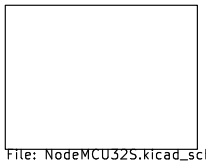
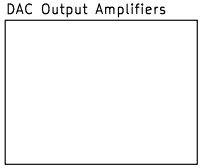
NodeMCU32S



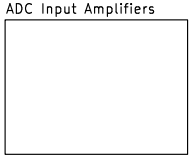
File: NodeMCU32S.kicad_sch

DAC Output Amplifiers



File: DACOutputAmplifiers.kicad_sch

ADC Input Amplifiers



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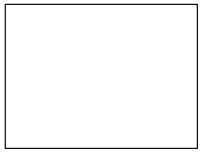
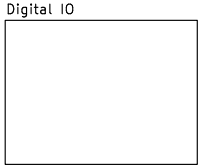
Quadrature Counters



File: QuadratureCounters.kicad_sch

Digital IO

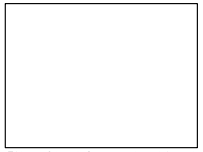


File: DigitalIO.kicad_sch

NodeMCU Test Cables

File: NodeMCUTestCables.kicad_sch

Clock Generator



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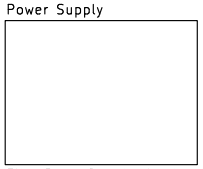
Power Supply

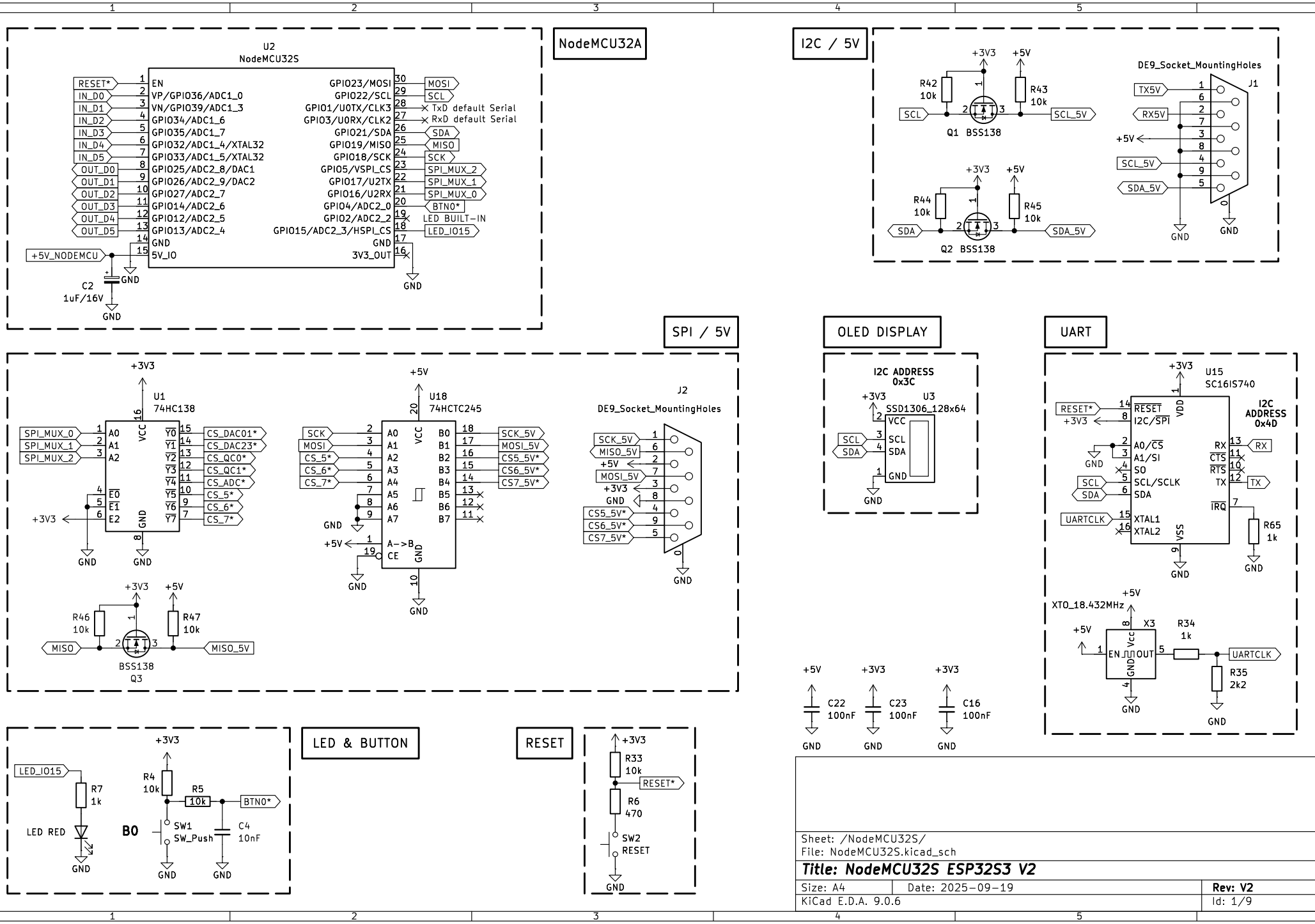


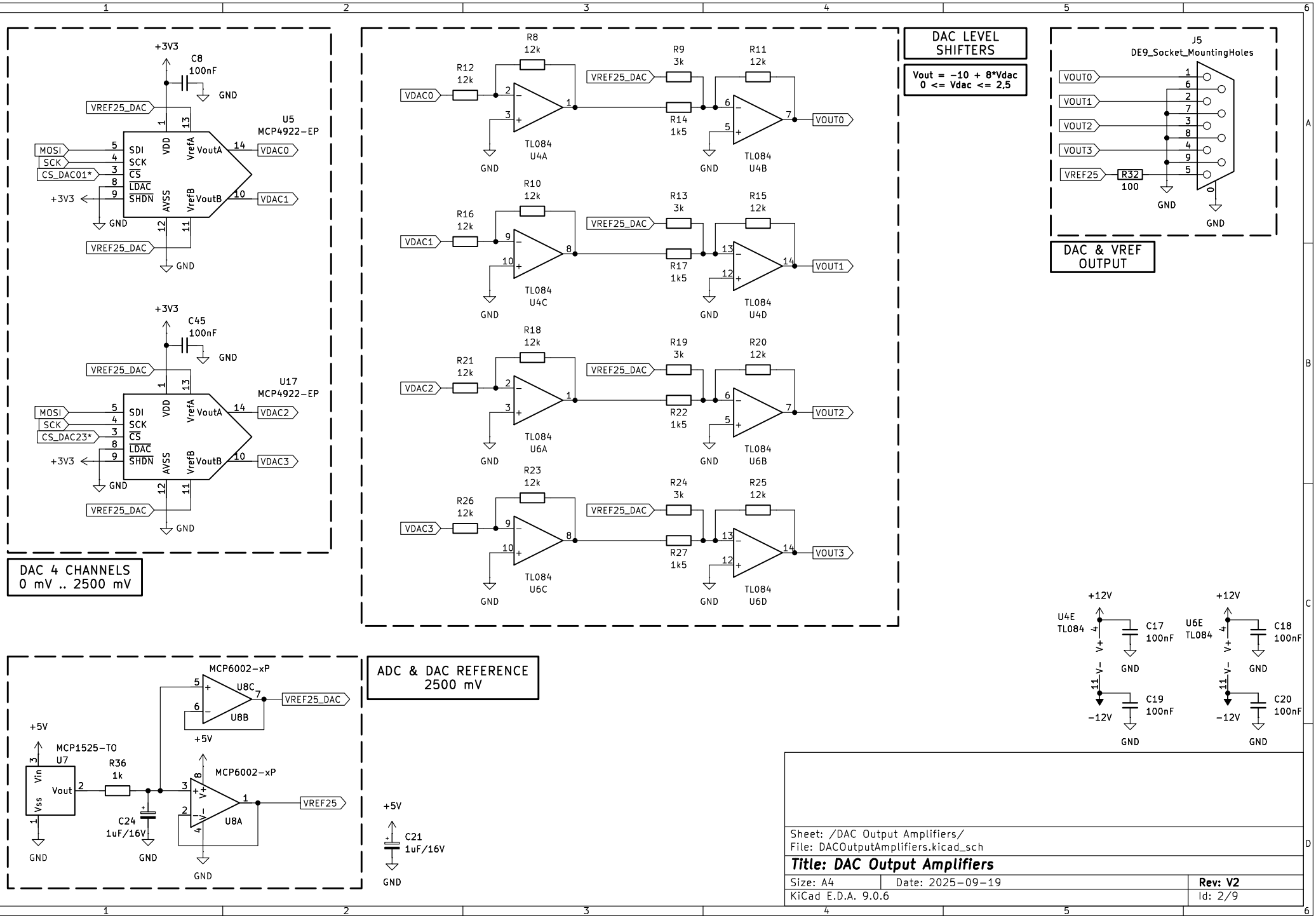
File: PowerSupply.kicad_sch

Sheet: /
File: NodeMCU32SPlatform_v2.kicad_sch

Title: NodeMCU32S Platform V1

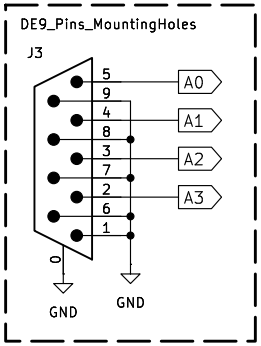
Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 1/9


NodeMCU32A
U2
NodeMCU32S
RESET*
IN_D0
IN_D1
IN_D2
IN_D3
IN_D4
IN_D5
OUT_D0
OUT_D1
OUT_D2
OUT_D3
OUT_D4
OUT_D5
EN
VP/GPIO36/ADC1_0
VN/GPIO39/ADC1_3
GPIO34/ADC1_6
GPIO35/ADC1_7
GPIO32/ADC1_4/XTAL32
GPIO33/ADC1_5/XTAL32
GPIO25/ADC2_8/DAC1
GPIO26/ADC2_9/DAC2
GPIO27/ADC2_7
GPIO14/ADC2_6
GPIO12/ADC2_5
GPIO13/ADC2_4
GND
5V_IO
GPIO23/MOSI
GPIO22/SCL
GPIO1/U0TX/CLK3
GPIO3/U0RX/CLK2
GPIO21/SDA
GPIO19/MISO
GPIO18/SCK
GPIO5/VSPI_CS
GPIO17/U2TX
GPIO16/U2RX
GPIO4/ADC2_0
GPIO2/ADC2_2
GPIO15/ADC2_3/HSPI_CS
GND
3V3_OUT
MOSI
SCL
TxD default Serial
RxD default Serial
SDA
MISO
SCK
SPI_MUX_2
SPI_MUX_1
SPI_MUX_0
BTN0*
LED BUILT-IN
LED_IO15
+5V_NODEMCU
C2
1uF/16V
I2C / 5V
R42
10k
R43
10k
Q1 BSS138
SCL_5V
R44
10k
R45
10k
Q2 BSS138
SDA_5V
DE9_Socket_MountingHoles
J1
TX5V
RX5V
SCL_5V
SDA_5V
SPI / 5V
U1
74HC138
SPI_MUX_0
SPI_MUX_1
SPI_MUX_2
CS_DAC01*
CS_DAC23*
CS_QC0*
CS_QC1*
CS_ADC*
CS_5*
CS_6*
CS_7*
U18
74HCTC245
SCK_5V
MOSI_5V
CS5_5V*
CS6_5V*
CS7_5V*
J2
DE9_Socket_MountingHoles
R46
10k
R47
10k
BSS138
Q3
OLED DISPLAY
I2C ADDRESS
0x3C
U3
SSD1306_128x64
UART
U15
SC16IS740
I2C
ADDRESS
0x4D
XTO_18.432MHz
X3
R34
1k
R35
2k2
R65
1k
C22
100nF
C23
100nF
C16
100nF
LED & BUTTON
LED_IO15
R7
1k
LED RED
R4
10k
R5
10k
BTN0*
B0
SW1
SW_Push
C4
10nF
RESET
R33
10k
R6
470
SW2
RESET
Sheet: /NodeMCU32S/
File: NodeMCU32S.kicad_sch
Title: NodeMCU32S ESP32S3 V2
Size: A4
Date: 2025-09-19
Rev: V2
KiCad E.D.A. 9.0.6
Id: 1/9



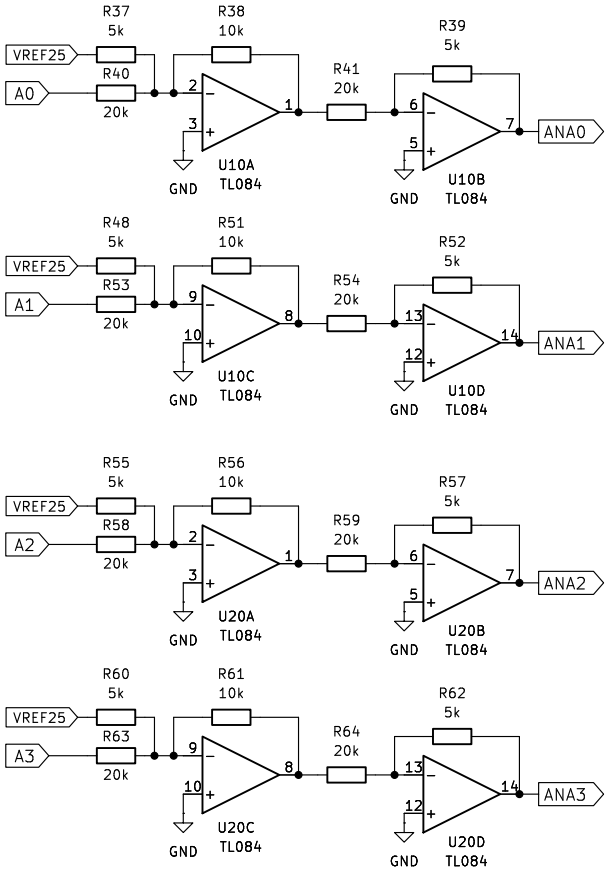
Sheet: /DAC Output Amplifiers/		
File: DACOutputAmplifiers.kicad_sch		
Title: DAC Output Amplifiers		
Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 2/9

ADC INPUT

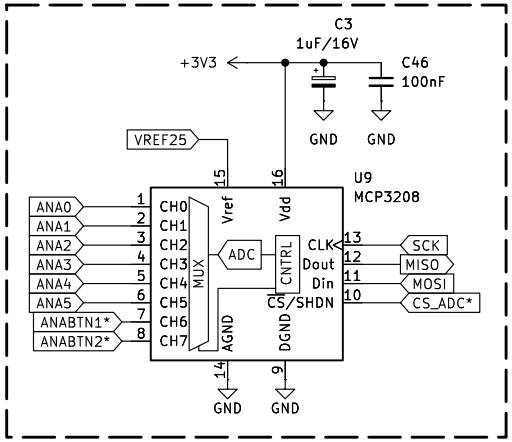


ADC LEVEL SHIFTERS

Vout = (2.5/20) * (Vin + 10)
−10 <= Vin <= +10

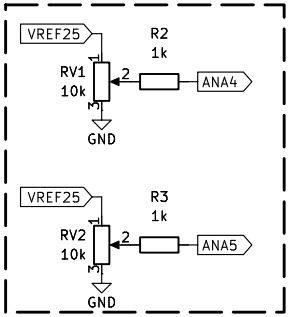


8 CHANNEL ADC

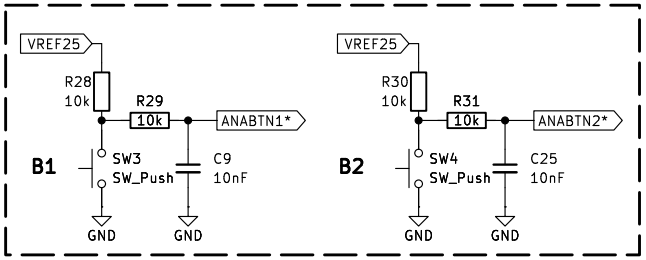


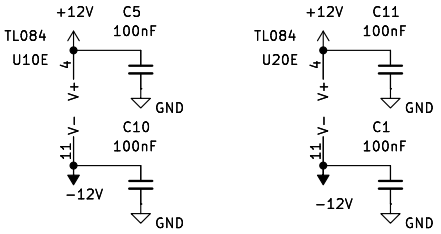
	INPUT −5V/+5V	INPUT −10V/+10V
R39, R52, R57, R62	10k	5k
R41, R54, R59, R64	20k	20k
R38, R51, R56, R61	10k	10k
R37, R48, R55, R60	10k	5k
R40, R53, R58, R63	20k	20k

POTMETERS



ANALOG BUTTONS



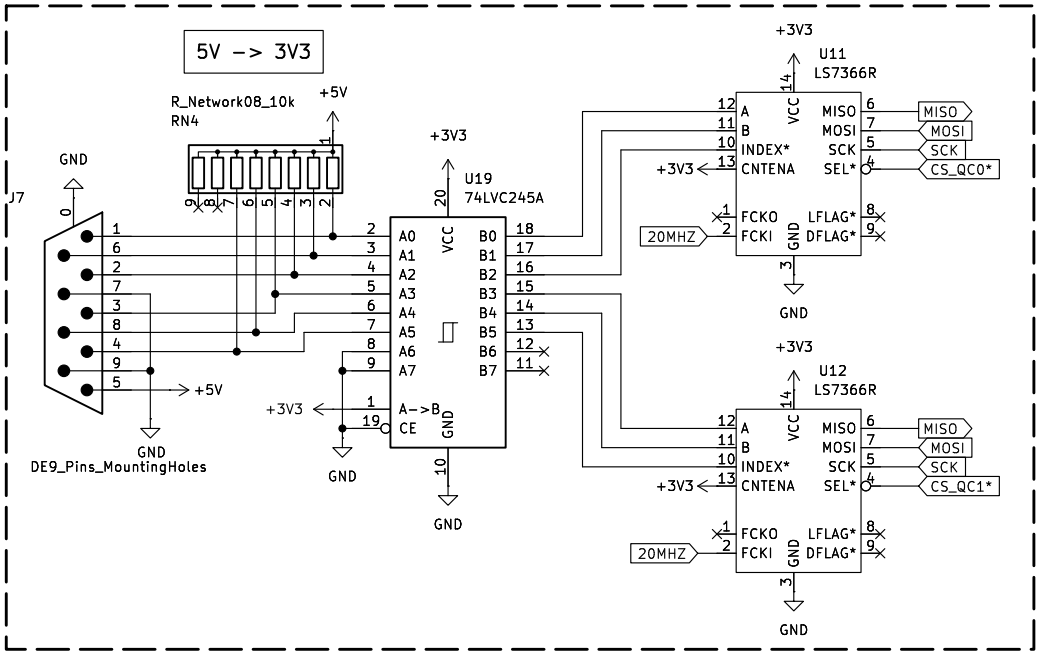


Sheet: /ADC Input Amplifiers/
File: ADCInputAmplifiers.kicad_sch

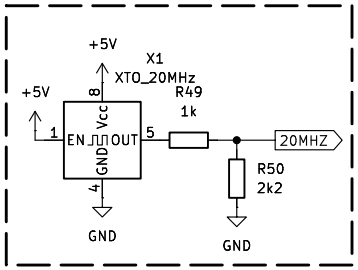
Title: ADC Input Amplifiers

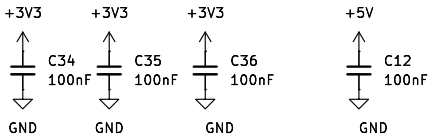
Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 3/9

QUADRATURE COUNTERS



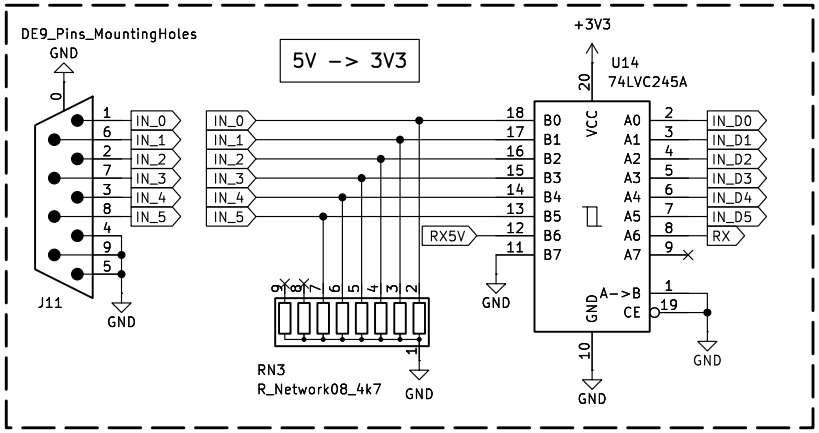
QUADRATURE CLOCK



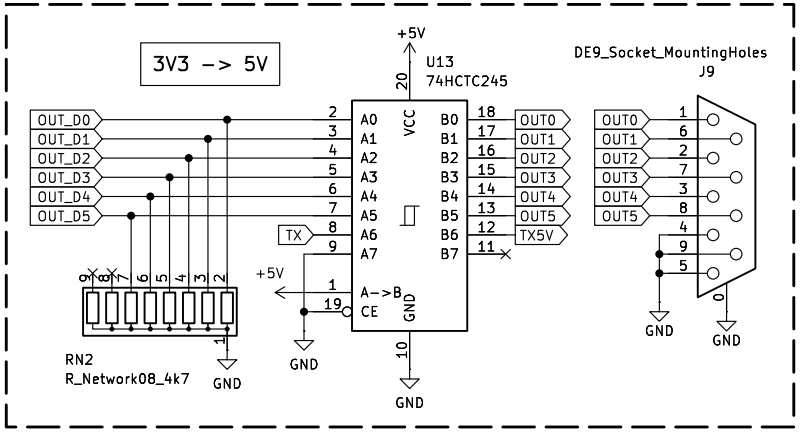


Sheet: /Quadrature Counters/ File: QuadratureCounters.kicad_sch		
Title: Quadrature Counters		
Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 4/9

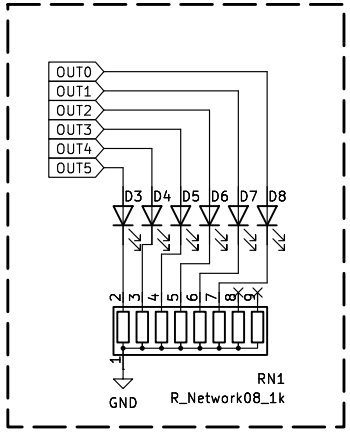
6-BIT DIGITAL INPUT

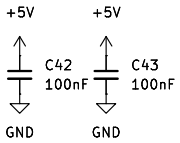


6-BIT DIGITAL OUTPUT



6-BIT OUTPUT LEDS





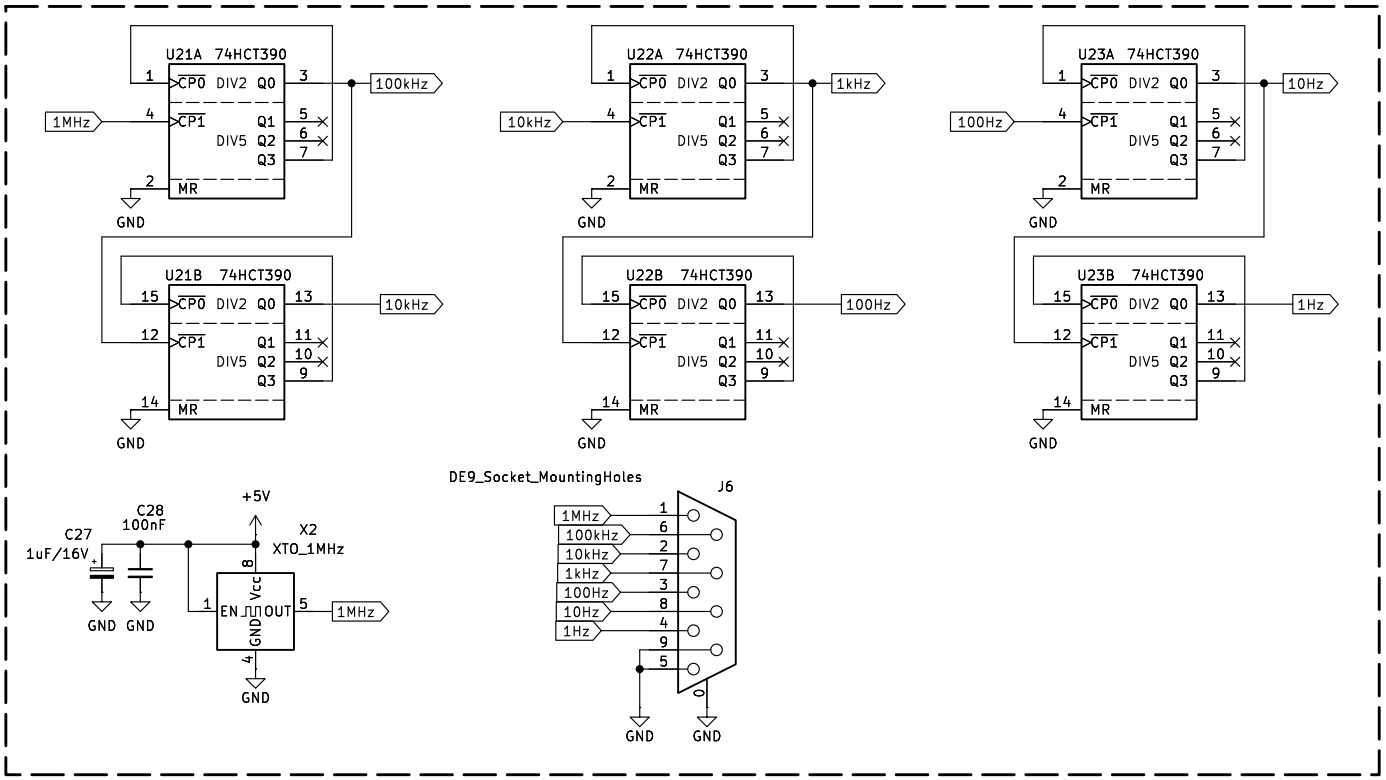
Sheet: /Digital IO/
File: DigitalIO.kicad_sch

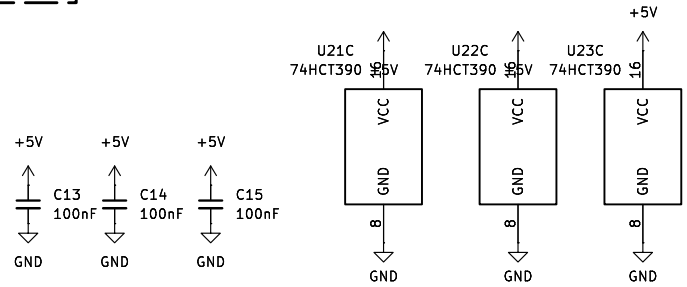
Title: Digital IO

Size: A4 | Date: 2025-09-19 | **Rev: V2**

KiCad E.D.A. 9.0.6 | Id: 5/9

CLOCK GENERATOR



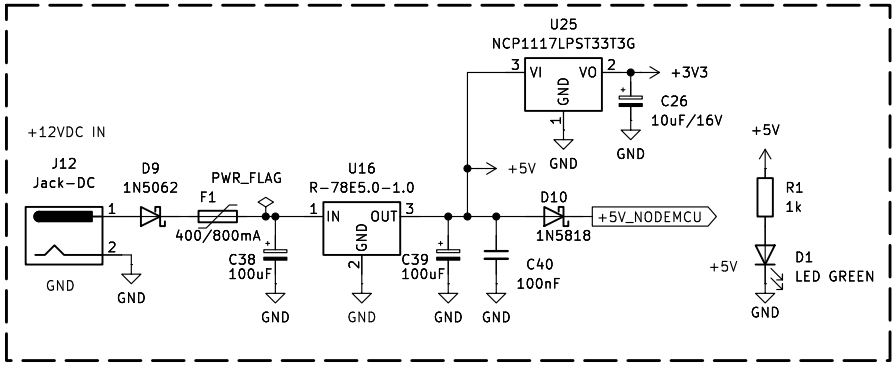


Sheet: /Clock Generator/
File: ClockGenerator.kicad_sch

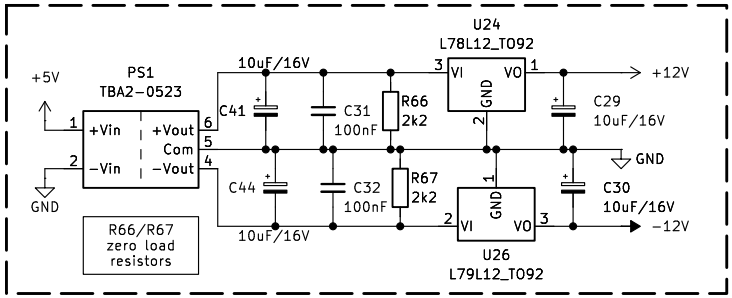
Title: Clock Generator

Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 6/9

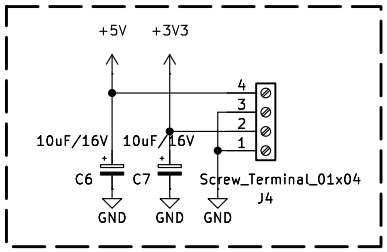
+5V +3V3

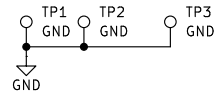


+12V / −12V



+5V +3V3 OUTPUT



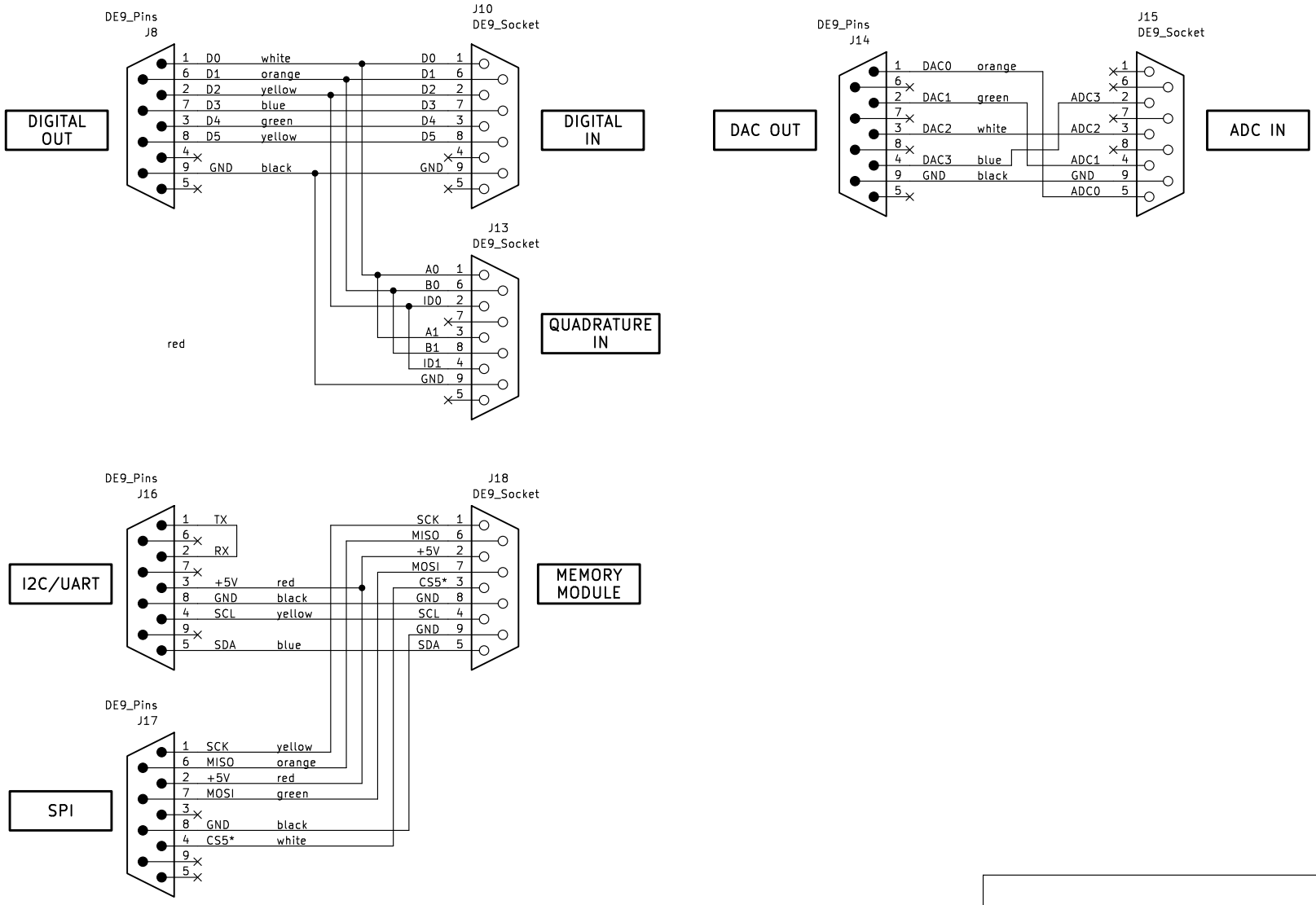


H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole
H5 MountingHole
H6 MountingHole

Sheet: /Power Supply/
File: PowerSupply.kicad_sch

Title: Power Supply

Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 7/9



Sheet: /NodeMCU Test Cables/
File: NodeMCUTestCables.kicad_sch

Title: Test Cables

Size: A4	Date: 2025-09-19	**Rev: V2**
KiCad E.D.A. 9.0.6		Id: 9/9