

# Quick-Start Guide

## BlueTemp Bluetooth® Thermometer

### Specifications:

Operating Voltage: 4.5V – 20VDC

Maximum Current Draw: 80mA

Transmission Distance (free space): 10m (30ft)

### Setup:

The BlueTemp Thermometer was designed with fast setup and ease-of-use in mind.

To begin collecting data, you will need the following:

- BlueTemp Thermometer Main Board
- DS18B20 Sensor (if not onboard)
- A Power Supply or Battery (See “Specifications” section above)
- A Computer with Bluetooth® Networking Hardware and Software
- A Serial Terminal Program (such as HyperTerminal or RealTerm)

Once you have acquired the necessary hardware and software, follow the steps outlined below to complete the setup procedure.

1. Connect the power supply to the BlueTemp board, making sure the positive lead is connected to the terminal marked “+” and the negative lead is connected to the terminal marked “-”.
2. On the computer you will use to collect data, launch the Bluetooth® management console and search for discoverable devices. If you are unsure of how to do this, please consult the documentation that came with your Bluetooth® networking hardware.
3. Perform a search for discoverable Bluetooth® devices. The BlueTemp will be identified by the name “Sure”. Create a new connection to this device, and make note of the COM port number assigned to the new connection. If prompted, enter the PIN “1234” to connect to the device.
4. After the connection setup is complete, reset power to the BlueTemp board.
5. Launch a terminal program and configure it with the COM port assigned above in combination with the following settings:

Baud: 9600

Parity: None

Data Bits: 8

Stop Bits: 1

Flow Control: None

6. Fifteen (15) seconds after power is applied the BlueTemp board will transmit firmware and hardware version information to the host. After this information has been sent, the BlueTemp will start transmitting temperature data at ten-second intervals in the following format:

`<sample number>, <temperature>`

Each temperature measurement is accompanied by a sample number. This sample number will increment by one as each successive measurement is sent. Please note that the sample counter will reset to zero when power to the BlueTemp device is lost or reset.

If you intend to develop custom software to receive and process data from the BlueTemp board, it should be noted that each transmission is terminated with both a carriage-return and linefeed character, resulting in the following data format:

`<Sample Number><Temperature><CR><LF>`

## Troubleshooting

The device is not visible from the host computer's Bluetooth® management software

- Ensure the board is powered on
- Ensure the BlueTemp board is within transmission range of the computer
- Ensure the Bluetooth® management software is configured correctly, and that the Bluetooth® stack you are using supports the COM port object.

The device goes offline or appears to stop transmitting data

- Ensure the BlueTemp board is within transmission range of the computer
- Check the power supply to the board
- Try operating the board in close proximity to the computer (<1m). If problems still occur, there may be compatibility issues with the Bluetooth® management software or drivers.

The message "ERROR: 1-Wire Network Fault Detected - Check Sensor Wiring" appears on the host computer.

- Check the wiring to the DS18B20 sensor. The BlueTemp board does NOT need to be reset after the wiring problem has been corrected; it will resume normal operation once the board is able to communicate with the sensor successfully.