

Nextriv Sense Level

Laser level sensor for dispensers

NX-SN-LVL

Nextriv Sense

A miniature laser supply-level sensor for paper and towel dispensers. It measures distance using time-of-flight (ToF) over a 1–55 cm range with ± 1 cm accuracy and a dead zone of only 1 cm, and alarm thresholds are set as a percentage of the remaining supply. The housing, just 12 mm thick, fits inside typical dispensers, while a moisture-protective coating on the electronics and a purpose-designed antenna ensure stable operation even inside metal enclosures. A replaceable coin-cell battery lasts approx. 2–3 years, so service teams refill before anything runs out.



± 1 cm

measurement accuracy

1–55 cm

detection range

12 mm

housing thickness

~15 km

open-terrain range

Key features

- Laser time-of-flight (ToF) measurement: 1–55 cm range, ± 1 cm accuracy, a dead zone of only 1 cm
- Ultra-slim housing, 12 mm thick and 24.7 g light — fits inside typical paper and towel dispensers
- Remaining supply reported as a percentage, with configurable alarm thresholds
- Progressive measurement resolution — 1 mm at short distances, when the supply is running out
- Moisture-protective coating on the electronics — stable operation in bathrooms and other damp rooms
- A purpose-designed antenna keeps the device connected even from inside a metal dispenser
- Scheduled hibernate mode and ultra-low power draw — approx. 2–3 years on a replaceable coin cell
- Tool-free mounting with 3M tape; configuration over NFC from a smartphone or remotely from the platform (downlink)

Technical specification

Measurement — fill level (distance)

Measuring principle	laser time-of-flight (ToF), non-contact
Measuring range	1...55 cm
Dead zone	1 cm
Accuracy	± 1 cm
Resolution	1 mm (1...15 cm); 2 mm (15...35 cm); 3 mm (35...55 cm)
Field of view	25° ($\pm 5^\circ$)

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 -132 dBm
Antenna	internal, designed for a stable link also inside metal dispensers
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

Supply reporting	remaining amount as a percentage with user-defined alarm thresholds
Threshold alarms	on-device thresholds + alert rules in the Nextriv platform
Hibernate mode	editable schedule (e.g. facility closing hours) — extends battery life
Configuration	mobile app over NFC; remotely via platform downlink
Indicators	1× LED indicator (internal)
Button	1× reset (internal)
Identification	QR code with the device ID on the front — quick pairing and inventory

Power

Battery	1× lithium CR2450 coin cell, 590 mAh, replaceable
Battery life	approx. 1.9–3.2 years depending on the radio configuration — 60-min interval, approx. 13 working hours a day, 25 °C [1]

Enclosure and operating environment

Operating temperature	-10...60 °C
Ambient humidity	0...95 % RH, non-condensing
Moisture protection	moisture-protective coating on the electronics — operation in bathroom conditions
Ingress protection	IP30 (indoor use)
Housing	ABS + PC (flame retardant), white
Dimensions	66 × 38 × 12 mm (2.60 × 1.50 × 0.47 in)
Weight	24.7 g (with battery); 18.1 g (without battery)
Mounting	on flat surfaces — industrial 3M tape, no tools

Compliance and approvals	
Approvals	CE, FCC
Environmental	RoHS

Ordering information	
Product code (SKU)	NX-SN-LVL
Accessories (optional)	magnetic mounting kit — for metal dispensers and residue-free deployments
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, radio configuration and operating 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.