



Intellex TMT-8500

Temperature Monitoring Tag

- Temperature monitoring for perishable foods and pharmaceuticals
- Reliable reads/writes at 100m or without unpacking
- Onboard memory stores 3,600 temperature samples
- Two year battery life—based on typical use cases
- Based on ISO and EPCglobal standards

The Intellex TMT-8500 Temperature Monitoring Tag is an XC3 Technology™ RFID tag that combines high sensitivity temperature sensing functionality with ISO standards-based RFID wireless communications. This combined functionality provides market leading visibility, efficiency and improved ROI for perishable foods and pharmaceutical cold chain management by enabling solutions that leverage the benefits of RFID (including real time data access, long range reads, and autonomous data collection with no line of sight restriction) without impacting existing business processes.

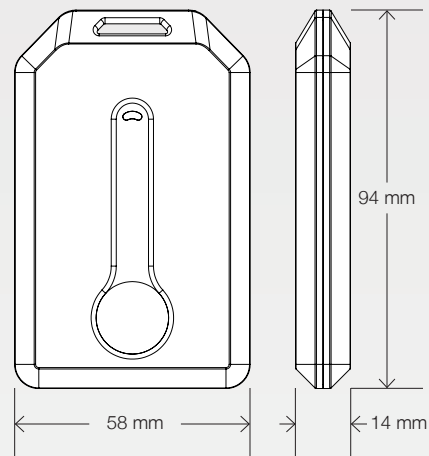
The TMT-8500 is based on the ISO C3 (ISO/IEC 18000-6:2010) and EPCglobal Gen 2 Class 1 protocols, with extended memory (60kbits) for data storage, and a microcontroller temperature sensing application. Support for the ISO and EPCglobal protocols enables the TMT-8500 to provide extended RFID capabilities including enhanced read/write sensitivity equating to read ranges in excess of 100 meters, superior battery power management and the full functionality and configurability of a microcontroller-based temperature sensing application. The TMT-8500 is configurable for both single use and multiple-use applications.

Product Features

Device Type	Class 3 RFID (battery assisted passive) single chip transponder
RF Interface	ISO/IEC 18000-6:2010 (Manchester BAP), EPCglobal C1G2
Operating Frequency	902-928 MHz (North America); 865.6-867.6 MHz (Europe/India)
Modulation	Amplitude modulated forward link (reader to tag) Miller / FM0 modulated subcarrier
Range	100 meters or more in free space in ISO BAP mode
Security	User and Block Memory Password Security, Administrator Authentication
Memory	Standard EPC tag ID memory plus 60 kbits of extended memory for Sensor, User and WayPoint Data— user configurable 3,600 temperature samples can be logged in the sensor memory

Sampling Interval	User configurable from one (1) minute to five (5) days	
Start Sample Time	User configurable: selects a time offset delay to start data logging or set a specific date and time to start data logging	
Alarms	Four (4) configurable thresholds: Two user configurable high temperature and two low temperature alarms	
Logging Modes	Multiple logging modes for increased storage capacity and monitoring time	
Temperature Range	Operating temperature range is -30°C to +70°C (-22°F to +158°F)	
Temperature Accuracy	The maximum temperature measurement error variance is indicated in the table below:	
	Temperature Range	Allowable Variance
	-22°F to 0°F (-30°C to -18°C)	±2°F (±1.1°C)
	0°F to +122°F (-18°C to +50°C)	±1°F (±0.5°C)
	+122°F to +158°F (+50°C to +70°C)	±2°F (±1.1°C)
Temperature Resolution	0.1°C (1/10th degree) over full temperature range	
Compliance	NIST, FAA	
Clock Accuracy	Real-time clock and timer accuracy of ±1 minute/month	
Battery/Battery Life	3V Lithium battery, UL rated; meets UN Part III, sub-section 38.3 test criteria. Two year battery life – based on typical use cases	
Data Rates	8-128 Kb/sec forward link Up to 640 Kb/sec reverse link	
Data Retention	> 10 years at 85°C	
Environmental Specifications	Environment	Tolerance
	Operational Temperature	-30°C to +70°C (-22°F to +158°F)
	Storage Temperature	-30°C to +80°C (-22°F to +176°F)
	Vibration	IEC 60068-2-36
	Shock (drop)	IEC 60068-2-32
	Dust / Water	IP67
Interface	Single dual color (red and green) LED and single button for user control and tag status	
Size & Weight	94mm H x 58mm W x 14mm D (3.7" H x 2.3" W x 0.55" D) & 45g	
Packaging	FDA Compliant packaging available	

Design





Warranty	The TMT-8500 is warranted against defects in workmanship and materials for a period of two (2) years. See Terms of Sale for warranty details.
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Ordering Information

Part Number	Description
TMT-8500	Temperature Monitoring Tag; North America 902-928 MHz frequency range

For More Information

To learn more please visit our website or contact us directly. We look forward to hearing from you.

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