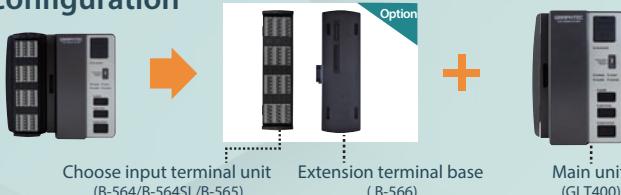


## Multi-use data logger **NEW** midi LOGGER GLT400

### Configuration

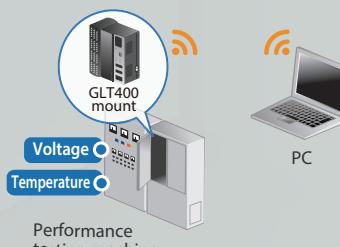


\* The illustration above shows GLT400 and Options (B-564SL+B-566) are installed

- Transferring data to PLC via Modbus/TCP protocol
- DC Power only for -20 to +60 operation
- Supports WEB server, FTP server and FTP client network functions for remote monitoring and controlling.
- High Isolation inputs to ensure signals are not corrupted by noise from other channels
- Connect as a remote terminal unit of GL840

### Mount or embed in a system and remote monitoring by PC.

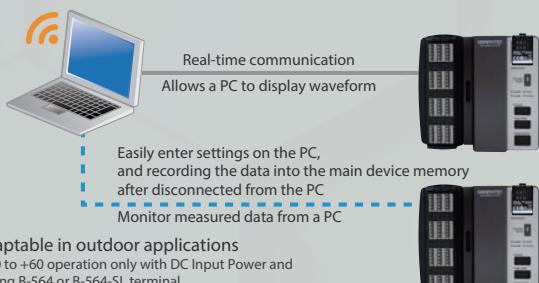
Real time remote monitoring and control via Ethernet, Wireless LAN\* and USB (Software is standard accessory)



Bracket for DIN rail is optional (B-540)

### Enable to use as PC hosted data logger

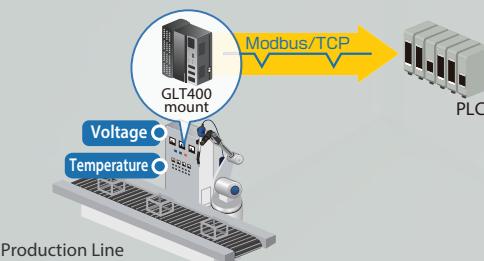
Connection to PC via USB, LAN and Wireless LAN. Standalone or PC hosted data logger for R&D, Quality and Production



Wide range operating environment:-20 to +60°C

### Modbus/TCP for PLC I/O channels. It can be used as additional I/Os.

Bidirectional communication between PLC and GLT400 via Modbus /TCP, Start or stop command can be sent from PLC.



### Connect as a remote terminal unit of GL840

Communications via Ethernet or Wireless LAN.\* (Expand up to 200 ch (incl.GLT400) per GL840 or Up to 5 units of GLT400 can be connected to GL840 host) Setup and control from GL840 and captured data can be stored on GL840 which is measured from GLT400.



\* Requires optional B-568  
When using multiple devices, use Router by WPS

## Selectable terminal for different applications

Choose a terminal for your application needs depending on accuracy, isolation or connection type.

	Standard terminal (B-564)	Screwless terminal (B-564-SL)	Withstand high-voltage high-precision terminal(B-565) <b>NEW</b>
Number of analog channels	20ch/terminal		
Input terminal type	M3 screw	Screwless	M3 screw
Measure range	Voltage 20mV to 100V		
Temperature	ThermocoupleK • J • E • T • R • S • B • N • C (WRe5-26) RTD:Pt100 • JPt100 • Pt1000 (IEC751) *3 wire only		
Humidity	0 to 100 % RH - using the humidity sensor (option B-530)		
Maximum input voltage	20mV-2V Range:60Vp-p(Input between (+)/(-) terminal),5V-100V Range:110Vp-p(Input between (+)/(-) terminal) 60Vp-p(Channel/Channel) 60Vp-p(Channel/GND)		600Vp-p(Channel/Channel) 300Vp-p(Channel/GND)
Accuracy	±0.1%of F.S.		±(0.05%of F.S.+10μV)
Operating temperature	-20 to 60 °C (When used with GLT400)		0 to +45°C (When used with GLT400)

\* Terminals (B-564B, B-564SL, B-565) can be mixed.

However, if you mix with B-565 with B-564 or B-564-SL, the specification of B-565 will be equivalent as B-564 or B-564-SL.

Easy connection with push-in wire terminal (φ0.3 to 1.3mm)

### Option

#### Terminal Base Cover(B-588)

Compatible with all the terminals  
\*Except using with shunt resistor (B-551)



B-588

## Expandable up to 200 channels

From 20 to 200 channels, the GLT400 is scalable to meet your future needs.

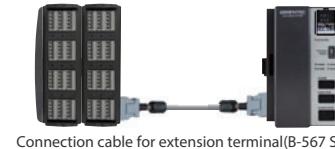
### Direct connection (w/o cable)

Extension terminal base unit connects directly to the GLT400



### Connection cable (Max.20m for 10pcs)

Cable connection between main body and screw terminal or screwless connection types



Connection cable for extension terminal(B-567 Series)

### Option

#### Connection cable for extension terminal



50cm type:  
B-567-05  
2m type:  
B-567-20

### Configuration of direct connection

	20ch	40ch	60ch	80ch	100ch	120ch	140ch	160ch	180ch	200ch
GLT400 main unit	1	1	1	1	1	1	1	1	1	1
Terminal base	1	2	3	4	5	6	7	8	9	10
Input terminal	1	2	3	4	5	6	7	8	9	10

\*Use the connection cable for extension terminal to the device, as you require.

## Long term recording capability

The standard features include a Built-in 4GB Flash memory, and SD card slot up to 32 GB to be used as external storage for recorded data at the same time as transferring the data to a PC.(1 File size is up to 2GB)

### <Selectable from 2 types of file format>

- Graphtec Binary Data(GBD)
- CSV Data which can be open by Excel
- Supplied software allows GBD files to be converted to CSV format



SD memory card

\*Not Supplied

\*SD card cannot be used when the wireless LAN unit is used.

\*Max single file size is 2GB. (use Relay mode to extend recording)

### Sampling Interval and Capturing time

(When all 20 analog channels are being used, File size of captured data is 2GB)

Sampling interval	10ms	50ms	100ms	200ms	500ms	1s	10s
Number of Channels	31days	77days	95days	108days	270days	Over365	Over365
Measuring	3days	11days	16days	21days	54days	109days	Over365

## Notify by Alarm output function

Alarm level can be set for each channel

- Alarm Lamp on device
- Email Alarm Notification
- Alarm Output(4 ports)

Output port can be chosen for each channel

\*Input/Output cable(B-513) is required

## 4 to 20mA Current measurement

- Shunt resistance 250 Ω for current input \*
- Installing 250ohm (0.1%) resistor for converting 1 to 5V
- EU scaling function allows diverse measurements by converting voltage to user defined engineering units.

\*Not compatible with B-564-SL



Shunt resistor250Ω(B-551)

### Ring capture function

The old data is deleted, and most recent data is saved.  
When stop the recording, selected data point is saved.

### Relay capture function

Data is continuously saved with hard disk space or capturing time without losing any data until capturing is stopped.  
The multiple files can be joined on GL-Connection.

## Digital I/O port available (Requires option (B-513))

### Input

- Logic/Pulse inputs ( 4 channels )  
Pulse mode: Instant/Counts/Revolutions
- Signal input for external trigger or external sampling.

### Output

- Alarm output( 4ch)  
When the input value exceeded the threshold level,

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## Selectable power source for different application

### AC100 to 240V

- Powered from AC adapter (Standard accessory)

\* Supplied AC adapter does not comply with -20 to 60°C operating environment specification.  
If you need to have the harsh operating environments specification, please contact the Graphtec sales office.

### DC 8.5 to 24V

- Powered from DC Drive Cable (Requires option (B-513))

### USB PD

- USB PD compliant battery and AC adapter (Supported USB PD 2.0 later)

\*Not supplied

## Standard Accessory for 2 types of PC software and web browser function

### Software

#### GLT400 SETTING APP

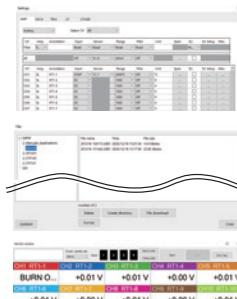
#### Simple Operation S/W

Easily enter settings and monitor measured data from a PC.

GLT400 is ideal for use with single unit. GLT400 inherited the setting screen menus from GL series.



▲ Connect on the main screen



- Sets the various settings by push button  
※When Remote mode is set, remote settings are displayed in the screen
- View recorded data files, download and delete data files on your PC through simple software manipulations.
- Displaying the current value of GLT400 and controlling the capturing start.

### Software

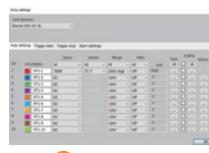
#### GL-Connection

#### Advanced Function S/W

Max 20 units of GLT400 can be connected.

Display modes come standard with a Y-T View, Digital View, XY View and FFT View. Contains direct Excel functions and a file connection function.

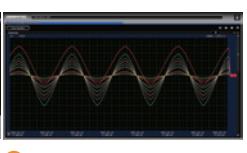
Can convert GBD files to CSV format.



▲ Setting screen



▲ Measurement Screen (4 Screen)



▲ Measurement Screen (1 Screen)

Direct Excel function installed

A function that transfers recorded data directly to specified Excel template file with recording start. Creates a measured data file when stop recording by utilizing a computational expression and macro in combination.

### Useful function

#### Web browser function

GLT400 can be controlled, monitored, and data transferred to PC via web browser.



- <<Supported browser>>
- Google Chrome(Recommended)
- Microsoft Edge
- Fire Fox

#### Simple Operation S/W

Transferring device data to PC with drag and drop.

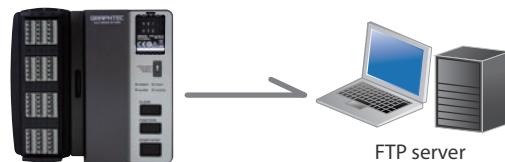
### Useful function

#### FTP backup functions

Periodically backing up recording data to FTP server.

Backup Interval: 1H・2H・6H・12H・24H・per file

When the upload is succeeded, the file can be deleted automatically from device memory.



#### Remote monitoring & Data sharing

### Available functions on 2 software and web browser

	GLT400 SETTING APP	GL-Connection	WEB browser
Device connection	Wire LAN	●	●
	Wireless LAN	●	●
	USB	●	×
Number of connected units	1 unit	20 units	1 unit
Device setting	●	●	×
Device control(Start/Stop)	●	●	●
Display data	Digital value	●	●
	Waveform	×	●
	Other	×	●
Redisplaying the recorded file	×	●	×
Connect/Disconnect during recording	●	×	●
Data transfer to PC	●	●	●
File conversion (CSV)	×	●	×
Supported model	GLT400 only	GL Series *	GL Series *

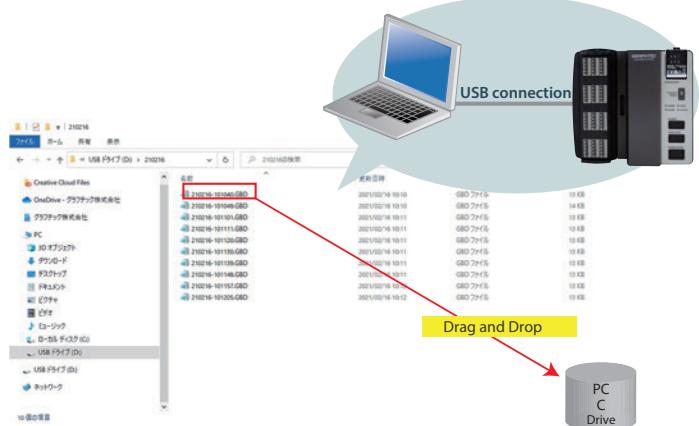
※GL7000・GL2000・GL980・GL840series・GL240・GLT400(Currently-used models only)

### Useful function

#### USB Drive Mode

#### Easy&Convenient

Internal memory is recognized as a removal disk, this mode facilitates file manipulation such as transfer and deletion.



SDK (Software Development Kit) is offered for free

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### Main unit speciation's

Item	Description	
Number of analog terminal units	Up to 10 units (200CH)	
Sampling speed	10msec to 1 hour (Only voltage:10ms to 50ms with limited channels), External (Able to select at only "STAND ALONE" mode) (*1)	
Trigger / Alarm Functions	Repeat Trigger	Off- On
	Trigger conditions	Start/Stop: Off, level value, alarm, external input, specified time, specified day of the week, certain time
	Alarm judgment modes	Combination: Analog, Logic or "AND" / "OR" of pulse Analog judgment: H (↑), L (↓), Window In, Window Out Logic judgment: Pattern Pulse judgment: H (↑), L (↓), Window In, Window Out
	Operation of the alarm output function	Alarm Lamp on device, Email Alarm Notification, Alarm Output (4channels ("REMOTE" 1 channel only))
	Alarm output (hold function)	Yes
External Input/ Output (* 1)	Input/output types	Trigger input (1 ch) or External sampling input (1 ch) Logic input (4 ch) or Pulse input (4 ch) (Only for STAND-ALONE mode)
	Input specifications	Input voltage range: 0 to +30 V (single-ended ground input) Input signal: No-voltage contact (a-contact, b-contact, NO, NC), Open collector, Voltage input Input threshold voltage: Approx. +2.5 V, Hysteresis: Approx. 0.5 V (+2.5 to +3 V)(*7)
	Alarm output specifications	Alarm output: 4CH ("REMOTE" 1 channel only) Output format: Open collector output (5 V, pull-up resistance 10kΩ) <Maximum ratings of output transistor> Collector-GND voltage: 50 V, Collector current: 2 A, Collector dissipation: 0.3 W
	Maximum number of pulse inputs	Maximum input frequency: 50kHz, Maximum number of count: 50k/sampling (16-bit counter)
Math Channels	Computation types: +,-,x,/(Arithmetic) CH:Input Channel(CH1 to 200)	
Scaling function(EU)	4 points can be set for each channel, Temperature range: 2 points is available	
Annotation Input	Alphanumeric, Number of characters: 31 Function: A comment can be input for each channel	
PC I/F	Types	Ethernet (10BASE-T/100BASE-TX), USB 2.0, Wireless LAN (Option)
	Functions	Transfer device data to the PC, control device from PC, and connect as a remote terminal unit of GL840
	Ethernet functions	Web server function, FTP server function, FTP client function, NTP client function, DHCP client function, DHCP server function, Modbus/TCP communication
	USB functions	USB drive mode: Transfer and delete the captured files in the internal memory or SD CARD
	Realtime data transfer speed	10 msec/1 ch maximum * The transfer speed varies depends on the number of channels.
Memory devices	Internal memory	Approx. 4GB
	External memory slot	SD CARD slot: 1 (Compatible with SDHC, up to approx. 32GB memory available)
	Maximum size for 1 file	1 File size is up to 2GB
Capture function	Memory contents	Setup conditions / Measured data
	Functions	OFF, Ring capturing, Relay capturing
	Ring capturing	If the number of recordings is exceeded "1000 to 2000000", recording will continue on another file with deleting the oldest one. When ring capture is ON, the possible recording time becomes less
	Relay capturing	The captured data is continuously captured by files separated in the set relay unit without losing data.
	File format	GBD (Graphtec Binary Data)Format/CSV Format
Data backup function	Functions during capture	Replacement of SD CARD
	Backup interval	OFF, 1, 2, 6, 12, 24 hours, Each file
	Backup destination	Internal memory, SD card, FTP
Operating Environment	Data format	GBD-CSV
	AC Adapter	-20 to +60°C only when using B-564 or B-564SL input terminals & DC power.
	DC power	0 to +45°C when using B-565 input terminal or AC Adapter.
Power source	USB PD	5 to 85%RH. (non condensed) (When using the USB PD as the power supply, the spec. is based on power supply requirements.)
	AC Adapter	AC 100~240V / 50~60Hz
	DC power	8.5 to 24V DC (Maximum 26.4V)(Requires option (B-514)
Power consumption	External dimensions [WxDxH] (approx.)	Standard terminal (B-564) or Screwless terminal (B-564SL): 187.5 x 183 x 65.5 mm
	(excluding protrusions)	Withstand high-voltage high-precision terminal (B-565): 187.5 x 183 x 73.4mm
	Weight (approx.)	Standard terminal (B-564) is attached: 1090g Screwless terminal (B-564SL) is attached: 1020g Withstand high-voltage high-precision terminal (B-565) is attached: 1120g
Others		
Vibration: Automobile parts Type 1 Class A equivalent		

\* 1: The Input/output cable for GL-B-513 (option) is required to use the external I/O function.

\* 2: (Each file can be selected only when the backup destination is set to FTP and the captured file is deleted when the backup of the FTP client settings is activated normally)When the RING mode or external pulse synchronization sampling is selected for recording, the backup function is not available. When there are many active channels or the sampling time is fast or the backup interval is long, it may take time to close the data file after recording stops because the size of the data to be backed up becomes large.

When saving file to FTP server using wireless LAN connection, backup may fail depending on the communication condition.

Available sampling speed is 100 ms or slower when using the CSV format.

When backup is enabled and data file format is specified as CSV format, SD memory card exchange (hot-swapping) and RELAY recording are not available.

\* 3: We cannot support OS that is no longer supported by the OS manufacturer.

\* 4: Thermocouple diameter: T - K: 0.32 φ, others: 0.65 φ

\* 5: 3-wire system

\* 6: When you are not used B-542, available for only one humidity sensor. Allowable temperature range:-25°C to +80°C(Built to order with 10m,15m and 20m)

\* 7: Switch between Logic and Pulse. Switch between Trigger and External sampling.

\* 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.

\* Brand names and product names listed in this brochure are the trademarks or registered trademarks of their respective owners.

\* Items mentioned are subject to change without notice. For more information about product, please check the web site or contact your local representative.

### Important safety instructions

- Before using it, please read the user manual and then please use it properly in accordance with the description.
- To avoid malfunction or electric shock, please ensure ground connection and use it in specified power source.

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GLT400\_KE10684\_1D

