uRADMonitor SMOGGIE Quickstart Guide

Congratulations on purchasing this excellent low cost environmental monitor! You are now part of an ambitious global project. The uRADMonitor is a global array of interconnected monitoring stations, focused on continuous Environmental Surveillance. Its purpose is to generate fully transparent open data, to assert the quality of our environment, directly impacting our health.

uRADMonitor SMOGGIE is an automated, fixed monitoring station. There are 4 SMOGGIE flavors for different applications. They all track temperature, pressure and humidity. Additional features include:

- SMOGGIE-PM25, tracks 5 parameters, adding Particulate Matter PM1, PM2.5 and PM10
- SMOGGIE-CO2, monitors 3 parameters, adding CO2 monitoring to T+H
- SMOGGIE-CH2O, monitors 3 parameters, adding Formaldehyde monitoring
- SMOGGIE-GAS, monitors 3 parameters, adding one electrochemical cell for one of the following: Ozone, Nitrogen Dioxide, Sulphur Dioxide, Carbon Monoxide, Ammonia, Hydrogen Sulfide, Chlorine, Hydrogen, Hydrogen fluoride, Hydrochloric acid.

They all come in a compact, rugged plastic enclosure with wall mounting support. The data is exported to the uRADMonitor network and can be accessed in real time using the cloud API interface or directly via the local network. It supports Wifi connectivity to the INTERNET.

More on: http://www.uradmonitor.com/blog http://www.uradmonitor.com/forum

Connecting and starting your SMOGGIE

Connect the uRADMonitor to the power source using the 5V micro USB adapter and cable. Use a smartphone or a computer with WLAN capabilities to connect to the local hotspot spawned by your SMOGGIE unit. The SSID is uRADMonitor-XX, where XX are the last two digits of the Device ID number. The key is the Device ID, in uppercase, as printed on the enclosure. You can later change this key. Open 192.168.4.1 in your browser:

uRADMonitor SMOGGIE 20FD2559 – HW:5 SW:25

PLANTOWER PMS5003 – running

Temperature:20.33C	PM1.0:7ug/m^3	Time:27s	WIFI:connected
Humidity:75.71RH	PM2.5:11ug/m^3	Interval:60s	IP:192.168.88.217
	PM10:12ug/m^3	Stats:0/0 0	DNS:192.168.88.1

Warmup: 0s │ valid │ JSON │ CONFIG

uRADMonitor, a Magnasci SRL 2015-2022 project

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Click the "CONFIG" link to setup the connection to the Internet. A new page opens where you can see all your nearby WiFi networks.

Select your Internet access point from the list and enter the key to connect your SMOGGIE to the INTERNET. Press SAVE. Here you can also change the default key on your SMOGGIE.

USB Configuration

Alternatively, the SSID and KEY can also be configured via USB. Connect to your SMOGGIE via USB, baudrate 9600bps, open a terminal program and type the two commands: "key1","SSID" then "key2","your WLAN key" . Use the "getsettings" command to verify that the new settings are in place. Quotes are a must, and there are no spaces in between. See the USB Commands manual for more.

Open source

SMOGGIE uses Arduino. The source code was designed as open source, so you can customize it yourself. You can program your unit via the USB cable. See https://github.com/radhoo/uradmonitor_smoggie

Data Access

There are three easy ways to access the data generated by your detector:

1. local access, simply open the LAN IP of your unit in your browser, to access an embedded mini webserver, where you can see the measurements or access the data as a JSON formatted file.
2. on the uRADMonitor portal frontend, open http://www.uradmonitor.com/?open=ID , where ID is your unit's ID (16XXXXXX), please replace accordingly. This will open the global map to your unit's location and you can see the data represented in charts.
3. using the uRADMonitor cloud API, via REST API calls, please see the details presented in the uRADMonitor Dashboard on http://www.uradmonitor.com/dashboard