



USB-1WIRE+ Interface

Description

The USB-1WIRE+ module provides a DS9097U compatible interface between your PC and your devices on 1-wire bus. The module (hereinafter the adapter) is self powered from the USB host and can supply power for external circuitry from a standard 100 mA USB port. The adapter acts as an 1-wire master only.

1-wire bus voltage: **5 V**
USB standard: **USB 1.1 / USB 2.0 Full Speed**

Connections

The GND pin must be connected to the 0 V (ground) on your 1-wire device. The 1W pin composes the 1-wire bus. The 3.3 V and 5 V pins can supply power from the adapter up to 30 mA at 3.3 V or 70 mA at 5 V to external devices. Do not apply power of your own supply to these pins.

Protocol

Since the adapter consists of DS2480B+ 1-wire interface chip (Maxim Integrated Products, Inc.) the protocol is defined in their Datasheet¹ and Application Note 192².

Drivers

On Linux based operating system, a serial driver is usually provided by the kernel: USB FTDI Single Port Serial Driver: `ftdi_sio.c` and, after connecting the USB-1WIRE+ module, the serial device usually appears under `/dev/ttyUSB0` device file.

On Windows 10 the system loads port driver from Windows Update service, otherwise a VCP driver for FT230X can be downloaded from FTDI webpage³.

System requirements:

- a free USB port
- Linux, or Windows 7, 8, 10

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¹<https://datasheets.maximintegrated.com/en/ds/DS2480B.pdf>

²<https://pdfserv.maximintegrated.com/en/an/AN192.pdf>

³<https://www.ftdichip.com/Drivers/VCP.htm>