I3
I4
I5
I6
I7
I8
I9
I10
I11
I13
I14
I23
VCC
GND
IO22
IO21
IO20
IO19
IO18
IO17
IO16
IO15
A9
A8
O1_ROM
BUS
IO
CS_RAM
CS_ROM
GAL20V8
VCC
K1
1&2 FOR SMALL ROM, 2&3 FOR LARGE ROM
GND
VCC
U14
CLK_CPU
RW
VDA
VPA
ML
IO
BUS
VP
I1/CLK
I2
I3
I4
I5
I6
I7
I8
I9
I10/OE
VCC
GND
IO1
IO2
IO3
IO4
IO5
IO6
IO7
IO8
BUSAK
RD
WR
DATA_DIR
GAL16V8
GND

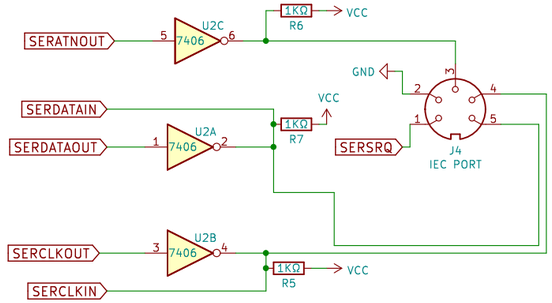
SERIAL IO

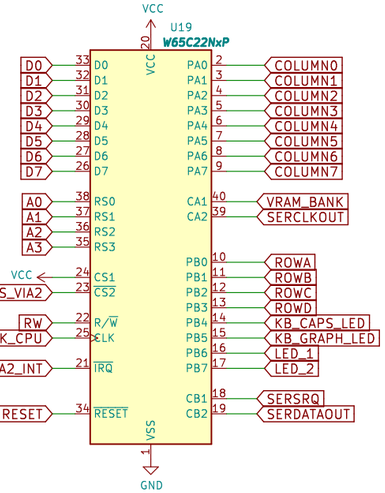

VCC
U15
16550
D0
D1
D2
D3
D4
D5
D6
D7
A0
A1
A2
CS0
CS1
CS2
XIN
XOUT
WR
RD
ADS
INTR
MR
RI
DCD
DSR
CTS
OUT1
DTR
RTS
OUT2
SIN
SOUT
RXRDY
TXRDY
DDIS
BAUDOUT
RCLK
GND
CS_UART
CLK_UART
UART_INT
URESET
CTS_TTL
RTS_TTL
SIN_TTL
SOUT_TTL

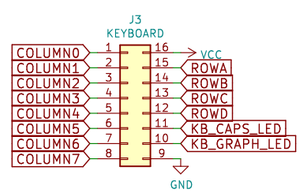

BT1
Battery_Cell
PWR_FLAG
U16
SCLK
CE
VCC2
VCC1
I/O
X1
X2
GND
USERCA_2
USERA_6
USERA_5
X3
CRYSTAL 32.768 KHz
32.768 KHz
DS1302

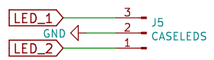

U17
C1+
C1-
C2+
C2-
VS+
VS-
T1IN
T2IN
R1OUT
R2OUT
T1OUT
T2OUT
R1IN
R2IN
LOGIC
RS232
MAX232
C39
C40
C41
C42
C43
1.0µF
RTS_TTL
SOUT_TTL
CTS_TTL
SIN_TTL
RTS
TX
CTS
RX


U18
W65C22NxP
D0
D1
D2
D3
D4
D5
D6
D7
RS0
RS1
RS2
RS3
CS1
CS2
R/W
CLK
IRQ
RESET
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
CA1
CA2
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
CB1
CB2
VCC
VSS
A0
A1
A2
A3
CS_VIA1
RW
CLK_CPU
VIA1_INT
RESET
SERCLKIN
SERDATAIN
USERA_2
USERA_3
USERA_4
USERA_5
USERA_6
SERATNOUT
USERCA_2
USERB_0
USERB_1
USERB_2
USERB_3
USERB_4
USERB_5
USERB_6
USERB_7


SERATNOUT
SERDATAIN
SERDATAOUT
SERCLKOUT
SERCLKIN
SERSRQ
U2A
U2B
U2C
7406
1KΩ
R5
R6
R7
J4
IEC PORT
VCC
GND


U19
W65C22NxP
D0
D1
D2
D3
D4
D5
D6
D7
RS0
RS1
RS2
RS3
CS1
CS2
R/W
CLK
IRQ
RESET
PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
CA1
CA2
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
CB1
CB2
VCC
VSS
A0
A1
A2
A3
CS_VIA2
RW
CLK_CPU
VIA2_INT
RESET
VRAM_BANK
SERCLKOUT
ROWA
ROWB
ROWC
ROWD
KB_CAPS_LED
KB_GRAPH_LED
LED_1
LED_2
SERSRQ
SERDATAOUT

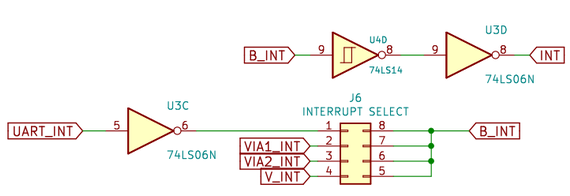

J3
KEYBOARD
COLUMN0
COLUMN1
COLUMN2
COLUMN3
COLUMN4
COLUMN5
COLUMN6
COLUMN7
ROWA
ROWB
ROWC
ROWD
KB_CAPS_LED
KB_GRAPH_LED
VCC
GND

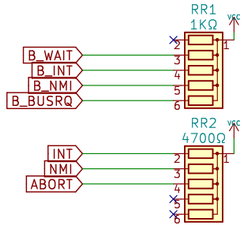

LED_1
GND
LED_2
J5
CASELEDS

P1
SERIAL
RX
TX
RTS
CTS

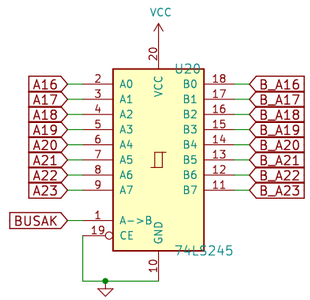
J2
TTL Serial
VCC
SIN_TTL
CTS_TTL
SOUT_TTL
RTS_TTL

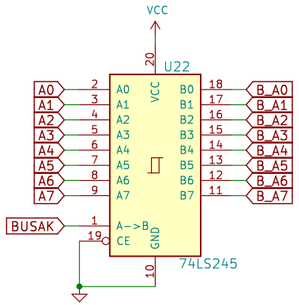
VCC
X2 CXO_DIP8
EN
GND
OUT
CLK_UART

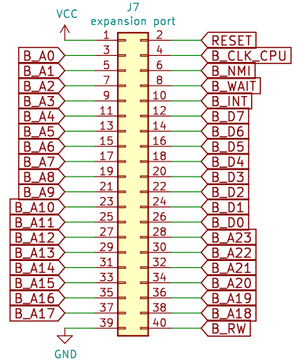


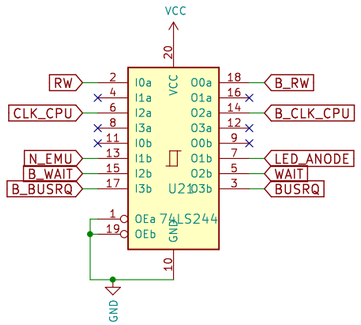


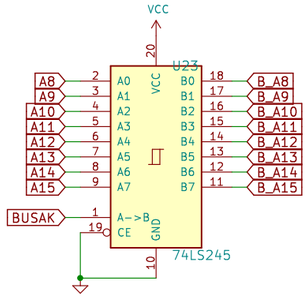
BUS BUFFERING

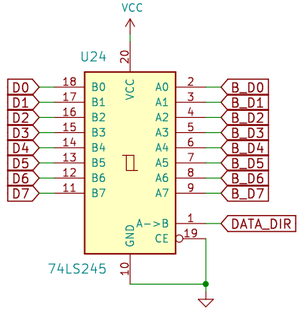


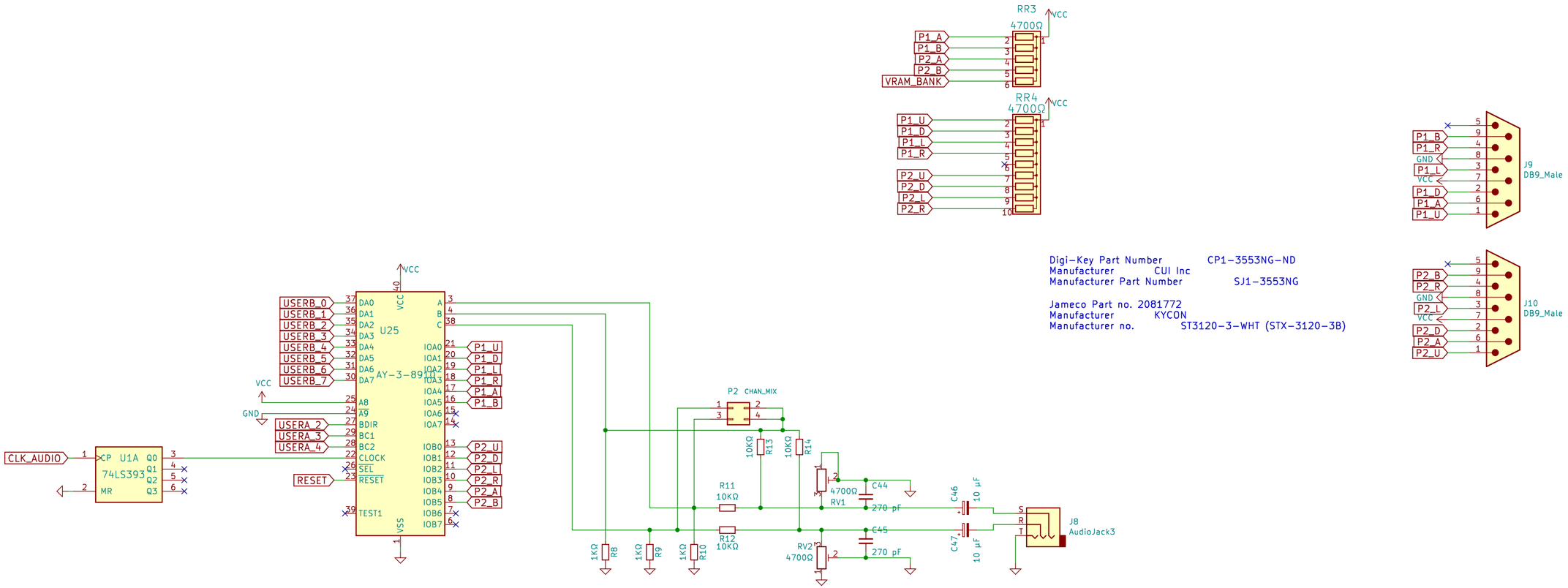











RR3
4700Ω
VCC
P1_A
P1_B
P2_A
P2_B
VRAM_BANK
RR4
4700Ω
VCC
P1_U
P1_D
P1_L
P1_R
P2_U
P2_D
P2_L
P2_R
J9
DB9_Male
P1_B
P1_R
GND
P1_L
VCC
P1_D
P1_A
P1_U
J10
DB9_Male
P2_B
P2_R
GND
P2_L
VCC
P2_D
P2_A
P2_U
Digi-Key Part Number CP1-3553NG-ND
Manufacturer CUI Inc
Manufacturer Part Number SJ1-3553NG
Jameco Part no. 2081772
Manufacturer KYCON
Manufacturer no. ST3120-3-WHT (STX-3120-3B)
VCC
USERB_0
USERB_1
USERB_2
USERB_3
USERB_4
USERB_5
USERB_6
USERB_7
USERA_2
USERA_3
USERA_4
RESET
U25
AY-3-8910
DA0
DA1
DA2
DA3
DA4
DA5
DA6
DA7
A8
A9
BDIR
BC1
BC2
CLOCK
SEL
RESET
TEST1
A
B
C
IOA0
IOA1
IOA2
IOA3
IOA4
IOA5
IOA6
IOA7
IOB0
IOB1
IOB2
IOB3
IOB4
IOB5
IOB6
IOB7
P1_U
P1_D
P1_L
P1_R
P1_A
P1_B
P2_U
P2_D
P2_L
P2_R
P2_A
P2_B
GND
VCC
VSS
CLK_AUDIO
U1A
74LS393
CP
MR
Q0
Q1
Q2
Q3
P2 CHAN_MIX
R11
10KΩ
R12
10KΩ
R13
10KΩ
R14
10KΩ
RV1
4700Ω
RV2
4700Ω
C44
270 pF
C45
270 pF
C46
10 µF
C47
10 µF
R8
1KΩ
R9
1KΩ
R10
1KΩ
J8
AudioJack3
S
R
T

CPU, CLOCK, AND MEMORY

U27
658C16
RESET
CLK_CPU
NMI
INT
VP
WAIT
RDY
ML
M/XXTAL
RW
EMU
E
BUSRQ
BE
ABORT
VDA
VPA
VCC
GND
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7

100Ω R15
BICOLOR LED D1
LED_ANODE
BICOLOR LED
U4A 74LS14
EMU
N_EMU
RUN/HALT LED

VCC
C49 0.1 µF
P5
EN OUT
CLK_CPU

U30 74LS373
AD0 AD1 AD2 AD3 AD4 AD5 AD6 AD7
LE
OE
A16 A17 A18 A19 A20 A21 A22 A23

U4C 74LS14
CLK_CPU

U31 74LS245
D0 D1 D2 D3 D4 D5 D6 D7
A0 A1 A2 A3 A4 A5 A6 A7
B0 B1 B2 B3 B4 B5 B6 B7
A->B
CE
RW

U26
DQ0 DQ1 DQ2 DQ3 DQ4 DQ5 DQ6 DQ7
CE# OE# WE#
CS_RAM RD WR
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A18
SRAM_512K0

K2
A17
USE FOR 512K SRAM OR 128K SRAM

U28 27C256
CE OE VPP
CS_ROM RD
1&2 FOR 27C256, 2&3 FOR 29C256
K3

U29 27C512
O1_ROM RD

RESET SWITCH / POWER ON RESET / POWER SWITCH

POWER P3
PWR_FLAG
C48 22 µF
10Ω R16
10KΩ R17
C50 10 µF
P4 RESET
U4B 74LS14
URESET
U3B 74LS06N
1KΩ R18
RESET