

# IQ-Temp, IQ-Temp-40

## Ambient Temperature Data Logger



### Functional Description

The IQ-Temp data logger is a rugged and versatile device designed for remote, ambient temperature monitoring. To use it, simply set up the logger using your PC's serial port and the IQ Wizard software. Then, place it where desired and start the logger. When your recording session is complete, reconnect to your PC and download the data directly into an Excel worksheet.

The IQ-Temp holds 21,280 samples while the IQ-Temp-40 version holds 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! A 10-year battery life makes maintenance a virtual non-issue.

Typically, the logger is connected to the PC only for initial setup, testing, and uploading data. However, while connected to the PC, data can also be displayed in real time. All data is stored in nonvolatile memory so in the unlikely event of battery failure, your data is available after a new battery is installed.

Sampling can be started:

- Immediately after configuration,
- by pressing the start button after deployment,
- at a programmed time and date,
- by pressing the start button to acquire a single sample

Sampling can be programmed to stop when the memory is full, or by pressing the logger button. If not programmed to stop on a full memory, the logger will continue to acquire samples and will overwrite the oldest stored data.

A Status/Alarm LED on the logger indicates status as follows:

- Single blink every 5 sec. = sampling
- Single blink every sec. = sampling, temperature threshold exceeded
- Double blink every 5 sec. = waiting for start
- Double blink every sec. = sampling stopped

You will need an IQ-PCIK PC Interface Kit to communicate with your IQ logger. The kit includes IQ-Wizard software and a serial cable/adaptor. The kit is sold separately and can be used with any number of data loggers.

### Features

- Acquires up to 43,120 temperature samples (IQ-Temp-40)
- Periodic sampling or manual, (single) time-stamped samples
- Fast and easy setup, data-downloads and analysis with IQ Wizard™ and Excel™.
- Rugged ABS plastic construction
- 12-bit resolution
- User-replaceable lithium battery lasts up to 10 years
- Conversion to °C (default), °F, or K.
- Serial connect to PC to upload and/or view data in real time.
- Four start-sampling modes (Immediate, key, time, single sample)

### Performance & Specifications

#### Data Logging

Type:	Ambient temperature	
A/D resolution	12 bits	
Sampling rates	8 Hz to 1 per 24 hours	
Clock accuracy	±2 seconds per day	
Data transfer	To on-board memory, optional real-time viewing of data	
Memory type	nonvolatile	

Maximum sample sizes	IQ-TEMP	IQ-TEMP-40
Single, time-stamped samples	4,560	9,240
Periodic sampling	21,280	43,120

#### Internal Temperature Sensor

Type	Semiconductor
Range	-40 to 85°C (-40 to 185°F)
Resolution	0.03°C
Relative accuracy	±0.5°C over entire range
Response time:	10 minutes in still air (to 63%)

#### General

Size	3.1 x 2.5 x 1.0 in. (79 x 64 x 25mm)
Weight	2.8 ounces (80g)
Case	Heavy duty ABS plastic
Front panel	Start/stop button, status/alarm LED

#### Power Consumption

Battery	3.6 V lithium, 2.1 AH	
Battery life	<b>Sample Period</b>	<b>Battery Life</b>
	0.125 second	2.3 years
	1.0 second	6.9 years
	>13 seconds	10 years

#### Environmental

Operating/storage temp.	-40 to 85°C (-40 to 185°F)
Humidity	0 to 95% noncondensing

### Ordering Guide

<b>IQ-Temp</b>	Ambient Temperature Logger - 21K Samples
<b>IQ-Temp-40</b>	Ambient Temperature Logger - 43K Samples
<b>IQ-PCIK</b>	IQ family PC Interface Kit