

STM32 Connector

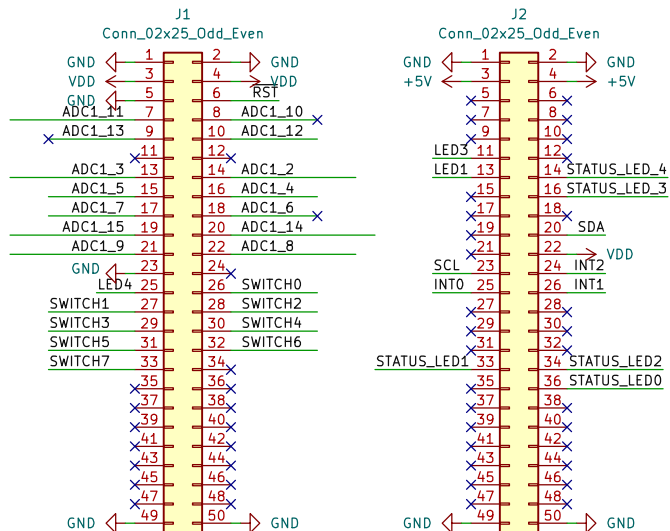
The diagram illustrates the pin connections for two STM32 connectors, J1 and J2, both using a 25-pin 02x25 connector. The connections are organized into two columns, Odd and Even, for each connector.

J1 Conn_02x25_Odd_Even:

- Odd Pins (Left):** 1 GND, 3 VDD, 5 GND, 7 ADC1_11, 9 ADC1_13, 11 ADC1_3, 13 ADC1_5, 15 ADC1_7, 17 ADC1_15, 19 ADC1_9, 23 GND, 25 LED4, 27 SWITCH1, 29 SWITCH3, 31 SWITCH5, 33 SWITCH7, 35 GND, 37 GND, 39 GND, 41 GND, 43 GND, 45 GND, 47 GND, 49 GND.
- Even Pins (Right):** 2 GND, 4 VDD, 6 RST, 8 ADC1_10, 10 ADC1_12, 12 ADC1_2, 14 ADC1_4, 16 ADC1_6, 18 ADC1_14, 20 ADC1_8, 24 SWITCH0, 26 SWITCH2, 28 SWITCH4, 30 SWITCH6, 34 GND, 36 GND, 38 GND, 40 GND, 42 GND, 44 GND, 46 GND, 48 GND, 50 GND.

J2 Conn_02x25_Odd_Even:

- Odd Pins (Left):** 1 GND, 3 +5V, 5 +5V, 7 LED3, 9 LED1, 11 SCL, 13 INT0, 15 STATUS_LED1, 17 GND, 19 GND, 21 GND, 23 GND, 25 GND, 27 GND, 29 GND, 31 GND, 33 STATUS_LED1, 35 GND, 37 GND, 39 GND, 41 GND, 43 GND, 45 GND, 47 GND, 49 GND.
- Even Pins (Right):** 2 GND, 4 +5V, 6 +5V, 8 +5V, 10 +5V, 12 STATUS_LED_4, 14 STATUS_LED_3, 16 STATUS_LED_3, 18 SDA, 20 SDA, 22 INT2, 24 INT1, 26 INT1, 28 GND, 30 GND, 32 GND, 34 STATUS_LED2, 36 STATUS_LED0, 38 GND, 40 GND, 42 GND, 44 GND, 46 GND, 48 GND, 50 GND.



I/O Expander

VDD

U2
PCA9555PW

SCL 22
SDA 23
INT 1

VDD R1 4k7
INT0

VDD R2 4k7
SDA

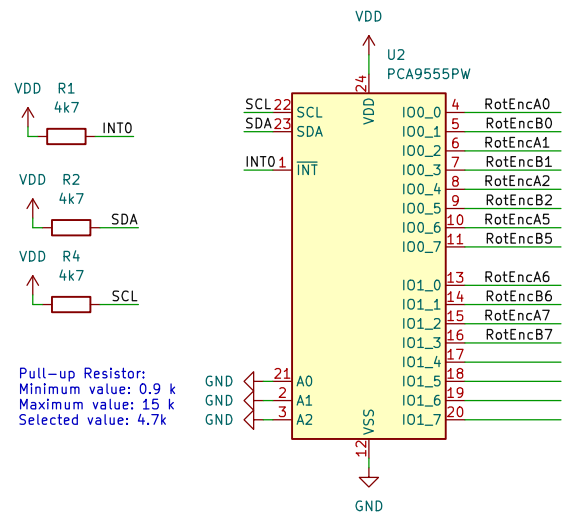
VDD R4 4k7
SCL

Pull-up Resistor:
Minimum value: 0.9 k
Maximum value: 15 k
Selected value: 4.7k

100_0	4	RotEncA0
100_1	5	RotEncB0
100_2	6	RotEncA1
100_3	7	RotEncB1
100_4	8	RotEncA2
100_5	9	RotEncB2
100_6	10	RotEncA5
100_7	11	RotEncB5
101_0	13	RotEncA6
101_1	14	RotEncB6
101_2	15	RotEncA7
101_3	16	RotEncB7
101_4	17	
101_5	18	
101_6	19	
101_7	20	

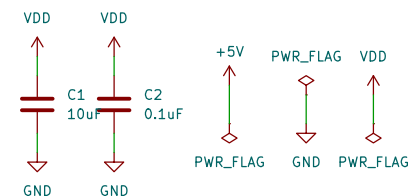
GND 21 A0
GND 22 A1
GND 23 A2

VSS
GND



Power

The diagram illustrates the power supply configuration for the device. It shows two decoupling capacitors, C1 (10uF) and C2 (0.1uF), connected between VDD and GND. Additionally, three signal pins are shown: +5V, PWR_FLAG, and VDD, all connected to GND.



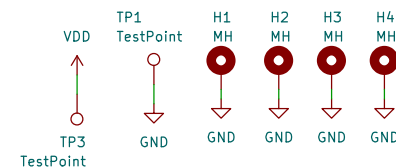
Test-Points

Diagram illustrating Test-Points for a circuit:

- TP1 TestPoint**: Connected to **GND**.
- H1 MH**: Connected to **GND**.
- H2 MH**: Connected to **GND**.
- H3 MH**: Connected to **GND**.
- H4 MH**: Connected to **GND**.

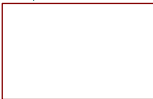
Additional components shown:

- VDD**: Power supply connection.
- TP3 TestPoint**: Test point connected to **VDD**.



Peripherals

Peripherals



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RotEncA[0..13] RotEncA[0..13]

RotEncB[0..13] RotEncB[0..13]

SWITCH[0..23] SWITCH[0..23]

STATUS_LED_3 STATUS_LED_3

STATUS_LED_4 STATUS_LED_4

Peripherals



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RotEncA[0..13] RotEncA[0..13]

RotEncB[0..13] → RotEncB[0..13]

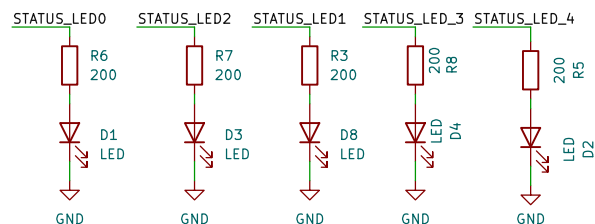
SWITCH[0..23] SWITCH[0..23]

STATUS_LED_3 STATUS_LED_3

STATUS_LED_4 STATUS_LED_4

Status LEDs

Red, Orange and Yellow LED Vf: around 2 V at 20 mA.
Blue and Green LED Vf: around 3.4 V at 20 mA.
Target current: 4 mA.
Resistor Red: $3V/4mA = 750$ or $3V/20mA = 150$
Resistor Blue: $1.6V/4mA = 400$ or $1.6V/20mA = 80$



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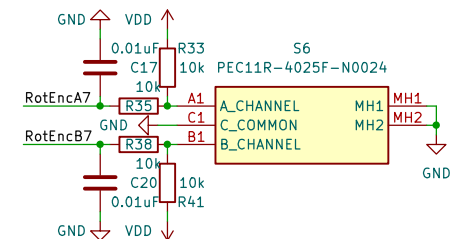
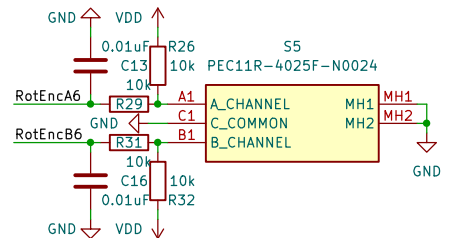
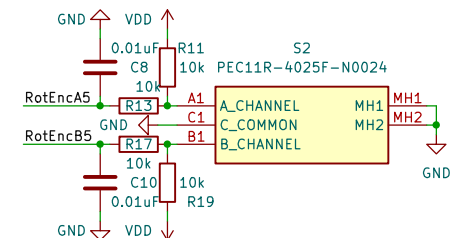
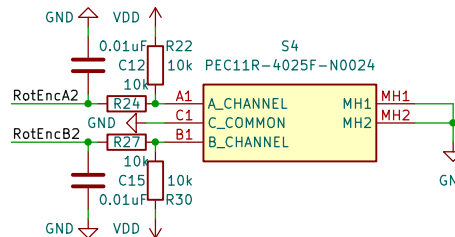
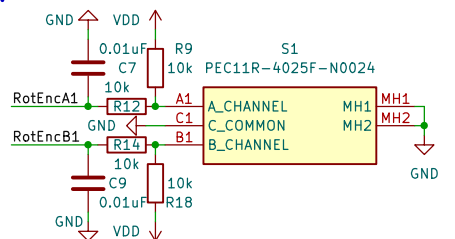
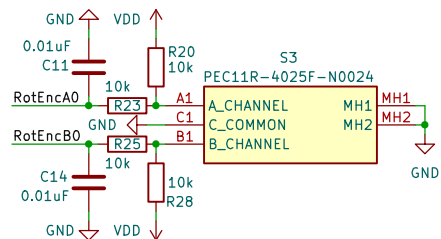
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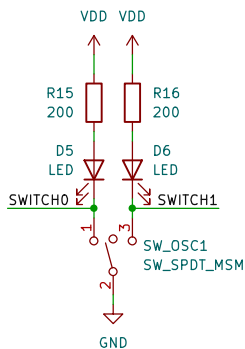
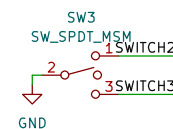
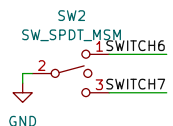
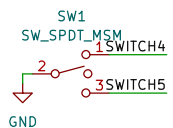
Rev: v1.2

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Oscillators & Filter



Switches



LFOs

TU Delft

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Size: A4 Date: 2023-08-29

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Rev: v1.2

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