

# How-to Setup the airpointer for the modem

## Modem in airpointer / airQlog

The modem is integrated into the airpointer by the Linux system, checked by the watchdog software, additionally the LinSens can power off/on the modem in case of a hang up. The modem needs a SIM card in the standard SIM (15 x 25mm) size for data connectivity. If you ordered the modem with your airpointer (or airQlog) most configuration steps already have been done and tested by recordum you just have to configure for your provider. **Put in the SIM card when recommended in this description!**

## Preparation:

Find out what modem you have:

Until now recordum has delivered 3 different types of modem from the same manufacturer, they all look more or less the same. First version was GPRS (MC66), UMTS (PH8) and Last version is LTE (PLS8). If you are not sure what you have, please check what's written on the type label.

Type GPRS and UMTS1 are using COM1

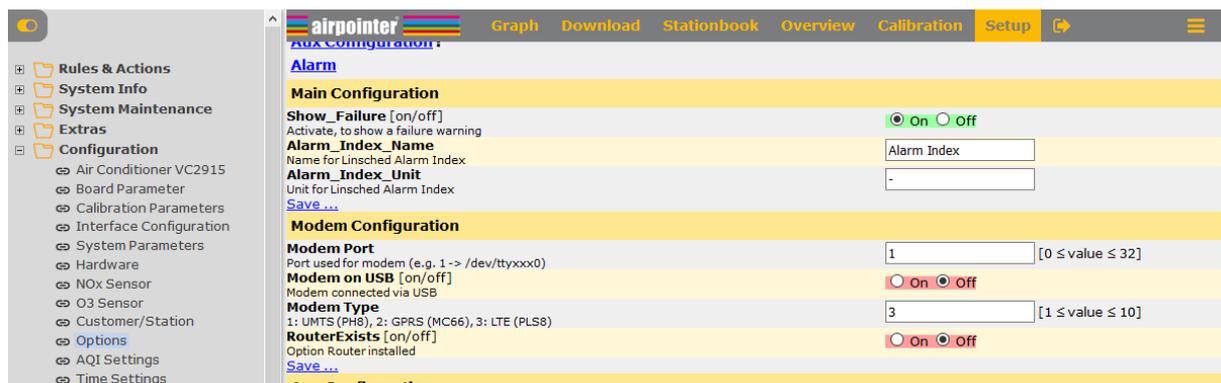
Type UMTS2 and LTE are using any USB port and are working on the Debian systems only.

## Provider

Find out the providers 'access point' and 'dial in' configuration, in some cases also a user and a password are needed. The Android configuration help of most Providers is a good starting point for finding out your 'access point'. 'Dial in' information is so scarce, that simply trying one of the most common used numbers (\*99#, \*99\*\*\*1#) is recommended.

## Enable modem in setup:

Make sure you logged in with admin privileges and choose Setup -> Configuration -> Options

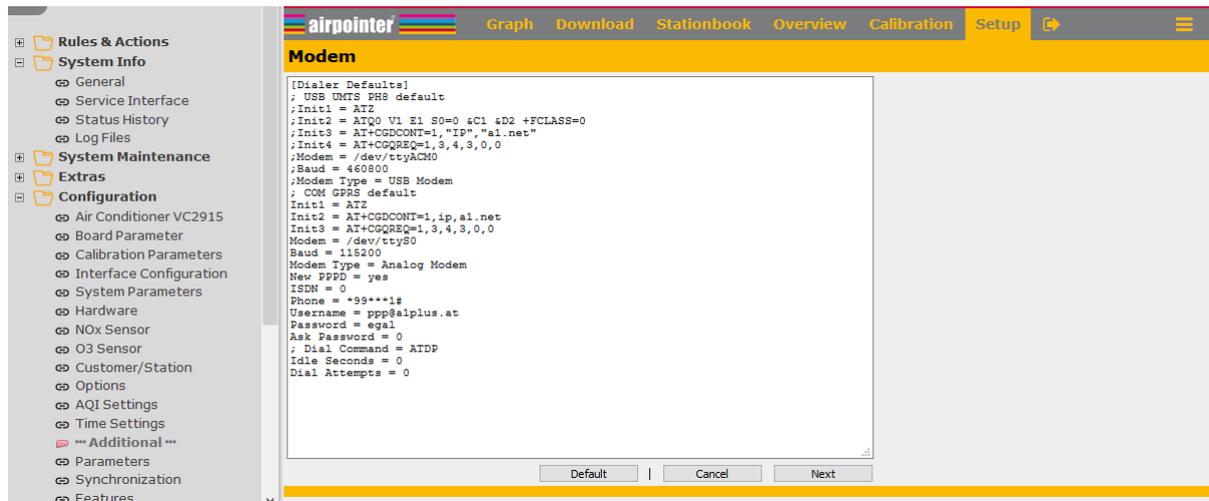


If your modem is a USB type enable 'Modem on USB'. On all products check and setup the Modem Port. For any USB type modem choose 1. For older COM types choose 1 for airpointer and 10 for airQlog. Check/setup your Modem Type and that save your setup.

## Setup for provider

Now go to Setup – Communication -> Modem

If you have a GPRS modem click on 'Edit configuration file' and change the Semicolons (;) to the following example:



Configure now according your provider



If your provider says no username and/or no password just type in a few letters, the communication program does not allow empty fields.

If special setups are required by you provider, you can edit the configuration file.

## Put in SIM Card

Now power off your airpointer. Only with no power put in/exchange a SIM Card.

**Really power off the airpointer as this avoids a lot of troubles later on!**

Take care to not put the SIM card in the wrong way!

Power on the airpointer again.

## Check the setup

Setup -> System Info -> Log Files

Choose wvdial.log from the dropdown list and press open. Look for messages like 'CONNECT' or 'Using interface ppp0'.

That is an example of a working modem:

The screenshot shows the 'Log Files Viewer' window with the 'wvdial.log' file selected. The log content is as follows:

```
End of file reached (-403)
--> Ignoring malformed input line: "; USB UMTS PH8 default"
--> Ignoring malformed input line: "; COM GPRS default"
--> WVDial: Internet dialer version 1.60
--> Cannot get information for serial port.
--> Initializing modem.
--> Sending: ATZ
ATZ
OK
--> Sending: ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0
ATQ0 V1 E1 S0=0 &C1 &D2 +FCLASS=0
OK
--> Sending: AT+CGDCONT=1,"IP","a1.net"
AT+CGDCONT=1,"IP","a1.net"
OK
--> Sending: AT+CGQREQ=1,3,4,3,0,0
AT+CGQREQ=1,3,4,3,0,0
OK
--> Modem initialized.
--> Sending: ATDT*99***1#
--> Waiting for carrier.
ATDT*99***1#
CONNECT
--> Carrier detected. Waiting for prompt.
--> Don't know what to do! Starting pppd and hoping for the best.
--> Starting pppd at Sun Nov 3 11:26:34 2019
--> Pid of pppd: 29973
--> Using interface ppp0
--> local IP address 100.100.122.143
--> remote IP address 10..4.6
--> primary DNS address 194.48.139.254
--> secondary DNS address 194.48.128.199
```

## Test communication

Try out communication over the recordum portal or with direct access to your new IP address (if your new IP is in a private IP range you need to use the portal).

Your URL for the new recordum portal is instrument type-year-serial.recordum.net  
Example: airpointer-2019-00233.recordum.net or airqlog-ah2g-00233.recordum.net

Hint: You see all IP's on the first user interface page where you log in.

## Debug

In case you got no connection, you need to test different provider settings.

Restart the WVDial-Modem dialer in Setup -> System Maintenance -> Service manager

The screenshot shows the 'Services' manager interface. The 'WVDial - Modem dialer' service is highlighted with a red circle. The service is currently 'running'. Below it, the 'Internal Services' section is visible, listing various system services like linexpo, linlog, linout, linsched, linsens, and watchdog.

Name Of Service	Actions	Status	More	Description
The Lins	force-rest   Execute	running		This is the main controlling and logging software of your airQlog.
Dyndns.org	restart   Execute	running	Uninstall	Periodically synchronizes your dynamic ip-address (e.g. of modem) with your dyndns.org domain
NTP	restart   Execute	running		Timeserver using NTP
OpenVPN - Portal	restart   Execute	running	Uninstall	Establishes connection to the portal.
System Shutdown	restart   Execute	running		<b>WARNING!</b> Executing this service initiates a complete system shutdown/restart. Do not use <i>halt</i> option, unless you want the system completely switched off.
<b>WVDial - Modem dialer</b>	restart   Execute	running	Uninstall	The Modem Dialer connects your station to the internet via a modem.
<b>Internal Services</b>				
linexpo	restart   Execute	running		Provide exports and downloads
linlog	restart   Execute	running		Collects finished sensor data
linout	restart   Execute	running		External real-time data access
linsched	restart   Execute	running		Task automation
linsens	restart   Execute	running		Generates sensor data
watchdog	restart   Execute	running		Keeps an eye on all

Check the wvdail.log file again. In most cases you find some hints what could be wrong.