

# IQ-Data Logger Family

## The IQ Advantage

### IQ Family Features

- Easy to use
- Rugged, impact resistant plastic case
- Wide variety of loggers to match your requirements
- Long battery life (up to 10 years)
- Small size
- High resolution (12 bits)
- Large sample sizes (up to 43,120 samples)
- Low cost



### Functional Description

The IQ Family is a line of high-quality, self-contained, stand-alone data loggers for recording temperature, humidity, dc volts, milliamps, or events. The IQ is packaged in a small, extremely rugged case and is very easy to operate.

If you need to gather temperature/humidity data or record signals from remote measurement devices, an IQ Data Logger can do the job, any time, and nearly any place.

IQ data loggers are simple to operate. Simply plug the logger into a serial port on your PC. Next, use the IQ-Wizard software to select the sample rate, thresholds, and start method. Then, unplug the logger, deploy it where desired, and start recording data. If desired, recording can be programmed to start at a later time and/or date. After the recording session is over, simply retrieve the logger, reconnect it, and download the data to an Excel spreadsheet. From there, take advantage of all the powerful features of Excel, or simply save the data to disk for further reference.

The basic IQ Logger typically holds up to 21,280 samples, while the -40 version Loggers can hold up to 43,120 samples. With 43,120 samples you can sample once a minute for 30 days, or once every 15 minutes for over 14 months! Note that if you aren't logging ambient temperature, these numbers increase by almost 50%.

For continuous operations, you may download data from your IQ Logger's memory without interrupting the ongoing logging procedure. You can also leave the IQ connected to your PC indefinitely and log your data in real-time, directly to disk.

If you lose power or your computer stops running, your data will still be available in the IQ Logger's internal memory. All data is stored in nonvolatile memory, so even in the unlikely event that your battery dies, your data is safe and will be available when you install a new battery or connect the logger to your PC. Battery life of up to ten years makes maintenance virtually a non-issue.

### IQ Operating Modes

IQ data loggers have two primary modes of operation:

- Periodically recording data after being started, or
- Recording a single sample of data when the key on the logger is pressed.

In periodic recording, a sample period of from 0.125 sec to 24 hours is programmed into the logger. Data sampling can be started in three modes: Immediately upon configuring the logger; by pressing the logger's key (pushbutton); or on a specific time and date based on the internal real-time clock & calendar.

Once started, the logger will record data until stopped by pressing the logger key, or, if programmed, when the memory is full. If not programmed to stop on full memory, the logger will continue to record data, overwriting the oldest data, until manually stopped.

All IQ Data Loggers may also be configured to operate in a single-sample mode. In this mode, no recording is done until the logger's "key" (pushbutton) is pressed and held for one second. When this is done, a single, time/date-stamped sample is recorded. This process may be continued until the logger's memory is full.

Each sample can consist of one or two channels of data plus the time-stamp. The channel data recorded varies with the IQ Logger model and the desired configuration. With the IQ-Event, time-stamping may also be employed without any other data being recorded, such as logging the times that random events occur.

All IQ Data Loggers have an LED status/alarm indicator. The LED indicates status or alarm as follows:

- Single blink every 5 sec. = sampling
- Single blink every 1 sec. = sampling, threshold exceeded
- Double blink every 5 sec. = waiting for start by keypress, pre-set time, or single sample mode
- Double blink every sec. = sampling stopped

## Common Specifications

Size	3.1 x 2.5 x 1.0 inches (79 x 64 x 25mm)
Weight	2.8 ounces (80g)
Case	Heavy-duty ABS with 0.23" attachment hole for cable or padlock.
Mounting	Via the attachment hole, or use a magnetic or velcro mounting strips included with each logger
Battery	(1) 3.6 V lithium AA
Battery life	Up to ten-years depending on sample rate.
Memory	31,920 bytes (standard models) 64,680 bytes ("-40" models)
Data Size	3990 to 64,680 samples
Resolution	12-bit (0.0244%)
Sample periods	0.125 sec to 24 hours
Ambient temp. sensor	IC, -40 to 85 °C (-40 to 185°F)
Front panel	Start button, status/alarm LED
Sensor connector	Removable screw terminals (none on Temp and TRH models)

## OEM Support

If your application requires modification of the standard IQ family design or specifications, please contact us. We can produce data loggers in the form factor, memory configuration and sensor suite that you need, all at a reasonable price and with quick delivery. Please call us to discuss your OEM application!

You can integrate an IQ Logger into your own software application. An IQ Logger uses simple ASCII strings to communicate with the host PC during setup and data download. If you would like to integrate IQ Loggers into your own software we'll give you everything you need to know.

## PC Interface Kit and Accessories

To interface your IQ data loggers to your computer, you will need an IQ-PCIK, PC Interface Kit that is sold separately. The interface kit includes the serial cable/adaptor and IQ-Wizard software. One PC Interface Kit can be used with any number of data loggers, so you need only one interface kit.

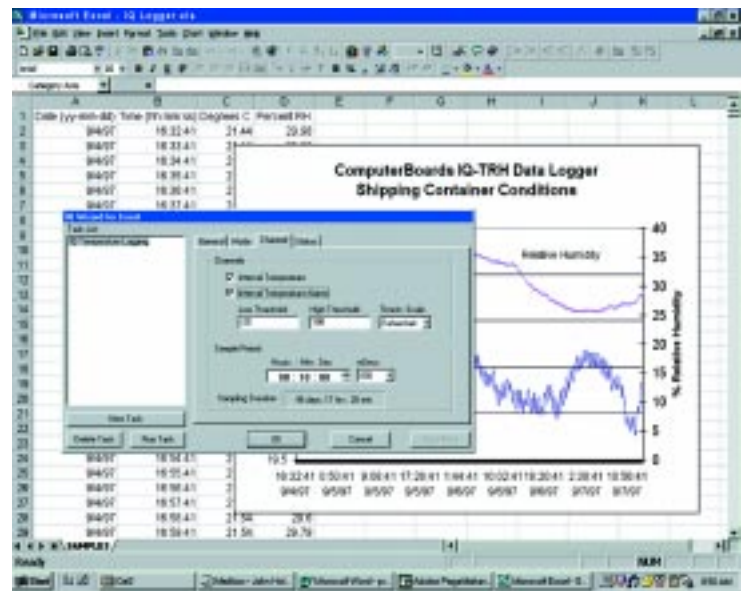
For details on these signal conditioning products, simply call us and ask to speak with one of our measurement specialists. We'd like to talk with you!



## Software

IQ-Wizard is an add-in for Microsoft's Excel. It enables you to set up and read out any IQ data logger. A simple dialog box is used to configure the data logger prior to deployment. After a data recording session, and upon retrieving the IQ Logger, you simply set the range of cells in an Excel worksheet where the data will be placed. IQ-Wizard then places your data directly into the cells of the worksheet. By using the powerful analysis, charting, and programming features of Excel, you not only get the information you need quickly, but you can also automate the data reduction process for future IQ Logger downloads. Data is stored and displayed in the engineering units, whether temperature (°C, °F, or K), relative humidity (%), V, mv, mA, A, or counts.

IQ Wizard requires Windows 95/98/NT and Excel 97. IQ Wizard is sold as part of the IQ-PCIK, PC Interface Kit.



## Current Model Data Loggers

<b>IQ-Temp</b>	Ambient Temperature Logger
<b>IQ-Temp-40*</b>	Ambient Temperature Logger
<b>IQ-TC</b>	Thermocouple + Ambient Temperature
<b>IQ-TC-40*</b>	Thermocouple + Ambient Temperature
<b>IQ-TRH</b>	Relative Humidity + Ambient Temperature
<b>IQ-TRH-40*</b>	Relative Humidity + Ambient Temperature
<b>IQ-TempXT</b>	Probe-Based Temp. + Ambient Temperature
<b>IQ-TempXT-40*</b>	Probe-Based Temp. + Ambient Temperature
<b>IQ-VmA</b>	Volts/milliAmp + Ambient Temperature
<b>IQ-VmA-40*</b>	Volts/milliAmp + Ambient Temperature
<b>IQ-Event</b>	Event/Time-Stamp and Amb. Temperature
<b>IQ-Event-40*</b>	Event/Time-Stamp and Amb. Temperature
<b>IQ-PCIK</b>	IQ family PC Interface Kit

\*A standard IQ Logger stores up to 21,280 samples; a "-40" version can store up to 43,120 samples.