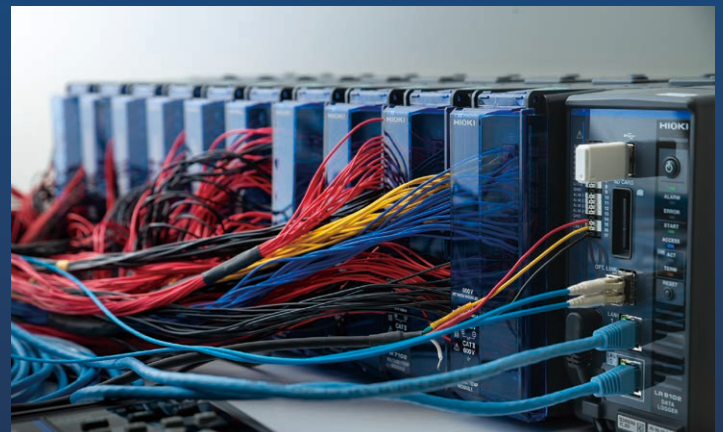


## Find the Logger You've Been Looking For

Fully isolated channels and noise resistance provides unmovable reliability

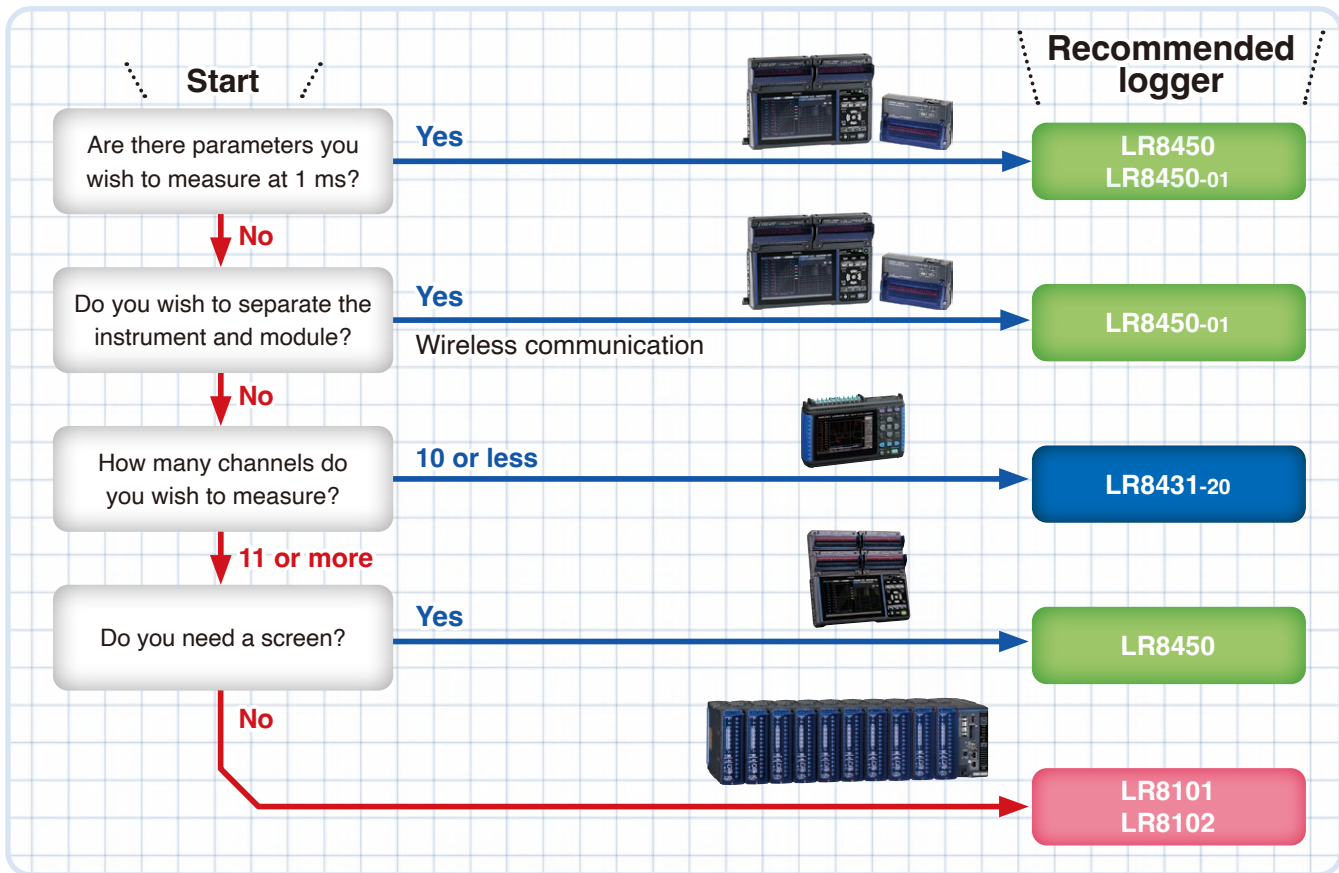
PC application with convenient analysis capabilities

Instrument and sensor combinations to meet various needs








# Extensive lineup of data loggers

## Selection guide

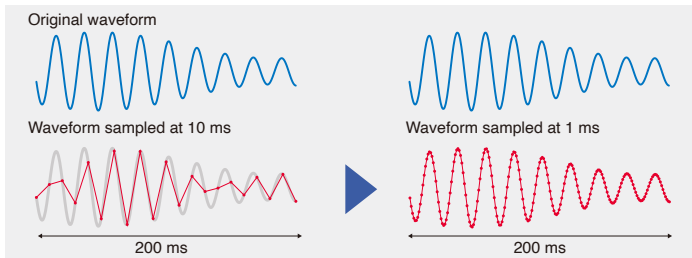


## Comparison

Model spec Items	LR8450 standard	LR8450-01 standard/wireless LAN	LR8431-20 small and versatile	LR8101 for systems, standard	LR8102 for systems, advanced
					
Channel count	5 to 120	5 to 330	10	15 to 300	15 to 3000
Maximum sampling interval	1 ms	1 ms	10 ms	5ms	5 ms
Wireless	-	Wireless LAN	-	-	-
Input	Voltage Current Thermocouple RTD Thermistor Humidity Resistance Strain Pulse/logic CAN	Voltage Current Thermocouple RTD Thermistor Humidity Resistance Strain Pulse/logic CAN	Voltage - Thermocouple - - - - - Pulse -	Voltage Current, power Thermocouple - - - - Pulse/logic -	Voltage Current, power Thermocouple - - - - Pulse/logic -
Module	U8550 to U8557	U8550 to U8557 LR8530 to LR8537	no module needed	M7100, M7102, M7103	M7100, M7102, M7103
Interface	LAN, USB	LAN, USB	USB	LAN	LAN
External memory	USB drive SD memory card	USB drive SD memory card	USB drive CF card	USB drive SD memory card	USB drive SD memory card
Battery-powered	✓	✓	✓	-	-

# Features

## Fully isolated channels & sampling in 1 ms LR8450/LR8450-01

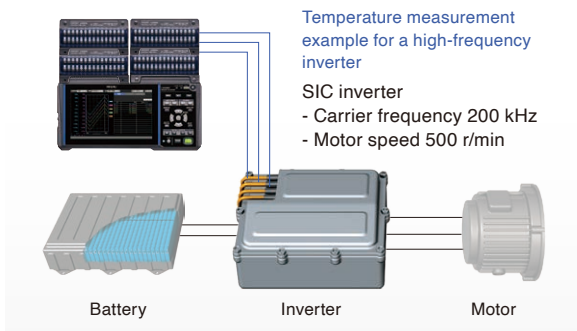


Observe high-speed waveforms, for example of vibrations, with sampling in as short as 1 ms.

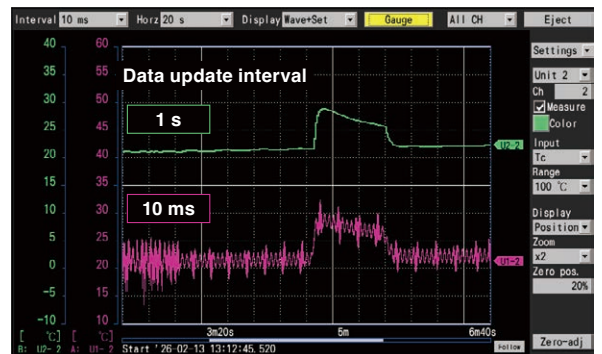
For voltage measurement and temperature measurement using thermocouples, all models feature isolated input for all channels. This design lets you make connections without worrying about shorts, and allows you not to worry about interference or electric shock.

Users need measurement solutions that are capable of accommodating abrupt changes in load as well as chassis vibrations in the development of electric vehicles such as EVs, HEVs, and PHVs. The LR8450 offers high-speed sampling in as short as 1 ms, allowing it to track waveforms that cannot be captured using 10 ms sampling.

## Noise resistance for solid reliability LR8450/LR8450-01



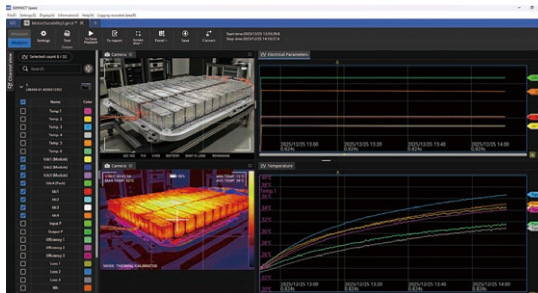
Even in environments where high voltage and high frequency currents are applied (e.g., in the development of inverters and motors), the LR8450 is not easily affected by noise and can perform stable measurements. High-sensitivity data that handles minute changes, such as temperature, can also be acquired with high reproducibility and minimal variation.



Data update intervals are configured independently for each measurement module. When measuring high-speed phenomena such as vibration or switching signals together with temperature, set a slower update interval for the temperature channels. This reduces susceptibility to noise and ensures stable, reliable readings.

## Connectivity for predictive maintenance

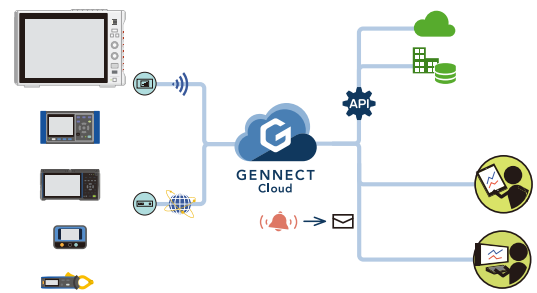
### GENNECT Space: measurement data integration platform



Designed as a next-generation data hub, Gennect Space supports 1 ms sampling and up to 3,000 channels. It centralizes data from compatible Hioki instruments and supports synchronized viewing of numeric signals, video, and location information on a common time axis.

(LR8450 and LR8450-01 are supported)

### GENNECT Cloud: a cloud service operated by Hioki



Connect instruments and monitor measurement sites anytime, from anywhere. Detect anomalies. Control instruments. Gennect Cloud promises to reliably improve both work quality and speed. License plans are available in both free and paid variants.

### Communication commands & LabVIEW® driver

Preventive maintenance requires replacing parts in manufacturing equipment regularly. This inevitably increases maintenance costs. You can reduce these costs by implementing predictive maintenance. By monitoring with data loggers, you can forecast when parts will need to be replaced. This enables you to replace only the minimum number of parts.

If you use communication commands and the instrument's LabVIEW® driver\*, you can capture data such as vibration and temperature for manufacturing equipment, send the data to an upstream server via LAN, and replace parts when you find increases in vibration or temperature.

\*L8431 is not supported

### Compact, easy-to-install loggers

#### WIRELESS MINI LOGGER LR8512 series



This compact logger can collect data wirelessly. You can configure settings and collect data from a smartphone, tablet, or PC. The instrument can record a variety of parameters, including temperature, current, and pulse input, with the capability of collecting 500,000 data points per channel.

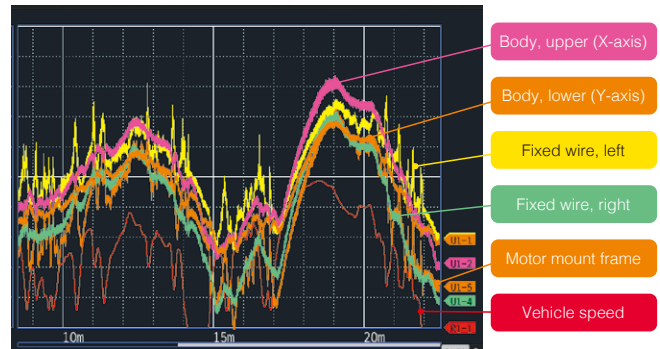
(Not compatible with the LR8450-01)

# A proposal from Hioki



## Fast sampling speed of 1 ms, even with wireless modules! Data Logger LR8450-01

This data logger can measure up to 330 channels when connected to four plug-in modules and seven wireless modules. It performs isolated high-speed voltage recording with its high-speed modules capable of sampling intervals as short as 1 ms.



Measurement with strain gages affixed to an automobile body (measured while driving)



### Wireless modules save wiring!

Wireless modules are ideal for multi-point measurement and measurement in remote locations. Using wireless modules lets you reduce the time and cost of connecting and routing large numbers of wires.



### Sampling in as short as 1 ms!

The instrument delivers 1 ms sampling despite its portable design. It can also record sensor output such as pressure and vibration.



### Strain modules with built-in bridge boxes!

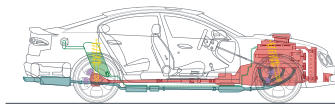
Simply connect gages to the strain module and you're ready to go. You can also use strain gage-type converters.

## Applications

### If you need to measure dynamic strain



Stress or load of moving parts



Brake or pipe strain

#### High-speed data logger + strain modules + strain gages

Strain modules have a built-in bridge box. This design lets you connect strain gages directly and measure vibration or pressure at up to 1 ms sampling.

MEMORY HiLOGGER LR8450 + STRAIN UNIT U8554

### If you need to measure current and voltage RMS values



#### Current probe (current) + differential probe (voltage) + data logger

Combine a current probe and a differential probe to measure either AC or DC current and voltage.

CURRENT SENSOR series CT7800, CT7700, CT7100, and CT7040  
DIFFERENTIAL PROBE P9000-02 (RMS output)

### If you need to measure power

Interfaces vary with the digits after the model-number's hyphen (e.g. 02 of PW3337-02)



PW3337

#### Power meter with D/A output paired with data logger

Measure power by combining the logger with a power meter that provides D/A output, for example the PW3337-02.

#### Power meters and their interfaces

PW3335-02, -04 (AC/DC single-phase 2-wire)  
PW3336-02, -03 (AC/DC single-phase 2-wire to three-phase 3-wire, 2ch)  
PW3337-02, -03 (AC/DC single-phase 2-wire to three-phase 4-wire, 3ch)

### If you need to measure resistance variations



RM3545A

#### Resistance meter and Battery HiTester + data logger

Measure resistance variation by combining the logger with a resistance meter that provides output functionality, for example the RM3545A. Simultaneously measure the temperature and resistance variations of parts or battery internal resistance, for example in a constant-temperature.

RESISTANCE METER RM3545A  
BATTERY HITESTER BT3562A

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