

Specifications List

Common

Product name	Cloud-based water level monitoring system
Components	Water level gauge, solar panel, power supply box
Power source	Self-sustaining power supply through solar power generation
Server notification method	Server communication via wireless communication

Water Level Gauge eWL001A

Measurement method	24GHz Microwave radar type (ARIB STD-T73)
Detection range	0.5m~30m
Minimum reading Unit	1cm
Observation accuracy	±1cm(1~20m, other ±5cm)
Observation interval	Min. 2 min.
Communications standard	LTE(Cat1)
Power consumption	Average 2W or less
Waterproof performance	IP55
Weight Approx. *1	2kg

Solar panel

Solar panel	13W
Weight Approx. *1	1.6kg

Battery box

Capacity	13Ah
Max no-sunshine days for operating*2	9 days (according MLIT 3L Water Level Gauge Standard) *2
Waterproof performance	IP55
Weight Approx. *1	14 kg (including battery)

Cloud server

System	Internet Cloud-based system
Service information provided	Water level, power status, other maintenance information
Notification function	Email notification based on set water level
Control function	Start/stop water level measurement, automatic measurement cycle
Data retention period	6 months (it depends on customer's needs)
Settings	Water level measurement intervals, various water level settings

* 1: Excluding mounting

* 2: In typical sunlight conditions in the Kanto region, with water level reporting every hour



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Peace of mind to all rivers

Based on MLIT 3L Water Level Gauge Standard

Cloud-based Water Level Monitoring System

Radio wave type water level gauge **eWL001A**

Supporting the Enhancement of Flood Response in Small and Medium-Sized Rivers with IoT

For over 50 years, we have been proposing, constructing, and maintaining various disaster prevention facilities and systems for local governments across the country.

We always work together with local communities to understand what is needed for disaster prevention in each region. The water level gauges we make are filled with our experience, knowledge, and passion for disaster prevention.

Low cost, no power supply required, easy installation, high accuracy, maintenance free
We propose the perfect water level gauge for Japan's small and medium-sized rivers, which are in demand today.

Ministry of Internal Affairs and Communications
SCOPE Adopted Proposals for 2017*1
Technical Standard*2

Product name	eWL001A
Water Level Gauge Measurement Methods	Radar type(24GHz)
Control method	Self-regulating / 3L water level gauge

*1.SCOPE is a competitive funding program of the Ministry of Internal Affairs and Communications (MIC) for the promotion of strategic information and communications research and development, which commissions research in the field of information and communications technology (ICT) on the basis of a broad public solicitation, selection and evaluation of research themes that are rich in novelty.
*2.This product is compliant with the Technical Regulations Conformity Certification based on the Radio wave Law.



Utilizing the latest wireless technology

Our proprietary measurement data processing method (Advanced FMCW) enables highly accurate water level measurement even in the conventional 24 GHz band.

* Selected as an adopted project of "Strategic Information and Communications R&D Promotion Project (SCOPE)" by the Ministry of Internal Affairs and Communications in 2017 and receiving development support.

Excellent maintainability and development

The system is a completely maintenance-free, non-contact water level gauge, and when combined with a high-capacity battery, it is a self-regulating water level gauge. Because maintenance and configuration changes can be done remotely, it has excellent scalability for future enhancements, such as incorporating AI.

Easy installation and operational reliability

The water level gauge itself is smaller and lighter than conventional products, making it easy to install in various locations such as bridges. In addition, the power supply unit, which consists of a separate solar panel and battery, can be installed in the optimal location in consideration of sunlight, ensuring reliable operation.

System Overview



Two ways to communicate



Construction achievements and cases



Small and Medium River Monitoring System from Demonstration Experiment to Actual Operation

Fukuoka City conducted a demonstration experiment using LPWA (LoRaWAN™) technology on two bridges in the city, confirming its effectiveness. Subsequently, these systems were installed in various locations throughout the city.



Ministry of Land, Infrastructure, Transport and Tourism Innovative River Technology Project (Phase I)

Participated in the Ministry of Land, Infrastructure, Transport and Tourism's "Innovative River Technology Project. Experiments were conducted on a river in Yokohama City, and the results were successful. We also participated in a demonstration experiment (Phase 2) for cold-weather specifications in Yamagata City.



New 3L water level gauge installed in Mie Prefecture

Adopted as a 3L Water Level Gauge for small and medium-sized rivers in Mie Prefecture



Image Linkage Disaster Prevention Cloud Camera eT001s

Can be combined with river monitoring cameras

Combined with our "Disaster Prevention Cloud Camera eT001s" for river monitoring, it allows for capturing changes in water levels from both images and numerical data.

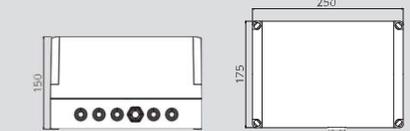


PC screen image



Equipment size and external dimensions

(please read back cover for more specifications.)
eWL001A Radio Wave / Approx. W250 × H150 × D175mm



Power supply box / Approx. W268 × D300 × H120mm

