GRAPHTEC

Compact data logger
GL100 Series

TRIGGERING FUNCTION
CO2, Temp, Oxygen

Main body only
GL100-WL
w/ Wireless LAN
MSRP $295.00

The new GL100 has the ability to trigger your controller in maintaining the perfect climate.

Put the GL100 to work for you!

GL100-WL-TH
MSRP $430.00
(Main Body with Temp/Humidity Sensor)

Sensor

Acceleration/Temp.
GS-3AT
Acceleration in 3-axis (max. 10 G), Temp. (-10 to 50 ℃)
MSRP $295.00

Carbon dioxide (CO2)
GS-CO2
CO2 concentration (max. 9999 ppm)
MSRP $415.00

Illuminance/UV
GS-LXUV
Illuminance (max. 200 klx), UV intensity (max. 30 mW/cm²)
MSRP $225.00

Input Terminal / Adapter

Voltage/Temp.
GS-4VT
4ch Voltage (max. 50V) or Temp. (TC: K & T),
4ch Logic or Pulse
MSRP $425.00

Thermistor
GS-4TSR
4ch Temperature (-40 to 120 ℃),
4ch Logic or Pulse
MSRP $195.00

AC current sensor
GS-DPA-AC
Max. 2 sensors Current (50, 100, 200A RMS), Power in Single or three-phase power system
MSRP $195.00 (adapter) + $125.00 (clamp)

GL100-WL
w/ Wireless LAN
MSRP $295.00
(Main body unit only. Requires sensor/adapter)

Dual port adapter connects up to two modules for simulatenous interface

1.	Temp./Humidity	&	Illuminance/UV
2.	Temp./Humidity	&	Carbon dioxide (CO2)
3.	Illuminance/UV	&	Carbon dioxide (CO2)

Example: 1.

Dual port adapter GS-DPA

Thermistor sensor
GS-103AT-4P (Normal type)
GS-103JT-4P (Ultrathin type)
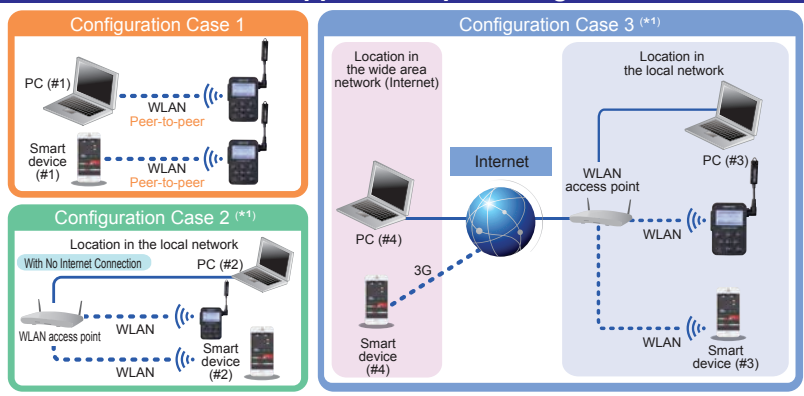
AC current sensor
Example

Line-up includes combined models best suited for application base

GL100 will feature combo solutions that are packaged together and will be offered as a one stop solution as an out-of-the-box-ready item for the specific application that best fits your need.

Combo models for GL100-WL	Temp./Humidity Set: GL100-WL-TH	Acceleration Set: GL100-WL-3AT	Voltage/Temp. Set: GL100-WL-4VT	Thermistor Set: GL100-WL-4TSR
	GL100-WL & GS-TH	GL100-WL & GS-3AT	GL100-WL & GS-4VT	GL100-WL & GS-4TSR
	MSRP $430.00	MSRP $590.00	MSRP $720.00	*Thermistor sensor is not included. MSRP $490.00
Combo models for GL100-N	Temp./Humidity Set: GL100-N-TH	Acceleration Set: GL100-N-3AT	Voltage/Temp. Set: GL100-N-4VT	Thermistor Set: GL100-N-4TSR
	GL100-N & GS-TH	GL100-N & GS-3AT	GL100-N & GS-4VT	GL100-N & GS-4TSR
	MSRP $380.00	MSRP $540.00	MSRP $670.00	*Thermistor sensor is not included. MSRP $440.00

Wireless access will support multiple configurations for both secured and world wide internet access

Configuration Case 1
PC (#1)
WLAN Peer-to-peer
Smart device (#1)
WLAN Peer-to-peer

Configuration Case 2 (*1)
Location in the local network
With No Internet Connection
PC (#2)
WLAN access point
WLAN
WLAN
Smart device (#2)

Configuration Case 3 (*1)
Location in the wide area network (Internet)
Location in the local network
PC (#3)
WLAN access point
WLAN
Internet
PC (#4)
3G
Smart device (#4)
WLAN
Smart device (#3)

Available functions	Configuration Case 1		Configuration Case 2		Configuration Case 3			
	PC (#1)	Smart device (#1)	PC (#2) (*1)	Smart device (#2)	PC (#3) (*1)	Smart device (#3)	PC (#4)	Smart device (#4)
Control of full functions	●		●		●		●(*2)	
Control of simple functions (Start/Stop, Sampling, Alarm)		●		●		●		●(*2)
Display Waveform/ Digital value	●	●	●		●	●	●(*2)	●(*3)
Save data to PC	●		●		●		●(*2)	
Receive message via email		●		●		●	●	●

●: Function is available ●: Function is available in the condition
*1: Multiple PC cannot make connection to the GL100 simultaneously.
*2: Static global IP address needs to be assigned. Or DDNS service needs to be available, and the GL100 needs to be configured as a device in the WAN.

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Incorporate Application Software for General-Purpose or Industry-specific Customized Platform

General purpose application software will continue to have the ability to view in Y-T chart, waveform, and digital values. The new industry-specific customize software will feature targeted software in accommodating users with indicators that are specific and familiar to that industry.
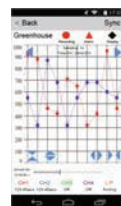
General-purpose software for PC
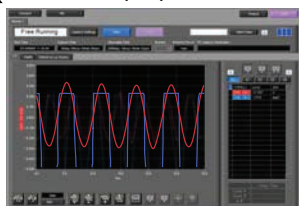
Waveform Screen
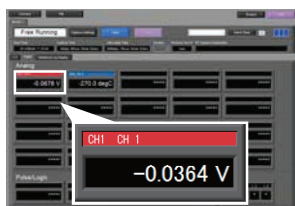
Digital Value Screen

General-purpose software for Smart Device (Android OS/iOS)

Digital Value Screen

Waveform Screen

Industry-specific software (for PC and Smart Device)

Specific-industry	Measurementv capability	Description	
Agriculture	• Temperature Accumulation • Humidity Deficit • Amount of solar radiation • Amount of ultraviolet rays	Confirm temperature accumulation, humidity deficit, solar radiation, ultraviolet rays as part of the vital indicators for healthy plant growth. Measure optimal saturation deficit by understanding the best conditions applied for growth, flowering, and fruiting using temperature accumulation and optimal growth environment analysis.	Available to downlod in end of 2014
Logistics	• Search and display acceleration thresholds • Temperature Accumulation • Humidity Deficit	Transpiration of industrial equipment, temperature controlled transport of food, and warehouse temperature management can all be monitored to provide the safest and secured operation. Safety measurements through monitoring the vibration of the transport vehicles can be vital to heavy-industrial and vibration sensitive equipment. Accumulated temperature monitoring and humidity levels will be vital to keeping food fresh in a controlled environment.	
Power measure-ment	• AC current • Power • Integrated power	Power and electric energy levels will be displayed on the graph using measured AC current locally at the factory, buildings and industrial equipment. Corresponds to three power systems such as two-wire single-phase, three-wire single-phase, or three-wire in three-phase.	

Support your peculiar software

Customize your software using the SDK (Software Development Kit) provided by Graphtec.

The SDK will be available at beginning 2015.

Sufficient capacity for data

Data Capturing Time

Condition	Capturing time
Built-in memory (Approx. 4.9MB)	Approx. 296 days
micro SD memory card	Over 2 years

* File size for captured data is up to 1.9GB on the micro SD memory card.

Condition Example:
Temp./Humidity sensor (GS-TH), 1 minute sampling interval

Available battery option

Battery Operating Time

Condition	Operating time
When saving data to the Built-in memory with WLAN disabled	Approx. 2 weeks

* USB power source will be required for Voltage/Temperature (GS-4VT), and CO2 sensor (GS-CO2).

Condition Example:
Temp./Humidity sensor (GS-TH), 1 minute sampling interval, using Alkaline battery (AA size x 2)

Specifications of GL100-WL, GL100-N

Item	Description
Number of channel	Up to 4 channels (varies by the type of the input module used, and measurement type is fixed with each input module.)
Interface to PC	USB 2.0, Wireless LAN (IEEE802.11b) in GL100-WL
Functions	• Real-time data capturing • Display the captured data value to the LCD in real-time and save the monitoring values • Set conditions using the Menu setting While using Wireless LAN: • Output captured data in real-time • Output the saved data from the internal memory • Full control of the GL100 from the PC application software • Send warnings via the e-mail in GL100-WL (*1) While using USB port: • Output captured data in real-time • Output the saved data from the internal memory • Full control of the GL100 from the PC application software
Display	LCD (backlit monochrome, graphical type)
Storage device	• Built-in RAM (Approx. 4.9 MB) • micro SD memory card * Maximum file size for captured data is 1.9 GB.
Sampling interval	0.5 to 30 seconds and 1 to 60 minutes
Output signal	Alarm (1 channel), Warnings message is sent via the e-mail in GL100-WL (*1)
Power source	• Battery (AA x 2) • USB bus-power (micro USB connector) * The required power capacity is 5V, 1A when AC adapter for microUSB drive is used. AC adapter is not included.
Operating environment	Temperature: -10 ºC to 50 ºC Humidity: up to 80% RH (non condensed) Water resistance: IP54
External dimension	Approx. 66 x 100 x 27 mm (exclude protrusion)
Weight	GL100-N: Approx. 125 g, GL100-WL: Approx. 130 g

Software

Item	Description
Supported OS	Windows: 8.1 / 8 / 7 / Vista (32- or 64-bit), Android OS: 4.3 or later, iOS: 7 or later
Controlled units	Up to 10 units

Accessories

Item	Model number	Description
Thermistor sensor (Normal type)	GS-103AT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range: -40 to 105 ºC
Thermistor sensor (Ultrathin type)	GS-103JT-4P	Sensor for GS-4TSR module, 3 m, 4 pcs/set, Temp. range: -40 to 120 ºC
AC Current sensor	GS-AC50A	For GS-DAP-AC module, Cable 200 mm, Current range : 50 A AC
AC Current sensor	GS-AC100A	For GS-DAP-AC module, Cable 200 mm, Current range : 100 A AC
AC Current sensor	GS-AC200A	For GS-DAP-AC module, Cable 200 mm, Current range : 200 A AC
Dual port adapter	GS-DPA	Connect up to two (2) sensors
Module Extension Cable	GS-EXC	Extension cable for input module, 1.5 m long

Specifications of input module

Temperature & Humidity sensor (GS-TH)

Type of measurement	Temperature, and Humidity Accumulated temp. (calculated value), Dew-point temp. (calculated value)
Measuring range	Temperature: -20 to 85 ºC Humidity: 0 to 100 % RH

Acceleration & Temperature sensor (GS-3AT)

Type of measurement	Acceleration in 3-axis (X-, Y-, Z-axis), and Temperature
Measuring range	Acceleration: ±2 (20 m/s²), ±5 (50 m/s²), ±10G (100 m/s²) Temperature: -10 to 50 ºC
Sampling interval	5 to 100 ms in memory mode, 0.5 s to 60 min. in direct mode (*2)

Illuminance & Ultraviolet sensor (GL-LXUV)

Type of measurement	Illuminance, and UV intensity Accumulated Illuminance (calculated value), Accumulated UV intensity (calculated value)
Measuring range	Illuminance: 0 to 200 klx UV intensity: 0 to 30 mW/cm²

Carbon dioxide (CO2) sensor (GL-CO2)

Type of measurement	Carbon dioxide concentration
Measuring range	0 to 9999 ppm
Operating environment	Temperature: 0 ºC to 50 ºC, Humidity: up to 80% RH (non condensed)

AC Current sensor adapter (GS-DPA-AC)

Type of measurement	Current Power (calculated value), Electric energy (calculated value)
Application circuit	Single-phase two-wire, Single-phase three-wire system, or Three-phase three-wire
Sensor	Clamp-on current probe (optional), Two (2) sensors are able to connect
Measuring range	50, 100, 200 A RMS (varies by the sensor)

Voltage & Thermocouple input terminal (GL-4VT)

Number of channel	Analog voltage 4 channels, Logic or Pulse 4 channels (*3)
Measuring range	Voltage: 20mV to 50V, 1-5V FS Thermocouple: K type (-200 to 1370 ºC) & T type (-200 to 400 ºC) Logic (signal pattern): 0 to 24 V (common ground) Pules (count): Max. 200 counts/sampling intervall, accumulating up to 65535 counts

Temperature sensor input terminal (GL-4TSR)

Number of channel	Sensor 4 channels, Logic or Pulse 4 channels (*3)
Sensor	Thermistor sensor (optional)
Measuring range	Temperature: -40 to 120 ºC (varies by the type of sensor) Logic (signal pattern): 0 to 24 V (common ground) Pulse (count): Max. 200 counts/sampling intervall, accumulating up to 65535 counts

*1: The mail server is required for using the e-mail function.
*2: Memory capacity is up to 128 k samples in the memory mode.
*3: The measurement type for analog input channels can each be separately selected but also available as set of 4 channels.

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* The GL100-WL uses radio waves in the 2.4GHz band. It may interfere with other devices that use radio waves in the same frequency band. Some actions are required to avoid radio interference when necessary. This equipment can be used in the USA, Canada, EU, and Japan by the regulations of the Wireless Telegraphy Act.