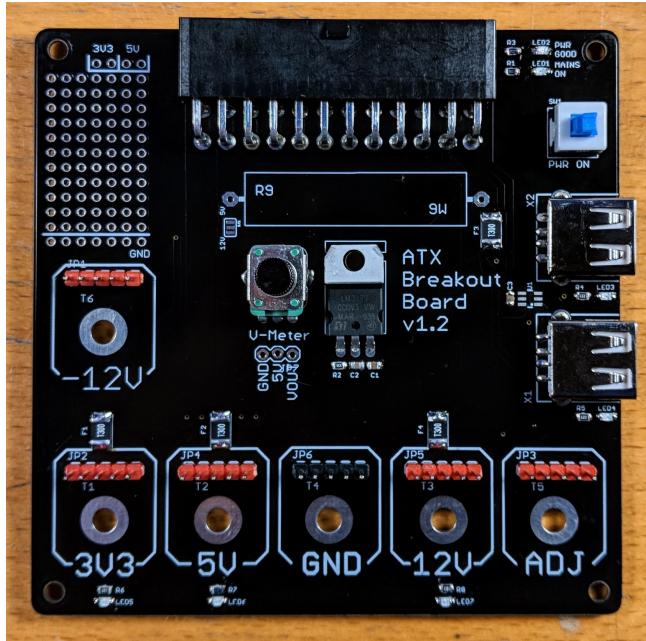


# ATX Breakout Board



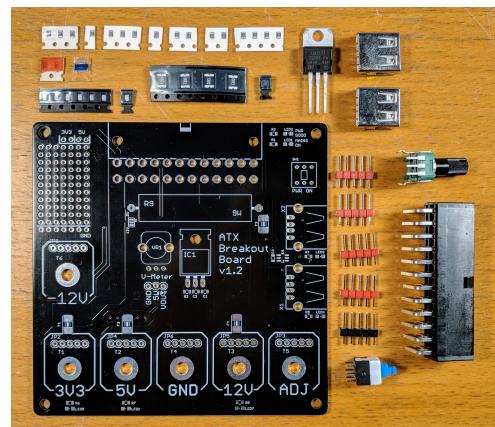
| Quantity | Name               | Description                         | Signing/Colorcode |
|----------|--------------------|-------------------------------------|-------------------|
| 3        | R1, R3, R7         | 3.3 kΩ 0805 resistor                | 332               |
| 1        | R2                 | 330 Ω 0805 resistor                 | 331               |
| 3        | R4, R5, R6         | 1.2 kΩ 0805 resistor                | 122               |
| 1        | R8                 | 10 kΩ 0805 resistor                 | 103               |
| 1        | R9                 | 9 Ω 10 W power resistor (optional)  |                   |
| 2        | R10, R15           | 43 kΩ 0805 resistor                 | 433               |
| 4        | R12, R14, R17, R19 | 51 kΩ 0805 resistor                 | 5102 or 513       |
| 2        | R11, R16           | 75 kΩ 0805 resistor                 | 753               |
| 2        | C1,C3              | 0.1 μF 0805 SMD capacitor           | red stripe        |
| 1        | C2                 | 1 μF 0805 SMD capacitor             | blue stripe       |
| 6        | LED1, LED3-LED7    | 0805 SMD LED red                    |                   |
| 1        | LED2               | 0805 SMD LED green                  |                   |
| 4        | F1,-F4             | 1812 SMD PTC Fuse 3 A               | T300              |
| 1        | U2                 | TPS2513                             |                   |
| 1        | IC1                | LM-317 (through hole)               |                   |
| 2        | X1, X2             | USB female connector (through hole) |                   |
| 6        | JP1-JP6            | 5-pin header                        |                   |
| 1        | JP7                | 3-pin header (optional)             |                   |
| 1        | SW1                | 8 mmx8 mm push button               |                   |
| 1        | VR1                | 2 kΩ PCB mount potentiometer 9 mm   |                   |
| 1        | J1                 | 24-pin ATX connector                |                   |
| 5        | T1-T3, T5, T6,     | Red 4mm Binding Post                |                   |
| 1        | T4                 | Black B4mm Binding Post             |                   |
| 1        | Board              |                                     |                   |

Difficulty: ●●●●○

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## Schritt 1

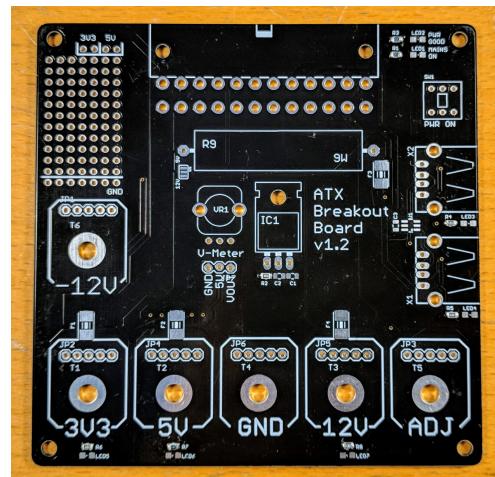
- a) Hint: Resistors (white package) have printed numbers on it and can be found in the overview (direction does not matter)
- b) Capacitors are marked with colours (direction does not matter)
- c) LEDs are in the black packes (DIRECTION IMPORTANT)



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## Schritt 2

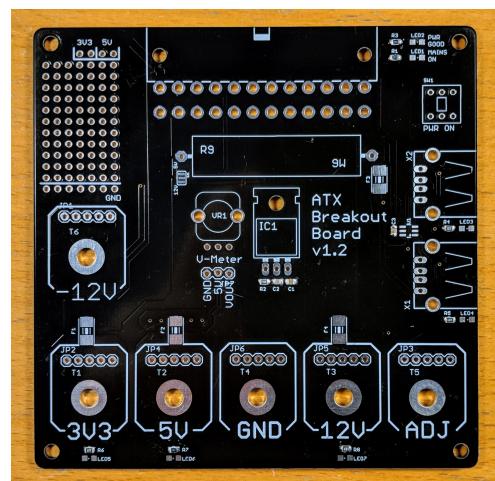
- a) Carefull: Check printed numbers on the resistors with the overview
- b) Solder Resistors R1 - R19 to the board front and back
- c) Direction of the resistors not important
- d) R9, R13 and R18 are not needed



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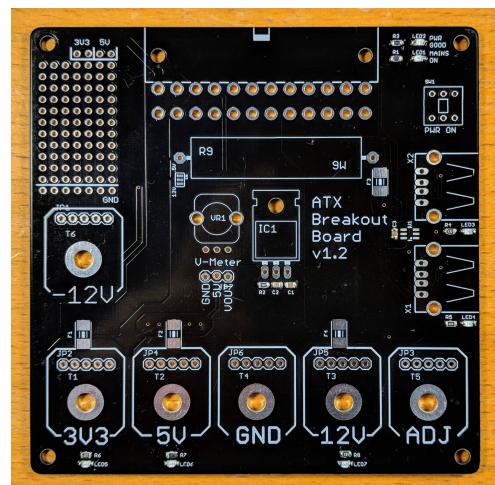
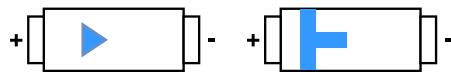
## Schritt 3

- a) Solder capacitor C1 - C3 on the board
- b) Direction of the capacitor is not important



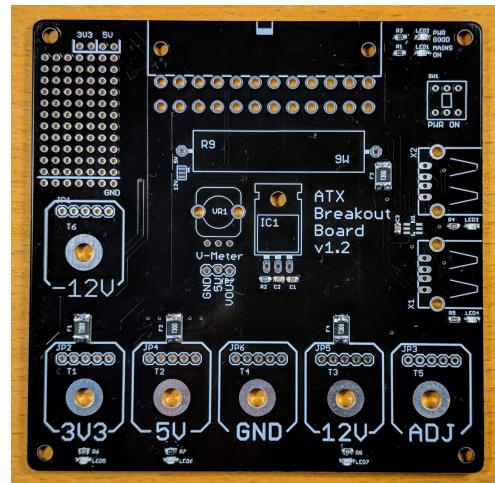
## Schritt 4

- a) Carefull: LEDs do have a direction! Solder LED 1 - 7 to the board
- b) LED2 is the green LED (single black package)
- c) A dot is printed on the board. The horizontal line on the backside of the LED needs to show in the direction of the dot.



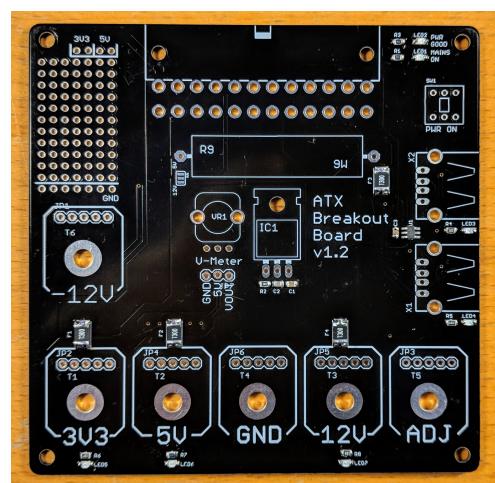
## Schritt 5

- a) Solder fuse F1 - F4 to the board
- b) Direction of the fuse is not important



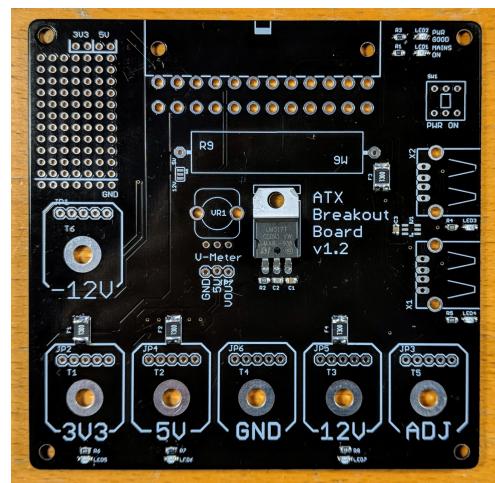
## Schritt 6

- a) Carefull: Direction important! Solder TPS2513 (6 pins) to the board
- b) A vertical line is printed on the board and the chip. Both lines are marking the direction and need to match



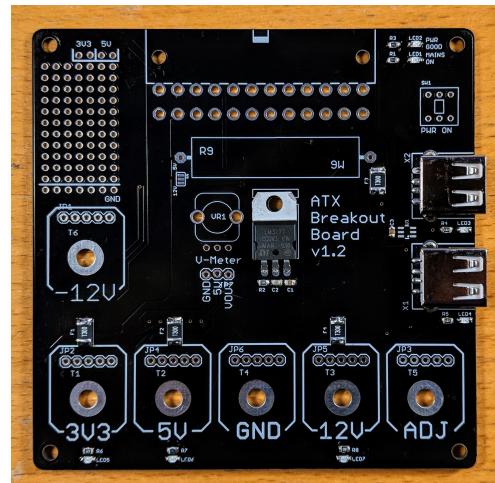
## Schritt 7

- Solder LM-317 to the board
- Hint: Bend the legs before soldering



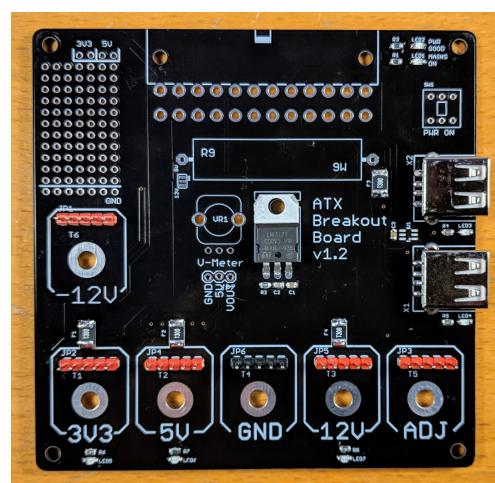
## Schritt 8

- Solder USB connector X1 and X2 to the board
- Hint: It is possible that some holder-noses needs to be clipped



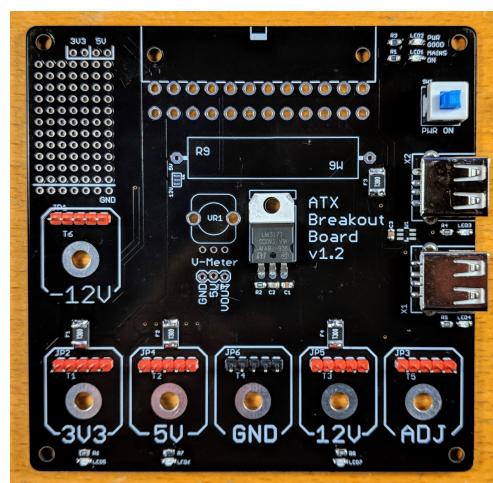
## Schritt 9

- Solder the pin header JP1 - JP6 with the short side to the board
- JP7 is optional and is only needed if you want a V-Meter



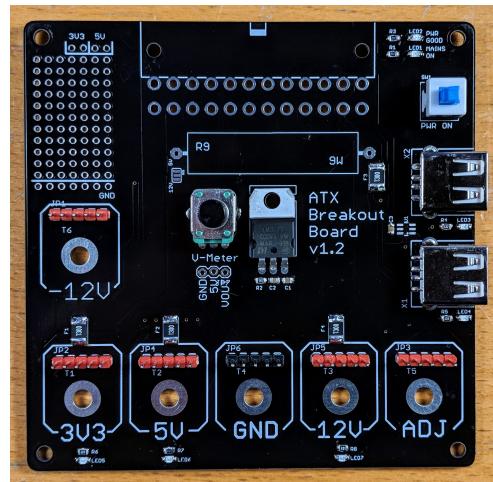
## Schritt 10

- Solder switch SW1 to the board
- Direction not important



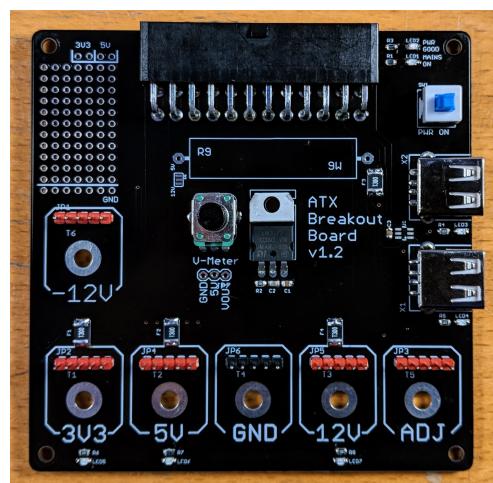
## Schritt 11

- Solder potentiometer VR1 to the board



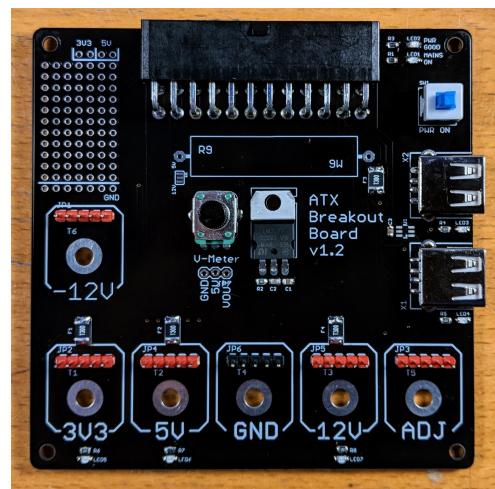
## Schritt 12

- Solder ATX connector J1 to the board



## Schritt 13

- a) Screw black (GND) and red binding posts to the board



## Schritt 14

- a) Optional: If you have nylon legs, push them into the holes in the corner
- b) Optional: To prevent shortages put some hot glue on the back of the ATX connectors

