

# Xsense® RTL 2G & Cat-M1(4G/5G) Datalogger for Real-Time Monitoring



## Introduction

The Xsense® 2G & Cat-M1(4G/5G) datalogger is a compact device for real-time monitoring built for today's world. It was designed from the ground up to use a non-lithium battery, and it supports easy battery replacement by the user, as per EU standards, for extended use or reuse. Temperature, relative humidity, light, shock/acceleration, and barometric pressure sensors are currently offered, with many additional sensors and extensions planned for the future.

Some novel features are:

- ☐ Ability to manually force test cellular connectivity
- ☐ Optional BLE access for reconfiguring device or offloading readings
- ☐ Optional USB-C power port for powering unit for extended use or as an emergency power source

It is simple to use. Register your device in Xsense®. Turn it on. And place it wherever you want (within range of a cellular signal) to get live measures of environmental and location information.

It comes with a cellular SIM card pre-installed.

The datalogger comes with access to Xsense® Cloud which includes such features as:

- ☐ Route tracing and trip segmentation
- ☐ Automatic alerts
- ☐ Automatic notifications at destination and waypoints
- ☐ Arrival time estimations
- ☐ Smart data access security
- ☐ Quality metrics
- ☐ In-app messaging and alerts (Android and iOS)
- ☐ Post-analysis reports

Stay informed anywhere, anytime.



## Applications

- ☐ One-way shipments
- ☐ Round-Trip shipments
- ☐ Last mile
- ☐ Fixed location monitoring
- ☐ Asset tracking

## Device Specifications

Cellular Network	LTE Cat-M1 (4G) & 2G
SIM Card	Pre-installed global nano SIM card
Battery Type	Non-Rechargeable
Operating Options	Single Use / Reusable
Certified Modes of Transport	Air, Road, Rail, Ocean
Operating Life	Up to 18 days (15-minute reporting interval) Up to 35 days (30-minute reporting interval) Up to 70 days (1-hour reporting interval)
Operating Temperature Range	-30°C to +60°C
Transmission Interval	Configurable, 5 to 120 minutes
Logging Interval	Configurable, 1 to 120 minutes
Memory Capacity (Offline Logger)	12,000 readings
Secondary Communication Channel	Bluetooth BLE 5.2 via Xsense® Mobile App
Alternative Power Source	Standard USB-C Cable (Cable Output: 5V/1A)
Regulatory Certifications	FCC; CE; RTCA/DO-160 - Pending
Storage Conditions	Temperature: +10°C to +35°C
Dimensions	97 mm x 111 mm x 29 mm 3.8 in x 4.37 in x 1.14 in
Weight	Up to 240 g / 8.5 oz
Patents	Pending

## Sensors

Sensor	Range / Accuracy	Precision	Calibration
Temperature (TB)	$\pm 0.2^{\circ}\text{C}$ (from $0^{\circ}\text{C}$ to $60^{\circ}\text{C}$ ) / $\pm 0.3^{\circ}\text{C}$ (under $0^{\circ}\text{C}$ ) $\pm 0.36^{\circ}\text{F}$ (from $32^{\circ}\text{F}$ to $140^{\circ}\text{F}$ ) / $\pm 0.54^{\circ}\text{F}$ (under $32^{\circ}\text{F}$ )	$0.1^{\circ}\text{C}$ / $0.18^{\circ}\text{F}$	Factory calibrated (NIST)
Relative Humidity	$\pm 3\%$ (from 0 to 85%) / $\pm 4\%$ (from 85 to 100%)	1%	Factory calibrated (NIST)
Light	0.01 to 157,000 Lux ( $\pm 10\%$ ) Door open > 15 Lux	???	Factory calibrated

### FCC Statements

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING – RF EXPOSURE COMPLIANCE: This equipment should be installed and operated with a minimum distance 20cm between the radiator and your body.

-This Class B digital apparatus complies with Canadian ICES-003.

-Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

### ◆ IC Statements

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

AVERTISSEMENT – CONFORMITÉ AUX NORMES D'EXPOSITION AUX RF : Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.