

Nextriv Sense CO₂ Industrial

Industrial NDIR CO₂ sensor, IP65

NX-SN-CO2I

Nextriv Sense

An industrial CO₂ sensor (NDIR) with temperature, humidity and barometric pressure measurement in a single sealed IP65 enclosure — for greenhouses, produce stores, wineries and technical facilities. It measures CO₂ concentration across 400–5,000 ppm with $\pm(30 \text{ ppm} + 3\% \text{ of reading})$ accuracy and operates from -30 to 70 °C. A single replaceable 19,000 mAh battery lasts up to 10 years, and the 1,000-entry local memory with retransmission keeps the measurement history gap-free. Configuration with a single smartphone tap (NFC) or remotely from the Nextriv platform.



4-in-1

CO₂ + temperature +
humidity + pressure

up to 10 yrs

on a single battery

IP65

sealed enclosure — outdoor
mounting

-30...70 °C

operating temperature range

Key features

- Four measurements in one enclosure: CO₂, temperature, humidity and barometric pressure — a complete picture of the atmosphere from a single mounting point
- NDIR (non-dispersive infrared) CO₂ sensing element — long-term stable, with calibration support; 400–5,000 ppm range, $\pm(30 \text{ ppm} + 3\% \text{ of reading})$ accuracy
- Built for harsh conditions: sealed IP65 enclosure and operation from -30 to 70 °C — mounting outdoors, in a cold store, cellar or greenhouse
- Up to 10 years on a single replaceable 19,000 mAh battery — no service schedule of its own
- 1,000-entry memory with automatic retransmission and data recovery — gap-free history after connectivity outages
- On-device alarm thresholds with an immediate report — independent of the regular reporting rhythm
- Configuration over NFC from a smartphone, over USB-C from a PC, or remotely from the platform (downlink)
- Pole/mast, wall or DIN-rail mounting

Technical specification

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 — temperature

Measuring range	-30...70 °C
Accuracy	±0.3 °C (0...70 °C); ±0.6 °C (-30...0 °C)
Resolution	0.1 °C
Sensing element	digital MEMS

Measurement — relative humidity

Measuring range	0...100% RH
Accuracy	±3% RH (10...90% RH); ±5% RH (below 10% and above 90% RH)
Resolution	0.5% RH
Sensing element	digital MEMS

Measurement — barometric pressure

Measuring range	300...1,100 hPa (at -40...85 °C)
Accuracy	±1 hPa
Resolution	0.1 hPa
Sensing element	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 20 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

Device features	
Local buffer	1,000 entries; automatic retransmission and data recovery after a connectivity outage
Threshold alarms	on-device thresholds + alert rules in the Nextriv platform
Calibration	sensor calibration support
Configuration	mobile app over NFC; PC software over USB-C (internal port); remotely via platform downlink
Power on / off	NFC or button (internal)
Indicators	1× status LED (internal)
Button	1× power / reset (internal)
Service port	1× USB-C (internal) — configuration and console

Power	
Battery	1× lithium Li-SOCl ₂ ER34615 (D size), 19,000 mAh, replaceable
Battery life	up to 10 years — 10-min interval, 25 °C [1]

Enclosure and operating environment	
Operating temperature	-30...70 °C
Ambient humidity	0...95% RH, non-condensing
Ingress protection	IP65 (outdoor mounting possible)
Housing	ABS + PC, grey
Weight	434.7 g (with battery and mounting bracket)
Dimensions	147.9 × 71 × 69.5 mm (5.8 × 2.8 × 2.7 in)
Mounting	pole/mast, wall or DIN-rail mounting

Compliance and approvals	
Approvals	CE, FCC, ISED, ICASA, Telec
EMC	EN 55032, EN 55035
Immunity (EMS)	IEC 61000-4-2 level 3; IEC 61000-4-3 level 2; IEC 61000-4-8 level 4
Radio frequency	FCC Part 15B, FCC Part 15.247, EN 300 330, EN 301 489-1/3, EN 300 220-1/2
Safety	EN 62368-1
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-SN-CO2I
Variants	regional radio-band variant (EU standard: EU868) — specify 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.