

# RT0005

RAIN RFID Temperature Logger Tag



BENEFITS

High temperature and time accuracy Button and LED

D Thin form factor

Configurable alarms

alarms

#### Features

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) interface
- High temperature and time accuracy
- Fast samples download
- Button and LED for fast inspection
- Configurable alarms
- Configurable sampling interval
- Long monitoring time span

#### Applications

- Fresh food
- Seafood
- Meat and poultry
- Milk based products
- Frozen food
- Pharmaceuticals
- Special chemical products
- Clinical trials

#### Overview

CAEN RFID easy2log<sup>©</sup> **RT0005** is a low cost, semi-passive UHF Logger tag that allows to monitor temperature sensitive products like perishable foods and pharmaceuticals, during transportation and storage. The combination of the high resolution sensor, the large memory size and the standard RFID interface permits to realize effective track and trace solutions for the cold-chain.

The **RT0005** can be used with standard RAIN RFID readers available on the market without requiring any additional equipment thanks to its compatibility with the EPCGlobal C1G2 and ISO18000-63 standards.

The tag can be configured to store temperature samples in intervals from 1 second to 18 hours in the internal memory that can contain up to 3,958 samples. The user can define up to 16 temperature ranges with independent threshold alarms for a very accurate control of the temperature excursions. The tag can be started either using a button or via standard RFID commands.

The tag is also able to calculate the Mean Kinetic Temperature and user configurable remaining shelf life time as well as generate alarms in case these parameters exceeded user defined thresholds.

The **RT0005** RFID logger can be used for multiple shipments thanks to the long battery life and the reset function thus allowing to reduce the total cost of the solution and anticipate the ROI.





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## **Technical Specification Table**

Frequency Range	860÷928 MHz				
Тад Туре	Semipassive				
RFID Interface	EPC Class 1 Gen 2 - ISO18000-63				
Data Points	Up to 3,958 samples				
Temperature Operating Range	-20 °C to +70 °C				
Temperature Accuracy	±0.5 °C typical				
Monitoring Time Span	Up to 5 years				
Time Accuracy	< 0.01% error				
Read Range	Up to 10 m in free air @ 2W ERP				
Available Memory	<ul> <li>Up to 512 bits in EPC memory bank</li> <li>Up to 512 bits in User Memory bank</li> </ul>				
Monitoring Delay Option	Up to 18 hours				
Features	<ul> <li>Multiple configurable sampling interval</li> <li>Temperature histogram function</li> <li>Mean Kinetic Temperature calculation</li> <li>Shelf Life prediction (Arrhenius kinetic model with custiomer designation of time-temperature dependency)</li> <li>Shelf Life monitoring (Remaining Shelf Life information available ate check points or manual interface)</li> </ul>				
Alarms	<ul> <li>Multiple configurable high and low temperature thresholds</li> <li>Estimated Time of Arrival</li> <li>Battery level</li> <li>Mean Kinectic Temperature</li> <li>Shelf life</li> </ul>				
Battery Life	1 year typical (depenfing on usage and operting temperature)				
Battery Type	Li/MnO2 Model Renata CR2450N				
IP rating	IP67				
Enclosure Material	PVC Tecnovil code: 21TV306TRS00000				
Dimensions	• (W)107 x (L)107 x (H)8.7 mm³ max. • 4.21 x 4.21 x 3.42 inches³				
Weight	31 g				

### **Ordering Options**

WRT0005XAAAA	RT0005 - Temperature Logger Tag					

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#### CAEN RFID srl

via Vetraia, 11 - 55049 Viareggio (LU) - Italy Phone +39 0584 388398 - Fax +39 0584 388959 www.caenrfid.com - info@caenrfid.com