



Smart IAQ Transmitter via LoRaWAN

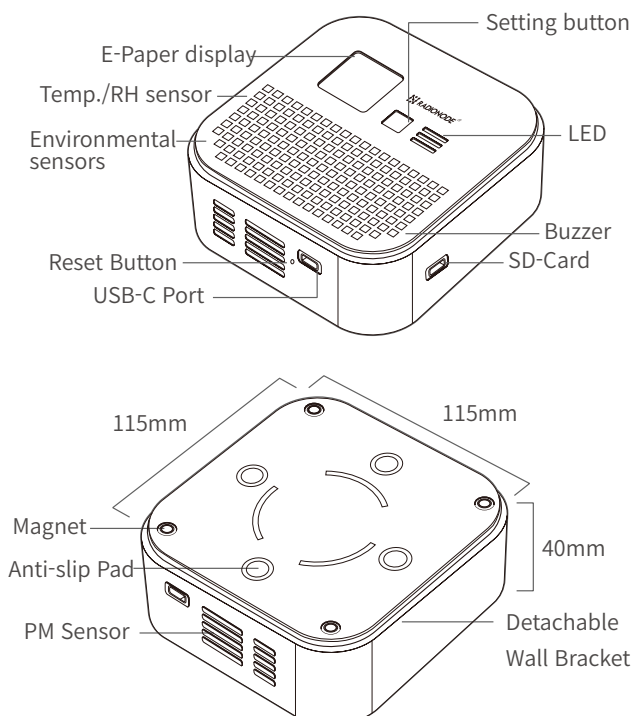
RN320-PMT

- Long Range Wireless / LoRaWAN[®]
- IAQ smart optimizer algorithm
- 3 Color LED Indicator (Best, Moderate, Bad)
- E-Paper Display
- Loud Buzzer 97dBA
- Long Battery Life (17000mAh)
- MicroSD Card supported
- Easy Installation with Magnet and Wall Bracket



Radionode RN320 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. You can easily register your product to the Radionode365 service by scanning the QR code on the surface of the product once. With Radionode365, you can utilize all aspects of remote monitoring, even in areas with poor radio conditions. Plus, you can keep all your data permanently by using the built-in microSD card. This RN 320-PMT model has an embedded high performance IAQ sensor With 17000mAh battery, RN320-PMT can be operated up to 1 year.

Hardware



⚠ CAUTION!

- Avoid exposure to organic solvents, coatings, medicines, oils, and high-concentration gases.
- Prevent excessive impact, vibration, and strong air convection.
- Warm up for 5 minutes before first use.
- Do not use in safety-critical systems or high-concentration organic compounds.

Certificate



Contact Information

- www.radionode365.com
- master@dekist.com



Smart IAQ Transmitter via LoRaWAN

RN320-PMT Specifications

Wireless Telecomm-unications	• LoraWAN ® V1.0.3 ,OTAA/ABP ClassA • CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923 TX : 20dBm Sensitivity : -137 dBm @ 300 bps			Display	• A mode : all 8 channel • B mode : PM2.5 • C mode : CO2 Sensor values are displayed in a large for easy viewing.			
Internal sensor	1 : PM2.5 (ug/m3) 5 : CO2 (ppm) 2 : PM10 (ug/m3) 6 : CO (ppm) 3 : LIGHT(lx) 7 : TEMP (°C) 4 : HCHO (ug/m3) 8 : RH (%)			External Memory	Option (16GB microSD, only supports SLC and MLC options)			
Supported Range	• Particulate Matter : 0 ~ 1,000 ug/m3 • Light : 0 ~ 150,000 lx • Formaldehyde : 0 ~ 1,960 ug/m3 • CO2 ¹⁾ : 400 ~ 15,000 ppm • CO : 0 ~ 1,000 ppm • TEMP : -20 ~ 50 °C (-4 ~ 122°F) • RH : 1 ~ 99 %			IAQ Smart LED status	the IAQ Smart Optimizer algorithm to all sensor data			
					LED status	IAQ status	IAQ levels	
					GREEN	GOOD	0 ~ 100	
					ORANGE	Moderate	101 ~ 250	
					RED	Polluted	251 ~ 500	
Resolution	• Particulate Matter : ±10% • Light : 0.0005 lx • Formaldehyde : ≤0.01ppm • CO2 : ±(50 ppm + 5% of reading) • CO : 0.5PPM • Temp: 0.1 °C • R.H.: 0.1 %RH			Set Mode	• Display Off Mode: Confirm mode OFF, Display OFF • ECO Mode : Confirm mode OFF, Display ON • Normal : Confirm mode ON, Display ON			
Cross - Sensitivity	Gas	Concentration(PPM)	HCHO(PPM)	Battery	3.6V Li-SOCL2 X 2EA (17000mAh) Measurement Interval: 30 Minutes, Temperature Range: -55~85°C ECO Mode : 1.2 Years, Normal Mode: 1.4 Years Note: These results are based on measurements taken without an SD card. Using an SD card may reduce performance and battery life by approximately 16%.			
	H2	200	11.2					
	NO2	5	0.7					
	SO2	10	3.6					
	H2S	25	53.6		USB Port	Configuration Port CALIBRATION is processed with this port.		
	C2H5OH	200	98.8					
	CO	400	97.8					
	NO	100	7.5					
	C2H4	50	41.1		Button	• Menu BUTTON • Reset button(below)		
	Gas	Concentration(PPM)	CO(PPM)					
	H2	200	100					
	C2H4	100	100					
Operating Condition	-20 ~ 80 °C / 5 ~ 95% (Non condensing)			Installation Types	• Magnet & Screw for wall mount (Option) • Desktop bracket for Table mount (Optional accessory)			
Material	PC, PS			Weight	360g (with Battery)			
Buzzer	97dBA @10cm			1) The CO2 sensor Specified CO2 Measurement Range 400-2000ppm				



Smart IAQ Transmitter via LoRaWAN

Basic Requirements

- LoRaWAN Gateway :
Radionode LoraWAN gateway or Others

Application

- Agricultural greenhouse
- Building management
- Medicine and medical goods storage sites
- Semiconductor production lines

Product Components

- RN320 IAQ Wireless Transmitter
- C-Type Battery (2EA)
- Wall Bracket (1EA)
- USB C cable

LoRaWAN Payload Decoder

- github.com/radionode/RN300-Series-LoraWAN