

Fonera Weather Station WS2300

This page is currently a draft, but a lot of informations are usefull!

USB Serial FTDI Driver

In order to communicate with the Weather Station WS2300 we need an USB Serial Adapter. We have choosed an adapter using the FTDI's chip. By default, La Fonera doesn't include the FTDI_SIO driver. So we need to get the driver.



Two possibilities comes to our :

- Get the driver from the Kernel's sources and build it for MIPS architecture.
- Download the already precompiled driver.

We have choosed the second option.

Get the driver

Possible locations (**Only for FON2202 Flipper!**) :

- http://cdn.itimeteo.com/kmod-usb-serial-ftdi_2.6.26.2-fonera2-1_mips.ipk 
- http://www.fonera.be/rep/FON2202/kmod-usb-serial-ftdi_2.6.26.2-fonera-1_mips.ipk 

Install the driver

- Extract data from this ipk => [Extract IPKG Package](#)
- Copy folders into fonera (/etc/modules.d and /lib/modules/2.6.26.2)
- Reboot fonera or for the first time : insmod ftdi_sio

Note :

/etc/modules.d contains the file 65-usb-serial-ftdi which is used to start the driver at startup
/lib/modules/2.6.26.2 contains the ftdi_sio.ko which is the driver itself

Communicate with Weather Station

Important :

In order to connect WS2300 Weather Station to the La Fonera with the USB Serial Adapter, we must use an **USB 2.0 Host !**

If you plug directly the adapter or use a simple USB 1.1 Host, La Fonera will shutdown the USB Port until the next hardware restart.

We have choosed a simple USB 2.0 Host powered externally in order to avoid current shutdown at the La Fonera USB Port.

Connection

First, login to the La Fonera by using SSH. Connect the USB 2.0 Host, USB Serial Adapter and the Weather Station RS232 cable.

In your terminal connected to La Fonera enter :

1. # Display kernel messages :
2. `dmesg`
- 3.
4. # This command should tell you at the end :
5. `usb 1-1.3.3: new full speed USB device using ehci_hcd and address 7`
6. `usb 1-1.3.3: configuration #1 chosen from 1 choice`
7. `ftdi_sio 1-1.3.3:1.0: FTDI USB Serial Device converter detected`
8. `ftdi_sio: Detected FT232BM`
9. `usb 1-1.3.3: FTDI USB Serial Device converter now attached to ttyUSB0`
10. `ttyusb -> 1 ttyUSB0 ftdi_sio 04036001`

Note :

If **dmesg** command doesn't tell you that you USB Serial Adapter was discovered, please verify that your adapter is built with a FTDI's chip.

The **dmesg** command tells you where the adapter is now attached. In our case, the adapter is attached to **/dev/ttyUSB0**.

Open2300

Presentation

Compilation

Get sources from these possible locations :

- <http://cdn.itimeteo.com/open2300-1.10.tar.gz> 
- <http://sourceforge.net/projects/open2300/files/open2300/open2300-1.10.tar.gz?download> 

```
wget ...  
tar -xvzf open2300-1.10.tar.gz
```


Export path of **mips-linux-uclibc-gcc**

Replace in "Makefile" file the following line :
CC = gcc **by** => CC = mips-linux-uclibc-gcc

```
make
```

Send compiled files to La Fonera.

Precompiled packages

- <http://cdn.itimeteo.com/open2300-1-10-fonera-mips.tar.gz> 

First try to exchange

Read indoor temperature :
./open2300 0346 r 2

Write a file with all human readable variables :
./log2300 myLogFile.txt

Communication protocol of the Weather Station is here : [La Crosse Technology WS2300](#)

SQLite

