



nooku

Air Quality Metrics



Meet the nooku family

Our unique, modular and expandable sensors can be customised to perfectly suit your home.



Mini

Tracks 5 Key Air Quality Metrics



Temperature



Humidity



eCO₂



VOCs



NO_x



Fusion

Tracks 9 Key Air Quality Metrics



Temperature



Humidity



CO₂



VOCs



NO_x



PM 1.0



PM 2.5



PM 4.0



PM 10.0

Understanding Your Indoor Air Quality

Click on the icons below to find out more about each of the air metrics and pollutants nooku monitors and how you can make everyday changes to your air quality to improve it.



Temperature



Humidity



NOx



CO₂



eCO₂



VOCs



PM 1.0



PM 2.5



PM 4.0



PM 10



Temperature

What's Temperature?

It's simply how hot or cold the air is in your home. Temperature typically fluctuates indoors throughout the day with each room varying.

What causes it?

Your central heating, sunlight through windows, the weather outside, and heat from your household appliances.

What are the effects?

Extreme temperatures make it hard to sleep, reduce focus, and can trigger asthma or dry skin depending on the extreme.

What can you do?

Open windows for a breeze, close curtains to block hot summer sun, and adjust your thermostat or radiator valves to stay cosy.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Room temperature · measured in °C

● Great 20 – 23°

● Good 18 – 20° · 23 – 25°

● Okay 16 – 18° · 25 – 27°

● Poor 14 – 16° · 27 – 29°

● Bad below 14° · above 29°



Humidity

What's Humidity?

Humidity is the concentration of water vapour present in the air and is measured as a % meaning the higher the % the more water is in the air.

What causes it?

Everyday activities like cooking, showering, drying clothes indoors, and even just breathing add moisture to the air.

What are the effects?

High humidity can cause mould growth and make you feel clammy, while low humidity can dry out your skin, eyes, and throat.

What can you do?

Good ventilation is the key to happy humidity levels. Use an extractor fan while cooking or showering. A dehumidifier helps in damp rooms, and opening windows lets trapped moisture escape.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Relative Humidity . measured in %

● Great

40 – 60%

● Good

30 – 40% · 60 – 70%

● Okay

20 – 30% · 70 – 80%

● Poor

10 – 20% · 80 – 90%

● Bad

below 10% · above 90%



NOx

NITROGEN OXIDES

What's NOx?

Nitrogen Oxides is what we most commonly associate with the term pollution and is formed when fuel is burned at high temperatures. The NOx Index is used to indicate how much Nitrogen Oxide pollution is in your air at any given moment. The index ranges from 0 – 500 with anything under 10 being seen as unavoidable daily pollution.

What causes it?

Gas hobs, portable gas heaters, tobacco smoke, and outdoor traffic pollution sneaking in through open windows or doors.

What are the effects?

It can irritate your airways, worsen asthma, and make you more prone to chest infections like colds or the flu.

What can you do?

Always use the extractor hood when cooking on a gas hob. Ensure your heaters are properly ventilated, and shut windows during rush hour.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Nitrogen Oxides . measured in Index

HEALTHY RANGE

Great <10 Index

Good 11 – 50 Index

UNHEALTHY RANGE

Okay 51 – 150 Index

Poor 151 – 300 Index

Bad ≥ 300 Index



CO₂

CARBON DIOXIDE

What's CO₂?

Carbon Dioxide is a natural, colourless gas, most commonly produced indoors by the air we exhale and measured in parts per million (ppm). The typically daily background ppm is 400 due to earths atmosphere.

What causes it?

Simply living and breathing! Having lots of people or pets in a poorly ventilated, closed-off room is the main reason levels rise.

What are the effects?

High CO₂ makes a room feel stuffy and can lead to drowsiness, headaches, and a noticeable drop in your focus and productivity.

What can you do?

The easiest fix is fresh air! Open a window, prop open a door, or turn on your ventilation system to let fresh outdoor air cycle inside.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Carbon Dioxide . measured in ppm

HEALTHY RANGE

Great <600 ppm

Good 600 – 800 ppm

UNHEALTHY RANGE

Okay 800 – 1200 ppm

Poor 1200 – 2000 ppm

Bad ≥ 2000 ppm



eCO₂

ESTIMATED CARBON DIOXIDE

What's eCO₂?

Estimated Carbon Dioxide is an estimation of CO₂ levels based on the amount of VOCs in the air. It's a handy gauge for overall room ventilation.

What causes it?

Like real CO₂, human breath contributes, but this reading can also be influenced by household items releasing VOCs into stagnant air.

What are the effects?

High eCO₂ usually means the air is stale and full of odours or chemicals. It can leave you feeling sluggish, tired, or unfocused.

What can you do?

Improve your room's airflow. Open up those windows, run an air purifier, or switch on a fan to clear out the stale, trapped air.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Estimated Carbon Dioxide .
measured in ppm

HEALTHY RANGE

Great

Good

UNHEALTHY RANGE

Okay

Poor

Bad



VOCs

VOLATILE ORGANIC COMPOUNDS

What's Volatile Organic Compounds?

Volatile Organic Compounds are airborne chemicals emitted as gases from objects and liquids. The VOC index is used to give a baseline guide for all VOC pollution within the home. An index above 105 means that there is more VOCs than recommended on average.

What causes it?

Cleaning sprays, paints, burning candles, and even new furniture or carpets off-gassing into your home's air.

What are the effects?

High levels can cause headaches, dizziness, and irritate your eyes and throat. Long-term exposure can have more serious impacts.

What can you do?

Open windows when using harsh cleaners or painting. Swap to unscented, natural cleaning products and ditch the chemical plug-ins.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Volatile Organic Compounds .
measured in Index

HEALTHY RANGE

● Great <105 Index

● Good 105 – 150 Index

UNHEALTHY RANGE

● Okay 150 – 250 Index

● Poor 250 – 400 Index

● Bad ≥ 400 Index



PM 1.0

ULTRAFINE PARTICLES

What's Particulate Matter (PM 1.0)?

Particulate Matter (PM) is the term used to describe a range of particles such as dust, dirt and liquids that become suspended in the air. The number (1–10) refer to the size of these particles with the smaller ones linked to the most serious health effects.

PM 1.0 (Ultrafine Particles) Extremely tiny, invisible particles in the air, measuring less than 1 micrometre wide. They are the smallest particles we track.

What causes it?

Mostly high-heat combustion. This includes smoke from cooking, burning candles, incense, vehicle exhaust, and tobacco smoke.

What are the effects?

Because they are so small, they can bypass your body's defences, entering your bloodstream and affecting your heart and lungs.

What can you do?

Always use your cooker's extractor hood, avoid burning candles or smoking indoors and if required run a high-quality HEPA air purifier.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Particulate Matter . measured in $\mu\text{g}/\text{m}^3$

HEALTHY RANGE

Great $<10 \mu\text{g}/\text{m}^3$

Good $10 - 30 \mu\text{g}/\text{m}^3$

UNHEALTHY RANGE

Okay $30 - 50 \mu\text{g}/\text{m}^3$

Poor $50 - 100 \mu\text{g}/\text{m}^3$

Bad $\geq 100 \mu\text{g}/\text{m}^3$



What's Particulate Matter (PM 2.5)?

Particulate Matter (PM) is the term used to describe a range of particles such as dust, dirt and liquids that become suspended in the air. The number (1–10) refer to the size of these particles with the smaller ones linked to the most serious health effects.

PM2.5 (Fine Particles) Fine inhalable particles up to 2.5 micrometres wide, about 30 times smaller than a single strand of human hair!

What causes it?

Cooking, wood burners, outdoor pollution, and bonfires. These particles easily drift indoors through open windows or tiny gaps.

What are the effects?

They can irritate your eyes, nose, and throat, trigger asthma attacks, and cause long-term respiratory and cardiovascular issues.

What can you do?

Keep windows closed on bad air quality days. Use an air purifier with a HEPA filter and ensure your vacuum has a good filter too.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Particulate Matter . measured in $\mu\text{g}/\text{m}^3$

HEALTHY RANGE

Great 0 – 12 $\mu\text{g}/\text{m}^3$

Good 12 – 35 $\mu\text{g}/\text{m}^3$

UNHEALTHY RANGE

Okay 35 – 55 $\mu\text{g}/\text{m}^3$

Poor 55 – 150 $\mu\text{g}/\text{m}^3$

Bad $\geq 150 \mu\text{g}/\text{m}^3$



What's Particulate Matter (PM 4.0)?

Particulate Matter (PM) is the term used to describe a range of particles such as dust, dirt and liquids that become suspended in the air. The number (1–10) refer to the size of these particles with the smaller ones linked to the most serious health effects.

PM4.0 (Coarse Particles) Airborne particles up to 4.0 micrometres in size. This includes a mix of combustion particles and fine dust floating in your home.

What causes it?

Dusting, sweeping, pet dander, mould spores, and heavier cooking smoke. Plumping cushions can also launch them into the air.

What are the effects?

These particles often get trapped in your upper airways, causing sneezing, coughing, and aggravating allergies or existing asthma.

What can you do?

Hoover regularly with a HEPA filter, wipe surfaces with a damp cloth instead of dry dusting, and groom your pets frequently.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Particulate Matter . measured in $\mu\text{g}/\text{m}^3$

HEALTHY RANGE

Great $<32 \mu\text{g}/\text{m}^3$

Good $32 - 90 \mu\text{g}/\text{m}^3$

UNHEALTHY RANGE

Okay $90 - 150 \mu\text{g}/\text{m}^3$

Poor $150 - 250 \mu\text{g}/\text{m}^3$

Bad $\geq 250 \mu\text{g}/\text{m}^3$



PM 10.0

LARGER COARSE PARTICLES

What's Particulate Matter (PM 10.0)?

Particulate Matter (PM) is the term used to describe a range of particles such as dust, dirt and liquids that become suspended in the air. The number (1–10) refer to the size of these particles with the smaller ones linked to the most serious health effects.

PM10.0 (Larger Coarse Particles) The largest particles we track, measuring up to 10 micrometres. They are big enough to include visible dust, pollen, and large spores.

What causes it?

Dirt tracked in on shoes, outdoor pollen, pet hair, road dust, and construction debris blowing inside from nearby building sites.

What are the effects?

They primarily irritate your eyes, nose, and throat. They are a major trigger for seasonal allergies like hay fever and coughing.

What can you do?

Use doormats to trap dirt, keep windows shut on high-pollen days, and keep up a regular hoovering and damp-mopping routine.

Thresholds

Monitoring ranges and safe levels for indoor air quality.

Particulate Matter . measured in $\mu\text{g}/\text{m}^3$

HEALTHY RANGE

Great $<54 \mu\text{g}/\text{m}^3$

Good $54 - 154 \mu\text{g}/\text{m}^3$

UNHEALTHY RANGE

Okay $154 - 254 \mu\text{g}/\text{m}^3$

Poor $254 - 354 \mu\text{g}/\text{m}^3$

Bad $>354 \mu\text{g}/\text{m}^3$

Unique Reactions

Look out for nooku's unique reactions to pollutants and make changes to improve your home's air quality.



Healthy Home

nooku is healthy and happy!



CO₂

Carbon Dioxide levels are high



PM 1-10

High levels of Particulate Matter



Temperature - Cold

Low Temperatures - Cold



VOCs

Airborne chemicals are high



NO_x

High levels of Nitrogen Oxides



Humidity

Humidity levels are high



Temperature - Hot

High Temperatures - Hot



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Please visit our website: **nooku.co** to find all product manuals, warranty information, and customer support.

If you still need assistance, please reach out to us at: **support@nooku.co**



Breathe easy with nooku.