



USB-1WIRE Interface

Description

The USB-1WIRE module provides a DS9097E 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

The protocol is defined in Maxim Application Note 214¹.

Drivers

On Linux based operating system, a serial driver is usually provided by the kernel (pl2303.c) and, after connecting the USB-1WIRE module, the serial device usually appears under `/dev/ttyUSB0` device file. Since this device file may be owned by different group, e.g. `dialout`, there might be permission mismatch, i.e. access denial. To solve this issue add user to this group, e.g. `adduser user dialout`

On Windows 10 the system loads port driver from Windows Update service, otherwise a driver for PL2303GS can be downloaded from Profilic webpage².

System requirements:

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

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¹<https://pdfserv.maximintegrated.com/en/an/AN214.pdf>

²http://www.prolific.com.tw/US/ShowProduct.aspx?p_id=225&pcid=41