

## Tags - RT0005

### Easy2Log Low Cost, Semi-Passive UHF Logger Tag

- EPC C1G2 (ISO18000-6C) Compatible
- Frequency range: 860 MHz ÷ 928 MHz
- Read range: approx. 10m in air @ 2W ERP
- Unique TID plus long EPC code (512 bit)
- Memory capacity: 4k samples (8 kByte)
- Multiple programmable sampling interval
- Multiple programmable temperature thresholds
- Multiple programmable alarms
- Temperature Histogram function
- Mean Kinetic Temperature calculation
- Remaining Shelf Life calculation
- Easy to use manual interface
- Typical usage time: 1 year
- Temperature range: -20°C to +70°C
- Accuracy : ±0.1°C (typical)
- Battery charge status monitoring through RF or manual interface



CAEN RFID Easy2Log RT0005 is a low cost, semi-passive UHF Logger tag that allows to monitor temperature sensitive products during transportation and storage.

Being compliant to the EPC Class1 Gen2/ISO18000-6C standards, the RT0005 can be used with standard Gen2 UHF RFID readers available on the market without requiring any additional equipment.

Once configured using the RFID interface, the logger can be activated either by a simple manual interface or by RFID commands. The tag will start monitoring the life of a temperature sensitive product allowing to identify any problem occurred along the whole cold chain in a fast and effective way.

The logger can be configured either in Continuous or Over-Threshold logging mode and it allows to define up to 16 independent histogram bins for the entire temperature range. Each histogram permits to have different programmable sample times. Temperature logging and alarms generation can be enabled or disabled independently for each histogram bin.

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

The tag can generate alarms if the following conditions occur:

The counter of a histogram bin exceed the defined threshold

The Mean Kinetic Temperature value exceed the defined threshold

The remaining Shelf life is less than the defined threshold

The logging memory is full

The elapsed time from the start of the logging exceed the defined Estimated Time of Arrival

(ETA)

The easy2log® RT0005 temperature logger is recommended for recording temperature during transportation and/or storage of temperature-sensitive goods such as:

Pharmaceuticals  
 Fresh food (fruit, vegetables)  
 Seafood  
 Meat and poultry  
 Milk-based products  
 Frozen food  
 Chemical products

## Ordering code

**WRT0005XAAAA**

RT0005 - Temperature logger UHF semi  
 -passive tag(EPC C1G2) Blistered

## Technical Specifications Table

|                             |  |
|-----------------------------|--|
| Size                        | 100x100x6 mm <sup>3</sup>  |
| Data Points                 | 4000   |
| Weight                      | 24g  |
| Temperature operating range | -20°C to +70°C   |
| Temperature Accuracy        | ±0.1°C typical, ±0.75°C maximum  |
| Monitoring Time Span        | Up to 5 years  |
| Time Accuracy               | <0.01% error   |
| RFID Interface              | UHF EPC Class1 Gen2/ISO 18000-6C compatible  |
| Frequency range             | 860 MHz ÷ 928 MHz  |
| Read range                  | approx. 10m in air @ 2W ERP  |
| Available Memory            | Up to 512 bits in EPC bank, up to 512 bits in User Memory bank   |
| Memory capacity             | 4k samples (8 kByte)   |
| Monitoring Delay Option     | Up to 18 hours   |
| Battery Life                | 1 year   |
| Alarms                      | Multiple user-configurable high temperature and low temperature alarms, ETA alarm, MKT alarm, shelf life alarm |
| Shelf Life Prediction       | Calculations based on Arrhenius kinetic model with customer designation of time-temperature dependency         |
| Shelf Life Monitoring       | Provides Remaining Shelf Life information at check points with RFID reader or manual interface                 |
| Water Resistance            | IP67   |

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