



www.radionode365.com



RADIONODE

Sensor Data Monitoring Solution

Dekist Co., Ltd

A2009 Heungdeok IT Vally, 13, Heungdeok 1- ro
Giheung-gu, Yongin-si, Gyeonggi-do, Korea

T : +82 (0)31-8004-4359

F : +82 (0)31-8039-4400

E : master@dekist.com

www.radionode365.com

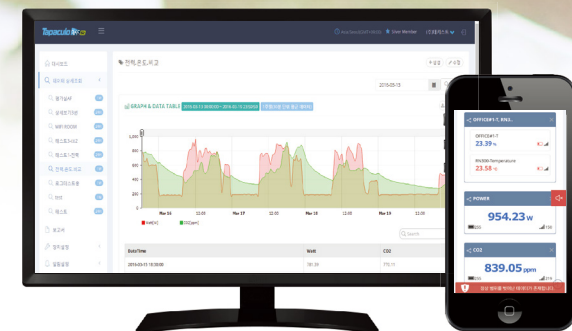
Rev. 20

RADIONODE®



*Easy and Innovative
Sensor Data
Monitoring Solution.*

It is Radionode.



RADIONODE
Connected Datalogger

Tapaculo365
Professional Sensor Data Monitoring Web Service



Contents

05 P

RN400
Wireless Sensor
Datalogger

11 P

UA1x, UA2x, UA5x
USB Type Sensor

17 P

RN17x
Network
Transmitter

21 P

Tapaculo365
Monitoring
Service

Applications

- Semiconductor Fab [QA(Quality Assurance) Temp/RH]
- Food Manufacturer [HACCP report / QA Temperature]
- Pharmaceutical Industry [QA differential Pressure, Temp/RH]
- Machinery Manufacturer [QA Temp / RH]
- Bio / Medical Center [Incubator / Deep Freezer Temp.]
- Data Center [Temp / RH report]
- Warehouse [Centralized Monitoring]
- Live Stock [Temperature Monitoring]
- Dining Facilities
[Refrigerator Monitoring / Washing Machine Temp.]
- Certification Center [Temp / RH monitoring]
- Museum [Temp / RH monitoring]



Our customers in Korea
are using Radionode
during 24 / 7

How does it send temperature a report by e-mail?

NTC	T/C	RTD	Door	4-20mA	PM0.5	NH3	H2S
Temp	Temp	Temp	Open	External	Particle	Gas	Gas



RN400

WiFi Connected Data Logger has took advantage of A.I. from Cloud.

00

Created by IT experts

- High WiFi Security (up to WPA2 Ent.)
- Tapaculo365 Web Service provided by Radionode.
- Even support user made web server.(HTTP)



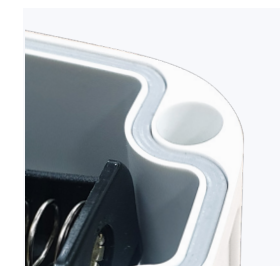
01

Enhanced durability and easy installation

- OLED Display that does not freeze at low temperatures
- Waterproof & dustproof design ensures high rigidity
- Supports both magnetic and screw mounting
- Membrane filter protects the humidity sensor from water



Clear OLED Display
at low temperature



Waterproof & Dustproof
design



Sensor data cloud
monitoring service (SaaS)

With RN400,
Everything is possible.

- ✓ Data Recording
- ✓ Remote Monitoring
- ✓ SMS Alert

02

High Reliability

- Real-time data backup to micro SD card
- FeRam is 30 times faster and 1 billion times higher write endurance than Flash memory
- Data measured at internet loss time is stored on the device and automatically sent to the server upon restoration

03

Groundbreaking Power Management System

- 3.6V (1EA) or 1.5V (2EA) optional available
- Low battery warning notification
- 5~30V DC power supply
- Built-in UPS (automatically switched to battery in case of power failure)

04

Various sensor support

- Temp Sensor (NTC, T/C, PT100)
- Temp/RH Sensor (Internal, External)
- Gas Sensor (NH3, H2S)
- Particle Sensor (PM0.5, PM2.5, PM10)
- Door Magnet Sensor

05

Output Signals and Calibration

- RS-485 (T2GS,T2PM,T2TS,T2CS)
- Dry Contact On/Off Output (T2EX,H2EX)
- Micro USB terminals for calibration (Dedicated software provided)



Temp Sensor sockets (NTC,T/C,PT100)



PM0.5 fine dust inlet with laser scattering method
MODEL: RN400 T2PM



Gas sensor with sintered filter
MODEL: RN400 T2GS + RG10



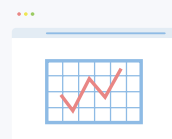
High precision Temp/RH Sensor
MODEL: RN400 T2PS + RG20

Size
H100 * W165 * D50

Certified
FC CE K

Do you need to setup
the centralized data monitoring system?

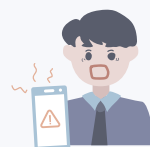
RN400 Solution is a cost effective and simple way.



Anytime, Anywhere
Just sign in



Share your sensor data
with QR code link

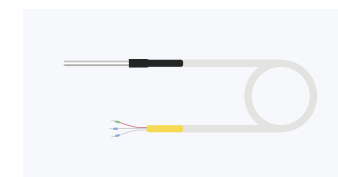


Urgent Alert Message by
SMS, Voice Call, Email.

RN400 Channel Information by Model

H2PS	- CH1 Temp, CH2 RH(MEMS Temp/RH) - CH3 Temp(NTC)	T2TS	- CH1~CH4 Temp (Thermocouple K/J/T/N/S/E/B/R Type) - RS-485 Output
H2EX	- CH1 Temp, CH2 RH(MEMS Temp/RH) - CH3~CH4 Temp(PT100 or Thermocouple K) - CH5 Door, CH6 Relay	T2CS	- CH1~CH4 4-20mA Input - RS-485 Output
T2PS	- CH1 Temp(NTC) - CH2 Temp - CH3 RH	T2GS	- CH1 Temp, CH2 RH (MEMS Temp/RH) - CH3~CH4 Electrochemical gas sensor(NH3, H2S) - RS-485 Output
T2EX	-CH1~ CH2 Temp(PT100 or Thermocouple) -CH3 Door, CH4 Relay	T2PM	- CH1 PM2.5, CH2 PM10.0, CH3 PM0.5 CH4 PM1.0, CH5 PM4.0, CH6 Size um - Weight unit, Count unit - RS-485 Output

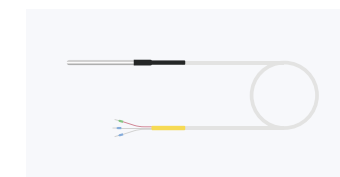
RN400 Accessory



NTC 20cm, 150cm
Measuring Range : -20~50°C



Thermocouple 3m, 15m
K-type Measuring Range: -20~300°C
T-type Measuring Range: -100~200°C



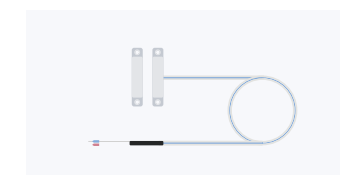
PT100 3m, 15m
Measuring Range: -200~200°C



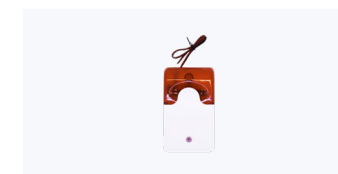
Temp/Humidity Sensor RG20
Temp Measuring Range: -40~80°C
RH Measuring Range: 5~95% RH



Gas Sensor RG10
NH3 Measuring Range: 0-100 ppm
H2S Measuring Range: 0-50 ppm



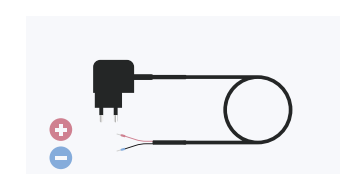
Door Sensor 1m
Sensor value at open : 99.0
Sensor value at closed : 0.0



Warning siren 30cm
12V, LED, 85dba



Battery
C type battery 1.5V(2EA)
C type lithium battery 3.6V(1EA)



DC adapter 3m
12V 500mA

Radionode USB Plugged Sensor

UA provide various sensors for environmental measurements
It is real time transmitter and just plug in your PC or Android.



UA1x, UA2x, UA5x

Sensor outputs data to USB ready for IoT
Make your computer the most advanced recorder.



01

Various sensor support

Temperature, Humidity sensor

Temperature & Humidity, Thermocouple, PT100

Gas Sensor

O₂, NH₃, H₂S, tVOC, CO, CO₂

Signal Converter

Connect 4-20mA, 0-1V output sensor in use to output sensor value as USB digital



Recording App on Android
Tapaculo Mobile(2 Channel)



Recording Software on MacOS/Linux/Windows
Tapaculo Lite(32 Channel)

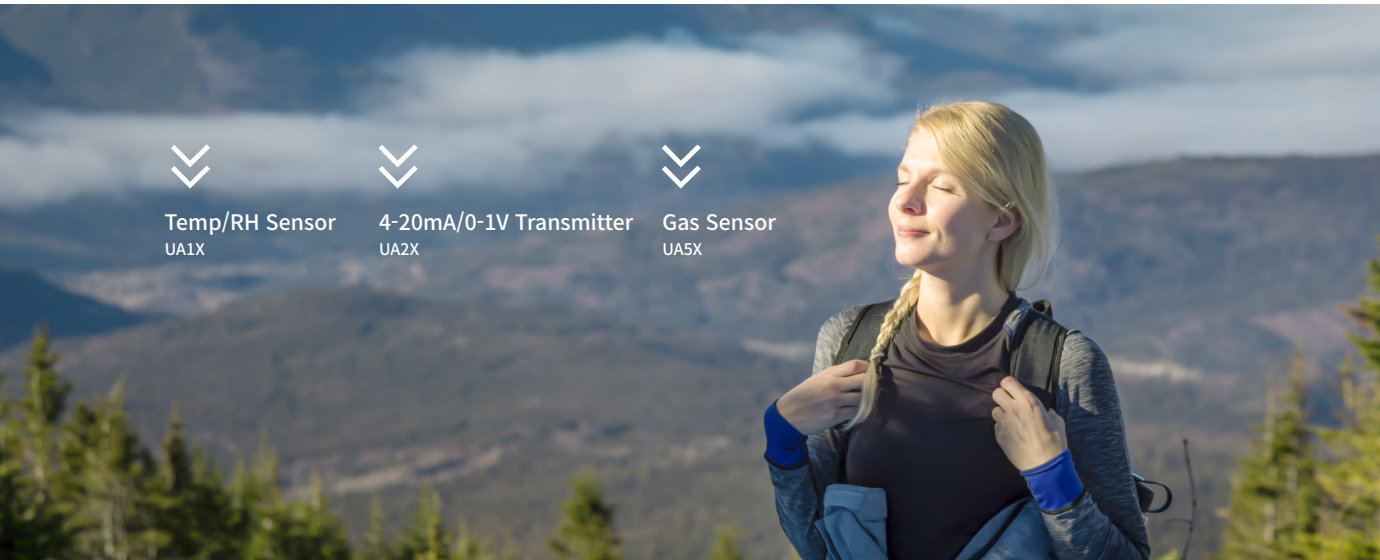


Fully Calibrated and
calibration tool support



SDK for software
integration support

The UA sensor is a simple sensor that **anyone can use**.
Various sensors are ready for you.



UA5x
Gas Sensor



UA50 (tVOC + CO2eq)
tVOC gas sensor

- TVOC sensor embedded
- tVOC Measuring range: 0~60,000 ppb
- CO2 Measuring range : 400~1200 ppm
- For Indoor air quality measurement



UA52 (O2 + atm)
O2 gas sensor

- Optical oxygen sensor embedded
- Measure barometric pressure and convert the O2%
- O2 Measuring range: 0~25%
- Oxygen partial pressure : 500~1200 mBar
- Temperature Sensor embedded(-20~50°C)
- For Aircraft, Industrial safety



UA53 (Gas + Temp)
MEMS gas sensor

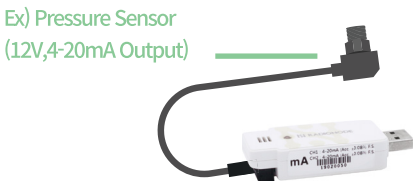
- Carbon monoxide sensor embedded
- Long-life Electrochemical Sensor
- Measuring range : 0 ~1000 ppm
- For Indoor air quality measurement

UA1x
Temperature/Humidity Sensor



UA10 Temp/RH sensor	- Temp Measuring range : -40~80°C - RH Measuring range : 5~95%RH
UA11-K High temperature transmitter	- Connect a TC-K type(2 CH) - Measuring range : 0~1,000°C
UA11-T Low temperature transmitter	- Connect a TC-T type(2 CH) - Measuring range : -100~300°C
UA13 super low temp transmitter	- Connect a PT100 (1 CH, 3 wired) - Measuring range : -200~300°C

UA2x
4-20mA / 0-1V Converter



UA20 4-20mA / 0-1V converter	- Connect ANY 4-20mA output sensors - Internal 100 Ohm 0.05% resistor - 3 Point Calibration certification provide - Calibration Software provide - Order number • UA20-A (4-20mA / 2 CH) • UA20-B (4-20mA / 1 CH, 12V Loop power) • UA20-C (0-1V / 2 CH)
--	---



UA54 (Gas + Temp)
EC gas sensor

- Electrochemical sensor embedded
- Ammonia Measuring range : 0~100ppm
- Hydrogen sulfide Measuring range : 0~50ppm
- Order number: UA54 NH3-100, UA54 H2S-50
- Provide calibration certificate
- For Industrial safety



UA59 (Gas + Temp)
SUS gas sensor

- NDIR type CO2 Sensor embedded
- Stainless steel / Provide mounting bracket
- Provide calibration certificate
- Measuring range : 0~20%
- Order number : UA59-CO2
- For Outdoor air quality measurement



RG40
AM-AF Film USB Extension Cable

- Film Type USB Extension Cable
- Port Material : Aluminum
- Cable Length : 50 cm

Recording Software for Radionode UA

Just Get a Sensor, then Multichannel Recorder is Free!



Tapaculo Lite Sensor Data Real-time Recording Software at PC

UA1X, 2X, 5X, RN17x

- Up to 32 Sensor Data Recording (32 Channel dash board)
- Real-time Traceable Graph Supported for each device
- Recording Data Management by each project files
- Viewing the past sensor data or printing reports without stopping sensor measurements
- One-page Daily Report
- Export Data to CSV, PDF
- Browsing Data with a Chart
- User Defined name allocated to each device
- Threshold Alarm Setting for each piece of data (Turn to RED color)
- All devices are easily searched through device configuration window



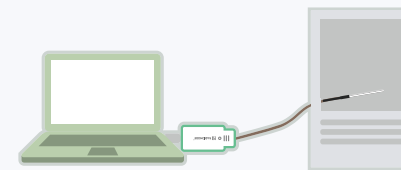
Tapaculo Mobile Sensor Data Real-time Recording App at Android

UA1X, 2X, 5X

- Real-time Traceable Graph
- Up to 24 Channel Data Recording
- Recording Interval : 1Sec, 10Sec, 30Sec, 60Sec, 5Min, 10Min
- Export Data to CSV
- Share Data : e-Mail, SNS
- Threshold Alarm (Red color, Audible alarm)

How to Use Radionode UA sensor

01



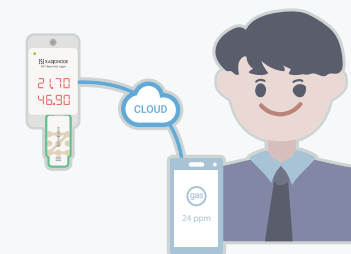
With UA, your notebook can be used as a real-time multichannel recorder.

02



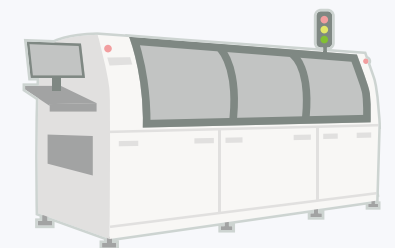
Measure and record with your smartphone.
Send and Share the data by email!

03



Use UA with RN171 and Tapaculo 365 to build a remote sensor data monitoring system at an affordable price!

04



Are you manufacturing the equipment?
You can make the material cost down by replacing the sensor used in the equipment with the UA sensor.

Networking is My Mission. Don't Worry.

Send the data measured by UA Series
to the server, cloud storage service
through the LAN/WiFi

RN17X

Sensor Data Transmitter

WiFi Easy wireless connection

PoE Power and LAN communication at once

Model Name

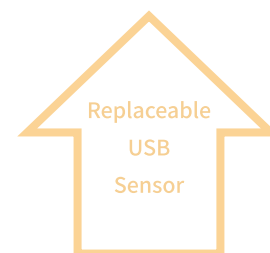
RN171	Ethernet Sensor Data Transmitter
RN172	WiFi Sensor Data Transmitter

Hardware Spec.

Dimension	H90 * W50 * D30 mm
Power	6V DC / 48V PoE
LAN	100Mbps
WiFi	IEEE802. 11 B/G (WPA, WPA2, WEP)
USB Port	Data in from UA Series or Config.
Display	2 Channel 4 Digit Display / 1 LED for Status
Alarm	Buzzer Inside
Mount Type	2 Screw Hole
Certificate	FCC / KC Compliance

Software Functions

- Auto IP Allocation (DHCP On)
- HTTP Transmission to server
- HTTP Sending Interval (1Min ~ 60Mins)
- Telnet for Config. / AT Commands
- MODBUS TCP - Holding Register
- UDP Broadcasting
- Cloud Monitoring Service (TP365)
- SMS / Call Alert



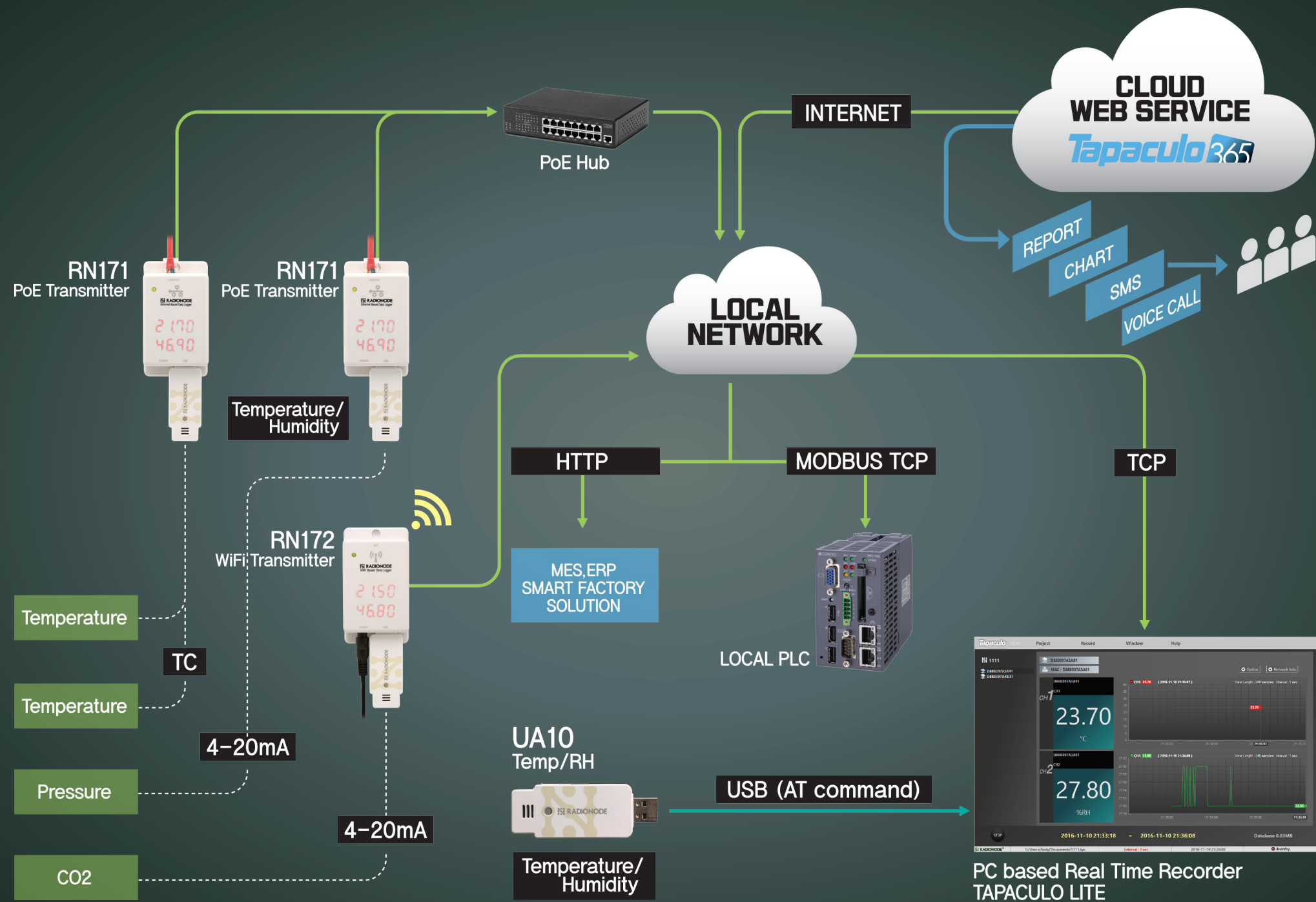
UA10
Temp/RH
Sensor



UA50
tVOC
Sensor



UA52
O2
Sensor





Tapaculo365 S2

No more install the infrastructure !

Just Sign in for Tapaculo365 SaaS
to access all your sensor data and
device.

s2.tapaculo365.com

Tapaculo 365 service is developed and operated by
Dekist Co., Ltd. It is professional management software
for sensor data in client facilities.

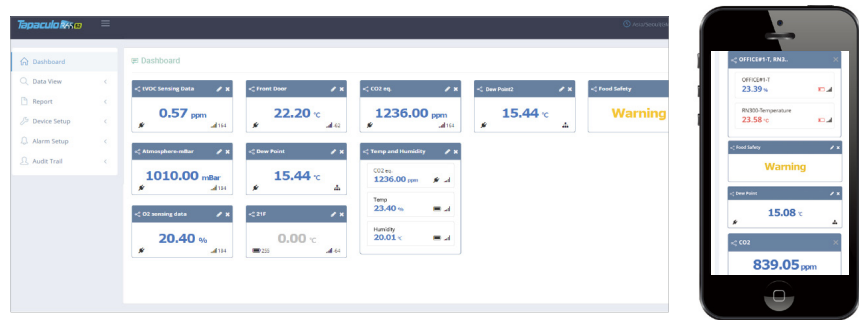
Just pay a service subscription fee at low cost and use
Tapaculo365 immediately.

Tapaculo365

01.
Real-Time
DASHBOARD

Dashboard is a group of alive data channels that you would want to check out instantly. You can also put your own logo on this dashboard. Create your own dashboard. Anytime, anywhere you can remotely monitor the equipments or facilities with web browser accessing.

Red colored text means that the sensor value is out of range. Audible alarm is given off to inform the people on the site.



02.
Huge
Data Storage

For example, If you record the temperature every minute in a year, there will be 525,600 temperature records. In the case of 20 sensors, you should manage more than 1000 million records.

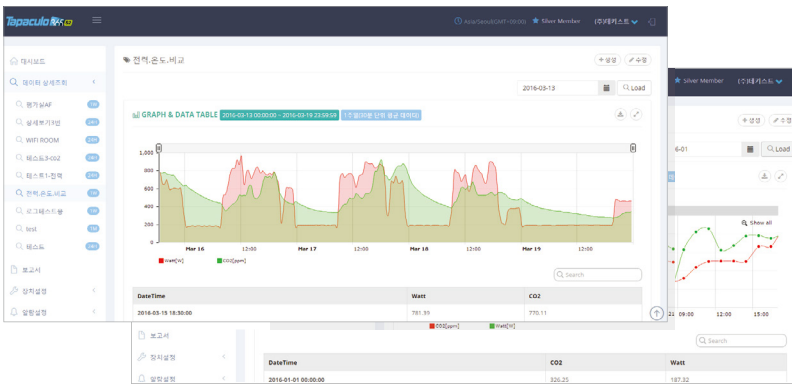
Tapaculo365 has a tremendous storage space for all the data from the RADIONODE device. Regardless of the number of sensors, our customers can access all the sensor data during past 3 years on thier account.



03.
Make your
own View

Customers can create their own views in which multiple sensors are selected. In these views, the users can browse all the data within a specific time duration. Check within 24 hours, 1 week, or 1 month.

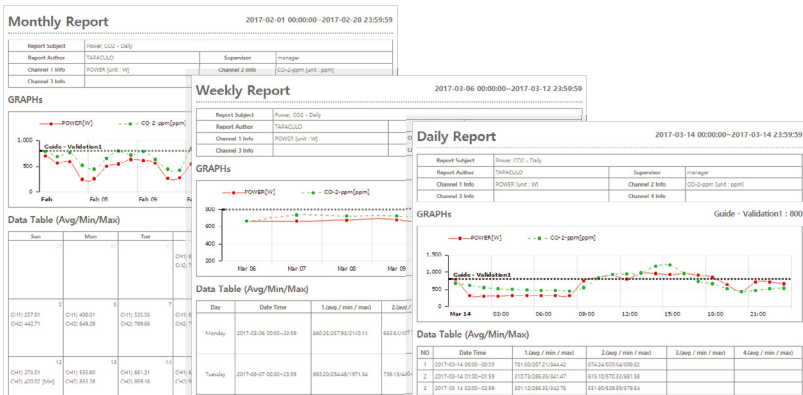
Also, you cas compare several data channels at the same view chart.



04.
Print a Report

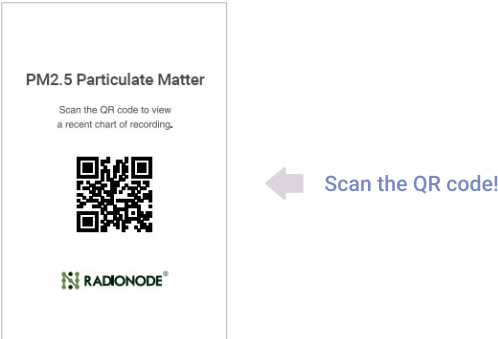
Make good-looking reports from your sensor data base. Basically, Tapaculo365 has a daily/weekly/monthly report form. Also, you can receive a MKT(Mean Kinetic Temperature) report. With this, you no longer need to calculate MKT separately. You can quickly decide whether to follow a complex deviation procedure (SOP).

Goodbye to write a report with your own hands. All reports can be emailed to you at the scheduled time.



05.
Provide
QR code Apps

Print the QR code from Tapaculo365 and paste it near your place.
It makes you see the sensor data flexibly.
When you scan it on your smartphone , on-site sensor data will appear immediately.
See and share graphs for 1, 3, and 7 days of data.



← Scan the QR code!

06.
Urgent Alert
Message

The users can set up their own threshold value on each sensor channel.
A message alert can be delivered via a phone call, SMS or e-Mail. To be able to use it, your Tapaculo365 account has to have SMS/Call credits.
You don't need any contract of telecommunication company.
Just buy some credit on your Tapaculo365 account with your credit card.

Support language
Korean, English, Chinese, Japanese, Vietnamese, Thai

Configuration Screen

A screenshot of a web-based configuration form for an alarm. The form includes fields for "Alarm Name", "Data Channel", "Normal Range", "No Initial Detection", "Snooze", "Type", "Recipients", and "User Text to Speech". There are also dropdown menus for "Normal Range", "No Initial Detection", "Snooze", and "Type". A "SAVE" button is at the bottom. To the right of the form, there are icons for "CALL" and "SMS" with red notification bubbles.

07.
Deviation
Reports

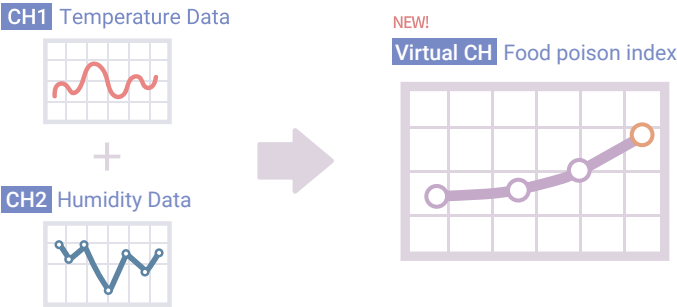
You can check the SMS/Call history of how the credit was used. Which sensor was the most problematic? You can also see who received the alarm and when.



08.
Virtual
Channel

Even if there is no real sensor, you can create a virtual channel by combining the values of existing sensors. Data is generated by your formula. For example, when you need some specific data such as food poisoning index and dew point, you could calculate them by applying your own mathematic formula to existing temperature and humidity channel data.
Now you can receive reports/alarms of food poisoning index, condensation and so on.

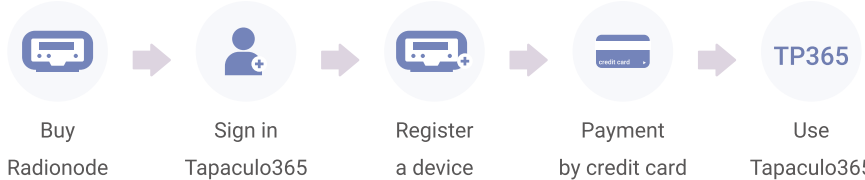
What information is meaningful to you?
Set a SMS alerts on the food poisoning index!



09.
Additional
Features

- ✓ Device / Channel Management
- ✓ Power outage / Low battery warning
- ✓ Notification of Internet lost
- ✓ Audit Trail
- ✓ Time Zone
- ✓ User Access Log History
- ✓ OPEN API
- ✓ IQ/OQ Protocol

10.
How to use



11.
Low Cost

If you use about 40 channels, you can register as an ECO member.
The annual fee is USD 330(Offer SMS / Call / e-Mail credit).

For more price plan, please contact our sales team