**Current Version**

**Parts for assembling the driver circuit board**

Supplier: Mouser

**Make 1 shipment to check that the dimensions of the SMD parts match with the board!!!**

**Capacitors:**

C1: <https://www.mouser.de/ProductDetail/KEMET/C0805C103K8RACTU/?qs=cw4evkOYbeKGik5IKerAPQ%3D%3D>

C2: <https://www.mouser.de/ProductDetail/ROHM-Semiconductor/TCA0J106M8R/?qs=sGAEpiMZZMsh%252B1woXyUXj69kqxOlrVKzuvW12Vm0Wbs%3D>

C3,C4: <https://www.mouser.de/ProductDetail/KEMET/C0805C104K9RACAUTO/?qs=ds50AKTGxA84SWre%252BvImOA%3D%3D>

C5: <https://www.mouser.de/ProductDetail/KEMET/C0805C105K9RACTU/?qs=Nnkldhwoc36daYb4WU%2Fecw%3D%3D>

**Resistors:**

R1: <https://www.mouser.de/ProductDetail/Panasonic/ERJ-U06J123V/?qs=sGAEpiMZZMtlubZbdhIBIAOOKAsNLlB%252BU0Q0TtVw5QE%3D>

R2: https://www.mouser.de/ProductDetail/Panasonic/ERJ-T06J273V/?qs=sGAEpiMZZMtlubZbdhIBIK7FbVYKWV6W038uxDWOpRk%3D

R3: https://www.mouser.de/ProductDetail/Panasonic/ERJ-U06J222V/?qs=Yyy8avaXlIt9u%2Fm70g0idQ%3D%3D

R4,R5: <https://www.mouser.de/ProductDetail/Panasonic/ERJ-U06J151V/?qs=Yyy8avaXlIvde5Eu83MNpg%3D%3D>

**Transistor:**

T1: https://www.mouser.de/ProductDetail/Toshiba/2SA1162-GRLF/?qs=iCzJi%2FIZBF4pKAB14b5rPg%3D%3D

**Units:**

U1: https://www.mouser.de/ProductDetail/Analog-Devices/LT1761ES5-BYPTRPBF/?qs=ytflclh7QUVO1tv%2FV6bsow%3D%3D

U2: https://www.mouser.de/ProductDetail/Nexperia/74HC04D-Q100118/?qs=%2Fha2pyFadugYAPSa%2Fr415QHV4LwjhLocoaB0htU8Y3E%3D

**Reference:**

https://tcd1304.wordpress.com/driving-circuit-and-pcb/

### Parts and components -> download all datasheets -> check 0603 dimensions

##### Drive circuit:

* C₃, C₄ 100 nF (MLCC 0805)
* C₂ 10 µF (MLCC or tantalum 1206) -> check dimension
* R₄, R5 150 Ω (0805)
* R₃ 2.2 kΩ (0805)
* U₂ 74HC04D (SOIC-14) Note: Hex inverter -> check direction
* T₁ 2SA1015 / 2SA1162 (SOT-23) Note: Transistor

##### LDO: low noise low drop-out voltage regulator

* U₁ LT1761-BYP (SOT-23-5)  
  Note: High efficiency, step down, DC-DC converter  
  Low Noise, Low Dropout Micropower Regulator
* R₂ 27 kΩ (0805)
* R₁ 12 kΩ (0805)
* C₁ 10 nF (MLCC 0805) -> check dimension
* C₅ 1 µF (MLCC 0805) -> check dimension

The LDO is an additional circuit to produce, low noise and smoother(?) power supply

Connecting to NUCLEO

Inner side

1 A3

2 A1

3 A0

4 +5V

5 GND

6 A5

outer side

**OLD Parts for assembling the driver circuit board**

Suppliers:

**Capacitors:**

1x 0,1 µF

https://www.mouser.de/Passive-Components/Capacitors/Ceramic-Capacitors/MLCCs-Multilayer-Ceramic-Capacitors/Multilayer-Ceramic-Capacitors-MLCC-SMD-SMT/\_/N-bkrdv?P=1z0wqusZ1yx4aw4Z1yzmou0&Keyword=capacitor&FS=True

1x 10 µF (tantalum) 10 µF (MLCC or tantalum 1206)   
https://www.mouser.de/Passive-Components/Capacitors/Tantalum-Capacitors/Tantalum-Capacitors-Solid-SMD/\_/N-75hr4?P=1z0wrkrZ1yzmotyZ1yzt832Z1yx4aw4

**Resistors:**

1x 2,2 kOhm (Better Reichelt)

[https://www.conrad.de/de/o/smd-widerstaende-0241260.html?tfo\_ATT\_LOV\_RESISTOR\_DESIGN=0805&tfo\_ATT\_RESISTANCE\_VALUE\_NUM=2200%20%CE%A9](https://www.conrad.de/de/o/smd-widerstaende-0241260.html?tfo_ATT_LOV_RESISTOR_DESIGN=0805&tfo_ATT_RESISTANCE_VALUE_NUM=2200 Ω)

2x 150 Ohm (Better Reichelt)

https://www.conrad.de/de/o/smd-widerstaende-0241260.html?tfo\_ATT\_RESISTANCE\_VALUE\_NUM=150%20%CE%A9&tfo\_ATT\_LOV\_RESISTOR\_DESIGN=0805

1x 27 kOm (Better Reichelt)

<https://www.mouser.de/Passive-Components/Resistors/_/N-5g9n?P=1yzmou0Z1yzekj3>

1x 12 kOhm (Better Reichelt)

<https://www.mouser.de/Passive-Components/Resistors/_/N-5g9n?P=1yzmou0Z1yzeki4>

**Transistor:**

1x PNP

https://www.conrad.de/de/f/sot23-1724883.html?tfo\_ATT\_LOV\_MODEL\_TRANSISTORS=PNP

**Hex-Inverter:**

1x (Better Reichelt SMD HC 04 Inverter, Hex)

https://www.conrad.de/de/search.html?search=74HC04D&category=%1Ft12%1Fc1202469

**Voltage regulator:**

**Reference:**

https://tcd1304.wordpress.com/driving-circuit-and-pcb/

### Parts and components -> download all datasheets -> check 0603 dimensions

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