

Nextriv Sense IAQ

7-in-1 air quality station with CO₂

NX-SN-AQ7

Nextriv Sense

A 7-in-1 air quality station for classrooms, offices and buildings: temperature, humidity, CO₂ (NDIR), volatile organic compounds (TVOC), barometric pressure, light and occupancy in one device. Readings and an emoticon comfort rating are visible on-site on a 4.2" e-ink display and remotely in the Nextriv platform. A built-in buzzer and LED indicator warn about threshold breaches without opening the app. A local buffer of 18,000 readings with retransmission and around 3 years on replaceable batteries — or permanent USB-C power.



7-in-1

monitored parameters

±(30 ppm + 3 %)

CO₂ measurement accuracy

4.2"

e-ink display

18,000

local history records

Key features

- 7 parameters in one device: temperature, humidity, CO₂, TVOC, pressure, light and occupancy — one installation instead of several sensors
- Large 4.2" e-ink display with emoticons and several content layouts, light or dark theme — air assessment at a glance (display variant)
- CO₂ measured optically (NDIR) over 400...5,000 ppm with ±(30 ppm + 3 % of reading) accuracy
- Built-in buzzer and a traffic-light LED indicator — threshold alarms are heard and seen on site
- 18,000 local history records with automatic retransmission — gap-free data after connectivity outages
- Smart display sleep when the room is empty for at least 20 minutes — measurements and transmission continue, the battery gains
- Power your way: 4 replaceable lithium batteries (approx. 3 years) or USB-C 5 V / 1 A
- Configuration over NFC from a smartphone, over USB-C from a PC or remotely from the platform (downlink)

Technical specification

Measurement — temperature	
Measuring range	-20...60 °C
Accuracy	±0.2 °C
Resolution	0.1 °C
Sensing element	high-precision digital MEMS

Measurement — relative humidity

Measuring range	0...100 % RH
Accuracy	±2 % RH
Resolution	0.5 % RH
Sensing element	high-precision digital MEMS

Measurement — carbon dioxide (CO₂)

Measuring range	400...5,000 ppm
Accuracy	±(30 ppm + 3 % of reading) — at 0...50 °C, 0...85 % RH
Resolution	1 ppm
Sensing element	optical NDIR (nondispersive infrared)

Measurement — volatile organic compounds (TVOC)

Measuring range	air quality index 1.00...5.00 [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
Classification	6 intensity levels (0–5)
Sensing element	photodiode

Detection — motion and occupancy

Operating principle	passive infrared (PIR)
Detection field	80° horizontal × 55° vertical
Detection 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, light/dark theme, several content layouts (display variant); display operation 0...40 °C
Display modes	on-screen emoticons and comfort rating; automatic display sleep after at least 20 min of vacancy (measurements and transmission continue)
Indicators	1× traffic-light status LED + 1× acoustic buzzer
Buttons	1× power + 1× reset

Device features

Local buffer	18,000 records; automatic retransmission after a connectivity outage; the history cannot be manually erased
Threshold alarms	on-device thresholds with acoustic and visual signalling + alert rules in the Nextriv platform
Configuration	mobile app over NFC; PC software over NFC or the USB-C port; remotely via platform downlink
Local communication	direct device-to-device communication within the Nextriv network — e.g. room motion can trigger a relay with no server involved

Power

Batteries	4× lithium Li-SOCl ₂ ER14505 (AA size), 2,700 mAh, replaceable
Wired power	USB-C 5 V / 1 A
Battery life	approx. 3 years (with display) / approx. 4 years (without display) — 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)
Dimensions	100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in)
Mounting	wall mounting — industrial 3M tape or screws

Compliance and approvals

Approvals	CE, FCC, ISED
Environmental	RoHS

Ordering information

Product code (SKU)	NX-SN-AQ7
Variants	with a 4.2" e-ink display or display-free (longer battery life) — specify the variant when ordering
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, display usage and radio conditions.

[2] TVOC index interpretation per air quality rating guidelines: ≤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.