

HiTag2™ Series Data Loggers with Ambient Sensors



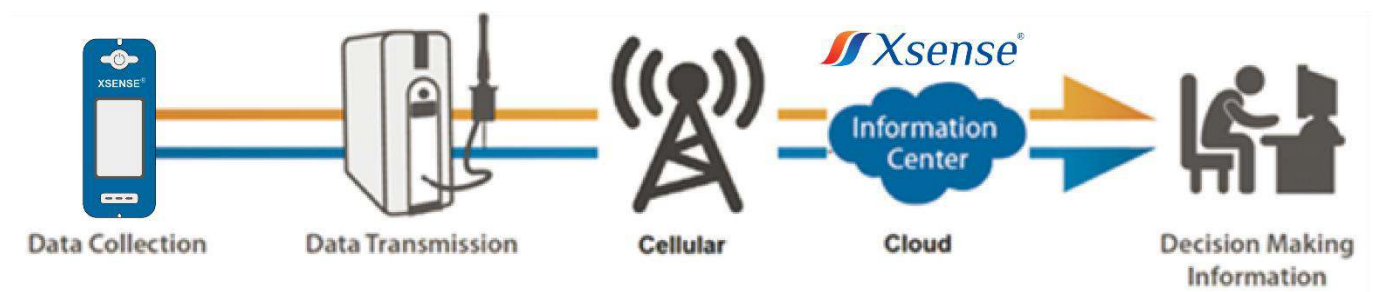
Introduction

HiTag2™ is a series of wireless RF sensor data loggers.

The HiTag2™ series of data loggers are suitable for monitoring all parts of the cold-chain, whether transport vehicles, fixed locations, or items, with results reported automatically.

HiTag2s™ are offered in a variety of configurations of sensors, lifespans, measurement intervals, and operating ranges.

Readings taken by HiTag2™ data loggers are read by Xsense® wireless gateways (CUs), which pass the readings to Xsense® Cloud, where the data is processed and presented.



Models

Standard Resolution (0.25°C / 0.45°F)

Temperature	Standard Range	-12°C to 50°C (6.8°F to 122°F)
	Accuracy	±0.5°C (±0.9°F) in range -12°C to +40°C (-10.4°F to 104°F)
	Freeze Range	-35°C to 26°C (-31°F to 78.8°F)
	Accuracy	±0.5°C (±0.9°F) in range -30°C to +26°C (-22°F to 78.8°F)
	Resolution	0.25°C (0.45°F)
Relative Humidity	Range	20% to 95%
	Accuracy	±5%
	Resolution	1%

Popular	P/N*	Model	Temperature	RH	Freeze	FM Plastic	Interval (connected / not connected) in minutes	Battery**	Estimated Life (mo.)***	Life Limit (mo.)
	T20-T0-L2-S1-A	HiTag2 SI 1m	●				8/16	AAA	1	1
2	TH20-T0-L2-S1-A	HiTag2 SI RH 1m	●	●			8/16	AAA	1	1
	T20-T2-L3-S0	HiTag2 Freeze 1m	●		●		30/60	CR2	<1	1
	T20-T2-L3-S1	HiTag2 Freeze SI 1m	●		●		8/16	CR2	<1	1
	T20-T0-L3-S0-A	HiTag2	●				30/60	AAA	3	3
	T20-T0-L3-S1-A	HiTag2 SI	●				8/16	AAA	3	3
1	TH20-T0-L3-S0-A	HiTag2 RH	●	●			30/60	AAA	3	3
	TH20-T0-L3-S1-A	HiTag2 RH SI	●	●			8/16	AAA	3	3
	T20-T0-L4-S0-A	HiTag2 Long-life	●				30/60	AAA	9	12
	T20-T0-L4-S1-A	HiTag2 Long-life SI	●				8/16	AAA	9	12
	TH20-T0-L4-S0-A	HiTag2 Long-life RH	●				30/60	AAA	9	12
	TH20-T0-L4-S1-A	HiTag2 Long-life RH SI	●				8/16	AAA	9	12
	Installation Tag	Installation Tag						AAA		
	T22-T0-L4-S0-A	HiTag2 FM	●			●	30/60	AAA	12	12
	T22-T0-L4-S1-A	HiTag2 FM SI	●			●	8/16	AAA	12	12
3	TH22-T0-L4-S0-A	HiTag2 FM RH	●	●		●	30/60	AAA	12	12
	TH22-T0-L4-S1-A	HiTag2 FM RH SI	●	●		●	8/16	AAA	12	12
	T22-T2-L4-S0	HiTag2 FM Freeze	●		●	●	30/60	CR18505	12	12
	T22-T2-L4-S1	HiTag2 FM Freeze SI	●		●	●	8/16	CR18505	12	12

High Resolution (0.1°C / 0.18°F)

Temperature	Standard Range	-32°C to 70°C (-25.6°F to 158°F)
	Accuracy	±0.5°C (±0.9°F) in range -12°C to +40°C (10.4°F to 104°F)
	Freeze Range	-32°C to 26°C (-31°F to 78.8°F)
	Accuracy	±0.5°C (±0.9°F) in range -30°C to +26°C (-22°F to 78.8°F)
	Resolution	0.1°C (0.18°F)
Relative Humidity	Range	32% to 95%
	Accuracy	±5%
	Resolution	1%

Popular	P/N*	Model	Temperature	RH	Freeze	FM Plastic	Interval (connected / not connected) in minutes	Battery**	Estimated Life (mo.)***	Life Limit (mo.)
	TH20-T0-L3-S0-A-r7	HiTag2 RH HiRes	●	●			30/60	AAA	3	3
	TH20-T0-L2-S1-A-r7	HiTag2 RH SI HiRes	●	●			8/16	AAA	1	1

HiTag2™ high resolution data loggers will operate only with Xsense® wireless gateways (CUs) with hub version 4.0 and above.

* Revs -r1 and above include a label on the case of the data logger, and two transferrable labels for customer use: a large one to stick on a pallet or container, and a small label for customer paperwork.

** AAA and AA are alkaline batteries. CR18505 and CR2 Li are lithium metal batteries.

*** Estimated life is based upon observation of operation under typical usage. Actual life may vary depending upon mode of use and environmental factors, such as ambient temperature which affects the capacity of the battery.

Specification

Sample Rate / Reporting Interval	Standard: Short: Custom:	30 minutes connected / 60 minutes not connected 8 minutes connected / 16 minutes not connected Available upon request
Reading Capacity	≈ 2000 readings	approx. 20 days of readings at 16 minutes interval, approx. 80 days of readings at 60 minutes interval
Data Upload	Automatic over wireless via Xsense® gateways (CUs)	
RF communication	Operating frequency range Range ITU Emission classification Modulation Transmission power Channel spacing Signal bandwidth Communication type Air Transport Safety Antenna Length	ISM band 433.05MHz to 434.8MHz 100m (300ft) line of sight. Actual range depends upon RF interference, building materials, and physical obstacles F7D 2FSK (MFSK2) ≈ +2dbm (FCC ≈ -3dbm) 150 KHz 90KHz TDD (Time Division Duplex) RF transmission only in presence of gateways (CUs) 75 cm
Dimensions / Weight	HiTag2™ HiTag2™ FM	19.5 X 35 X 89 mm (.75 X 1.38 X 3.5 in) / ≈34g (1.2 oz) 28 X 34 X 114 mm (1.1 X 1.34 X 4.5 in) / ≈65g (2.3 oz)
Operating Temperature	Alkaline / RH Alkaline / No RH Lithium / RH Lithium / No RH	0°C to 50°C 32°F to 122°F) -12°C to 50°C (10.4°F to 122°F) 0°C to 70°C (32°F to 158°F) -35°C to 70°C (-31°F to 158°F)
Lifetime	Storage (not activated) Operation (activated)	2 year 1/3/9/12 months (depends upon model)
Power	Standard Freeze	AAA or AA Alkaline battery Single lithium battery CR18505 or CR2
Materials	Food grade materials	
Quality Assurance Certifications	Calibration traceable to ILAC and NIST® recognized standard	
Recording Options	Single Life Single use (standard) / multi-use (optional upon configuration in Xsense®)	
Certifications	FCC, RTCAA/DO-160, CE, IEC EN61010, EN12830, CMIIT, ICASA, GOST, RoHS	
Air Safety	Airbus Approved	
Ingress Protection (per IEC standard 60529)	HiTags™ with RH HiTags™ without RH	IP51 IP63 spray and dust rated
Body not intended for prolonged submersion. To monitor temperature of fluids, use model with probe recommended		