
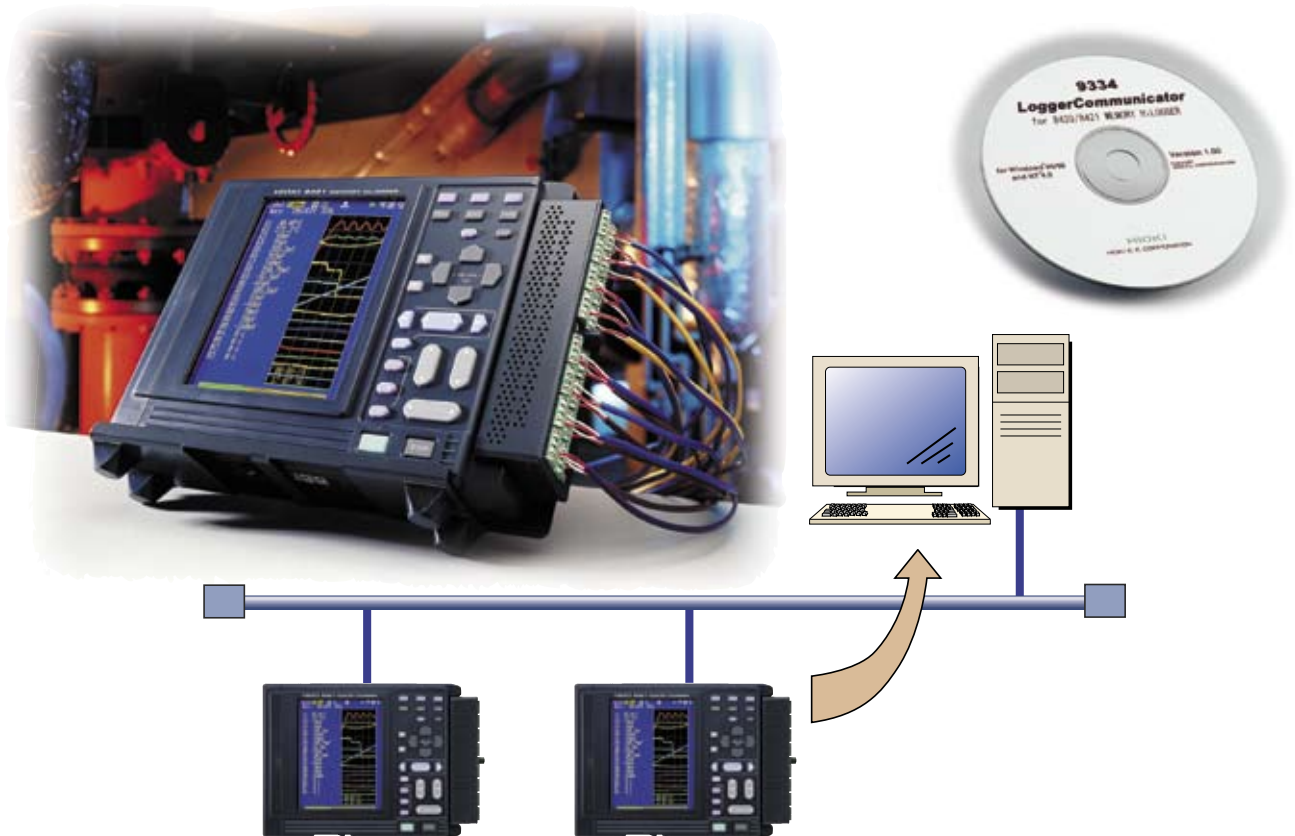


## 9334 LOGGER COMMUNICATOR

Data Loggers 



## Measure a multitude of items over a network

**Program that enables data collection using Ethernet and data analysis in Windows**

In addition to their data collection capabilities, our 8420-51, 8421-51 and 8422-51 MEMORY HiLOGGERS feature multiple channel temperature recording capabilities and are completely portable, making them very popular with our users. HIOKI developed the 9334 LOGGER COMMUNICATOR as a Windows program to enable real-time data collection on a PC. The 9334 LOGGER COMMUNICATOR allows you to connect up to sixteen 8420-51 to 8422-51 MEMORY HiLOGGERS via LAN and measure up to 512 items.



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091



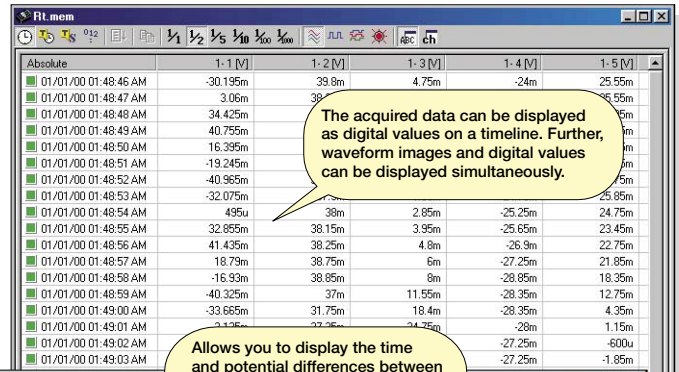
<http://www.hioki.co.jp/>

HIOKI company overview, new products, environmental considerations and other information are available on our website.

# PC-based data collection and data management are just a click away

## Verify trend graphs and measurement values in real time from a PC

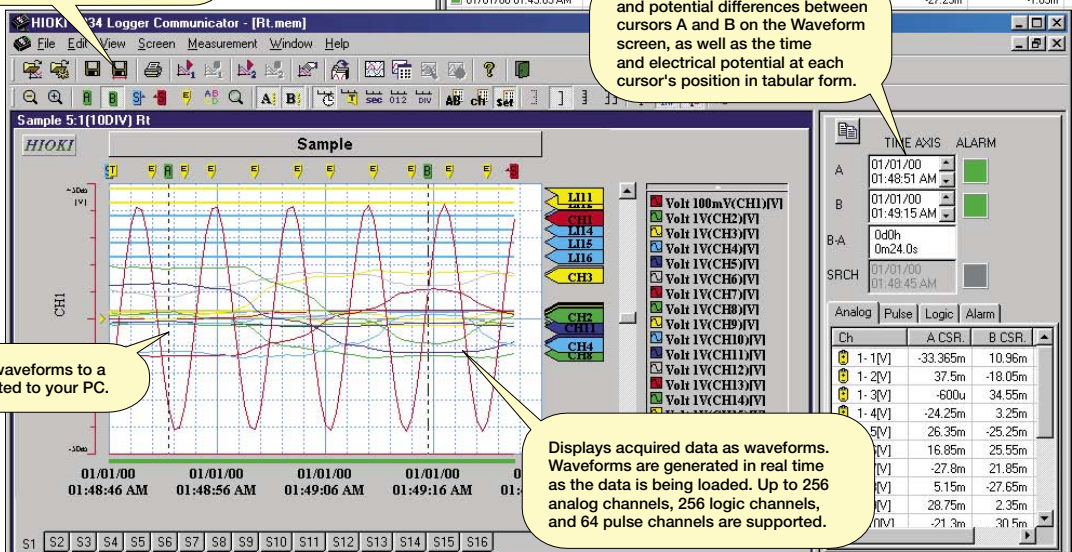
Data can be downloaded in real time to a hard disk on your PC from a HiLOGGER connected to a LAN. You can check measurement results from the beginning of measurement to the current measurement result on the Waveform Display and Numerical Value Display screens.



All the acquired data or the area between the A or B cursor can be converted to CSV text format. Data can be used in spreadsheets such as Excel or DADiSP (an engineering spreadsheet used for data analysis).

The acquired data can be displayed as digital values on a timeline. Further, waveform images and digital values can be displayed simultaneously.

Allows you to display the time and potential differences between cursors A and B on the Waveform screen, as well as the time and electrical potential at each cursor's position in tabular form.

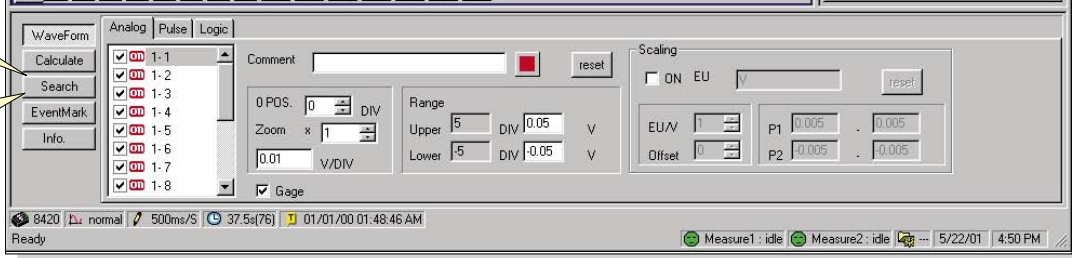


You can print waveforms to a printer connected to your PC.

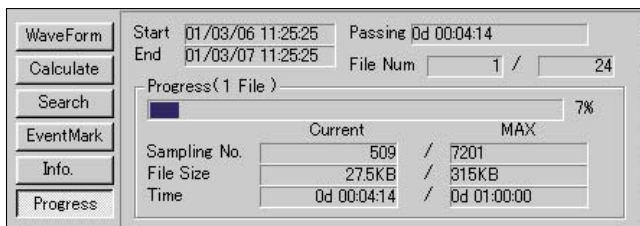
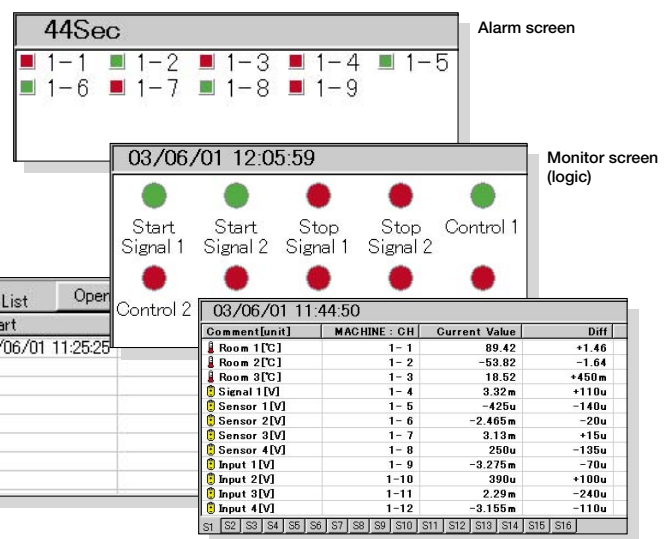
Displays acquired data as waveforms. Waveforms are generated in real time as the data is being loaded. Up to 256 analog channels, 256 logic channels, and 64 pulse channels are supported.

Calculates the parameters for the maximum value, the time, and the average value of acquired data.

In addition to being able to use recorded event markers to perform searches, you can specify criteria and search your data for items such as the date, maximum value, and minimum value.



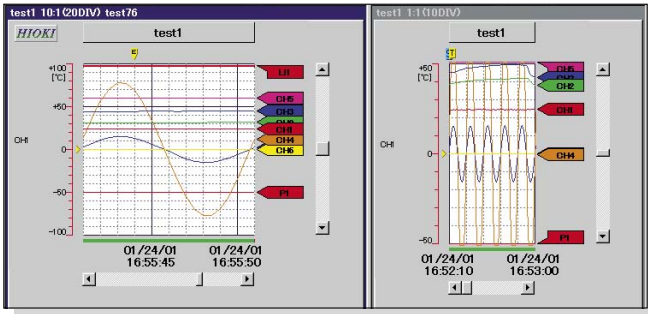
Signals can be displayed as a graph on the Alarm or Monitor (logic) screens, while current measurement values are displayed in a list on the Monitor screen (analog).



Measurement Status screen displayed in the Settings screen

Monitor screen (analog)

## I want to view data while measuring...



Split screen Waveform Display screen

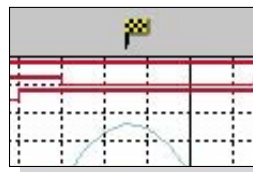
While performing measurements, the Waveform Display screen can be divided in half so that you can observe previous trends while viewing the current waveform. Previous trend cursor measurements and parameter calculations are possible.

## Quickly find events

You can jump to positions that fulfill event markers and specified criteria, and display the waveform and search position measurement value.

In addition to event markers, you can specify the following search criteria:

- time axis
- peak position
- level
- maximum position
- valley position
- window
- minimum position
- alarm position
- volume of change



Search marker (Waveform Display screen)

SRCH	03/06/01	12:13:55
Analogue   Pulse   Logic   Alarm		
Ch	SRCH POS.	
Room 1 [°C]	327.67	
Room 2 [°C]	37.91	
Room 3 [°C]	-51.38	
Signal 1 [V]	415u	

Measurement value at the search position (Cursor screen)

Settings screen for search criteria

## Statistical functions make data evaluation easy

CH	Average	P-P	Max.	MaxTime	Min.	MinTime
Room 1	24.7479	370m	24.92	51Sec	24.55	234Sec
Room 2	32.43715	14.13	42.27	45.5Sec	28.14	150Sec
Room 3	45.92314	19.7	54.06	79Sec	34.36	179.5Sec
Signal 1	187.32113u	158.01m	78.92m	42.5Sec	-79.09m	47.5Sec
Sensor 1	60.04355m	75u	60.08m	92Sec	60.005m	76Sec
Sensor 2	19.6589u	70u	55u	87Sec	-15u	15Sec
Signal 2	126.87198u	158.45m	79.1m	173Sec	-79.35m	57.5Sec

Event Marker Search screen

13 types of numerical calculations can be displayed for all the areas or a specific area only. In addition to being able to display the average, maximum, and minimum values, you can display the operation time and rate by selecting the ON time option.

Use the **LOGGER COMMUNICATOR** to calculate the following:

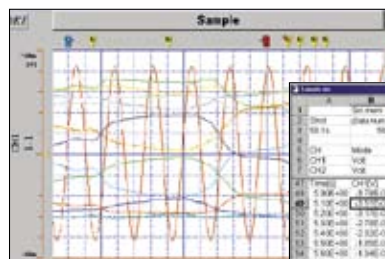
- average value
- maximum value
- maximum time
- minimum value
- standard deviation
- number of times turned ON
- number of times turned OFF
- peak-to-peak value
- ON time
- OFF time
- number of times turned ON
- minimum time
- integration
- area values

## Converting data to CSV format

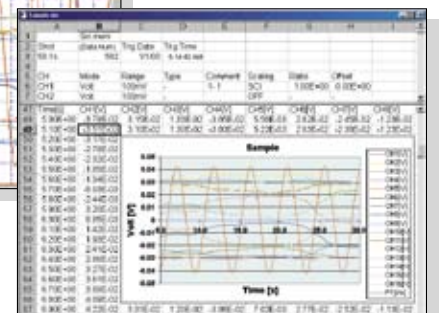
You can convert a specific area (partial conversion) or the entire displayed waveform into CSV format.

The cropping option can be activated or deactivated.

Once in CSV format, the file can be opened in a spreadsheet or other programs for further processing.



Waveform Display screen



A sample screen showing data that has been converted into CSV format and opened in Excel.

## ■ Supports multichannel measurement over a network

The 9334 LOGGER COMMUNICATOR is a program for use on a PC and supports the connection of up to sixteen 8420-51, 8421-51, and 8422-51 MEMORY HiLOGGERS via LAN. This allows the simultaneous data collection and display of up to 512 analog channels, 256 logic channels, and 64 pulse channels. Measurement data can be downloaded to the disk drive of your PC in real time.

By connecting your PC, HUB, and LAN with their respective cables, you can easily use the 8420-51 to 8422-51 as multipoint loggers.

## ■ Wide variety of display screens

In addition to the Waveform Display screen, the 9334 allows you to display other screens, such as the Numeric Display Screen, Monitor screen, and Alarm screen. This allows you to display multiple screens, which means that you can view waveforms and numerical values simultaneously, or confirm the status of alarms on the Alarm screen while viewing the current values on the monitor. Furthermore, you can print waveforms displayed on the Waveform screen if you have a printer connected to your PC

## ■ I want to view data while measuring...

The Waveform Display screen can be divided in two so that you can observe previous trends while viewing the current trend. Previous trend cursor measurements and parameter calculations are possible.

## ■ Converting data and opening it in spreadsheets

Widely used spreadsheet programs (such as Excel) can be used to edit measurement data and create reports. The 9334 LOGGER COMMUNICATOR allows you to convert acquired waveform data to CSV format.

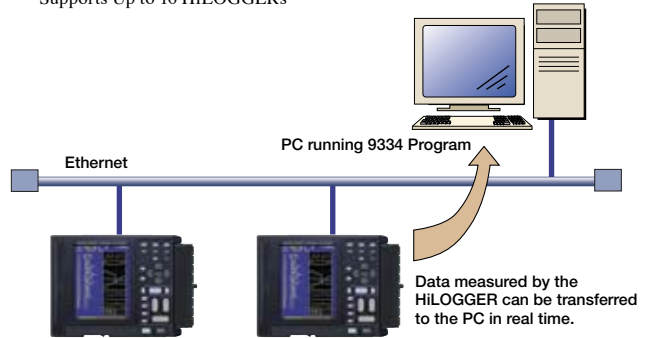


## 9334 LOGGER COMMUNICATOR

(Windows 95/98, NT4.0/2000/XP English version)

## ■ Real-Time Data Collection on a PC (TCP/IP Communications)

Supports Up to 16 HiLOGGERS



### Advantages of Ethernet - TCP/IP Connection

- 10Base-T cables may be up to 100m long.
- The 9334 LOGGER COMMUNICATOR program is available for immediate use on the PC.
- Automatic retransmission capability provides better error handling than RS-232C serial communications.

### 9334 LOGGER COMMUNICATOR specifications

<b>Compatible units</b>	8420-51, 8421-51, and 8422-51 MEMORY HiLOGGER
<b>Media</b>	One CD-R
<b>Operating environment</b>	Computers running under Windows 95/98/Me or Windows NT4.0/2000/XP. CPU: Pentium (133 MHz) or later, 64-MB memory or more
<b>Data transfer functions</b>	<ul style="list-style-type: none"> <li>■ <b>Interface:</b> Ethernet</li> <li>■ <b>Number of units supported:</b> 16</li> <li>■ <b>Number of measurement systems:</b> eight</li> <li>■ <b>Internal memory:</b> Internal memory data can be loaded from the 8420-51s</li> <li>■ <b>Real-time transfer:</b> data can be loaded in real time (maximum file size: up to 200 MB), real-time load settings can be made using the remote control</li> </ul>
<b>Display functions</b>	<ul style="list-style-type: none"> <li>■ <b>Waveform Display:</b> displays acquired waveform data as images</li> <li>■ <b>Real-time Display:</b> displays real-time transfers as images and allows the time axis to be split</li> <li>■ <b>Digital Value Display:</b> displays waveform data as digital values, and allows images and digital values to be displayed simultaneously</li> <li>■ <b>Cursor function:</b> allows you to display the time and potential differences between cursors A and B, the time and electrical potential between each cursor, and the absolute and relative times</li> <li>■ <b>Scroll function:</b> available</li> <li>■ <b>Maximum number of channels:</b> 256 analog channels, 256 logic channels, and 64 pulse channels</li> <li>■ <b>Data load format:</b> real-time and memory</li> <li>■ <b>Alarm Output Display:</b> possible</li> </ul>
<b>Storage function</b>	<ul style="list-style-type: none"> <li>■ <b>Memory content:</b> criteria settings and measurement data (binary and text formats)</li> </ul>
<b>Data conversion functions</b>	<ul style="list-style-type: none"> <li>■ <b>Target data:</b> all data or data between cursors A and B</li> <li>■ <b>Data interval:</b> simple interval, average value, absolute and maximum values, maximum and minimum values (can be selected when saving)</li> <li>■ <b>Data conversion:</b> can convert analog and pulse waveform data into numerical values and logic data into binary</li> <li>■ <b>Data conversion format:</b> CSV</li> <li>■ <b>Conversion channel:</b> can be selected when saving</li> </ul>
<b>Print functions</b>	<ul style="list-style-type: none"> <li>■ <b>Target data:</b> all data or data between cursors A and B</li> <li>■ <b>Print format:</b> waveforms and numerical values</li> </ul>
<b>Parameter calculation functions</b>	<ul style="list-style-type: none"> <li>■ <b>Target data:</b> all data or data between cursors A and B</li> <li>■ <b>Calculation items:</b> average value, peak value, maximum value, maximum value time, minimum value, minimum value time, ON time, OFF time, number of times ON, number of times OFF, standard deviation, area</li> </ul>
<b>Other</b>	<ul style="list-style-type: none"> <li>■ <b>Marking function:</b> inserts an event marker at the start of measurement</li> <li>■ <b>Search functions:</b> Select from event marker, date (absolute and relative time), trigger, maximum, minimum, peak, valley, alarm, level, window, or volume of change</li> </ul>

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