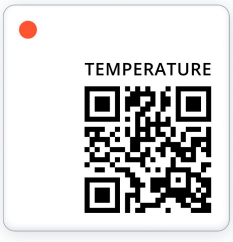
DISRUPTIVE TECHNOLOGIES

Wireless Temperature Sensor (Gen 2) US

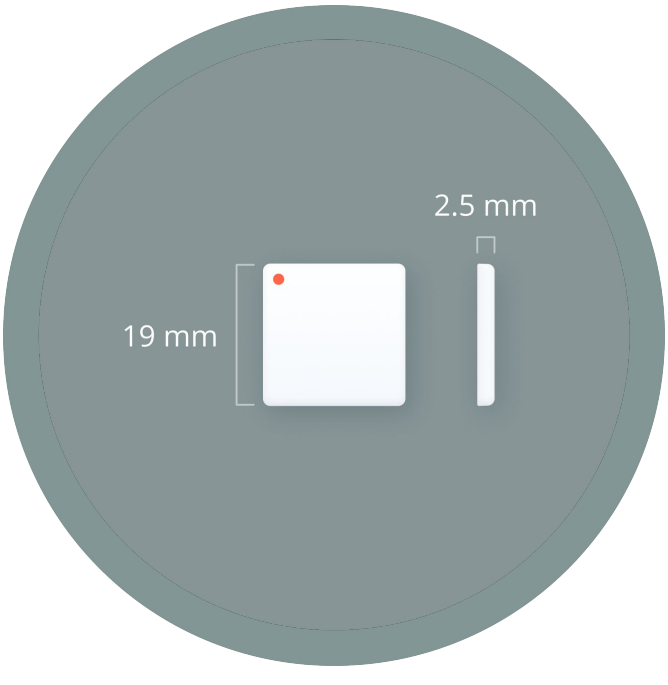


The Wireless Temperature Sensor (Gen 2) measures the surrounding temperature and wirelessly transmits the result to a Cloud service through a Cloud Connector (Gateway) using SecureDataShot™ technology. The device can be configured to measure the temperature at regular intervals and report the measurements every 15 minutes. The number of temperature measurements taken in each 15 minute interval can be configured from 1 up to 30, for a measurement interval down to 30 seconds.

The Wireless Temperature Sensor (Gen 2) has touch functionality for simple installation and use.

Features

- 0.05 °C / 0.09 °F resolution, ±0.2 °C / ±0.4 °F typical absolute accuracy at 25 °C / 77 °F
- Configurable number of temperature measurements taken in each 15 minute interval, from 1 up to 30
- Long lifetime, up to 15 years
- Robust design, IP68
- Touch functionality
- Wireless range 25 m typical indoor, similar to a WiFi network with an advanced WiFi router
- Wireless range line of sight up to 300 m in standard mode and up to 1000 m in high power Boost Mode



Specifications

Operating Conditions	
Temperature range	-40 to 85 °C / -40 to 185 °F
Recommended temp. range	-25 to 50 °C / -13 to 122 °F
Humidity at 25 °C / 77 °F	0 to 100% relative humidity
Recommended Storage Conditions	Cool and dry, near normal room temperature
Construction	Sealed, IP68
Material	Impact modified acrylic film
Typical Dimensions[4]	19 x 19 x 2.5 mm (±0.2 mm)
Typical Weight[4]	2.0 g (±0.3 g)
Lifetime	Up to 15 years at 25 °C / 77 °F [1]
Certifications and Compliance	Certified to FCC and ISED regulations FCC ID: 2ATFX-100541, IC: 25087-100541
Radio range	
Standard Mode	25 m indoor[2], up to 300 m free-space[2]
High Power Boost Mode	Up to 1000 m free-space[2]
Wireless Communication	915 MHz ISM band, SecureDataShot™
Temperature resolution	0.05 °C / 0.09 °F resolution
Temperature accuracy	±0.2 °C / ±0.4 °F typical, ±0.4 °C / ±0.7 °F worst case absolute accuracy at 25 °C / 77 °F

Sensor performance parameters

The Wireless Temperature Sensor performance is temperature dependent. The sensor battery will have reduced current drive capabilities at low temperatures resulting in increased recovery time and reduced range in Boost Mode. Self discharge of the battery will reduce the lifetime significantly at high temperatures.

Temperature dependency	-40 °C -40 °F	-25 °C -13 °F	25 °C 77 °F	50 °C 122 °F	85 °C 185 °F
Sensor lifetime recommended temperature range[1]		5 y	15 y	7 y	
Sensor lifetime full temperature range [3]	1 w[3] / 3 y				4 mo
Typical temperature accuracy	±0.6 °C ±1.0 °F	±0.3 °C ±0.5 °F	±0.2 °C ±0.4 °F	±0.2 °C ±0.4 °F	±0.3 °C ±0.5 °F

Water: The Sensor is waterproof, but should not be used in applications where the sensor is submerged. Long time exposure to water will result in water penetration and reduced sensor lifetime.
Magnetism, electric fields: The sensor shall not be exposed to strong magnetic fields. Magnets should not be used for mounting the sensor, as this will make the sensor unresponsive. Strong electric field fluctuations (e.g. fluorescent lamps and switching transformers) may trigger false touch events.
Environmental factors: The sensor is designed to handle heavy stress, but exposure to environmental factors such as strong sunlight, mechanical stress, solvents and extensive temperature variations will impact lifetime.

Footnotes

(1): Assuming a radio transaction every 15 minutes, operating at 25 °C / 77 °F in default configuration. Lifetime will vary based on operating environment, rate of transmissions and sample period.
(2): Based on standard ITU-R P.1238 (indoor) and ITU-R P.525 (free-space). Lifetime in Boost Mode is shorter than in Standard Mode.
(3): The sensor will become unresponsive and stop reporting if placed at very low temperatures for extended periods of time. The sensor will resume operation when temperature is increased
(4): The backside tape is excluded