

# IQ-TempXT, IQ-TempXT-40

## Probe-Based and Ambient Temperature Data Logger



### Functional Description

The IQ-TempXT Probe-based and Ambient Temperature data logger is a rugged and versatile device designed for remote, battery-operated monitoring. The IQ-TempXT measures temperature from probes containing high accuracy semiconductor temperature sensors. To use the IC-TempXT, simply set up the logger using your PC's serial port and the IQ Wizard software. Then, disconnect it from the PC, deploy 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-TempXT, when logging probe temperature, holds over 21,280 samples. The IQ-TempXT-40 version holds 43,120 samples. You can sample once a minute for 30 days or every 15 minutes for 14 months!

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 sample and will overwrite the oldest data.

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 once owned, can be used with any number of data loggers.

### Ordering Guide

<b>IQ-TempXT</b>	Probe & Ambient Temp. Logger- 21K Samples
<b>IQ-TempXT-40</b>	Probe & Ambient Temp. Logger- 43K Samples
<b>IQ-XTP</b>	Spare External Temperature Probe
<b>IQ-PCIK</b>	IQ family PC Interface Kit

### Features

- Acquires up to 43,120 temperature samples (IQ-TEMPXT-40)
- Fast and easy setup, data-downloads and analysis with IQ Wizard™ and Excel™
- Four start-sampling modes (Immediate, key, time, single sample)
- User-replaceable lithium battery lasts up to 10 years
- Rugged construction of ABS Plastic
- 12-bit resolution
- Temperature Conversion to °C (default), °F, or °K.
- Small size

### Performance & Specifications

#### Data Logging

Type	Temperature from probe & ambient
A/D resolution	12-bits
Sampling rates	8 Hz to 1 per 24 hours, S/W- selectable
Clock accuracy	±2 seconds per day
Memory type	nonvolatile

	<b>IQ-TempXT</b>	<b>IQ-TempXT-40</b>
Maximum sample size		
Probe or ambient temp only		
Single time-stamped sample	4,560 samples	9,240 samples
Periodic Samples	21,280 samples	43,120 samples
Probe and ambient temp		
Single time-stamped sample	3,990 samples	8,085 samples
Periodic samples	10,640 samples	21,560 samples

#### 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%)

#### External Temperature Probe Sensor

Type	Semiconductor
Operating range	-40 to 125°C (-40 to 257°F)
Resolution	0.03°C
Relative accuracy	±0.5°C over entire range
Response time	2.9 minutes in still air (to 63%)
Size:	12 in x 1/4 in dia. SS sheath, 10 ft. cable

#### Power Consumption

Battery	3.6V Lithium, 2.1 AH	
Battery life	<b>Sample Period</b>	<b>Battery Life</b>
	0.125 second	1.6 years
	1.0 second	6.5 years
	>8 seconds	10 years

#### General

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

#### Environmental

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