

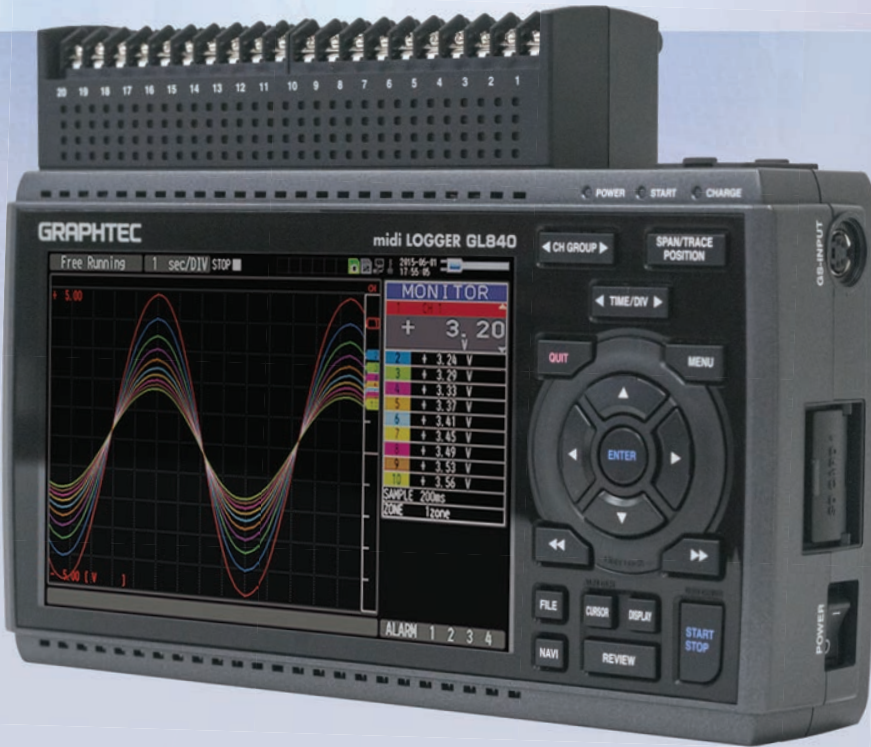
# GRAPHTEC



## midi LOGGER

### GL840-M / GL840-WV

Isolated/Universal Input, Standalone Multi-Channel Datalogger



#### GL840-M (60Vp-p)

Thermocouple/Voltage Logger

Withstands voltage of 350 Vp-p (1 min.)



#### GL840-WV (300Vp-p)

High Voltage Logger

Withstands voltage of 2300 Vp-p (1 min.)



✓ Wireless LAN capability | remote monitoring & datalogging

✓ Flexible input system for wide array of applications | RTD, T/C

✓ Ability to access additional (GL100) sensors & adapters

✓ Extended memory capacity using SD memory card

✓ Max sampling interval up to 10ms

✓ Smartphone access



#### SENSORS | INPUT TERMINAL & ADAPTERS

GL100 Sensors:  
Temp/Humidity, Luxe/UV,  
CO2, AC, Thermistor,  
Acceleration/Temp



# GL840 expands to two models for application specific use

## Multi-Input Model midi LOGGER GL840-M



Suitable for temperature measurement with multiple channels.

## High Voltage Withstand Model midi LOGGER GL840-WV



Suitable for stacked high voltage battery application, or high-precision temperature measurement.

## Expandable up to 200 channels

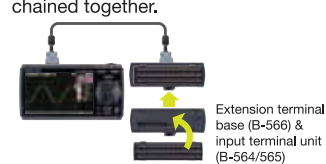
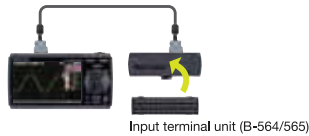
Standard configuration has 20 analog input channels. It is expandable to 200 channels by adding the optional 20 channel extension terminal base unit (B-566) and input terminal units (B-564 or B-565).

The following shows how a standard configuration is expanded to a 40 channel configuration.

1. Terminal unit is removed from the main body of the GL840.
2. Extension terminal base unit (B-566) connects to the GL840 using the external cable (B-567).



3. Terminal unit snaps onto the extension terminal base unit (B-566).
4. The combined extension terminal base set (B-566) and additional input terminals (B-564 or -565) are daisy chained together.



### Configuration for additional channels

Number of channels	20 channels	40 channels	100 channels	200 channels
GL840 unit (GL840-M or GL840-WV)	1 set	1 set	1 set	1 set
Connection cable (B-567-05 or -20)	N/A	1 pc	1 pc	1 pc
Terminal base (B-566)	N/A	2 sets	5 sets	10 sets
Input terminal (B-564 or B-565)	N/A	1 set	4 sets	9 sets

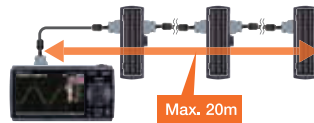
\* Input terminal blocks for the B-564 and B-565 can be mixed together for combined configurations. However, the maximum voltage and accuracy rating for the setup will be limited to the rating of the B-564.

### Offers longer cable for the input terminals

Input terminal blocks can be connected directly (in daisy chain), or using the B-565 cable(s). This allows the input terminals to be placed in separate locations according to the need of the application.

The input terminal and the GL840 main body can be extended by using an extended connection cable.

\* If the signal is affected by noise, it may be required to use a slower sampling.

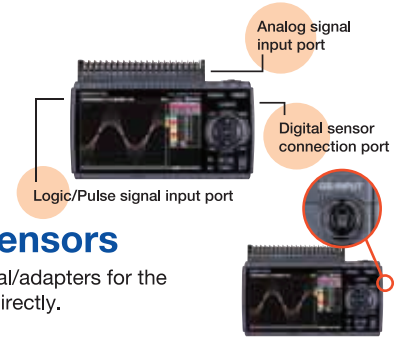


Withstand voltage & Accuracy		Multi-input type (B-564)	Withstand-voltage type (B-565)
Voltage	Input voltage range	20 mV to 100 V	20 mV to 100 V
	Max. voltage (Input - GND)	60 Vp-p	300 Vp-p
Temp.	Thermocouple	R, S, B, K, E, T, J, N, W (WRe5-26)	
	RTD (Resistance Temp. Detector)	Pt100 (IEC751), JPt100 (JIS), Pt1000 (IEC751)	
Accuracy	Voltage	± 0.1% of F.S.	±(0.05% of FS + 10μV)
	Temperature*	± 1.55 °C	± 1.1 °C

\* Accuracy rating for K-type thermocouple at 100°C includes reference junction compensation. Accuracy varies by the temperature levels and thermocouple types.

## Three types of input systems enable measurement of various signals

Along with the basic analog signal, Logic/Pulse, and digital sensors can be all connected to monitor a variety of measurements.



## Support digital sensors

Digital sensors and input terminal/adapters for the GL100 connects to the GL840 directly.

Temp/Humidity GS-TH	Acceleration/Temp GS-3AT	Carbon Dioxide GS-CO2	Illuminance/UV GS-LXUV	Voltage/Temp GS-4VT
Thermistor adapter GS-4TSR	Thermistor	AC current sensor adapter GS-DPA-AC*	AC current sensor	Extension cable**

\* Supports up to two AC current sensors.  
\*\* Allows only one extension cable per port.

### Dual port adapter connects up to two sensors for simultaneous interface



## High performance software with useful functions for the PC (GL100\_240\_840-APS)



- Supports GL840, GL240, GL100  
Up to 10 units of GL840, GL240 and GL100 can be connected to 1 PC simultaneously. Up to 1000 channels are supported.
- Controls settings for GL840, GL240, GL100
- Various measurement screen

Displays data in Y-T waveform, digital monitoring, statistical calculation result. The direct-Excel function enables captured data to be written directly to an Excel file.



### File operation

Data captured in multiple files can be merged into a single file. Using the *combine* function, data can be imported as a new channel overlaying on top of each other. The *bind* function connects the data in a time axis. When using the relay capture mode, the bind feature will append multiple files together into one large, continuous file.

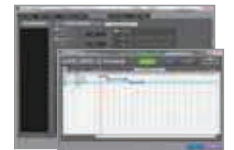
### Useful functions

#### Scheduling function

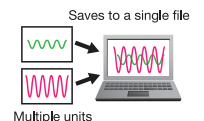
Create a schedule for your monitoring to start and stop at selected time, and set an automatic measurement schedule.

#### Group function

Multiple units can be managed, such as controlling start or stop simultaneously. Data captured by each unit is saved in a single file.



Schedule table is able to create easily using mouse.



### Data format conversion

Converts the GBD (Graphtec Binary Data) format to CSV format. The file size is reduced using the compression function saving a value at particular time point of a specified interval. Or, it will save the average, maximum, or minimum values from the specified time interval as the highlighted values.



# Wireless Measurement Using WLAN (option)

Wireless LAN option enables the wireless communication with other devices. Connects to the GL100-WL wireless unit remotely when set as an access point. When set as a station, PC and smart devices will be able to access the WLAN unit directly.

## Combining GL100-WL and GL240/GL840

GL100-WL can now be connected to the GL840 or GL240 as a remote sensor using the WLAN feature. You can expand your measurement variety by adding the sensors available on the GL100-WL unit. The measured value will then appear in a single file along with the measurement values from the GL840/GL240 main inputs. GL840/GL240 will now take in direct information from the GL100-WL units.

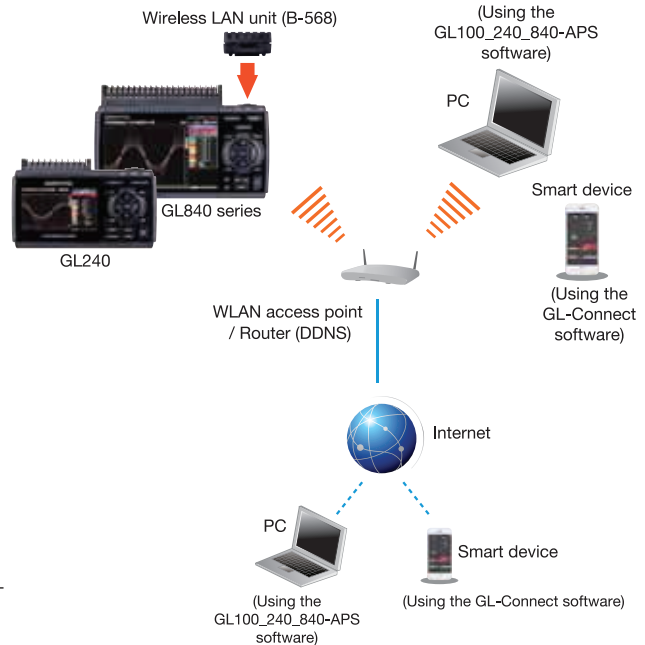


Sensors and input terminals/adapters for the GL100



## Communication with the PC or Smart device

GL840 and GL240 units can be connected to a LAN (Local Area Network) via a WLAN access point. Measured data can be monitored and controlled via a PC or a smart device using the application software. Configuration can be set via the network.



## High quality performance and measurement software with useful functions for the PC & smart device environment

### For PC (GL100\_240\_840-APS)

Software for the PC is included as a standard accessory.

- Monitor and save captured data remotely
- Control the GL840/GL240
- Additional functions

• Scheduling function • Group function • Data format conversion • File operation And more!

### For Smart device (GL-Connect)

Apps for the smart devices are available on the Android OS and iOS platforms. Download them free from the individual stores.

#### Monitoring captured data

Real time captured data can be displayed as digital values in real time on the smart device apps. The saved data on the GL840/GL240 main body can also be displayed in waveform display format.

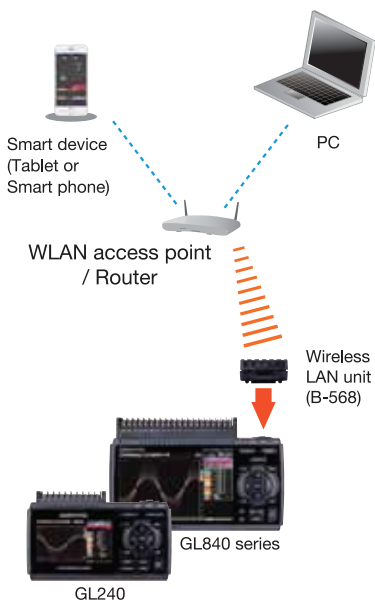
\* Captured data will not be saved on the smart device.

#### Set and control simple functions

Dedicated control features allow remote start and stop, setting the sampling interval, and setting the alarm conditions.

#### Control the settings remotely

Web server function of the GL840/GL240 allows remote control and monitoring using this application.



\* Please type "graphtec" to search for the app.



## Accommodates a wide variety of measurements

### Multifunction analog input ports

Contains a highly isolated input mechanism which ensures that signals are not corrupted by noise from other channels. The GL840 inputs are suitable for combined measurements from voltage, temperature, humidity, logic, and pulse signals.

### 4 channels of Logic/Pulse inputs

Supports 4-channel logic or pulse signal inputs. Pulse mode allows cumulative, instant, or rotational values for industrial measurement capability with speed and flow.

<b>Voltage</b>	Ranges from 20mV to 100V	<b>Pulse</b>	4 channels* Accumulating, Instant or RPM
<b>Temp.</b>	Thermocouple type: R, S, B, K, E, T, J, N, W RTD types (for GL840 only): Pt100, JPt100, Pt1000	<b>Logic</b>	4 channels*
<b>Humidity</b>	0 to 100%RH - using optional sensor (B-530)	* Requires optional input/output cable (B-513). Select either Pulse or Logic input.	

## Large easy-to-read 7-inch wide color LCD

Carries a clear 7-inch wide TFT color LCD screen (WVGA: 800 x 480 dots) for the GL840, and 4.3-inch wide LCD screen. Monitoring data are displayed in waveform or digital form option. Parameter settings can be displayed on the screen.



Waveform display (Analog + Digital)



Digital display



Dual display (Current + Past)



Waveform display (Analog only)

## Useful functions

### Alarm output function

Based on set conditions for each channels, alarm signals can be placed using the four channel alarm output ports.\*

\* Input/output cable (B-513 option) is required to connect the alarm output ports to external buzzer/light mechanism.

### USB drive mode

USB drive mode function enables data to be transferred to the PC from GL840 by drag & drop feature.

### Navigation function

Simple to use navigation screen allows setting operation for measurement and wireless LAN adapter.

## Maximum sampling interval of up to 10ms

Provides faster sampling rates for voltage measurements. You are able to achieve up to 10ms sampling speed when limiting the number of channels in use.

Model	Sampling interval	Number of channel	10ms	20ms	50ms	100ms	200ms	500ms	1s	2s
			GL840	Measuring	Voltage	Yes	Yes	Yes	Yes	Yes
		Temperature	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes
GL240	Measuring	Voltage	Yes	Yes	Yes	Yes	Yes(10ch)	Yes(10ch)	Yes(10ch)	Yes(10ch)
		Temperature	N/A	N/A	N/A	Yes	Yes(10ch)	Yes(10ch)	Yes(10ch)	Yes(10ch)

\* This chart is applicable when the captured data is saved in the GBD binary file format.

Limited sampling speed is available when digital sensors and GL100-WL are used as a remote monitoring device.

## Supports large-size SD memory card for reliable long term measurement

New GL series carries two SD memory card slots for storage device. The SDHC type SD memory card is supported up to 32GB. 4GB SD memory card comes as a standard accessory installed in the first slot.

Capturing time\* (When all 20 or 10 analog channels are being used with Logic/Pulse inputs turned off.)

Model	Sampling	10ms	50ms	100ms	200ms	500ms	1s	10s
GL840	GBD format	31 days	77 days	95 days	108 days	270 days	over 365	over 365
GL840 (20ch)	CSV format	3 days	11 days	16 days	21 days	54 days	109 days	over 365
GL240	GBD format	41 days	88 days	103 days	207 days	over 365	over 365	over 365
GL240 (10ch)	CSV format	3 days	11 days	16 days	36 days	91 days	182 days	365 days

\* Figures are approximate. File size of captured data is 2GB in GBD or CSV file format on this chart.

Sampling interval is limited by the number of channels in use. (10ms: 1ch, 50ms: 5ch, 100ms: 10ch)

Limited sampling speed is available when digital sensors and GL100-WL are used as a remote monitoring device.

### Ring capture function

The most recent data is saved when the memory is configured in ring memory mode. (Number of capturing data is 1000 to 2000000 points)

### Relay capture function

Data is continuously saved to multiple files up to 2GB without losing any data until capturing is stopped when the memory is configured in the relay mode.

### Hot-swapping the SD memory card

SD card can be replaced during data capturing when the sampling interval is 100ms or slower.

### 3 Types of Power Source

Choose from AC power supply, DC supply\* or the rechargeable battery pack.\*

\* DC power drive cable (B-514) and battery pack (B-569) are optional accessories.

### Networking features

#### Web & FTP server function

GL840 can be controlled externally via a network on the WEB browser, which also supports monitoring and transfer of signals and captured data.

#### FTP client function

Captured data is periodically transferred to the FTP server for backup.

#### NTP client function

The clock on the GL840 is periodically synchronized with the NTP server.

\* The GL840 needs to be connected to a LAN environment using the available Ethernet/WLAN ports.

• Due to the possibility of equipment or PC failure, the data files on the instrument will not be guaranteed to be held on the memory. Please make a backup of data whenever possible to avoid data loss.

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• Specifications are subject to change without notice. For more information about product, please check the web site or contact your local representative.

**Warning:** For using equipment in correctly and safely. Before using it, please read the user manual and then please use it properly in accordance with the description. To avoid malfunction or an electric shock by current leakage or voltage, please ensure a ground connection and use according to the specification.

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