

Nextriv Sense IAQ Comfort

Air quality sensor with PM2.5/PM10

NX-SN-AQ8C

Nextriv Sense

An 8-in-1 indoor climate sensor with laser measurement of PM2.5 and PM10 particulates — the full picture of air health in facilities with elevated dust levels. From a single mounting point it measures temperature, humidity, CO₂ (NDIR), volatile organic compounds, barometric pressure, light level and motion. A large 4.2" e-ink display with emoticons and a traffic-light indicator communicates the air status on site, and an acoustic alarm reacts to threshold breaches. A local history of 18,000 readings with retransmission after connectivity outages, plus flexible power: replaceable batteries or USB-C.



8-in-1

parameters from one point

±10 µg/m³

PM2.5/PM10 accuracy (0–100 µg/m³)

4.2"

e-ink display

18,000

readings of local history

Key features

- Laser-scattering measurement of PM2.5 and PM10 — full 0...1,000 µg/m³ range with 1 µg/m³ resolution
- 8 parameters from one mounting point: temperature, humidity, CO₂ (NDIR), TVOC, pressure, light, motion and PM particulates
- Large 4.2" e-ink display with emoticons and a traffic-light air quality indicator — readable by anyone without an app
- Acoustic buzzer and a tri-colour status LED — threshold alarms audible and visible on site
- 18,000 records of local history with data retrieval and automatic retransmission after connectivity outages
- Smart display sleep when the room is empty (motion sensor) — energy savings with no loss of data
- Configuration over NFC from a smartphone, via USB-C or remotely from the platform (downlink); button lock
- Flexible power: 4 replaceable batteries or USB-C 5 V/1 A — recommended for frequent particulate sampling

Technical specification

Measurement — temperature	
Measuring range	-20...60 °C
Accuracy	typ. ±0.2 °C (0...60 °C); ±0.3 °C (-20...0 °C)
Resolution	0.1 °C
Sensing element	high-precision digital MEMS

Measurement — relative humidity

Measuring range	0...100 % RH
Accuracy	typ. ± 2 % RH (at 25 °C)
Resolution	0.5 % RH
Sensing element	high-precision digital MEMS

Measurement — carbon dioxide (CO₂)

Measuring range	400...5,000 ppm
Accuracy	$\pm(30 \text{ ppm} + 3 \text{ \% of reading})$ at 0...50 °C, 0...85 % RH
Resolution	1 ppm
Sensing element	NDIR (non-dispersive infrared)

Measurement — PM2.5 and PM10 particulates

Measuring range	0...1,000 $\mu\text{g}/\text{m}^3$
Accuracy	$\pm 10 \mu\text{g}/\text{m}^3$ (0...100 $\mu\text{g}/\text{m}^3$); $\pm 10 \%$ (100...1,000 $\mu\text{g}/\text{m}^3$) — at -10...60 °C
Resolution	1 $\mu\text{g}/\text{m}^3$
Sensing element	laser — light-scattering method

Measurement — volatile organic compounds (TVOC)

Measuring range	1.00...5.00 (air quality index) [2]
Accuracy	± 1
Resolution	0.01
Sensing element	MOX semiconductor (MEMS)

Measurement — barometric pressure

Measuring range	260...1,260 hPa
Accuracy	± 0.5 hPa
Resolution	0.1 hPa
Sensing element	piezoresistive absolute pressure sensor (MEMS)

Measurement — light level

Measuring range	0...60,000 lx — reported as 6 levels (0–5)
Sensing element	photodiode

Detection — motion and occupancy

Operating principle	passive infrared (PIR)
Detection area	80° horizontal × 55° vertical, range up to 5 m
Reported status	vacant / occupied

Radio connectivity

Technology	long-range, low-power radio (LPWAN)
Radio band	EU868 (EU); regional variants: US915, AU915, AS923, IN865, KR920, RU864
Tx power	up to 16 dBm (EU868); up to 22 dBm (US915)
Receiver sensitivity	down to -137 dBm
Antenna	internal
Sensor–gateway range	up to approx. 2 km in built-up areas / approx. 15 km in open terrain
Communication	two-way — readings to the platform, remote configuration via downlink

Display and indicators

Display	4.2" black & white e-ink with emoticons and an air quality indicator (display variant); display operation 0...40 °C
Display modes	smart screen mode — incl. sleep when no occupancy is detected (motion sensor)
Indicators	traffic-light status LED + acoustic buzzer
Buttons	1× power + 1× reset; button lock available

Device features

Local buffer	18,000 readings; data retrieval and automatic retransmission after a connectivity outage
Threshold alarms	on-device thresholds (buzzer + LED) + alert rules in the Nextriv platform
Calibration	on-device reading calibration
Configuration	mobile app over NFC; PC software over NFC or USB-C; remotely via platform downlink
USB port	1× USB-C — power, configuration or service console

Power

Batteries	4× lithium Li-SOCl ₂ ER14505 (AA size), 2,700 mAh, replaceable
Wired power	USB-C 5 V / 1 A — recommended for frequent particulate sampling
Battery life	approx. 1.3 years (EU868); approx. 1–1.2 years with slower radio data rates — 10-min interval, 25 °C [1]

Enclosure and operating environment

Operating temperature	-20...60 °C (e-ink display: 0...40 °C)
Ambient humidity	10...90 % RH, non-condensing
Ingress protection	IP30 (indoor use)
Housing	ABS (UL94 HB), white
Dimensions	100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in)
Weight	222.6 g (with batteries)
Mounting	wall mounting — industrial 3M tape or screws

Compliance and approvals

Approvals	CE, CE (RED), FCC, ISED
Environmental	RoHS

Ordering information

Product code (SKU)	NX-SN-AQ8C
Variants	with an e-ink display or display-free — specify the variant when ordering; a 7-in-1 version without the particulate sensor is available as Nextriv Sense IAQ (NX-SN-AQ7)
System requirement	a Nextriv Hub gateway (e.g. NX-GW-MINI, NX-GW-PRO)

[1] Battery life determined under laboratory conditions — indicative value; the actual time depends on the reporting interval, particulate sampling frequency and radio conditions.

[2] TVOC air quality index: ≤1.99 — very good; 2.00–2.99 — good; 3.00–3.99 — medium; 4.00–4.99 — poor; ≥5.00 — bad.

Specifications are subject to change without notice. The latest document versions are available in the download centre: nextriv.com/files. Questions: nextriv.com/contact.