

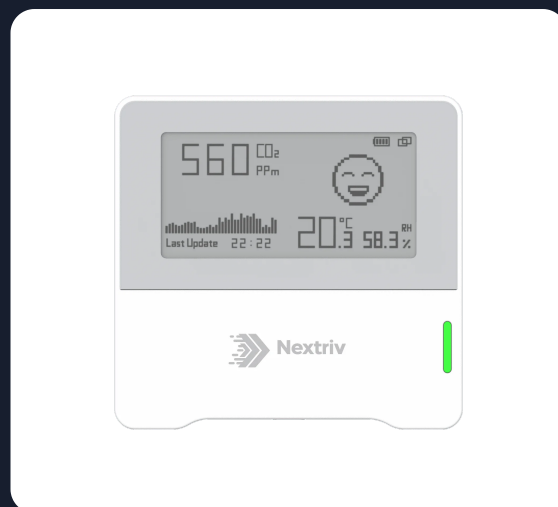
Nextriv Sense CO₂

NDIR CO₂ sensor for offices and schools

NX-SN-CO2

Nextriv Sense

A CO₂, temperature and humidity sensor for continuous indoor air-quality monitoring. Optical NDIR CO₂ measurement (400...5000 ppm) does not age or drift, and the e-ink display with an emoticon shows on the spot when to air the room. A traffic-light LED signals multi-level threshold alarms, and the data flows to the Nextriv platform. Up to approx. 5 years on replaceable batteries, configuration with a single smartphone tap (NFC) and a local measurement buffer with retransmission.



±(30 ppm + 3 %)

CO₂ accuracy (NDIR)

400...5,000 ppm

CO₂ measuring range

up to 5 yrs

battery life

~15 km

open-terrain range

Key features

- Optical NDIR CO₂ measurement — no ageing or drift, with in-service calibration
- Three comfort parameters in one device: CO₂, temperature (±0.2 °C) and humidity (±2 % RH)
- Emoticon and live readings on a 2.13" e-ink display — an air rating you understand without knowing "ppm" (display variant)
- A traffic-light LED signals multi-level CO₂ threshold alarms — also in the display-free variant
- Buffer of 640 readings with automatic retransmission — gap-free history after connectivity outages
- Configuration over NFC from a smartphone or remotely from the platform (downlink)
- Smart screen mode and scheduled hibernation extend battery life
- Up to approx. 5 years on two replaceable batteries

Technical specification

Measurement — carbon dioxide (CO₂)

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

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

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	2.13" black & white e-ink (display variant); display operation 0...40 °C
Display modes	smart screen mode, scheduled hibernation
Indicators	traffic-light status LED — multi-level CO ₂ threshold indication
Button	1× power / reset

Device features

Local buffer	640 readings; data retrieval and automatic retransmission after a connectivity outage
Threshold alarms	on-device thresholds (traffic-light LED indication) + alert rules in the Nextriv platform
Calibration	in-service CO ₂ measurement calibration
Configuration	mobile app over NFC; remotely via platform downlink
Power on / off	NFC or button

Power	
Batteries	2× lithium Li-SOCl ₂ ER14505 (AA size), 2,700 mAh, replaceable
Battery life	approx. 3–4.5 years (display variant) / approx. 3.3–5 years (display-free variant) — EU868 band, 10-min interval, 25 °C; depending on the radio configuration [1]

Enclosure and operating environment	
Operating temperature	-20...60 °C (e-ink display: 0...40 °C)
Ambient humidity	0...95 % RH, non-condensing
Ingress protection	IP30 (indoor use)
Housing	PC + ABS, white
Dimensions	68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in)
Weight	182.5 g (batteries included)
Mounting	wall mounting — industrial 3M tape or screws

Compliance and approvals	
Approvals	CE, CE (RED), FCC, ISED
Environmental compliance	RoHS

Ordering information	
Product code (SKU)	NX-SN-CO2
Variants	with an e-ink display or display-free (traffic-light LED indication, 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 and radio conditions.

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