Input buffer and sync separator

J1 Video In
C9 22p
R8 10K
Q2 2N3904
R1 620R
C3 100n
R9 1K
C2 510p
C4 100n
R2 680K
U2 LM1881
VIDEO INT
VCC
CSYNC
FRAME
BURST
O/E
GND
+5V
CSYNC
FRAME
GND

Edge select

+5V
R5 1K
Q1 2N3904
R6 10K
GND
U3B 74LS109
J
C
K
R
Q
Q
ARMN
U3A 74LS109
J
C
K
R
Q
Q
ARM
D3 1N914
D4 1N914
+5V
R7 10K
J5 Trigger Out
GND

Controller

+5V
C1 100n
GND
J2 ICSP
GND
AREF
VCC
AVCC
ATmega328P-P U1
PB0
PB1
PB2
PB3
PB4
PB5
XTAL1/PB6
XTAL2/PB7
PC0
PC1
PC2
PC3
PC4
PC5
RESET/PC6
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
GND
GND
SW
ENCB
ENCA
D1 LED
R3 1K
GND
Y1 20MHz
C5 22p
C6 22p
GND
SDA
SCL
+5V
D2 1N914
R4 10K
C7 100n
SW1 RESET
GND
CSYNC
FRAME
ARMN
ARM

Power

+5V
J3 5V Power
PWR_FLAG
C8 100n
U3C 74LS109
VCC
GND
PWR_FLAG
GND

Display and encoder

+5V
SCL
SDA
J4 Conn_01x04
GND
U4 DISPLAY_SSD1306_OLED_128x32
SDA
SCL
VCC
GND
SW2 RotaryEncoder_Switch
ENCA
ENCB
A
C
B
S1
S2
SW
GND
GND