

## Features & Specification

### ✧ Accurate thermometers

Each tag is equipped with a digital sensor, which offers accurate detections and readings of temperature and humidity.

### ✧ Wireless temperature sensor

Temperature information can be sent instantly to the central server through Empress™ Active Reader for immediate analyzing or further actions.

### ✧ Durable, Long battery life

Battery used in the tags is replaceable and durable, providing long useful life feature. All Tempcorder™ tags make a cost effective choice for environment control applications.

### ✧ Robust with durable plastic

All tags are manufactured with special material which can withstand harsh environment.

Frequency	2.4GHz ~ 2.5GHz ISM
Anti-Collision	Read more than 100 tags simultaneously
Battery Life	Around 2 years (battery life measured at 5-second beacon interval)
Reading Range	30 to 50 meters (depends on reader)
<b>Extreme Tag HKRAT-PT02</b>	
Dimension	Body: 115mm x 58mm x 33.4mm Probe length: 0.5 (other lengths available upon request)
Detection Temperature Range	-200 °C to +500 °C Type K: Thermocouple
Temperature Resolution	0.1 °C
<b>Moist Tag HKRAT-HT02</b>	
Dimension	78.8mm x 33.6mm x 9.7mm
Detection Temperature Range	-30 °C to +80 °C
Humidity Resolution	1%
<b>Sense Tag HKRAT-TT02</b>	
Dimension	78.8mm x 33.6mm x 9.7mm
Detection Temperature Range	-20 °C to +70 °C
Temperature Resolution	0.1 °C

For detailed specification of each product, please refer to product catalogues.



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#### Company Awards:



## Tempcorder™ 2.4GHz Active RFID Tag Series

### Breakthrough in Environment Control Application

### Featuring Excellent Sensitivity and Durability

Temperature and humidity sensor for precise and reliable measurement applications have been widely adopted in almost all industries today, serving as an effective tool for better environment control as well as hazard prevention. Yet, it is sometimes difficult and dangerous to obtain accurate real-time temperature information in some hard-to-reach locations such as railway tracks and mining tunnels. With our Tempcorder™ tag series, it becomes an easy task.

#### Sense Tag

(HKRAT-TT02)



Temperature Tag with sensing range of -20°C to +70°C

#### Extreme Tag

(HKRAT-PT02)



Temperature Tag with external probe for sensing -200°C to +500°C

#### Moist Tag

(HKRAT-HT02)



Humidity Tag with sensing resolution up to 1%

The Tempcorder™ tag family consists of a series of environment sensing active RFID tags equipped with accurate digital sensors and powerful RFID functionality. Each model demonstrates unique features with careful product designs, providing users the most flexibility in applying tags on different objects as well as in any harsh environment.

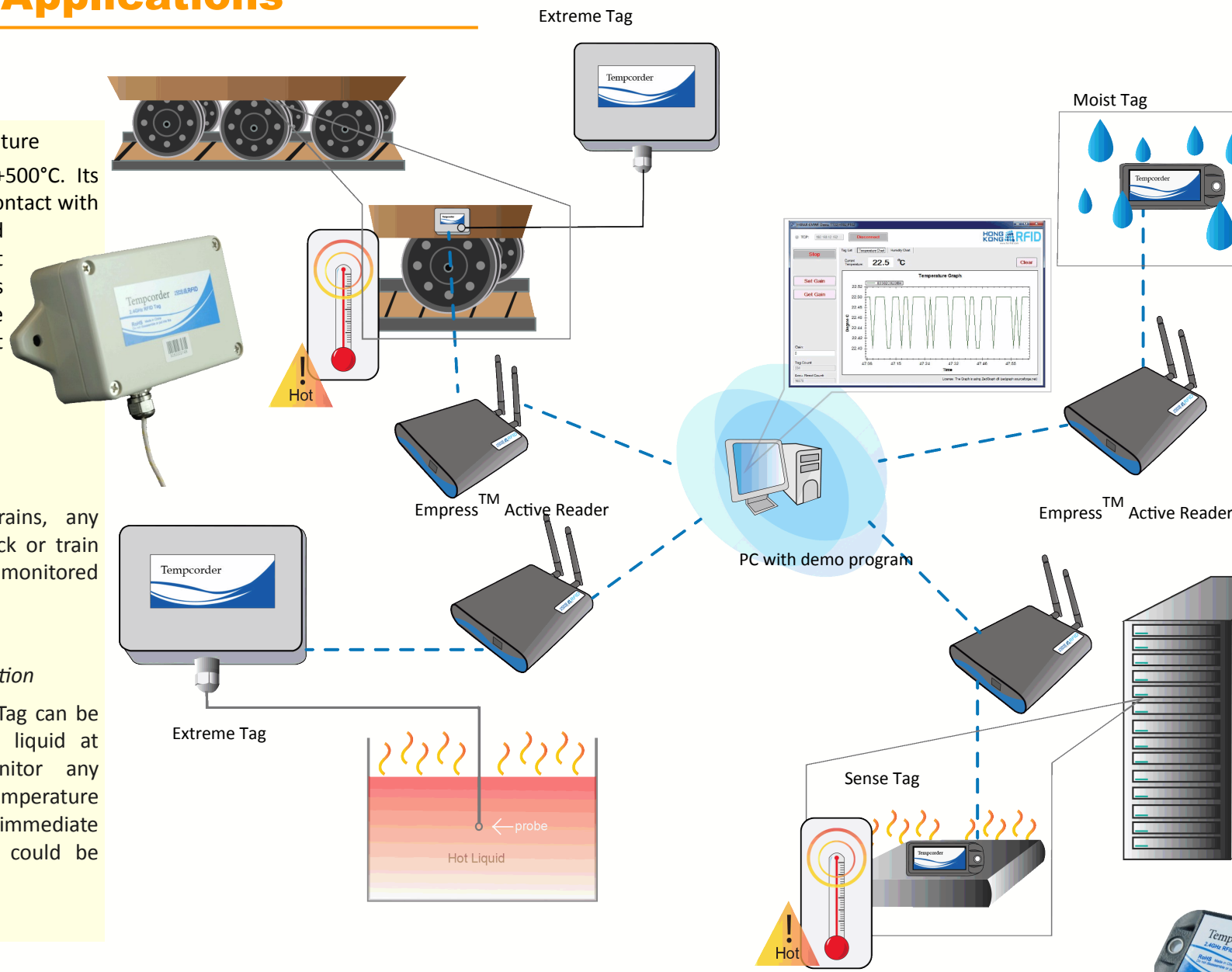
# Tempcorder™ Applications

**Extreme Tag** provides wide temperature detection range from  $-200^{\circ}\text{C}$  to  $+500^{\circ}\text{C}$ . Its external probe could be placed in contact with objects that are extremely hot/cold while the body of the tag remains at another location that is of less extreme temperature. Temperature monitoring in extreme environment is now much easier.

**Application Example:**

◆ **Underground Railways**  
To overlook the railway and trains, any over-heat along the entire rail track or train components could be checked and monitored immediately.

◆ **Industrial Sites Hazard Prevention**  
With the external probe, Extreme Tag can be placed in extremely hot or cold liquid at industrial sites to closely monitor any unexpected change. When temperature reaches a critical level which immediate actions are to be taken, alarms could be triggered.



**Moist Tag** is equipped with a humidity sensor of up to 1% relative humidity resolution, enabling instant accurate humidity and temperature data to be sent along with the tag ID to the reader and central server periodically for environment monitoring and control applications.

**Application Example :**

◆ **Valuable Paintings & Collections**  
To detect humidity changes and give warning when necessary. Dryness in the museum storage or display area can be ensured, which is of extreme importance to keep good quality of the paintings.

**Sense Tag** measures a temperature range of  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ . Stable wireless performance allows reading at a long distance up to 50 meters allowing operators the flexibility in designing monitor and control systems with the software program.

**Application Example :**

◆ **Server & Equipment Racks**  
A tag is attached to each server rack to closely monitor the temperature of location. Sensors can detect temperature changes instantly as to prevent overheating or fire at an early stage.

**1** Attach Tempcorder™ tags onto different objects. Install Empress™ Active Readers to cover the area and receive temperature and/or humidity data from the tags.

**2** Temperature and/or humidity data would be sent to the reader along with the tag ID.

**3** Any environment changes can be instantly reflected through the PC. Alarms can also be triggered immediately if any unusual circumstances is detected.

**Other Applications:**

- ◆ Temperature Monitoring of Greenhouses
- ◆ Humidity Monitoring of Wine Cellars