Information NEW

HIOKI

TEquipment.NET USA
An Interworld Highway, LLC Company

WIRELESS LOGGING STATION LR8410-20

Data Loggers

Wireless data link

No-fuss Wiring

Easy data capture

QUICK SET function

Quick configuration

Logging Multi-point Data Has Never Been So Easy

Introducing* HIOKI*'s new, multi-channel wireless logger with Bluetooth® technology!

HIOKI's new LR8410-20 Wireless Logging Station captures data from remotely installed logging modules wirelessly. Two types of logging modules provide measurement and recording capabilities for **voltage**, **temperature**, **resistance**, and **humidity** data. Each station can control up to seven logging modules (for a total of **105 channels**), and data is logged using a high-speed sampling process that scans **all channels every 100 ms**. Wireless technology makes it possible to log over 100 channels of data in applications where it would be difficult to use a conventional logger, such as high locations where wiring would be difficult or inside secured control panels. Since the logging modules can be placed right next to the system to be measured, long wires and connection complexities are minimized. The new LR8410-20 dramatically expands the potential of the multi-channel logger.

CE

ISO 9001 JMI-0216

ISO14001 JQA-E-90091

INTERNET HIOKI Website www.hioki.com

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

Countries and regions where Bluetooth® operation is currently supported: Japan, U.S.A., Canada, Europe

Wire-free data capture

100 ms sampling of all channels

Wireless data transmission !

Capture data from remote locations reliably with HIOKI's new *Bluetooth*®-enabled wireless logger !

15 channels / unit

LR8510: Voltage/ Temperature (Thermocouples)

LR8511: Voltage/Resistance/ Humidity/Temperature (Thermocouples, Pt100)

Since input units can be placed close to measurement targets, wire lengths are reduced and wiring complexity is eliminated.

Data is sent wirelessly from the logging modules to the Wireless Logging Station over line-of-sight distances of up to 30 meters, facilitating measurement at locations from which it would be difficult to route wires.

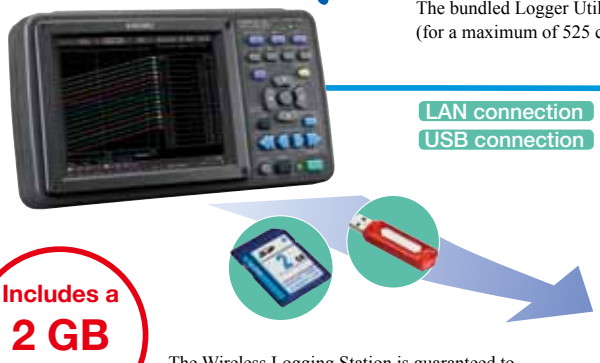
Advantages of a wireless network of small, individual logging modules

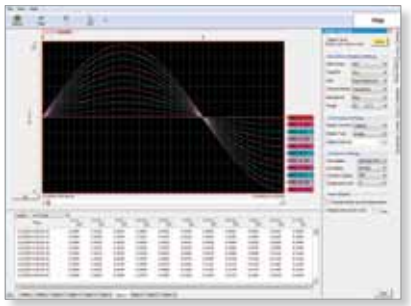
Add units when you need more channels

Up to 105 ch on 7 units

A single Wireless Logging Station can control up to seven logging modules, allowing you to collect 105 channels of data at a sampling speed of 100 ms. Simply add more logging modules to the implementation when necessary.

The bundled Logger Utility application allows a single computer to control up to five Wireless Logging Stations. (for a maximum of 525 channels).





Includes a 2 GB SD MEMORY CARD

The Wireless Logging Station is guaranteed to operate properly with the bundled HIOKI SD MEMORY CARD.

Data captured wirelessly is stored on the included SD memory card or a separately purchased USB memory stick for later analysis on a computer. The Wireless Logging Station can also be connected to a computer using a LAN or USB cable, and the included Logger Utility application can be used to record data in real time to a connected computer.

QUICK SET function

On-screen guide makes setup a snap

When you turn on the Wireless Logging Station, the QUICK SET function automatically detects and displays all input units that are within wireless range. Detected units are assigned to Numbers 1 through 7 and registered for use. Rename the individual logging modules to easily identify the source of recorded data.

Logging modules are registered using numbers for easy identification. (The unit shown on the left has been registered as No. 1.)

QUICK SET easy setup screen (shown when the Wireless Logging Station is turned on)

Logging modules within wireless range are automatically detected.

Eliminate the problems of using multi-channel loggers

Tricky wiring
Poor display visibility
Messy connections

Long wires, complicated wiring, crowded spaces all make traditional multi-channel logging a chore. Wireless data capture lets you log data from multiple locations efficiently and conveniently.

Before ▶▶▶▶▶▶ After

Advantage 1

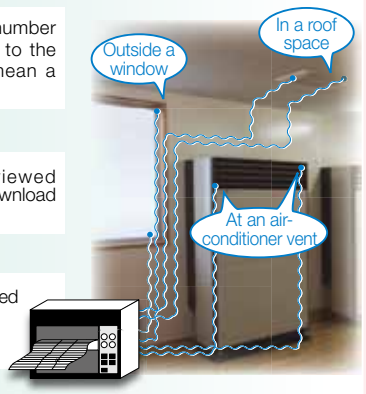
Make measurements where it would not be practical to wire equipment directly.

Monitoring the temperature near wall-mounted air-conditioners, in high places such as roof spaces, or in crawlspaces

Issue 1 Running a large number of thermocouples from a logger to the ceiling or crawlspace would mean a wiring nightmare.

Issue 2 Data can't be viewed during measurement, and data download is virtually impossible.

Issue 3 Logging for extended periods requires extra power, something traditional loggers can't support.



Battery life of logging modules:
100ms recording interval: Approx. 24 hours
1 minute recording interval: Approx. 120 hours

Solution Install a logging module in a roof space or crawlspace and check data while measurement is ongoing on the Wireless Logging Station's screen. The wireless data link between the station and logging module operates over a line-of-sight distance of up to 30 meters. (The presence of obstructions may shorten this range.)

Advantage 2

Multi-channel logging means messy wiring…

When you need to measure multiple locations using long thermocouples

Issue 1 Multiple data channels mean messy wiring with traditional loggers. Switching connections is even more challenging.

Issue 2 Simultaneously logging the data from multiple locations to a central device requires hundreds of meters of wires, which invite wire breaks and line noise.

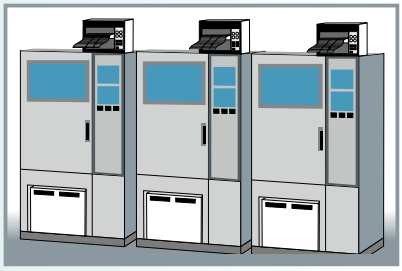
Solution Since logging modules be installed far away from the Wireless Logging Station and other modules, it's easy to keep wiring neat and organized. There's no need to have long wiring runs because each individual logging module can be placed close to measurement site, making the setup less prone to line noise.

Advantage 3

Synchronize measurement data

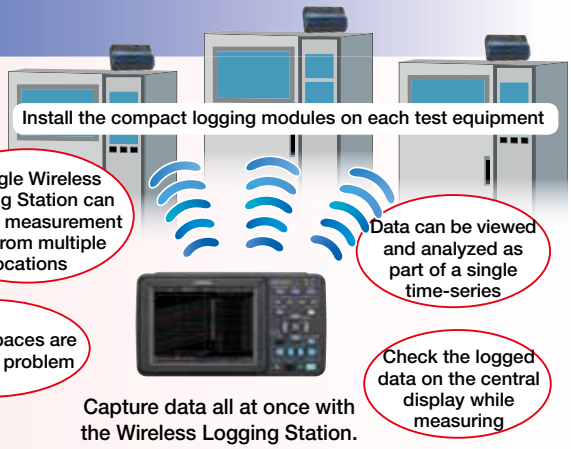
View test data from multiple points for a synchronized comparison

Traditionally, data loggers are installed on each device



Issue 1 Installing individual loggers on test equipment means each set of measured data is on its on time line, making it hard to compare the data with respect to a single time axis.

Issue 2 Conventional data loggers are sometimes too bulky and difficult to fit into test equipment.



Capture data all at once with the Wireless Logging Station.

Solution Observe data from multiple test equipment plotted along a single time axis. Logging modules are small enough to fit almost anywhere.

■ Basic Specifications (Accuracy guaranteed for 1 year)

No. of controllable logging modules	Max. 7 units (105 ch)
Control method	Bluetooth® 2.1 + EDR (between Wireless Logging Station and logging modules); communication range: 30 m (line of sight), SSP security
WIRELESS VOLTAGE/TEMP UNIT LR8510	[No. of channels] 15 analog channels; isolated scanning method input (2 terminals: M3 screw type) [Voltage]±10 mV to ±100 V, 1-5 V f.s., Max. resolution: 500 nV *Note: Isolated between channels and from each channel to chassis* [Temperature: Thermocouples] -200°C to 2000°C (depends on sensor), (K, J, E, T, N, R, S, B, W), Max. resolution 0.01°C *Note: Isolated between channels and from each channel to chassis* [Max. rated voltage between isolated input channels] 300 V DC [Max. allowable input] ± 100V DC [Max. rated voltage from isolated terminals to ground] 300 V AC, DC (max. voltage from terminals to chassis ground without damage) [Digital filter] Select OFF/ 50 Hz/ 60 Hz (During analog input the cut-off frequency is automatically set according to the sampling rate)
WIRELESS UNIVERSAL UNIT LR8511	[No. of channels] 15 analog channels; isolated scanning method input (4 terminals: push-button type) [Voltage] ±10mV to ±100V, 1-5 V f.s. Max. resolution: 500 nV Note: Isolated between channels and from each channel to chassies [Temperature: Thermocouples] -200°C to 2000°C (depends on sensor), (K, J, E, T, N, R, S, B, W), Max. resolution 0.01°C *Note: Isolated between channels and from each channel to chassies* [Temperature: Pt 100, JPt 100 sensor] -200°C to 800°C, Max. resolution 0.01°C *Note: Not isolated between channels* [Resistance] 10 Ω to 200 Ω f.s., Max. resolution 0.5 mΩ *Note: Not isolated between channels* [Humidity] 100 % rh f.s. 5.0 to 95.0 % rh (when using Z2000), resolution 0.1 % rh *Note: Not isolated between channels* [Max. rated voltage between isolated input channels] 300 V DC [Max. allowable input] ± 100V DC [Max. rated voltage from isolated terminals to ground] 300 V AC, DC (max. voltage from terminals to chassis ground without damage) [Digital filter] Select OFF/ 50 Hz/ 60 Hz (During analog input the cut-off frequency is automatically set according to the sampling rate)
Recording intervals	100ms*/200ms/500ms/1s/2s/5s/10s/20s/30s/1min/2min/5min/10min/20min/30min/1h (*Cannot be set when the thermocouple burn out detection signal is on.)
Data storage	[LR8410-20] Internal memory: 8 M-words, Data storage media: SD memory card (bundled with Z4001 2GB SD Memory Card) or USB memory [LR8510/LR8511] When recording n channels: 65,536/n data points are saved in the event of a communications error and resent once the data link has been reestablished.
Interface	[LAN] 100BASE-TX Functions: Data acquisition using bundled software or PC commands, FTP server, FTP client, HTTP server function, or E-mail system [USB] USB 2.0 High-speed capable, series mini-B receptacle Functions: Data acquisition using bundled software or PC commands, Transfer data from the SD memory card to a PC via USB drive mode
Display	5.7 inch TFT color liquid crystal display (640 × 480 pixels)
Other functions	Save waveform data in real time to the SD memory card or USB memory stick, Numerical value calculations, Waveform calculations, Alarm output (4 channels, non-isolated), and other
Operating temperature range	[LR8410-20] −10 to 50 °C (14°F to 122°F) [LR8510/LR8511] −20 to 60 °C (-4°F to 140°F)
Power supply	[LR8410-20] AC ADAPTER Z1008 (100 to 240 V AC, 50/60 Hz) or BATTERY PACK Z1007 (Continuous operation time: 3 h), or DC10 to 28 V DC [LR8510/LR8511] AC ADAPTER Z1008 (100 to 240 V AC, 50/60 Hz) or BATTERY PACK Z1007 (Continuous operation time: 24 h (Recording interval: 100ms), 120 h (Recording interval: 1 min), or DC10 to 28 V DC
Dimensions and mass	[LR8410-20] 230mm (9.06in)W × 125mm (4.92in)H × 36mm (1.42in)D, 700 g (24.7oz.) (excluding Battery Pack) [LR8510/LR8511] 150mm (5.91in)W × 90Hmm (3.54in) × 56mm (2.20in)D, [LR8510] 340 g (12.0oz.) (excluding Battery Pack) [LR8511] 320 g (11.3oz.) (excluding Battery Pack)
Wireless certification standards	JAPAN (type certificate) : Includes a wireless module that has been certified under applicable technical standards. USA (FCC) : Part 15.247 (Contains FCC ID: QOQWT11IA) CANADA (IC) : RSS-210 (Contains IC: 5123A-BGTWT11IA) EU : EN 300 328, EN 301 489-1, EN 301 4089-17
Accessories	Instruction manual ×1, Measurement guide ×1, AC ADAPTER Z1008 × 1, USB cable ×1, CD-R (data collection software "Logger Utility") ×1, SD MEMORY CARD (2GB) Z4001 × 1

■ WIRELESS LOGGING STATION series (available soon)

WIRELESS LOGGING STATION LR8410-20
Captures, displays, calculates and saves data transferred from logging modules wirelessly.

WIRELESS VOLTAGE/TEMP UNIT LR8510
2 terminals M3 mm screw type, 15 ch
Voltage, Temperature with thermocouple

WIRELESS UNIVERSAL UNIT LR8511
4 terminals push-button type, 15 channels
Voltage, Temperature with thermocouple, Platinum Resistance temperature sensor, Humidity, or Resistance measurement

AC ADAPTER Z1008
100 to 240V AC, 50/60Hz
Included with the LR8410-20, LR8510, and LR8511.

SD MEMORY CARD 2GB Z4001
Included with the LR8410-20.

BATTERY PACK Z1007
Li-ion, 7.2V/2170mAh

CARRYING CASE C1007
Holds one LR8410-20 and four logging modules.

FIXED STAND Z1009
For wall hanging and slanted bench mounting

LAN CABLE 9642
Straight Ethernet cable, supplied with straight to cross conversion adapter, 5 m (16.41 ft) length

HUMIDITY SENSOR Z2000
3 m (9.84 ft) length

HIOKI
HIOKI E. E. CORPORATION

HEADQUARTERS:
81 Koizumi, Ueda, Nagano, 386-1192, Japan
TEL +81-268-28-0562 FAX +81-268-28-0568
http://www.hioki.com / E-mail: os-com@hioki.co.jp

HIOKI USA CORPORATION:
TEL +1-609-409-9109 FAX +1-609-409-9108
http://www.hiokiusa.com / E-mail: hioki@hiokiusa.com

HIOKI (Shanghai) SALES & TRADING CO., LTD.:
TEL +86-21-63910090 FAX +86-21-63910360
http://www.hioki.cn / E-mail: info@hioki.com.cn

HIOKI INDIA PRIVATE LIMITED:
TEL +91-731-6548081 FAX +91-731-4020083
E-mail: info@hioki.in

HIOKI SINGAPORE PTE. LTD.:
TEL +65-6634-7677 FAX +65-6634-7477
E-mail: info@hioki.com.sg

HIOKI KOREA CO., LTD.:
TEL +82-42-936-1281 FAX +82-42-936-1284
E-mail: info-kr@hioki.co.jp