2.4 24V-Input and Raspberry Power Supply

Application Manual

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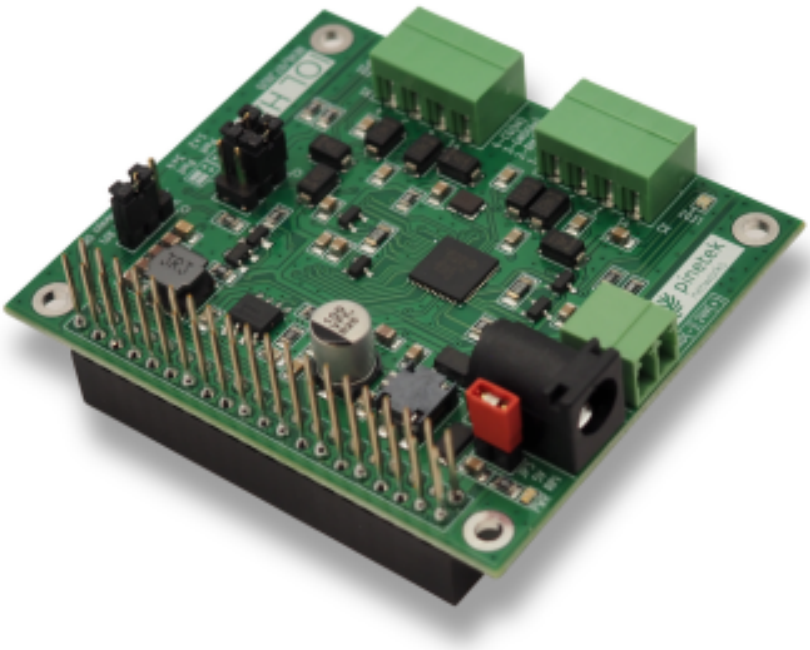

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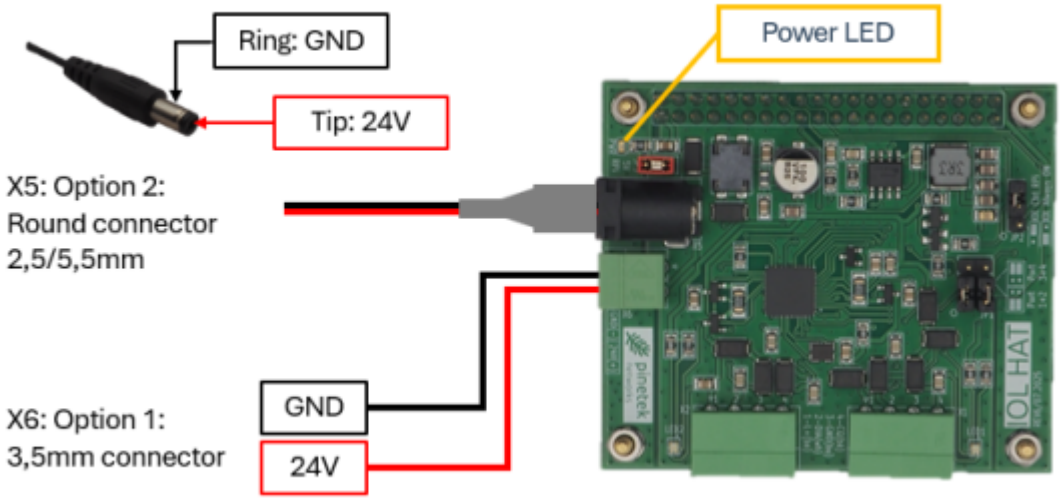

24V Input

The 24V power supply input is used for the L+ supply of the SDCI ports and the supply of the Raspberry Pi (if JP3 is set).

The logic part of the module is supplied over the 3V3 on the 40-pin GPIO connector. This supply comes from the Raspberry Pi.

The connector on X6 is 2pin, 3,5mm MC-type. The connector on X5 is a round type 2,5mm, 5,5mm outer diameter type with GND on the ring, 24V on the tip.

Only use one of the powering options, X5 or X6. If you use both options, you risk damaging of the power supplies, the IOL HAT and/or overheating.

Depending on the connected SDCI devices and the Raspberry Pi , the 24V input can consume up to 1,8A current. Please use adequate cabling. There is no hardware overcurrent protection in plae, the L+ lines and CQ-lines shall be current limited by the driver in software (this is the case for the provided software).

The 24V input is equipped with industrial-grade filtering to ensure robustness in industrial environments.

The presence of the 24V input is signaled with the Power LED.

Please note that this LED operates on 5V generated from the 24V input. Power LED on does only signalize presence of voltage, it does not show that the voltage is in range.

Raspberry Pi Power Supply

When jumper JP3 is set, the IOL HAT powers the Raspberry Pi through the 40-pin GPIO connector. The IOL HAT can constantly provide up to 1,8A at 5V, which equals 50% processor load on a Raspberry Pi with two USB2.0 ports with maximal current consumption. If you have higher power requirement, please power the Raspberry Pi through the USB3.0 port on the Raspberry Pi itself.