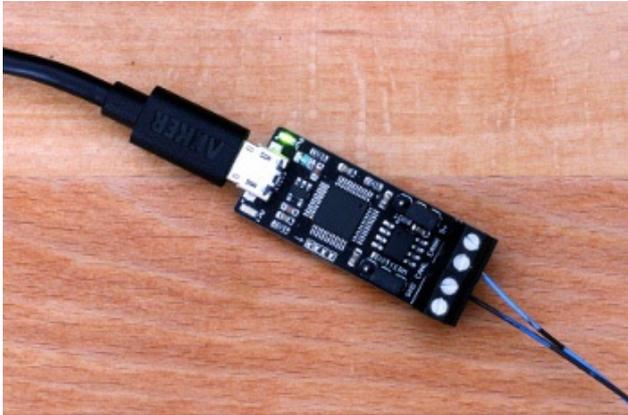


DONGLES

Open-source modules connect CAN to USB

There are open-source dongles available to connect CAN networks to USB. Such hardware is even suitable for industrial applications.

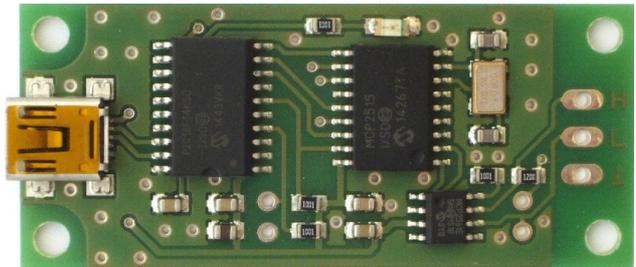


The CANable is a clone of the CANtact open-source project (Photo: Protofusion)

The CANable dongle is currently available for sale on the Protofusion store. It supports CAN bit-rates of up to 1 Mbit/s. The product comes with an open-source SocketCAN driver software. It features a Micro-USB connector and a 4-pin screw terminal with CAN_H, CAN_L, 5-V supply, and ground. The CANable device is a hardware clone of Eric Evenchick's CANtact project, an open-source USB-to-CAN hardware adapter. "I took his design and reworked the hardware to be a bit more suitable for my personal needs, with a screw terminal instead of a 9-pin Dsub connector and a much smaller PCB," said the CANable developer.

On Linux the dongle works natively with `slcand`, so you can use the `can-utils` command-line utilities and even Wireshark to interact with the bus. On Windows and Mac, the interface module works with `cantact-app`. This is a Java application that shows CAN traffic in real-time and allows you to transmit CAN frames on the bus. For more flexibility, the `canard` library allows you to directly talk to the CAN network from Python scripts.

USBtin is a simple open-source USB-to-CAN interface. It can monitor the CAN traffic up to 1 Mbit/s. Thomas Fischl is the designer of the dongle hardware. It provides a 120-Ω termination resistor to be enabled by means of a jumper. The dongle comes with boot-loader for firmware updates. Open-source software drivers (SocketCAN) and a Java library is available, too. The CAN interface feature listen-only and active modes. One user connected the dongle to a network with B&R controller for trouble-shooting. The CAN networked controller is used on a sea platform for charging a large bank of batteries. Another user analyses the CAN network connecting Stiebel Eltron WPF 10 heat pump controller. The [Fast Forest Formula Student](#) team selected the open-source dongle in its racing cars.



The USBtin is used in several industrial applications (Photo: Fischl)

[hz](#)