THERMOMETER AND HUMIDITY MONITOR

COOLINGPATROL - CP.01

WIRELESS – BATTERY POWERED SYSTEM

Model CP.01

CoolingPatrol is a wireless monitoring system designed for real-time temperature and humidity control in refrigeration units and storage areas. The system features a compact sensor module that communicates via LoRa modulation using a proprietary protocol, ensuring long-range data transmission with minimal energy consumption. CoolingPatrol offers easy installation and seamless integration with cloud-based dashboards for data visualization and historical analysis.

Features and Benefits

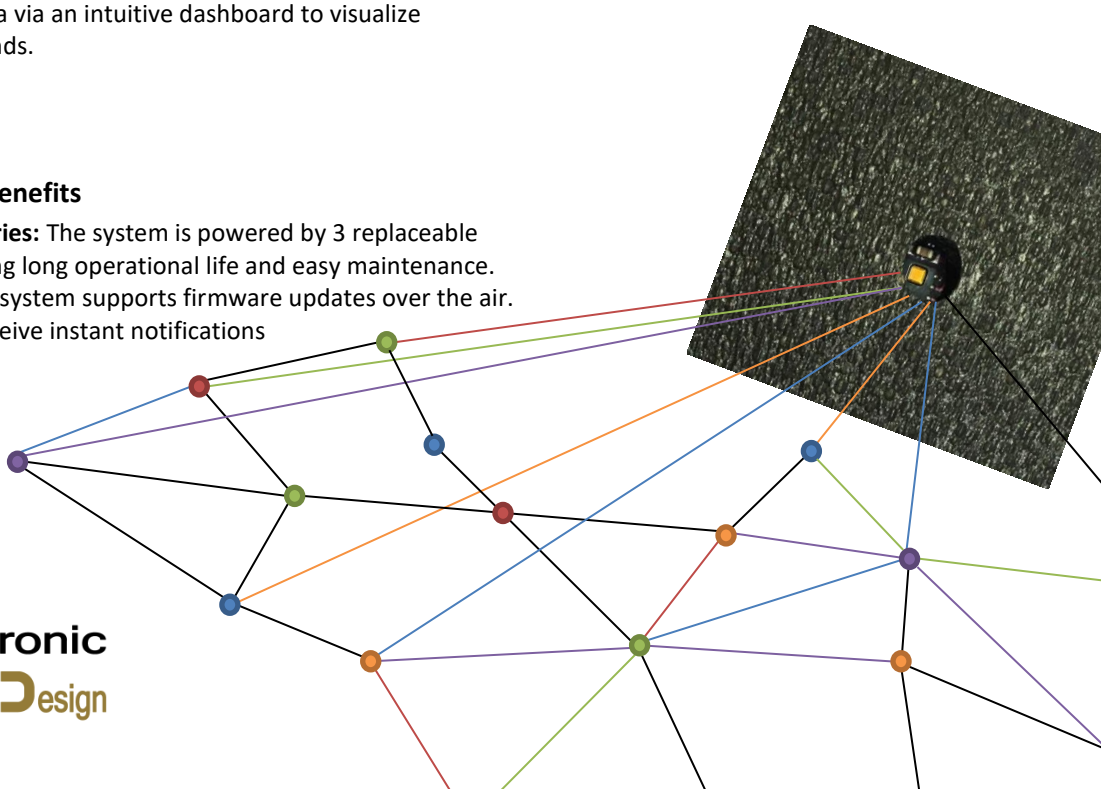
+ **Wireless Communication:** LoRa modulation with proprietary protocol for long-range, low-power transmission.
+ **Real-time Monitoring:** Continuous tracking of temperature and humidity with high precision.
+ **Smart Power Management:** The system intelligently adjusts transmission frequency based on temperature variations.
+ **Cloud Integration:** Data transmitted to the cloud through a gateway using WiFi or SIM.
+ **Remote Access:** Access data via an intuitive dashboard to visualize real-time and historical trends.

Applications

+ Refrigeration monitoring in commercial kitchens, supermarkets, and cold storage facilities.
+ Ensuring temperature compliance in food safety and storage.
+ Plant maintenance.
+ Remote temperature management for logistics and distribution centers.

Additional Features and Benefits

+ **Replaceable Lithium Batteries:** The system is powered by 3 replaceable AA lithium batteries, offering long operational life and easy maintenance.
+ **Over-the-Air Updates:** The system supports firmware updates over the air.
+ **Real-Time Alerts:** Users receive instant notifications through the dashboard.



Electronic Circuit Design

Technical specifications

	Measuringunits units	Accuracy*	Measuring range	Resolution
Temperature Sensor	Celsius	±0.2°C	-40°C a 125°C	0.1°C
Humidity Sensor	Celsius	±2% RH	0% to 100% RH	0.1 % RH

*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions.

General features

Measuring element	Integrated sensor (HDC1080*)
Housing	ABS-PC, IP67*
Power supply	3 replaceable AA lithium batteries (1.5V)
Consumption	Working mode: From 0.001 to 25mA Stand-By mode: less than 10nA
Communication	LoRa Modulation at 433 MHz, allowing the signal to pass through walls more effectively compared to higher frequencies. Transmission is triggered by temperature change or every 35 minutes.
Dimensions	Body: 83 x 58 x 34 mm
Operating conditions	From -40 to 50 °C
Weight	350 g with batteries
Time acquisition	1 minute

* Depending on the version.

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