



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 Prolific 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