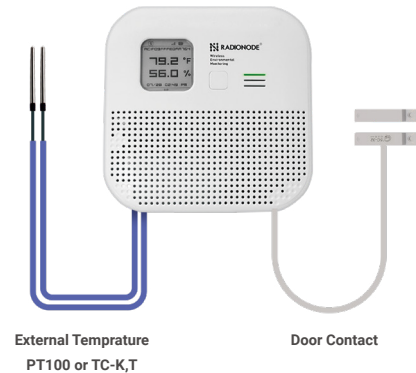




## Door and 2CH Temperature Transmitter via LoRaWAN

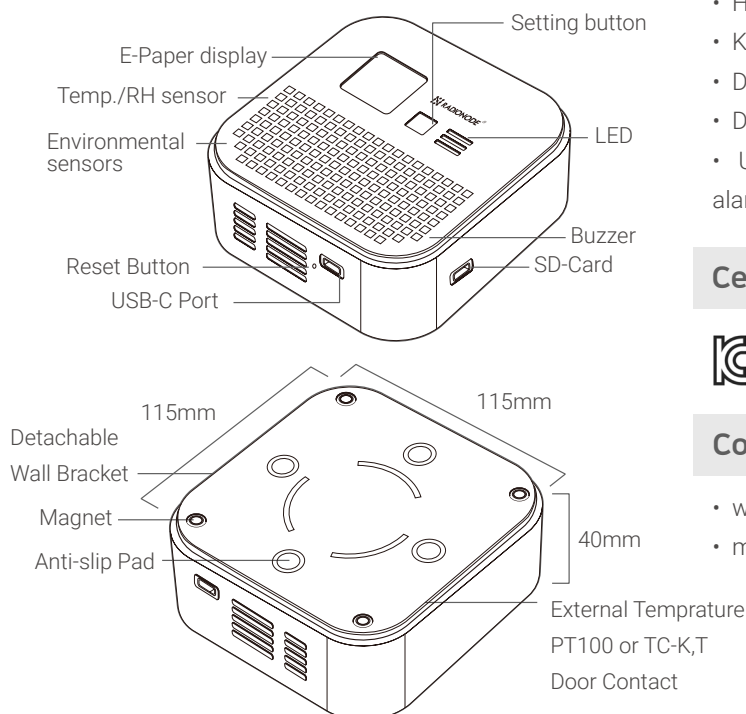
# RN320-EX2

- Long Range Wireless / LoraWAN ®
- High Accuracy 2CH Temperature Sensor
- Door Open/Close Sensor
- E-Paper Display / Loud Buzzer 97dBA
- 3 Color LED Indicator (Best, Moderate, Bad)
- Long Battery Life (17000mAh)
- MicroSD Card supported
- Easy Installation with Magnet and Wall Bracket



Radionode RN320-EX2 series is battery operated wireless environmental sensor. It is professionally designed for our valuable customer to have E-paper display, microSD card, loud buzzer, three color LED and unbelievable battery capacity. Using Lorawan ® technology, Radionode customers can easily set up wide range sensor network in a short time. the user can intuitively check the current status of sensor using the three color LED and ePaper Display. Also, the loud buzzer is the easiest and most useful feature to quickly alert nearby users of danger. The RN320 model has a retransmission function, so it does not drop measurement samples. Plus, you can keep all your data permanently by using the built-in microSD card. This RN320-EX2 model has an embedded high accurate temperature and humidity sensor. With 17000mAh battery, RN320-EX2 can be operated up to 10 years.

### Hardware



### Contact Information

- Handle with care; avoid impacts.
- Keep away from dust, moisture, and steam.
- Do not disassemble or modify.
- Do not knock reed part when mounting.
- Use magnetic contacts only for doors/windows alarms

### Certificate



### Contact Information

- [www.radionode365.com](http://www.radionode365.com)
- [master@dekist.com](mailto:master@dekist.com)



## Door and 2CH Temperature Transmitter via LoRaWAN

### RN320-EX2 Specifications

Wireless Telecommunications	<ul style="list-style-type: none"> <li>• LoRaWAN® V1.0.3 ,OTAA/ABP ClassA</li> <li>• KR920/IN865/RU864/EU868/US915/AU915/AS923</li> <li>TX : 20dBm</li> <li>Sensitivity : -137 dBm @ 300 bps</li> </ul>
External sensor	CH1: Temperature (PT100/TC-K/TC-T) CH2: Temperature (PT100/TC-K/TC-T) CH3: DOOR SENSOR (Normal Close)
Accuracy (Repeatability)	EX-Temp: $\pm 0.5^{\circ}\text{C}$ (typical)
Resolution	EX-Temp: $0.1^{\circ}\text{C}$ (typical)
Supported Temp. Range	<ul style="list-style-type: none"> <li>• PT100: <math>-200^{\circ}\text{C} \sim 300^{\circ}\text{C}</math> (<math>-328 \sim 572^{\circ}\text{F}</math>)</li> <li>• TC- K: <math>-30^{\circ}\text{C} \sim 300^{\circ}\text{C}</math> (<math>-22 \sim 572^{\circ}\text{F}</math>)</li> <li>• TC- T: <math>-100^{\circ}\text{C} \sim 50^{\circ}\text{C}</math> (<math>-148 \sim 122^{\circ}\text{F}</math>)</li> </ul>
Door Sensor Input	NC Door Sensor (Normal Close) CH3: door status 99=Open , 0=Close
Operating Condition	$-20 \sim 80^{\circ}\text{C}$ / $5 \sim 95\%$ (Non condensing )
Material	PC, PS
Buzzer	Min.80dB, at 4.0KHz, L 6.2 mm x $\Phi$ 12.8mm
Display	<ul style="list-style-type: none"> <li>• E-ink display, 200x200 Pixel 1.54 Inch</li> <li>• Operating condition : <math>2 \sim 50^{\circ}\text{C}</math> (Display off is recommended below <math>0^{\circ}\text{C}</math>)</li> </ul>
LED Status	<ul style="list-style-type: none"> <li>• GREEN : Normal</li> <li>• ORANGE : Warning</li> <li>• RED : Alert</li> </ul> *Configurable Parameter
External Memory	Option (16GB microSD, permanent logging)
Set Mode	<ul style="list-style-type: none"> <li>• Normal : Confirm mode ON, Display ON</li> <li>• ECO Mode : Confirm mode OFF, Display ON</li> <li>• Display Off Mode: Confirm mode OFF, Display OFF</li> </ul>
Battery	3.6V Li-SOCL2 X 2EA (17000mAh) <ul style="list-style-type: none"> <li>• Display Off Mode: <math>8.3</math> Years @ <math>10</math> Mins (<math>-55 \sim 85^{\circ}\text{C}</math>)</li> <li>• ECO Mode : <math>4.2</math>Years, @ <math>10</math> Mins (<math>-55 \sim 85^{\circ}\text{C}</math>)</li> <li>• Normal Mode: <math>3.5</math> Years @ <math>10</math> Mins (<math>-55 \sim 85^{\circ}\text{C}</math>)</li> </ul> Note: These results are based on measurements taken without an SD card. Using an SD card may reduce performance and battery life by approximately 50%.
USB Port	Configuration Port CALIBRATION is processed with this port.
Button	<ul style="list-style-type: none"> <li>• Menu BUTTON</li> <li>• Reset button(below)</li> </ul>
Installation Types	<ul style="list-style-type: none"> <li>• Magnet &amp; Screw for wall mount (Option)</li> <li>• Desktop bracket for Table mount (Optional accessory)</li> </ul>
Weight	360g (with Battery)

### Basic Requirements

- LoRaWAN Gateway :  
Radionode LoRaWAN gateway or Others

### Application

- Life Science Monitoring
- Building management
- Medicine and medical goods storage sites
- Semiconductor production lines

### Product Components

- RN320-EX2 (1EA)
- C-Type Battery (2EA)
- Wall Bracket (1EA)
- USB C cable

### LoRaWAN Payload Decoder

- [github.com/radionode/RN300-Series-LoraWAN](https://github.com/radionode/RN300-Series-LoraWAN)

### Accessory

Type	Magnet DOOR Sensor	
Model Number	AP-D1	
Length	1 M	
Spec	NORMAL CLOSE(N.C)	
Sensor Values	99.0 : Open 0.0 : Closed	

Type	PT100	
Model Number	PR-P1-3	PR-P1-15
Length	3M	15M
Sensor Values	Diameter: 4.8 $\phi$ Length: 60.0mm	

Type	TC-K	
Model Number	PR-K1-3	PR-K1-15
Length	3M	15M
Sensor Values	Diameter: 3.2 $\phi$ Length: 60.0mm	

Type	TC-T	
Model Number	PR-T1-3	PR-T1-15
Length	3M	15M
Sensor Values	Diameter: 3.2 $\phi$ Length: 50.0mm	

\*Do not install this product close to the floor for accurate measurement.