General Specifications

GS 04K10B01-01EN

CL0AL01 / CL0AL02
OpreX™ Data Acquisition
Wide Area Monitoring System

■ Overview

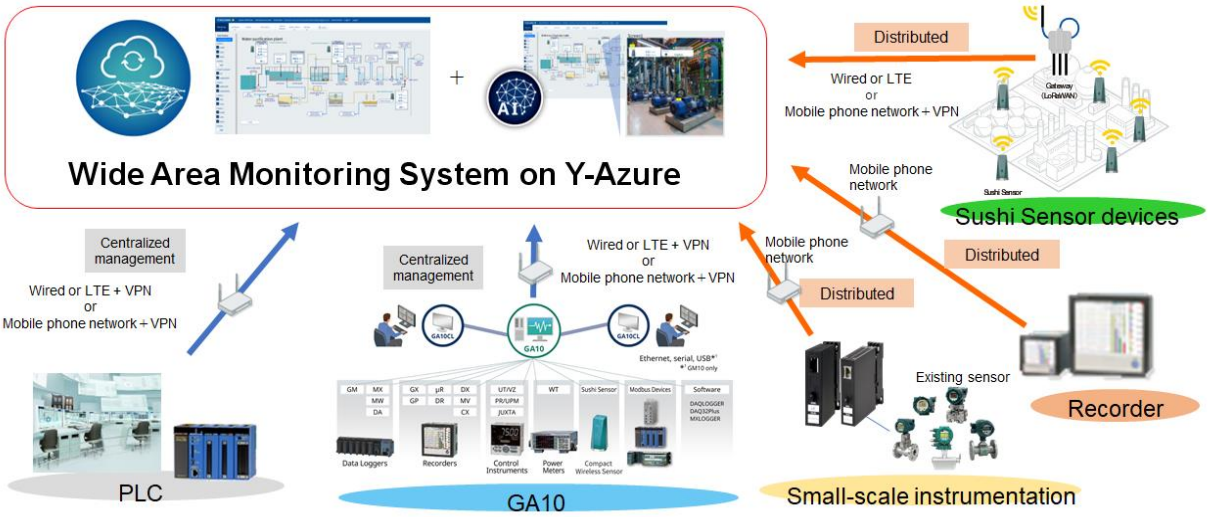
The Wide Area Monitoring System is a cloud service that integrates centrally managed data, such as operational data, and distributed data, such as sensors scattered over a wide area, and monitors them remotely. The service is also affordable, making it ideal for customers who want to start using the cloud on a small scale.

The Wide Area Monitoring System can be connected to software and devices such as SMARTDAC+ Data Logging Software GA10, Sushi Sensor, PLC, and Recorder allowing data from existing facilities to be aggregated and viewed in the cloud.

■ Features

- The user interface based on user surveys and simple configuration, makes it intuitively simple to use.
- The dedicated smartphone screen allows for stress-free and comfortable viewing of data in the field.
- The system is equipped with tools for engineering and maintenance work.
- GA10 (R4.05.04 or later), Sushi Sensor, PLC, Recorder, etc. can be connected.

■ System Conceptual Diagram



This result was achieved through joint development by Yokogawa Electric Corporation, National Institute of Advanced Industrial Science and Technology (AIST), Geothermal Engineering Co., Ltd., and West Japan Engineering Consultants, Inc. They were commissioned by the New Energy and Industrial Technology Development Organization (NEDO).

■ Basic Specifications

The maximum number of measured data is 3,000 data, the maximum number of monitoring screens is 20, and the maximum number of users is 300.

Specification Items	Contents
Available areas	Thailand, Malaysia, and India (only in the country where the product was delivered)
Data type	Measured data, error data
Usage environment	Web Browser
Number of measured data	Up to 3,000 measured data
Data storage period	Contract term or two years, whichever is shorter
Data receiving interval	5 or more minutes or 60 or more minutes
Number of registered users	Max. 300
Number of monitoring screens	Max. 20
Monitoring screen size	Screen display based on 1024x768 or 1920x1080 standard
Trend data display	Last 7 days Display any time period for up to 2 years
Long-term data download	Generate files summarized every 28 days
Set graph display	Display up to 10 graphs of trend data
Approximate line graph display	Display approximate lines from graphs of trend data
Number of simultaneous browser connections possible	5 browser connections per customer site
Registerable capacity in the Documents screen	Up to 30 MB per a file

The number of measured data is arranged in units of 5 data; for every 50 data, the number of monitoring screens is increased by 3 and the number of users is increased by 5. However, the maximum number of monitoring screens and users is the maximum number mentioned above.

Specification Items	Contents
Number of measured data	5 data
Number of monitoring screens	3 screens
Number of users	5

■ Operating Environment (Web Browser)

・When viewing on a Windows PC

OS	Microsoft Windows 11
Browser	Google Chrome

・When viewing on a mobile device

OS	iOS
Browser	Google Chrome

■ Connectable Devices

The devices listed below can be connected to the Wide Area Monitoring System. In terms of received data, the system receives time data, measured data, error information data, and OTHERINFO data. The data is available in two formats, JSON and CSV.

・Sushi Sensor

Vibration, temperature, pressure, the condition of steam trap and other data measured by the Sushi Sensor can be imported into the Wide Area Monitoring System.

・Data Logging Software GA10

Data collected in GA10 from various devices, such as recorders, Sushi Sensor, PLC, and Modbus devices, can be imported into the Wide Area Monitoring System. Additional option (/C1 option) of GA10 (R4.05.04 or later) is required for connection.

・PLC

It is possible to import data into the Wide Area Monitoring System by sending data collected by PLC in CSV file format.

・Recorder/ Data Logger

It is possible to import data collected by the Recorder into the Wide Area Monitoring System.

■ Screen and Functions

The Wide Area Monitoring System consists of several screens, and the names and functions of each screen are shown in the table below.

Screen	Function
Monitoring for PC	Function to display measured data on a configuration diagram in combination with icons, etc.
Analysis Graph for PC	Function to display graphs analyzing trend data
Job Record for PC	Function to enter and view job reports
Monitoring for Smartphone	Monitoring function in a smartphone environment
Job Record for Smartphone	Job record function in a smartphone environment
Alarms	Function to display threshold exceedances and system errors on the monitoring screen and notify via email
Documents	Function to register and view documents
System Monitor	Function to check the operational health of the Wide Area Monitoring System
Maintenance Contact	Function for customers to reference maintenance contacts
System Notification	Function for customers to confirm announcements
Screen Editing	Screen editing function for monitoring screen
Users	Registration function for users of the Wide Area Monitoring System
Users (User Rights)	User rights management function for users of the Wide Area Monitoring System

In addition to the above screens, there are other screens used in engineering, such as network map, health check, etc.

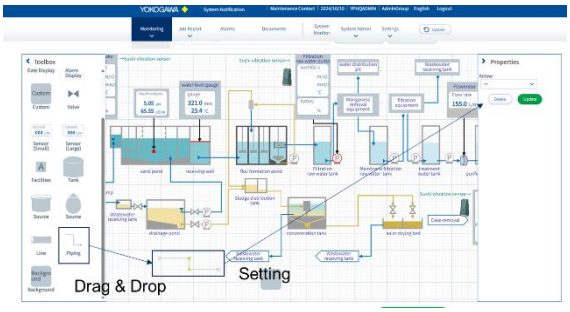
■ Monitoring Screen for PC

The monitoring screen for PC is composed of an initial screen and a detailed screen.

Screen	Display Contents
Initial screen	Measured values, alarm display icons
Detailed screen	Measured values, alarm display icons, trend graphs, long-term data graphs, combined graphs, approximation line graphs

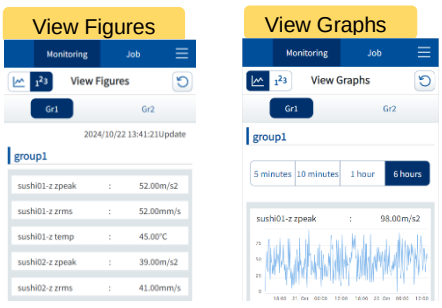
■ Screen Editing Function for PC

The monitoring screen for PC can be edited in your browser. The screen can be created by selecting icons from the toolbox and placing them on the screen. The screen size standard can be selected from 1024x768 or 1920x1080.



■ Monitoring Screen for Smartphone

The monitoring screen for smartphone offers two types of screens: View Figures screen and View Graphs screen.



■ Screen Editing Function for Smartphone

The monitoring screen for smartphone can be edited in your PC browser. Simply select the sensors you wish to display, and the screen will be created automatically.

■ Setting User Rights

On the customer's site, user rights can be set for each page. For example, the following authorization hierarchy can be created.

User Type	Role
Viewer	Users who primarily use the viewing function without management or engineering.
Administrator	Administrative user to manage the Wide Area Monitoring System on the customer side. Registration of one person for each customer site is required.
Users in charge of engineering	Users authorized to build (engineering work) and monitor customer sites as requested by the customer.

■ Cloud-to-Cloud Connectivity Function

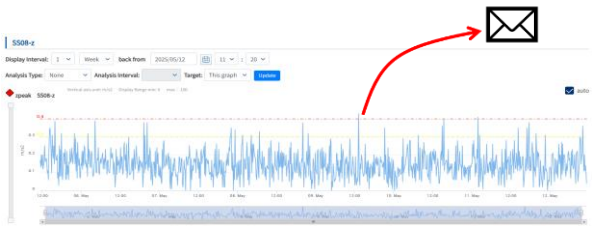
Files in CSV or JSON format can be sent and received via an external cloud and internet.

■ Document Management Function

PDF files such as manuals and site information can be registered as documents and viewed in the browser. Various PDF-related files can also be registered, stored, and downloaded.

■ Alarm Display Function

By setting threshold values, you can display alarms on the screen or receive alarm notifications by email. Alarms can also be cleared all at once.



In addition to the above screens, system errors appear on the Network Map and Health Check screen.

■ Security Measures

The Wide Area Monitoring System implements the following security measures.

- IP filtering of data transmission devices
- VPN connection for file transfer
- User login authentication
- WAF (Web Application Firewall) security features for user access
- Others

■ Notes on Ordering

The start date of service differs depending on the date of application.

- For applications received by the 14th of the month:
  Start date possible from the first day of the month designated by the customer.
- For applications received on or after the 15th of the month:
  Start date possible from the first day of the designated month, which must be at least two months from the current month.

■ Related Products

Product	Model	General Specification No.
Data Logging Software	GA10	GS 04L65B01-01EN
Sushi Sensor Wireless Communication Module	XS110A	GS 01W06D01-01EN
Wireless Vibration Sensor	XS770A	GS 01W06E01-01EN
Pressure Measurement Module	XS530	GS 01W06F01-01EN
Temperature Measurement Module	XS550	GS 01W06F02-01EN
Steam Trap Monitoring Module	XS822	GS 01W06G01-01EN
PLC	FA-M3Ve-RT3	GS 34M06A01-01E
Data Acquisition Module	GM10	GS 04L55B01-01EN
Paperless Recorder	GP10/20 GX10/20	GS 04L52B01-01EN GS 04L51B01-01EN

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■ Model and Suffix Code

Model	Suffix Code				Description
CL0AL01					License -data acquisition interval 5 min. or more
CL0AL02					License -data acquisition interval 60 min. or more
Destination	-02				Thailand
	-03				Malaysia
	-04				India
Cloud Type		-01			Azure
Arrangement Classification			-N□□□		N: Number of newly applied data sets (Number of data sets: 5 data/set) Min. 01, Max. 400 data sets
			-A□□□		A: Number of data sets to be added to existing customer sites (Number of data sets: 5 data/set) Min. 01, Max. 400 data sets
			-C□□□		C: Number of data sets for which the license is to be renewed (Number of data sets: 5 data/set) Min. 01, Max. 400 data sets
Data Size				-D□□□□	D=P×M D: Min 01, Max 4800 P: Number of data sets specified by N, A, and C in the arrangement classification. (Number of data sets: 5 data/set) Min.01, Max.400, Unit: number of data sets M: Monthly usage period Min.01, Max.12, Unit: month
Option				/□	Not available