

July 5, 2023
Weathernews Inc.
OMRON Corporation

Weathernews and OMRON Jointly Develop a New Weather IoT Sensor "Soraten Pro" to Observe Heavy Rain and Strong Winds Every Minute - Contributing to the realization of a sustainable society by reducing disaster risks caused by climate change -

Weathernews Inc. (Headquarters: Mihama-Ku, Chiba, Japan; President and Representative Director: Chihito Kusabiraki; hereinafter, "Weathernews") and OMRON Corporation (Headquarters: Shimogyo-Ku, Kyoto, Japan; President and CEO: Junta Tsujinaga; hereinafter, "OMRON") have jointly developed a new weather IoT sensor and will release it as Weathernews "Soraten Pro" on July 5, 2023.



New weather IoT sensor "Soraten Pro"

"Soraten Pro" is a compact and high-performance weather IoT sensor that can observe seven elements every minute: air temperature, humidity, atmospheric pressure, rainfall amount, wind direction, wind velocity, and illuminance. "Soraten Pro" was jointly developed by OMRON, which specializes in sensor development, and Weathernews, which boasts technology for the highest weather forecast accuracy*1, leveraging the strengths of both companies. "Soraten Pro" uses OMRON's sensing technology to enhance the performance of rain and wind sensors which can detect elevated disaster risks through observation of heavy rain and strong winds of 50 mm/h and 50 m/s, respectively.

Weathernews will develop this business as a new SaaS-type solution service by linking "Soraten Pro" with the "weathernews" application which boasts a cumulative total of 35 million downloads. As a result, you can seamlessly check various contents including paid features such as observation data, weather forecast, rain cloud radar, blackout risk prediction, etc. with the "weathernews" application. In addition, push notifications will alert you when the observed air temperature, rainfall amount, or wind velocity exceeds the set value, helping you to reliably detect disaster risks and respond quickly. Furthermore, PC-version applications are available, allowing you to download past observation data and analyze the weather conditions and damage at the time.

"Soraten Pro" can visualize on-site weather conditions using the high-performance weather IoT sensor and communicate weather changes as quickly as possible through the application, so it can be used for corporate safety measures and productivity improvement in agriculture, construction, drones, logistics, sports, electric power, food retail, apparel, and other industries. Weathernews and OMRON will contribute to the realization of a sustainable society by helping to promote a digital society and reduce disaster risks through "Soraten Pro."

Access "Soraten Pro" website at the URL below	Access the URL below for inquiries about "Soraten Pro"
https://wxtech.weathernews.com/soraten.html	https://wxtech.weathernews.com/contact.html

◆Weathernews and OMRON develop a sensing device that leverages their strengths

In recent years, various companies have increasingly required observation data as a measure to reduce disaster risks. It is difficult to introduce conventional observation equipment due to the time and effort required for installation and budgetary constraints. Therefore, there is a demand for weather sensors that are compact, easy to install, and inexpensive to obtain observation data. Weathernews' founding philosophy is "help people in times of need" and OMRON's commitment is "solving social issues through business". The two companies share many things in common, so we have collaborated on the development of sensing devices since 2017. In the past, Weathernews has launched "WxBeacon2"*2, a compact weather sensor that utilizes OMRON's sensing technology and had been well received by users. This time, OMRON and Weathernews have developed a new solution to meet corporate needs by leveraging the strengths of both companies.

◆High-performance weather IoT sensor "Soratena Pro"

"Soratena Pro" is a high-performance weather observation equipment that can observe seven elements every minute: air temperature, humidity, atmospheric pressure, rainfall amount, wind direction, wind velocity, and illuminance. Conventional observation equipment had the problem of being time-consuming to install because of its large size and the need for line maintenance, but "Soratena Pro" is compact and easy to install, and observation can be started simply by turning on the power. "Soratena Pro" is also useful for the observation of heavy rain and strong winds, which pose a high risk of disaster, because it can accurately observe torrential downpours with a rainfall amount of 50 mm/h and violent storms with a wind velocity speed of 50 m/s using OMRON's advanced sensing technology. Furthermore, by linking with the "weathernews" application, various kinds of weather information including observation data can be checked with one application. The observation data is stored in the cloud and can be provided via API, etc., so companies can acquire observation data via the cloud and incorporate it into their own systems.

◆Check observation data with the highest weather forecast accuracy application

In order to make it easier for you to incorporate observation data into your business, Weathernews has linked "Soratena Pro" with the "weathernews" application which boasts a cumulative total of 35 million downloads and has the highest weather forecast accuracy. This allows you to use the weather application that is used by many users on a daily basis without changing anything for your business. Just by logging in with your company account, a dedicated page will be displayed on the top page "My Weather".



Dedicated observation page appears on My Weather

Select from the list of observation equipment

Real-time observation data

View historical data in graphs

On the dedicated page, seven types of observation data can be viewed in real time and past data can be checked in graphs. Furthermore, push notifications will be sent out when the observed value exceeds the threshold value. Users can select two elements from air temperature, rainfall amount, and wind velocity, and set the thresholds and titles. By predetermining actions to be taken in response to notifications, companies can respond quickly to heavy rain, strong winds, and high/low air temperatures.



Push notification:
(Left) Setting screen, (Right) Wind velocity alarm

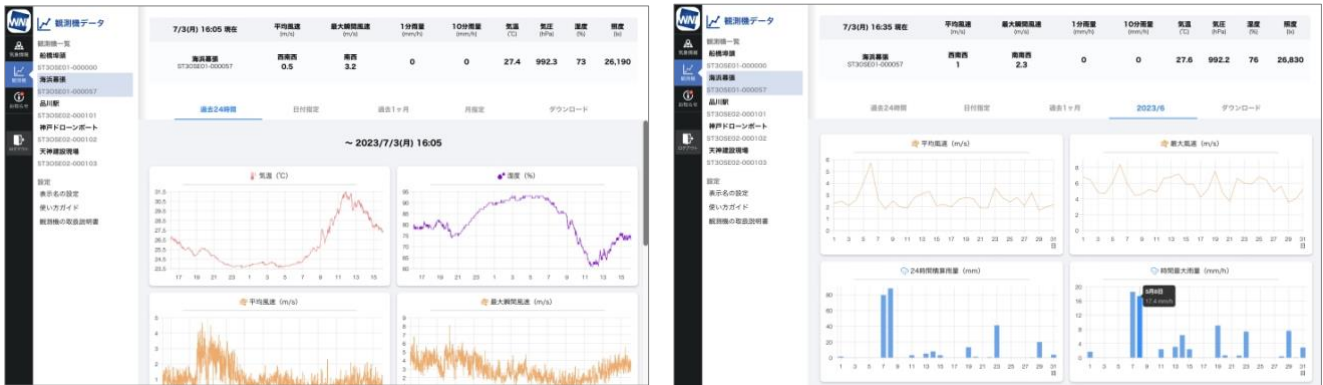
Paid contents
(Left) Raincloud radar, (Right) Various alarms

In addition, paid contents for general use, such as raincloud radar and notification functions, are available without advertisements. The weather content of the highest weather forecast accuracy application and the observation data of "Soratena Pro" are provided on the same platform, so you can seamlessly check the weather information useful for your business with one application.

One of the most popular paid features of the application is the "Raincloud radar," which allows you to check data every 10 minutes for up to 30 hours ahead with ultra-high resolution of 250m-mesh. In addition, an extensive range of disaster prevention information is available, including "Multiple typhoon track forecasts" and "Blackout risk predictions," both of which are useful when typhoons are approaching, and "Heavy snow pinpoint," which provides snow accumulation and freezing forecasts during heavy snowfall. Furthermore, push notifications can be sent out to the current location or to up to 20 registered locations for alerts, earthquakes, lightning strikes, tornadoes, etc.

◆Dedicated websites for PC version empowering data analysis are available

Dedicated websites for PC version provide weather information along with real-time video footage and past observation data. Users can specify the month and date to check daily and minute-by-minute observation data in graphs. All observation data from the date of installation up until now are stored in the cloud, and the data can be downloaded in CSV format. Past data for rain clouds, wind direction, and wind velocity up to 24 hours ago and forecast data up to 72 hours ahead can be displayed on a map. Using dedicated websites for PC version is recommended when analyzing the observation data against the damage situation, or when monitoring the data on a display in an office or other locations.



PC version: (Left) Observation data every minute (Right) Observation data every day



PC version: (Left) Observation data download screen (Right) Raincloud radar

The monthly usage fee for applications for PC version is included in the rental or purchase price of “Soratena Pro,” and up to three application accounts per Soratena will be granted free of charge.

- ▶ Access this URL to rent or purchase: <https://wxtech.weathernews.com/contact.html>
- ▶ “Soratena Pro” service site: <https://wxtech.weathernews.com/soratena.html>

◆ Utilize observation data for business

Observation data of “Soratena Pro” can be used for safety measures and productivity improvement in agriculture, construction, drones, logistics, sports, electric power, food retail, apparel, and many other industries. For example, in the field of agriculture, it can be used when there are strong winds to inspect if vegetables have fallen over or if vinyl has been blown away. At construction and building sites, observation data is useful for judging the feasibility of construction works such as high-altitude work and concrete placement during rainfall, of crane work during strong winds, and of preventative measures against heat strokes for workers. “Soratena Pro,” which can measure wind velocity accurately just by turning on the power, can also contribute to the realization of drone logistics, in which the flight location changes from time to time. In the case of campsites, installing “Soratena Pro” on the premises and monitoring the wind velocity can help prevent fires caused by campers' bonfires. Temperature alert notifications are effective in preventing heat stroke for students in physical education classes and sports meetings, and in preventing heat exhaustion for staff members, visitors, and athletes at zoos, firework displays, and marathon races.

For the electricity market, the system can be installed at solar power plants that do not have solar radiation meters, and power producers can incorporate a solar radiation estimation calculated by Weathernews based on illuminance data which will help improve accuracy of their solar power generation forecasts or to determine power plant failures by comparing with actual power generation.

In the food retail industry such as supermarkets and the apparel industry, the number of customers changes depending on the weather and air temperature, so understanding the weather outside the store can be applied to appropriate staffing and demand forecasting. By linking observation data to the system, digital marketing, such as signage linked to outside weather and coupon distribution via applications, will

become possible. In this way, please utilize various types of observation data depending on the intended use of each company.

◆ Specifications of "Soratena Pro"

Product name	Soratena Pro (OMRON Model: 2KW-0001)
Dimensions	Approx. 125 mm (L) x 125 mm (W) x 267 mm (H)
Body weight	Approx. 1 kg
Observation data	7 elements: air temperature, humidity, atmospheric pressure, rainfall amount (converted to mm/h), wind direction, wind velocity, illuminance
Observation frequency	Every minute
Measurement range	Air temperature: -20 to 50°C Humidity: 0 to 100% Atmospheric pressure: 600 to 1100 hPa Rainfall amount: 0 to 50 mm/h Wind direction: 0.1 to 360° Wind velocity: 0 to 50 m/s Illuminance: 150,000 lx
Power consumption	1.5W (mean value)
Power supply voltage	100 VAC / 5 VDC to 12 VDC
Accessories	Power cable (AC version 12m / DC version 4m)
Communication	IoT SIM

◆ Product photos



*1 Highest weather forecast accuracy: According to Tokyo Shoko Research (announced in June 2023)

<https://jp.weathernews.com/news/43535/>

*2 WxBeacon2: Beacon compatible with smartphone-connectable weather sensor launched in 2017

<https://jp.weathernews.com/news/16830/>

<About Weathernews Inc.>

Weathernews Inc. is one of the world's largest weather information companies. Founded in 1986, the company began with ship routing services based on the philosophy of "helping people in times of need". It currently provides weather data and solutions to accelerate corporate digital transformation (DX) promotion to 2,600 companies in 45 markets, including aviation, railway, road, and distribution industries.

<About OMRON Corporation>

OMRON Corporation is a global leader in the field of automation based on its core technology of "Sensing & Control + Think." OMRON's business fields cover a broad spectrum, ranging from industrial automation and electronic components to social systems, and healthcare. Established in 1933, OMRON has about 30,000 employees worldwide, working to provide products and services in around 120 countries and regions. For more information, visit OMRON's website:

<https://www.omron.com/global/en/>.