AURA1 · QUICK START

Getting started with the Aura1

Placement, connection, reading the module with GasCatena or your own software, and the specifications of the Aura1 ambient sensor.

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1. Place it

Mount the Aura1 close to the balance, at the height of the weighing pan and in the same air. Keep the ventilation slots on both sides free, and keep the module away from heat sources (lamps, computers, direct sunlight) and out of draughts from air-conditioning outlets.

After connecting it for the first time, or after moving it, allow **30 minutes** for the module to settle to the room before you rely on the readings.

2. Connect it

Plug in the USB-C cable. The Aura1 is powered from USB; it has no battery. No driver is needed: the Aura1 is a standard USB device (HID class).

Light	Meaning
ON (red)	the module is powered
CONN (green)	the module is recognised by the computer
COMM (yellow)	flashes while the sensors are being read

3. Read it

With GasCatena. Select the Aura1 under *Settings* → *Sensors*. GasCatena then reads it at every weighing and records the temperature, humidity and pressure with the preparation, for the air density and the buoyancy effect.

With your own software. The Aura software (a free Python package, Python 3.11 or later) reads the module and returns a measurement:

```
python -m aura meet --route aura1          averaged measurement (n = 16)
python -m aura meet --route aura1 --n 32   average over 32 readings
```

4. What a measurement gives you

The Aura1 has no processor of its own: the software on your computer takes a series of readings in quick succession and returns, for each quantity, the **mean**, the **standard deviation (SD)** and the number of readings **n**. Temperature in °C, relative humidity in %RH, pressure in **Pa**. No smoothing, no filters.

The Aura1 has no clock: your computer stamps each measurement at the moment it asks, so a single clock is in charge of every value.

5. Good to know

- Only one program at a time can use the Aura1. Close the other program first.
- The Aura1 reports the SD, not SD/√n. Your software decides how to use it, for example SD/√n as the type A uncertainty of the mean.
- The Aura1 does not log by itself. For monitoring around the clock, also without a computer, use the Aura2.
- Calibration is optional: Qualimetric can calibrate temperature, humidity and pressure in accordance with ISO/IEC 17025, or you have the Aura1 calibrated by a calibration laboratory of your choice.

6. Specifications

	Aura1
Sensors	Digital MEMS sensors for temperature and humidity and for barometric pressure
Temperature	0 – 50 °C
Relative humidity	0 – 95 %RH, non-condensing
Barometric pressure	30 – 125 kPa
Output	mean, SD and n per quantity; pressure in Pa
Averaging	set by your software, 16 readings by default
Interface	USB-C (USB-to-I^2C bridge, standard USB HID device), no driver needed
Power	5 V DC via USB-C, no battery
Status lights	ON · CONN · COMM
Enclosure	86 × 85 × 25.5 mm, cable gland at the bottom
Operating conditions	indoor, 0 – 50 °C, 0 – 95 %RH non-condensing

7. Safety and support

For indoor use only. Not for safety-critical or life-support applications. Do not open the module; there are no user-serviceable parts inside.

Questions, calibration or service: info@qualimetric.nl · nexchrom.nl/aura