



Radionode365 is always with you

Environmental Safety



Vaccine Management



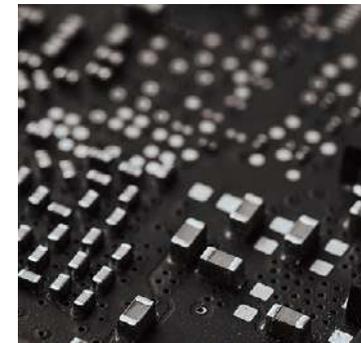
Facility Management



Cold Chain



Electronics Industry



Smart Farm



Radionode365

Measurements Sample

7billion
OVER

Risk Detections

2.2 million
OVER

Client Companys

3,700
OVER

Sensors

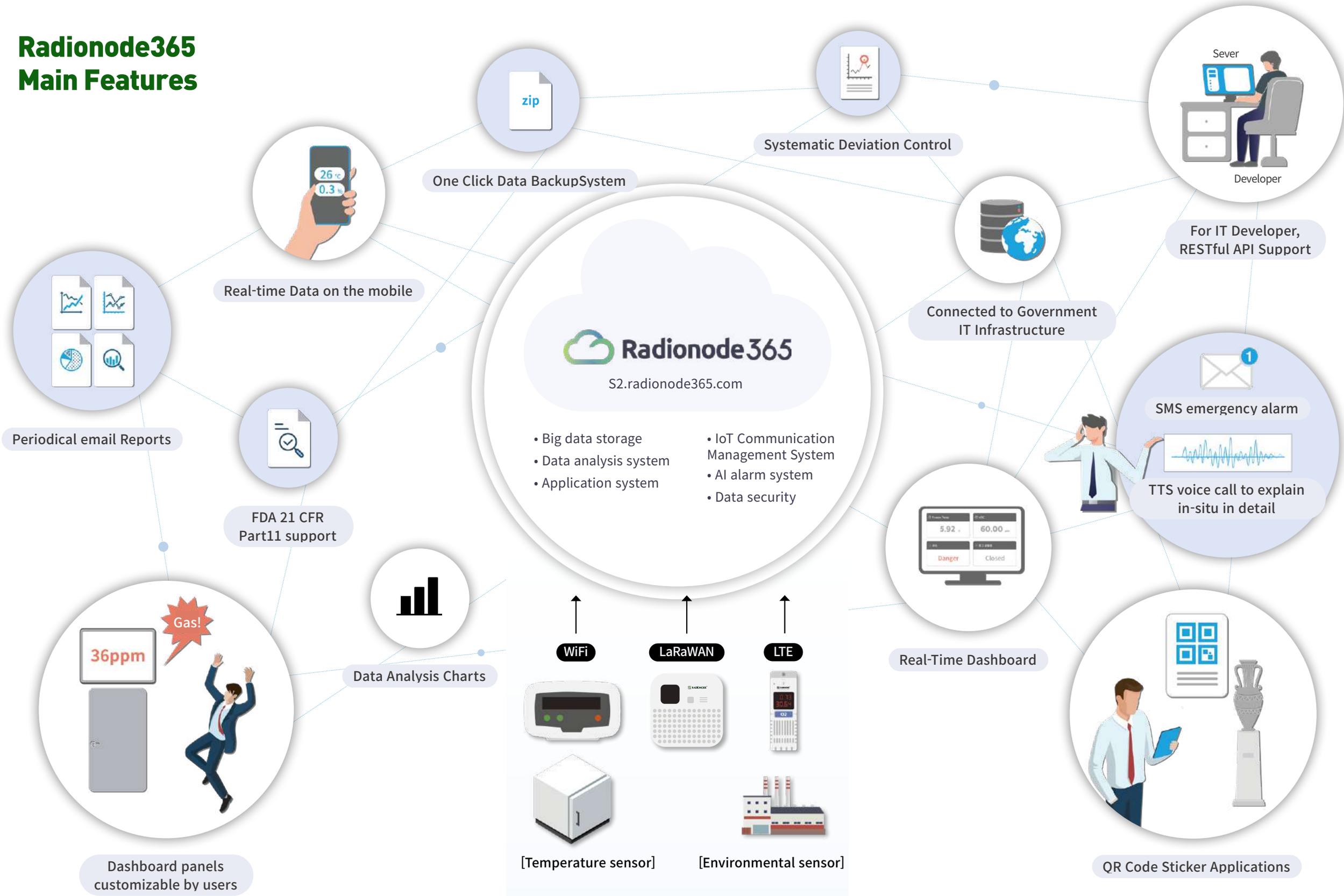
38,600
OVER

Administrators Receiving Reports

10,700
OVER

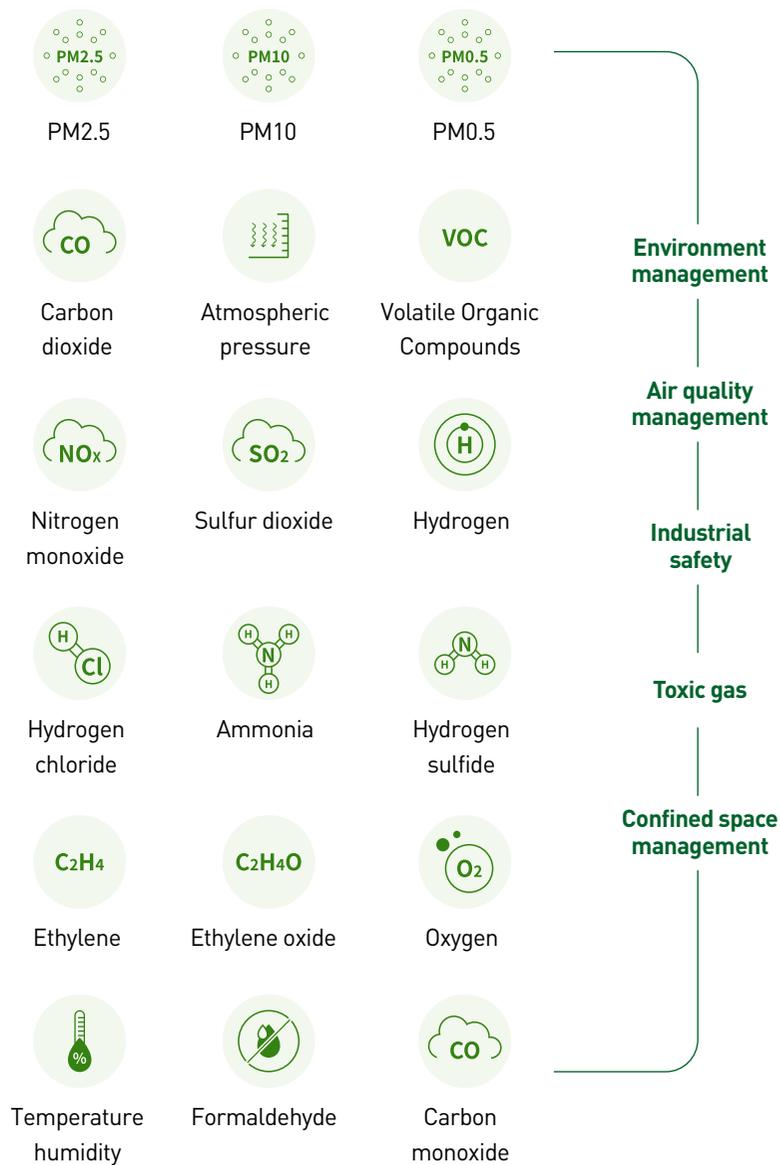
Until December 31,2024, Radionode365 has measured and recorded customer's assets more than 5.8 billion times. Also,we alerted them by detecting 900 thousand risks per year. We are currently reporting risks for over 16,000 facility managers in real-time while remotely monitoring temperature, humidity, and gas more than 3,500 times with 32,200 sensors. Now It's time to monitor your assets with Radionode365.

Radionode365 Main Features



Monitoring parameters of Radionode365 Sensors

Environment Monitoring



Temperature Management

Cryogenic temp [-196 °C]	Low temp [-80 °C]	Freezing temp [-20 °C]	Refrigeration temp [5 °C]
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Signal Integrated Management

- 4-20mA
- 0-1V
- Pulse

Water velocity	Flow meter	Pressure	Differential pressure
Illuminance	OPEN Door open	Wattage	Noise
PH PH indicator	Signal contact	Soil moisture	pulse signal

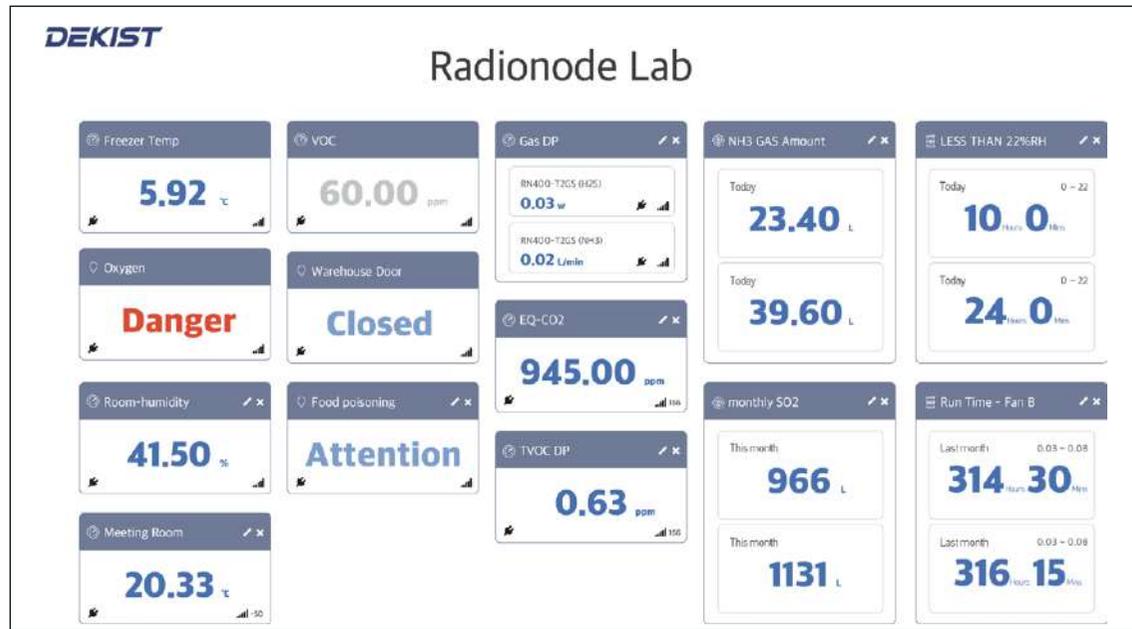
Virtual channel based on Algorithm

- ① Food poisoning index
- ② Spoilage index
- ③ Dew point
- ④ Accumalated temperature
- ⑤ MKT temp

App on Radionode365

- ① Smart construction solution
- ② Smart cold-chain solution
- ③ Smart museum solution

Widget View



Custom LOGO

You can upload your own logo image and setup full screen title



Number widget

It shows the current value of sensor in real time.

- Blue: Normal
- Red: Goes out of the set range
- Gray: Disconnect from the network



Quick reports(SMS)

User can receive the value of a specific parameter, and can be scheduled by the user. The schedule panel is given to user.

Example: Everyday at 9:00 AM and 2:00 PM, water level value will be sent by SMS.



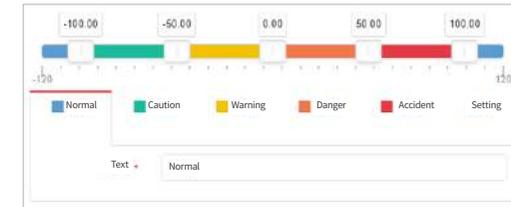
Widget modification

You can customize the name, type,(number, text, usage time, operation time) of widget and channel to display data.



Text widget

It shows a text message depending on the range of sensor value. The range is reconfigurable by the user.



Running total widget

It shows the accumulated sensor value such as flow meter or watt-hour. Monthly and Daily calculation are supported.

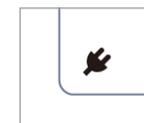
Example: Amount of water consumption today



Total time widget

It shows the total calculated time spent in specific conditions. Monthly and Daily calculation are supported.

Example: Total abnormal vaccine temperature last month.



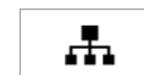
Sensor Management

The system provides information on the power supply method (adapter/battery), battery status and remaining charge, wireless signal strength, and Ethernet status, allowing you to monitor and manage the sensor's condition in real time.



Power Type

- Adapter
- Battery / battery level
- Battery / battery low



Transmitter Connection Status

- WiFi / Connection signal strength
- Ethernet

Image View

View List 

- Lab 1
- Lab 2
- Sewage treatment

◆ **Several View List**

◆ **Number Widget**
(Name, Data)

◆ **Chart Widget**
(Name, Data, Chart)

◆ **Point Widget**
(Name, Color Status)



◆ **Full Screen Setting Icon**

◆ **Auto-Sliding Full-Screen View**

When the full-screen button is pressed, the image view is displayed across the entire monitor area and slides according to the set update interval. If an alarm occurs, only the corresponding image view is shown, and the slide function resumes after the alarm ends.

◆ **Alert Notification using Color blinking and sound**

◆ **Event Popup**

When an alarm occurs, detailed information about the problematic sensor is displayed in a popup window, enabling quick identification and response to the issue.

You can setup your own view whatever you want.

Digital Twin, Virtual Space is just same as your real facility

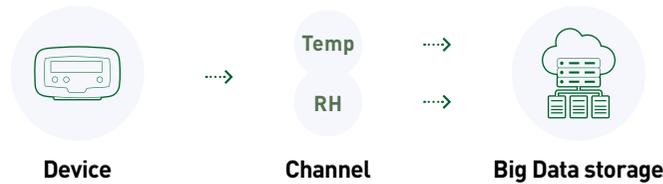
Widget Name	Channel Name	Normal range	Person receiving Alarm
O2	Oxygen	18~23%	Chris
Temp	Temp	18~21°C	Ben
EO	Ethylene Oxide	0~5ppm	Jay
CO	Carbon Monoxide	0~10ppm	Andy

◆ **Notification Setting Information option**

Device management

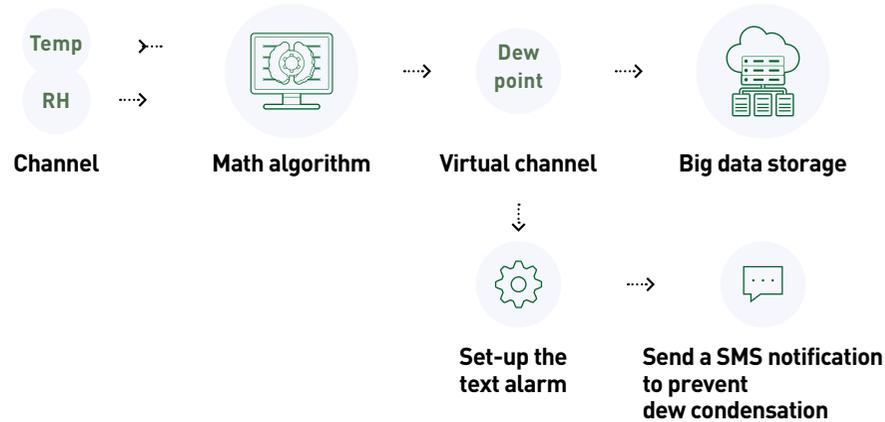
Channel & Device

What is device and what is channel? Device is the hardware product(Radionode sensor). Sensor has one or more channels in which it handle the actual monitoring data. Radionode365 manage various monitoring data as channels. For example, if you add one 'Radionode RN400-H2PS' wireless thermo-hygrometer, you will have one device and two channels to monitor temperature and humidity.



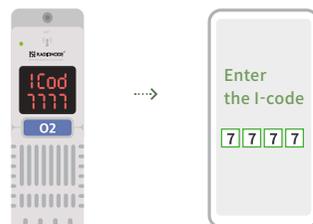
Virtual channel

Virtual channel is real-time calculating channel that consist of real channel such as temperature. Calculating value is recorded in big data storage in the same way as the real channel. The formula of calculation is user-defined LUA script language. SMS/ Phone call alarm rules canbe set upon virtual channel just like real channel.



Easy device registration

Radionode365 platform automatically recognizes the sensor when you enter 4 digit I-Code number on the add device screen.



Device Information

All the devices connected to your Radionode365 account can be listed on the device information page. It shows that device unique ID, name, IP address, sending rate, sampling rate, picture of installation location and number of channels, update time.

ID(MAQ)	Device Name	Location	Device Model	Public IP	Private IP	Channels	Sending Interval	Sampling Interval	System Notification	Last Update	Modify/Notification
01G2N000007	Meetingroom		RN400H2PS	210.188.64.66	192.168.1.100	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification
01B02100005	Gas DP1		RN400H2PS	210.188.64.66	192.168.1.100	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification
01B10000002	VOC DP		RN112	210.188.64.70	192.168.0.18	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification
01B03000006	Public DP		RN400H2PS	210.188.64.66	192.168.1.100	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification
01B03000008	Temperature		RN400H2PS	210.188.64.70	192.168.0.6	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification
01B10000009	Gas DP2		RN112	210.188.64.70	192.168.0.18	02:DEA	100 sec	100 sec	02:017 20:20 9:07	10:07	Modify/Notification

Channel Information

All the channel of your Radionode365 account can be listed on this page. It shows Name of channel, update time and sensor current value. On this page, virtual channel can be created by user.

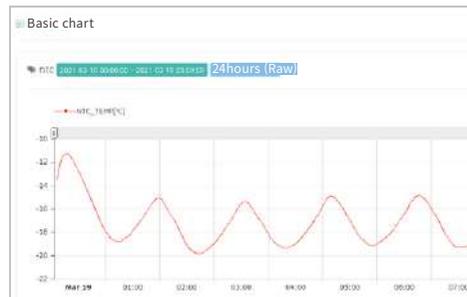
Channel Name	Channel property	Device Name	Device Model	Last Value	Unit	RF Signal	Battery %	Battery Type	Battery Voltage	Sending Interval	Sen
RN400-PG-CH3	Fine Dust	RN400-PG	RN112VOC	10	ugm3	Excellent	100%	Li-C Power	3.8V X1	3.27 V	100 sec
RN400-PG-CH1	Ammonia	RN400-PG	RN112VOC	0	ugm3	Excellent	100%	Li-C Power	3.8V X1	3.27 V	100 sec
RN400-PG-CH2	Hydrogen Sulfide	RN400-PG	RN112VOC	0	ugm3	Excellent	100%	Li-C Power	3.8V X1	3.27 V	100 sec
TEMP	Temperature	IAQ SENSOR	RN400T2P6-R023	22.21	°C	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec
PM2.5	Fine Dust	IAQ SENSOR	RN400T2P6-R023	11.96	ugm3	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec
PM10	Fine Dust	IAQ SENSOR	RN400T2P6-R022	7.12	ugm3	Good	100%	Li-C Power	2.8V X1	3.27 V	100 sec
TVOC	TVOC	IAQ SENSOR	RN400T2P6-R023	646.23	ugm3	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec
CO2	Carbon Dioxide	IAQ SENSOR	RN400T2P6-R023	1111.00	PPM	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec
RH	Humidity	IAQ SENSOR	RN400T2P6-R023	17.07	%	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec
TVOC	TVOC	IAQ SENSOR	RN400T2P6-R023	559.61	ugm3	Good	100%	Li-C Power	3.8V X1	3.27 V	100 sec

Data view

Key Features

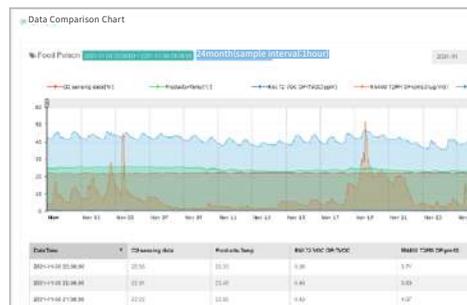
- ① Users can view sensor data for their desired period in chart and data table formats.
- ② Data can be retrieved in 24-hour, 1-week, or 1-month intervals at a time.
- ③ Up to 8 channels can be compared and analyzed simultaneously.
- ④ Users can zoom in and out on charts for detailed analysis.
- ⑤ Data can be downloaded as a CSV file.

01 Basic chart



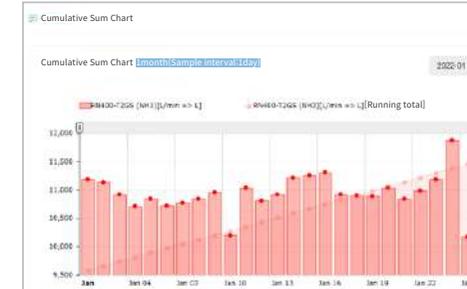
Basic chart of raw sensor data by time. Time Range are 24 Hours, One Week, One month

02 Data comparison chart



More than two sensor data can be compared. The average value will be used.

03 Cumulative sum chart



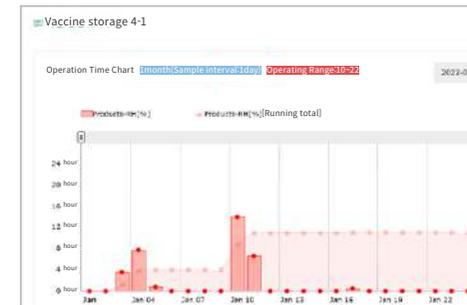
Daily or hourly cumulative summation unit is represented bar chart. Running total line chart will be shown for a month or a day.

04 Operation time chart



We can visualize the operating time of a particular device. The bar graph represents the operating time per unit hour. For example, the daily operating time of a pump is indicated by a bar.

05 Deviation time chart



Cumulative time is the total time during deviation. For example, you can see the total time your vaccine was exposed to dangerous temperature.

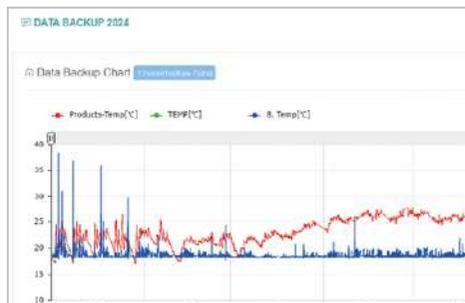
Data view

06 QR CODE APP



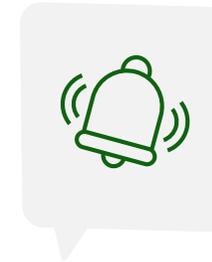
You can just print and paste QR CODE at any place you want. If you scan the QR CODE, You can directly check the current data. Attach the QR code to the entrance to a confined space such as a sewage treatment plant or boiler room. Also, stick the QR code on the exterior wall of the museum storage room or vaccine refrigerator. By scanning the QR code, you can check the current temperature in real-time and decide whether you can enter the confined space or not.

07 Data backup



A service that allows users to select a specific period and view the corresponding data all at once. Periods over one year can be selected, and data trends can be immediately analyzed using line charts.

Alarm



Radionode365 service sends real-time notification to you and your employees. The Emergency notification service provides the following functions.:

- TTS voice generation engine that supports multilingual voice.
- Warning notifications via voice phone call
- You can check whether an emergency call has been answered or not.
- Warning notifications via SMS or Voice phone call when set ranges exceeded
- History of detected risks.
- Alarms sent with various exception conditions as well as threshold settings.

Q&A

When can I receive a notification?

- ① When set ranges exceeded
- ② Out of battery
- ③ When sensor information is not collected
- ④ When there's a power outage in workplace

How do I get the notifications ?

- ① Warning notification via voice phone call
- ② Sending a simple text message
- ③ Sending a warning email
- ④ Recording a history

Exception Rules for notifications

Q. Don't notify me on Monday

A. Prevent notifications on holidays depending on the shift hours

Q. Don't notify me during 9am to 6pm

A. Prevent notifications when normal working hours

Q. Don't send me duplicated message for two hours

A. Prevent duplicate notifications during restoration work

Q. Analyze the situation for 30min before sending the first alert

A. Prevent notification when taking out vaccines from the refrigerator

Nest Panel

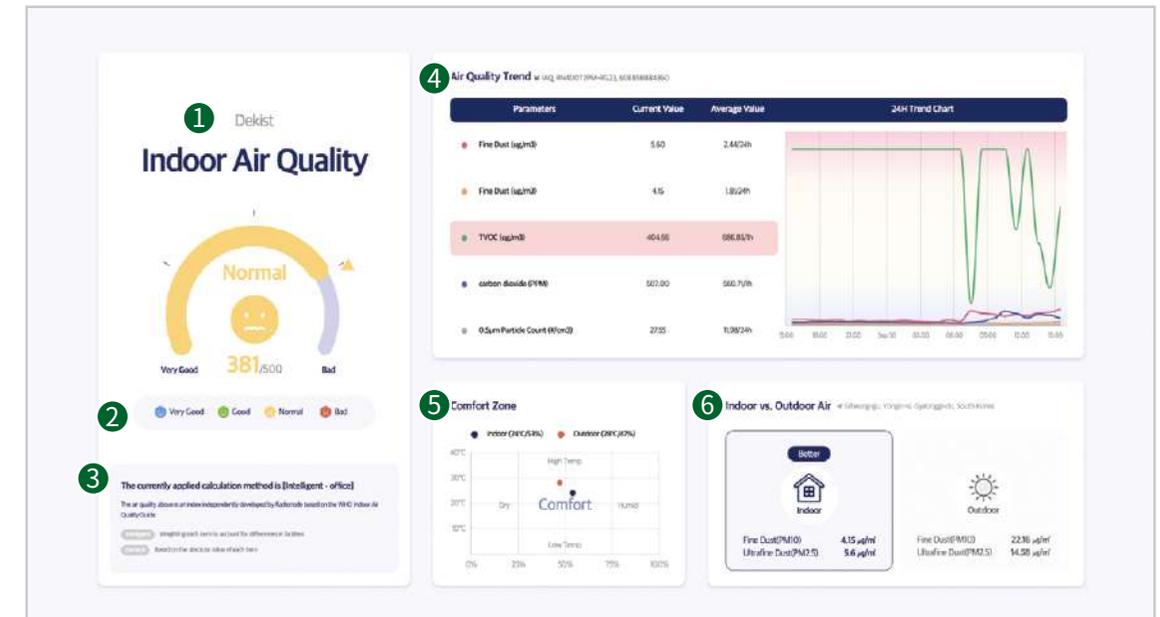
The data panel allows you to immediately see data from sensors that need focused management among multiple sensors. It can be displayed on both small tablets and large TV monitors

The Nest Panel is a display that allows users to intuitively monitor data on a PC or tablet and can be shared via URL without requiring a login. Users can configure up to 32 channels and set thresholds to receive alerts. The panel is only available for paid plans and is not supported in the free plan. Once created, the panel's URL can be copied and shared, with alarms indicated by warning sounds and color changes. Additionally, users can download and install an Android-specific APK file to use the panel on smart devices.



IAQ Panel

Easily monitor AI-analyzed air quality data



Main Features

- 1 Panel Name**
Displays the name of the IAQ Panel as entered during panel creation.
- 2 4-Step Status Indicator**
The current air quality is displayed in an easy-to-understand format using color-coded graphs and emojis, based on air quality assessment standards.
- 3 Air Quality Assessment by Site Type**
Smart air quality calculation is a unique method developed by Radionode based on the WHO Indoor Air Quality Guidelines. Intelligent Mode: Considers differences between facilities and applies weighted values to each metric. Standard Mode: Displays the absolute values for each metric
- 4 Air Quality Trend**
View the trends of air quality components through graphs. The least favorable metric is highlighted with a red block for easy identification.
- 5 Comfort Zone**
The comfort index compares the external temperature and humidity data with the on-site temperature and humidity data to provide a clear display.
- 6 Indoor vs. Outdoor Air Quality Comparison**
Compares the external fine dust data for the device's location with the indoor fine dust data and highlights which environment is better.

Report

Report template supports various report forms(daily, weekly, monthly, MKT, Deviation Control), Report forgery prevention function, and reservation for email sending time.

Monthly report

24 Hour

1 Week

1 Month

MKT

Report's name: Monthly Report

Time period for report: 2022-06-01 00:00:00 - 2022-06-30 23:59:59

Report Subject: Parkinglot

Report Author: DEMOT119

Channel 1 information (Channel name, Unit): Atmosphere Pressure [unit: mBar]

Channel 2 information: CO2 eq. [unit: ppm]

Supervisor: LUNA

Upper limit

Lower limit

Average of daily monitored data (Highest Value, Minimum Value)

- Daily, weekly, and monthly reports are provided.
- It provides a linear, territorial, and vertical bar chart.
- When setting up an email for report, we will verify by sending a report at reservation time.
- You can add a 'Document ID' to make report management more convenient.

MKT report

24 Hour

1 Week

1 Month

MKT

Report's name: Vaccine freezer report (Oct 2022)

Company logo: DEKIST

Supervisor: [Name]

QR code to prevent forgery

Installation place: [Location]

Deviation detection history

Guidance of control

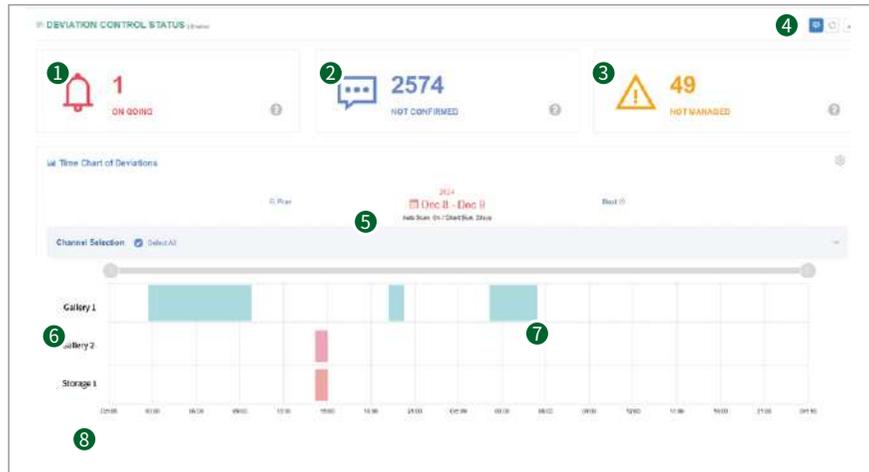
Statistics

Approval

* What is MKT(Mean Kinetic Temperature)?
 Mean Kinetic Temperature (MKT) is a simplified way of expressing the overall effect of temperature fluctuations during storage or transit of perishable goods. The MKT is widely used in the pharmaceutical industry. MKT is defined as "a single calculated temperature at which the total amount of decomposition over a specific period is equal to the sum of individual decompositions to occur at various temperatures."
 [ECA Academy]

Deviation Control

Deviation management monitors abnormal data that exceeds the set range in the asset system and provides decision-making information for immediate response. By utilizing smart deviation settings, unnecessary detections are minimized, and alarms are optimized according to asset characteristics, enhancing work efficiency. Users can record the type, cause, and actions taken for deviations, and access detailed reports on all past deviation incidents. A timeline chart provides an intuitive overview of deviation occurrences.

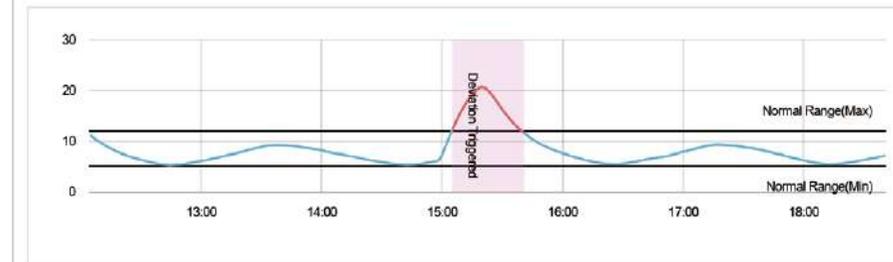


main feature

- 1 Ongoing Deviation Incidents**
 - The number of channels currently exceeding the threshold and triggering notifications among those with alarms enabled.
 - Clicking provides details such as the channel's photo, current value, and elapsed time.
- 2 Unacknowledged Deviation Incidents**
 - The number of recent deviations that have returned to normal but are yet to be reviewed and reasoned by the administrator.
- 3 Channels Excluded from Deviation Management**
 - Channels currently unable to detect deviations.
 - If alarms are set for these channels, the deviation management feature is automatically enabled.
- 4 Settings**
 - Activate Smart Deviation Detection
 - Enable Cause Analysis
- 5 Search Time**
 - Automatic Search: Automatically retrieves data only for the period when deviations occurred.
 - User-Specified Period: Allows users to specify a desired period to check for deviations.
- 6 Name of the Channel with Deviation**
- 7 Deviation Incident Report**
 - Generates a one-page A4 report detailing the deviation incident at the specified time.
 - Includes channel name, case number, case start/end time, case status, management range, alarm notification methods/recipients, and more.
- 8 Timeline**

Deviation is a situation while monitoring parameters like temperature or gas concentration exceeds the guideline or threshold. For example when vaccines are stored in abnormal temperature, a deviation has occurred. Radionode365 cloud alerts the user during deviation and also prevent them in the future proactively.

Deviation Case Report of 0712-5C80



Deviation Case ID	0712-5C80
Alarm Title	SQA Freezer
Alarm Enable Time	2024-07-05 10:34:39
Device-Channel Name	Freezer - refrigerator 2
Smart Detection	ON
Occurrence time	2024-07-12 15:34:39
Close time	2024-07-12 16:10:39
Duration	36 min
Case Status	Close
Normal Range(Min - Max)	5-12
Average Value in this case	16.8
Max. Value in this case	20.85
Min. Value in this case	12.09
Notification Callee	Henry
Notification Type and Count	5 St

Information to be verified

- ✓ When did the incident take place?
- ✓ How much of deviation has occurred? (Average,maximum,minimum)
- ✓ How long did the deviation last?
- ✓ Who was notified of the alarm?
- ✓ What caused the occurrence and How did you respond ?

* Deviation management service is provided to members with Eco, Silver, and Gold plan.

Type of Occurrence:
 Manager Comments:
 Date: 2022-04-08 10:54:12 (Asia/Seoul), Author: Jessica(Jessica)
 A lot of medicines are stored > Separate storage

FORM ID : GTR-005 PRINTING TIME : 2023-03-15 16:55:30 by Radionode365 report tool

Choose the service plan that's best for you. You can pay by credit card and use it right away

Radionode365 plan (Annual Fee)

Just sign-in to Radionode365 for remote integrated management. No matter where you are, the place where you are is the work place.

	FREE	WHITE	Custom plans
Data storage	15 days	20 channels (for 3 years)	Providing flexible cost adjustments and efficient operations by selecting only the necessary features.
Channel Management	⊙	⊙	
Real Time Dashboard	⊙	⊙	
Data comparison chart	Only 24 Hour Data	All Data	
Data Download	⊙	⊙	
Daily Report	-	⊙	
Weekly Report	-	⊙	
Monthly Report	-	⊙	
MKT Report	-	⊙	
Deviation Management	-	-	
SMS Notification	Available for charging	1000 per year	
Voice call Notifications	Available for charging	500 per year	
E-mail Notifications	Available for charging	500 per year	
Service use history	1 day available	⊙	
Authority division	-	Representative /User(1/1)	
Simultaneous Login	-	⊙	
Power outage Alerts	-	⊙	
Virtual Channel	-	⊙	
OPEN API	-	-	

- Credit card and Voucher payment is available.
- If you select Automatic Extension at the first payment, the payment method will be automatically renewed every year during the valid period.

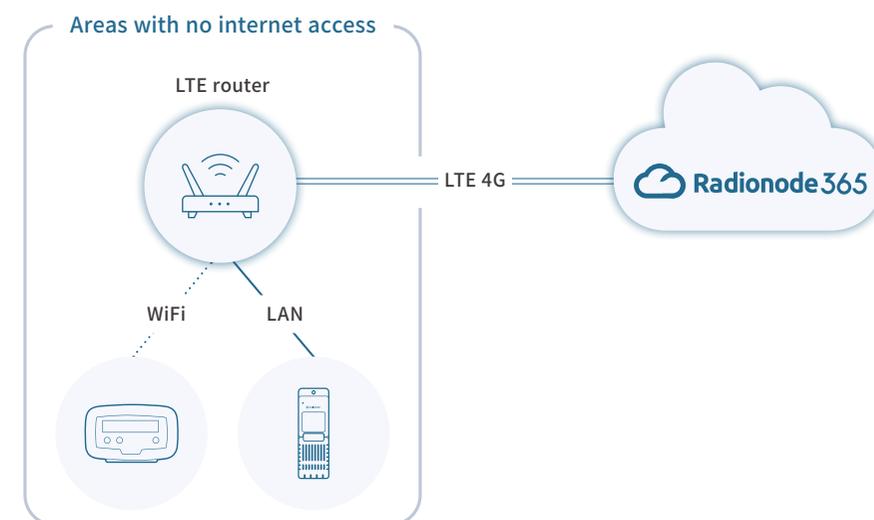
Radionode365 Custom plan

Radionode365 offers a custom pricing plan, allowing users to select only the features they need through expert consultation. Users can optimize costs by choosing from real-time monitoring, alarm systems, data storage and reporting, API integration, and more. Pricing is flexibly adjusted based on sensor types and data processing requirements, with tailored options available for businesses. This ensures efficient operations and cost savings by utilizing only the necessary services.

Radionode365 LTE Plan

If you're in an area without internet access or have security concerns about using the internet, consider adding an LTE router plan for the cost of a cup of coffee each month.

Leverage Radionode LTE plan



Service	Data/monthly
K1	15DC
K2	40DC
K3	80DC
K4	120DC
K5	200DC

- You can choose the plan that suits your situation from a variety of options.
- This service allows you to use data by pre-loading it and can be paid for along with the basic fee.
- Supports LTE router equipment for Radionode's communication and the communication fee for the month of activation.
- You can activate and use it anytime, anywhere, without being limited by time or place.