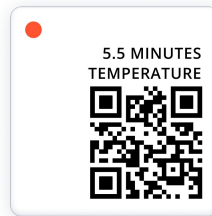# Wireless Temperature Sensor 330s US QR

The Wireless Temperature Sensor measures the surrounding temperature and wirelessly transmits the result to a Cloud Connector (Gateway) via SecureDataShot™ technology. The Cloud Connector will relay the temperature reading to a Cloud service. The readings are performed at 5.5 minute intervals. The Wireless Temperature Sensor has touch functionality for simple installation and use.

Features

- 0.1 °F resolution, ±0.7 °F absolute accuracy at 77 °F
- Touch functionality
- Long lifetime, up to 5 years in default configuration and standard environment
- Robust design, IP68 and UL 50E Type 4X
- 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
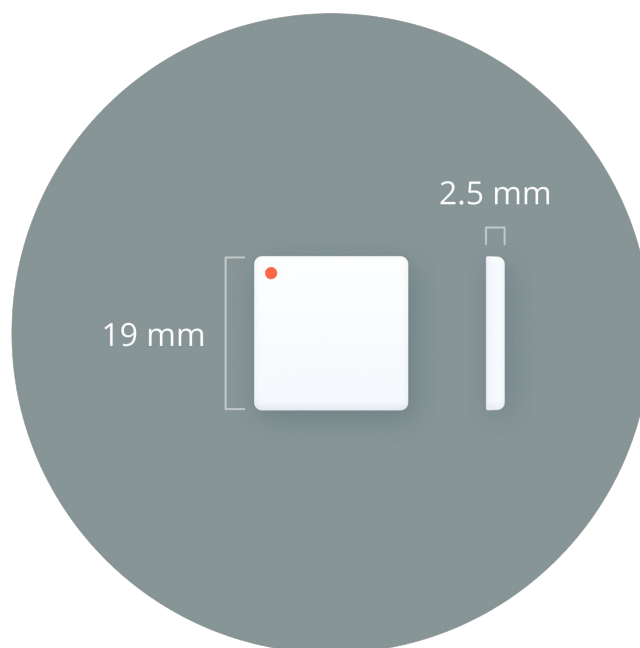
Specifications

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 %RH, non condensing
Recommended Storage Conditions	Cool and dry, near normal room temperature
Construction	Sealed, IP68 and UL 50E Type 4X
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 5 years [1], see graph
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	0.1 °F resolution, ±0.7 °F absolute accuracy at 77 °F

Sensor performance parameters

The Wireless Temperature Sensor 330s 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 °F	-13 °F	32 to 45 °F	122 °F	185 °F
Sensor lifetime recommended temperature range[1]		3 y	4 y	5 y	
Sensor lifetime full temperature range [3]	1 w[3] / 3 y				4 mo
Typical communication recovery time (fresh battery)	1 min		0.5 s		
Typical communication recovery time (close to depleted battery)	10 min				
Absolute temperature accuracy		±1.8 °F	±0.7 °F	±0.7 °F	±1.6 °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 5.5 minutes, operating at room temperature in default configuration. Lifetime will vary based on operating environment and rate of transmissions.

(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