



RT0013

**qLog**  
HUMIDITY

**Dual Frequency RAIN/NFC  
Data Logger Tag**



<b>BENEFITS</b>	Dual frequency RAIN/NFC	High temperature and time accuracy	Rugged and slim
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### Features

- RAIN RFID (UHF EPC Class1 Gen2, ISO 18000-63) interface
- NFC ISO 14443 Type A interface
- High temperature and time accuracy
- Fast samples download
- 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 **qLog<sub>HUMIDITY</sub>** (RT0013) is a low cost, semi-passive NFC/RAIN RFID temperature and humidity logger that allows to monitor temperature and humidity sensitive products. The combination of the high resolution sensor, the large memory size and the standard NFC/RAIN RFID interfaces permit to realize effective track and trace solutions for the cold-chain.

The RAIN RFID interface is ideal for reading temperature data or alarms from distance allowing automated check-points on conveyors or through dock doors. The NFC interface permits a very easy interaction with any NFC enabled smartphone allowing the consumer to check the good condition at home.

The **qLog<sub>HUMIDITY</sub>** can be configured to store temperature and humidity samples in intervals from 5 second to 18 hours in the internal memory that can contain up to 4,096 samples. The user can define up to 16 temperature and humidity ranges with independent threshold alarms for a very accurate control of the temperature and humidity excursions.

The rugged enclosure and the compact size permit to use the logger in various applications and the passive radiofrequency behaviour does not prevent air shipments.

The **qLog<sub>HUMIDITY</sub>** RFID logger can be used for multiple shipments thanks to the long battery life and the reset function allowing to reduce the total cost of a single monitored shipment and anticipate the ROI of the solution.



## Technical Specification Table

<b>Frequency Range</b>	- NFC/HF: 13.56 MHz - RAIN/UHF: 860÷930 MHz
<b>RFID Protocols</b>	- NFC/RFID ISO 14443 Type A Interface - RAIN : EPC Class 1 Gen 2 - ISO18000-63
<b>Tag Type</b>	Semipassive
<b>Data Points</b>	Up to 4096 samples
<b>Temperature Range</b>	-30 °C to +70 °C
<b>Temperature Accuracy</b>	±0.5 °C
<b>Humidity Range</b>	0 to 100% relative humidity range
<b>Humidity Accuracy</b>	± 3.5% rH, 20 to +80% rH
<b>Monitoring Time Span</b>	Up to 5 years
<b>Time Accuracy</b>	<0.02% error (typical)
<b>Read Range</b>	- NFC/HF: up to 5 cm. - RAIN/UHF: up to 5 mt. in free air @ 2W ERP
<b>Available Memory</b>	Up to 160 bits in EPC memory bank and up to 448 bits available for user
<b>Monitoring Delay Option</b>	Up to 18 hours
<b>Features</b>	- Multiple configurable sampling interval - Humidity and temperature histogram function - Configuration and start accessible both from NFC and RAIN interface - Samples download accessible both from NFC and RAIN interface - User accessible memory shared between NFC and RAIN
<b>Alarms</b>	- Multiple configurable high and low temperature/humidity thresholds - Estimated Time of Arrival - Battery Level
<b>Battery Life</b>	1 year typical (depending on usage and operating temperature)
<b>Battery Type</b>	Li/MnO2 Model Renata CR2430SN
<b>IP rating</b>	IP68
<b>Enclosure Material</b>	ABS
<b>Dimensions</b>	- (W)92 x (L)63 x (H)6.5 mm <sup>3</sup> max. - 3.62 x 2.48 x 0.25 inches <sup>3</sup>
<b>Weight</b>	35 g.

## Ordering Options

<b>WRT0013XAAAA</b>	qLog - Humidity version		

