

CAN termination resistor is onboard

Copperhill (USA) supplies the PiCAN3 board with a switch-mode power-supply. The CAN hat is stackable on Raspberry Pi 4 cards.

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The PiCAN3 is equipped with a CAN transceiver and a stand-alone CAN controller by Microchip (Source: Copperhill)

The switch-mode power-supply allows connecting an input voltage range of 6 V_C to 20 V_D suitable for industrial and automotive applications and environments. It powers the Raspberry Pi main board and the PiCAN3 hat. The CAN interface is realized by means of the MCP2515 stand-alone controller and the MCP2551 transceiver. Both chips are made by Microchip. The CAN interface supports bit-rates up to 1 Mbit/s, a 120-Ohm termination resistor is provided. It is available via a 9-pin Dsub connector or screw terminals. A SocketCAN driver software comes with the product. Programming can be accomplished in C or Python.

The onboard PCF8523 real-time clock and calendar chip is optimized for low-power consumption. Data is transferred serially via the I²C interface with a maximum data rate of 1 Mbit/s. Alarm and timer functions are accessible with the opportunity to produce a wake-up signal on an interrupt pin. An offset register allows fine-tuning of the clock. The PCF8523 has a backup battery switch-over circuitry, which detects power failures and automatically switches to the battery supply when a power failure occurs.

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