

Addendum 2014





TEMPERATURE MEASUREMENT & CALIBRATION SPECIALISTS

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# Marathon Products, Inc.

ince 1991, we have been designing, manufacturing and distributing reliable, precision-made temperature collecting instruments for monitoring the cold chain and laboratory sciences. Now, we offer wireless devices, CO<sub>2</sub>, relative humidity and vibration sensors to our growing line of precision data collectors.

Marathon delivers state-of-the-art data collecting solutions for applications from cryogenics to high temperatures for all of "life's essentials." Our continuing growth is fueled by superior product design, innovative technology, and an uncompromising commitment to customer service.

Today our valued clients include governmental laboratories, pharmaceutical and other research organizations, healthcare delivery systems, blood banks, IVF Clinics, chemical manufacturers, the aerospace and semiconductor industries, and logistic transportation entities.

Features of our new USB LCD products include:

- RoHS and Reach certified components
- CE-conformed design
- Traceable using our stringent internal standards and certified NIST instruments
- 100% tested before delivery to the customers.

Marathon is ISO 9001-2008 BSI-certified and our manufacturing partners are qualified for ISO-9001 2008 by TUV.

Thank you for your continued confidence and trust in our products and services.

Jon Nakagawa President, CPA, CEO

# **EDL-WiFi Temp/RH**™

WiFi Temperature and Humidity Monitoring for Hospitals, Laboratories and Research Organizations.

Use our WiFi-enabled EDL-WiFi Temp/RH data loggers to enjoy real-time temperature & humidity data collection and monitoring at anytime, from anywhere in the world

over a local network or via an internet connection. Leverage your existing WiFi network with the built-in WiFi 802.11 b/g/n connectivity to avoid expensive installation costs for managing temperature data. Marathon's Ethernet enabled loggers will allow you to wirelessly monitor multiple floors, buildings, rooms and locations simultaneously. Secure wireless encryption with WPA-PSK and WPA2-PSK. WiFi radio approval with FCC (USA), IC (Canada), CE/ETSI (Europe), C-TICK

USB

**FDL-WiFi** 

TEMP/RH

#### **BENEFITS:**

- Alarm notifications via email. phone, pager or SMS
- WiFi 802.11 b/g/n Connectivity
- Multiple Alarm options: local and remote
- Sensors: -40° C to +125° C. and 0% to 100% RH
- Precision temperature and RH data capture
- Powerful software with real-time display
- Audit Trails for Regulatory
- 32K Standard to 64K EEPROM memory options
- Power outage detection capabilities

Our advanced software can be programmed by the user to detect high and low temperature, and high and low humidity excursions. Also, detect power outages, trigger audible and visible alarms, and send alert notifications via cell phone and/or e-mail for facilities management control.

Marathon's 21 CFR: Part 11 compliant software, with secure supervisory controls, will allow database creations for products, part numbers, dates. locations. identification numbers, statistical analysis, and more.

In the lab, our NISTcalibrated and traceable thermistor probes have been tested sterile and can be used in incubators. In hospitals, clinics, pharmacies and blood banks, the EDL-WiFi Temp/RH is perfect for quality assurance and quality control, monitoring low temperature freezers, blood storage, vaccines and biologics via stateof-the-art high-performance temperature sensors and data logging.

#### **EDL-WiFi Temp-RH SPECIFICATIONS**

**EEPROM Memory:** 32k Standard to 64 EEPROM memory options.

Temperature Range: -40°C to 125°C / -40°F to 257°F

Temperature Accuracy: ±0.2° C

Relative Humidity

Accuracy: ±1.8% RH

Measurement Intervals: 2 second increments up to 4 hours

(or 365 days recording duration)

Worldwide access via the internet. Range:

Alarm programming: High and low alarm limits set by temperature or

Alarm Modes: Continuous or cumulative with LED Indicators. **Alarm Notifications:** Alert notification to cell phone, pager and on

desktop screen.

Alarm Reset: Push button-manually or by software.

Power Source: Requires 110 AC power. AC adaptor for wireless

connectivity and user replaceable internal 3V lithium battery for data logging function. Battery backup-Failsafe prevents data loss.

Accessories: Optional flat cable probes and external audible

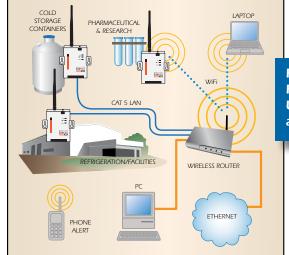
alarm boxes.

Shelf Life: 3 years of continuous use data logging.

Physical properties:

Width 7.9 cm / 3.11 inch Height 9.2 cm / 3.60 inch Depth 2.8 cm / 1.11 inch Weight: 230 grams / 8 oz.

Certifications: **CE Marking** 



For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance



(Australia) and Telec (Japan).

# The EDL-8 WiFi™

# New Wireless and Network enabled 8 Channel Data Logger

The most accurate multi-sensor graphical data logger on the market. The EDL-8 WiFi has eight channels with three types of NIST-traceable interchangeable sensors. Each sensor is calibrated for both temperature and humidity by the sensor manufacturer.

- Temperature Sensor: RTD -200°C to +380°C, accuracy ±0.2°C
- Relative Humidity Sensor: Capacitive humidity readings 0% RH to 100% RH.
- CO2 Sensor: Designed to measure percentage of carbon dioxide up to 30%. It is useful for biological or scientific applications where high levels of CO2 must be

maintained in an enclosed apparatus.

# CO2 Sensors

**HIGHLIGHTS:** 

 64k memory storage per channel

■ Temperature Sensor: RTD

Relative Humidity Sensor:

-200°C to +380°C

0% to 100% RH

- Precision data capture
- Alert notifications by email, phone, pager or SMS
- Battery backup
- Custom long-range probes up to 30 meters

### Ethernet and WiFi capability

EDL-8 WiFi can be monitored remotely via Ethernet connectivity or via a WiFi network. The device also connects directly to the computer via a USB port.

#### Statistics and mathematical functions

In addition to temperature, humidity and CO2 levels, the compact state-of-the-art device calculates minimum- maximum-time over alarm conditions and

much more. Simply push the mode button and the channel selection.

### Alarms and battery backup

Alarm settings can be set up quickly in the MaxiThermal WiFi software based on temperature, RH, and level of CO2. Alarms are visual (flashing display) and red LED (flashing). Likewise, alarm settings can be set up to trigger email notifications. In the event of a power outage, the internal lithium ion battery (when fully charged and when the backlight is not on) will continue to record data for approximately 24 hours.

# Large, easy-to-read display

Now view data remotely for all your locations from your desk. The EDL-8 WiFi is the ideal instrument for documenting, controlling, and managing critical environmental conditions graphically, statistically and in real time. Up to sixteen different display set-ups can be stored and recalled at the touch of a singe button. You can easily modify this to get exactly what you want. View high/ low data and all alarm conditions in real time from the Dashboard for all your remote locations.

#### **EDL-8 WIFI SPECIFICATIONS**

Memory: 64k per channel

1MB flash memory for data storage

Microcontroller: 32 bit flash microcontroller cortex M3
Digital sensor options: Temperature, Humidity, CO2, pH

Temperature Range: -200°C to +380°C / -328°F to +716°F
Temperature Accuracy: ±0.2°C at center

Temperature Resolution: 0.1°C / .18°F
Humidity: ±2% to 70% RH
CO2: Up to 30%

Recording Rate (sec.): Set by user

Update Data Rate (records): Set by user
Alarm Programming: High and low alarm limits set by

temperature, humidity, CO2 and time
Alarm Modes: Visual (flashing display) and red LED:

Alert notification to e-mail, phone, pager and SMS

Interface: RJ9 interface for 5 RTD sensors,

Mini USB-B 12C interface for 3 probes USB 2.0 with mini USB-B connector

Ethernet IEEE 1588 with protected RJ-45 WiFi ethernet (optional)

Power Source: 110 AC adaptor

Li-polymer 3.6V-2Ah battery

for data logging function.

Battery backup—Failsafe prevents data loss.

PC software: MaxiThermal WiFi

Accessories: Optional cable probes up to 30 meters.

#### **Physical Properties**

Alarm Notifications:

Communication:

Operating range: 0°C to 50°C, Storage range: -20°C to +85°C

Display: Graphic dot matrix LCD 128x86

viewing area: 60 x 40 mm

 Width
 12.5 cm / 4.9 in.

 Height
 7.29 cm / 2.87 in.

 Depth
 2.95 cm / 1.16 in.

 Weight:
 230 grams / 8.1 oz.



For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance



# **EDL-XYZ**<sup>™</sup> **Data**

Loggers

Digital Temperature, RH and Vibration Recorder with Large, Easy-to-Read Display

The EDL-XYZ multi-use data logger can be used to monitor fragile goods during shipment. It contains a temperature sensor, a high accuracy humidity sensor and a 3-D accelerometer. The latter controls the motion and vibration of a truck during shipment. It can also be used for monitoring machinery wear, vibration, impact and shock for all applications.

#### **FEATURES:**

- High accuracy thermistor for temperature measurement.
- High accuracy humidity sensor.
- 3-D accelerometer for motion and vibration detection.
- Alarm for out of limits operation for all sensors.
- Recording time updated on LCD display.



#### **Temperature Range**

-29°C to 72°C -20°F to 160°F

# **Humidity Range**

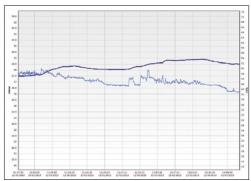
0% to 100%

### 3-D Accelerometer Range:

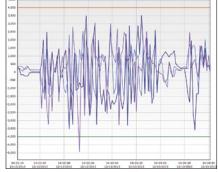
±2G; ±4G; ±8G; ±16G Sampling rate: 10 to 50 Hz

# Memory EEPROM, Storage

Temperature: 8k Humidity: 8k Vibration: 42k



**Temperature & Humidity Recording Graph** 



**Vibration Recording Graph** 

- Flexible recording interval time for temperature and humidity.
- Recording time automatically fixed by firmware for motion and vibration.
- Non-volatile memory for data saving
- Trigger threshold set by user for vibration data saving.
- MaxiThermal vibration software for logger parameters setting and monitoring results.
- LCD display for temperature, humidity, and 3 axis vibration.

### Applications:

- Vibration, shock, impact monitoring and data logging.
- Monitoring the transport conditions for fragile goods.
- Monitoring machinerv wear.

#### Waterproof **Enclosure:**

The product package is hermetically sealed to an IP66 rating.

#### **EDL-XYZ DATA LOGGER SPECIFICATIONS**

Thermal Sensor:

Memory EEPROM, Storage: Temperature: 8k, Humidity: 8k, Vibration: 42k -29°C to +72°C / -20°F to +160°F Temperature Range:

**Temperature Accuracy:** ±0.2°C from 10° to 30°C / ±0.5°C at extremes ±0.4°F from 50° to 86°F / ±0.9°F at extremes

Wired Chip in Glass Thermistor

Temperature Resolution: 0.2° C at center / 0.4° at center F Measurement Intervals: Programmable from 2 seconds to months. Examples:

Temp/RH - 8K Vibration - 42K 0 min. 43 sec. 0 min. 8 sec. 4 days 7 Davs 1 min. 15 sec. 0 min. 14 sec. 16 Days 2 min. 50 sec. 0 min. 32 sec. 30 Days 5 min. 18 sec. 1 min. 0 sec. 60 Days 10 min. 36 sec. 1 min. 59 sec. 90 Days 15 min. 54 sec. 2 min. 59 sec. 365 Days 1 hr. 4 min. 28 sec. 12 min. 2 sec.

**Humidity Range:** 0% to 100%

**Humidity Accuracy:** ±3% RH from 25% to 75%, ±5% RH at extremes

**Humidity Sensor:** Capacitive Cell

3-D Accelerometer Range: ±2G; ±4G; ±8G; ±16G Sampling rate: 10 to 50 Hz

> Accuracy: ±0.05G for 0 to 16G Resolution: ±0.01G for 0 to 16G

High and Low Alarm Limits: LED display set for temperature, humidity and vibration Computer Interface: Mini USB Connector

Start time, Interval, User description, Alarm values,

**Internal Software Provides:** Recording status, Measurement data, Software version, Serial number, Model type

One CR2477 Lithium Battery with a 1 year operating **Power Source:** life and a 5 year shelf life.

Size: Lenath Width Depth 9.0 cm / 3.5 in. 5 cm / 1.96 in. 2.8 cm / 1.1 in.

Weight: 90 grams / 2.6 oz. Warranty: 12 months **CE Certified:** CE Marking File

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance

Optional bracket





# The EDL-RTD2™

Digital Dual Sensor Thermal Temperature Data Logger for industrial and remote monitoring of refrigerated, ambient and high temperature applications

The EDL-RTD2 is a reliable and cost effective digital temperature recorder for all industrial and commercial applications requiring monitoring a wide temperature range. The EDL-RTD2 has one sensor for ambient range temperatures inside the case, and one external RTD stainless-steel probe that monitors temperatures from -29°C (-20°F) up to +380°C (+716°F) for applications such as warmers, incubators and ovens.

These high-precision laboratory-grade products will operate up to 3 years without a battery change. The LCD display provides real time viewing of ambient and remote temperature prior to downloading to a computer.

The internal software is user programmable and provides the following features: start time delay, sampling intervals, high and low alarm window values, recording status, and measurement data

All our data loggers have the ability to program alarm limits. Should the temperature reach levels outside these limits, the onboard red LED will light until reset by the user. Operation is as easy as pressing the START button on the recorder.

In conjunction with our MaxiThermal software, you can document your high-temperature uses for your GxP and FDA regulated environment. To download recorded information, simply plug the unit into a PC using a standard USB connector. The USB cable

Temperature Range

Shown with

Straight Probe

Internal Sensor: -29°C to 72°C External probe: -29°C to 380°C

### **Temperature Accuracy**

(NIST-traceable) ±0.2°C at center of range ±0.5°C at extremes

#### Memory 64k

# Measurement intervals

2 seconds to months

Number of measurements approx. 64,000 samples

and PC software are available as accessory items.

Serialization: the recorder is programmed at the factory with a unique serial number for positive tracking.

Waterproof enclosure: the product package is hermetically sealed to an IP66 rating.

Calibration: EDL-RTD2 is a laboratory grade multi-use logger with internal NTC and external RTD probe for precision temperature capture. Multi point calibration certificates can be provided for additional costs.





#### **EDL-RTD2 SPECIFICATIONS**

No. of Measurements:

Internal Sensor: Wired chip in glass thermistor **Operating Range** -29°C to +72°C / -20°F to +161°F

Accuracy: ±0.2°C from 2° to 10°C / ±0.5°C at extremes (NIST-traceable) ±0.4°F from 32° to 50°F / ±0.9°F at extremes

**External Probe:** RTD Stainless Steel Tip =12 cm / 4.72 in.; Flexible Teflon-coated Cable = 51 cm / 20 in.

**Operating Range:** -29°C to +380°C / -20°F to +716°F ±0.2°C at 0° to 30°C / ±1.0°C at extremes Accuracy: (NIST-traceable) ±0.36°F at 32° to 86°F / ±.18°F at extremes

Memory EEPROM, Storage: 64k memory (32k per sensor).

Approximately 64,000. Measurement Intervals Programmable from 2 secs per reading.

**Examples:** 4 days = 0 min. 06 sec.7 days = 0 min. 10 sec.

> 16 days = 0 min. 22 sec. 30 days = 0 min. 40 sec.60 days = 1 min. 20 sec. 90 days = 1 min. 59 sec. 365 days = 8 min. 02 sec.

Computer Interface: USB port

Power Source: One CR2477 Lithium coin cell battery with

a 3 year operating life and a 5 year shelf life.

Size: Lenath Width Depth 9.0 cm / 3.5 in. 5.0 cm / 2 in. 2.8 cm / 1.1 in.

95 grams / 3.3 oz. Weight:

**CE Certified** Yes Waterproof Yes

**MaxiThermal Software** PC Software

21CFR Part 11 Compliant Software

Software Highlights: **Report Summary & Statistics** 

> File Manager Note Attachment

Elapsed Time or Date/Time Recorded view

Celsius or Fahrenheit display

Warranty 3 Months

Optional Accessories: Standard Probe, 3 meter cable with

stainless steel tips.

Custom probes available up to 10 meters. NIST Certificate + 1, 2 or 3 Point Calibration

Mounting bracket

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, **HACCP** and Regulatory Compliance



# The EDL-LN2™

Digital Dual Sensor Thermal Temperature Data Logger for cryogenic industrial and remote monitoring applications.

The EDL-LN2 is a reliable and costeffective digital temperature recorder for all industrial and commercial applications. The EDL-LN2 has one sensor for ambient range temperatures inside the case, and one external RTD stainless-steel probe that monitors temperatures from -200°C  $(-328^{\circ}F)$  up to  $+72^{\circ}C$   $(+161.6^{\circ}F)$ ,



ideal for monitoring all of your cryogenic stem cells and biologic materials.

These high-precision laboratory-grade products will operate up to 3 years without a battery change. The LCD display provides real time viewing of ambient and remote temperature prior to downloading to a computer.

The internal software is user programmable and provides the following features: start time delay, sampling intervals, high and low alarm window values, recording status, and measurement data.

All our data loggers have the ability to program alarm limits. Should the temperature reach levels outside these limits, the onboard red LED will light until reset by the user. Operation is as easy as pressing the START button on the recorder.

In conjunction with our MaxiThermal software, you can document your monitoring for your GxP and FDA regulated environment. To download recorded information, simply plug the unit into a PC using a standard USB connector. The USB cable and PC

# Temperature Range

Internal Sensor: -29°C to 72°C External probe: -200°C to 72°C

### Temperature Accuracy

(NIST-traceable) ±0.2°C at center of range ±0.5°C at extremes

# Memory

64k

### Measurement intervals

2 seconds to months

### Number of measurements

approx. 64,000 samples

software are available as accessory items.

Serialization: the recorder is programmed at the factory with a unique serial number for positive tracking.

Waterproof enclosure: the product package is hermetically sealed to an IP66 rating.

Calibration: EDL-LN2 is a laboratory grade multi-use logger with internal NTC and external RTD probe for precision temperature capture. Multi point calibration certificates can be provided for additional costs.



Internal Sensor: **Operating Range** Accuracy: (NIST-traceable)

**Operating Range:** Accuracy: (NIST-traceable)

No. of Measurements:

Size:

4 days = 0 min. 06 sec.

16 days = 0 min. 22 sec. 30 days = 0 min. 40 sec.60 days = 1 min. 20 sec. 90 days = 1 min. 59 sec. 365 days = 8 min. 02 sec.

Wired chip in glass thermistor

64k memory (32k per sensor)

Approximately 64,000.

-29°C to +72°C / -20°F to +161°F

±0.2°C from 2° to 10°C / ±0.5°C at extremes

±0.4°F from 32° to 50°F / ±0.9°F at extremes

RTD Stainless Steel Tip =12 cm / 4.72 in.; Flexible Teflon-coated Cable = 51 cm / 20 in.

±0.4°F at 32° to 86°F / ±.18°F at extremes

-200°C to +72°C / -328°F to +161.6°F ±0.2°C at 0° to 30°C / ±1.0°C at extremes

Computer Interface: USB port

Power Source: One CR2477 Lithium coin cell battery with

a 3 year operating life and a 5 year shelf life.

9.0 cm / 3.5 in. 5.0 cm / 2 in. 2.8 cm / 1.1 in.

Weight: 95 grams / 3.3 oz.

**CE Certified** Waterproof Yes

PC Software

21CFR Part 11 Compliant Software

Software Highlights: Report Summary & Statistics

File Manager

Elapsed Time or Date/Time Recorded view

Warranty

**Optional Accessories:** 

Custom probes available up to 10 meters. NIST Certificate + 1, 2 or 3 Point Calibration

Mounting bracket



For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, **HACCP and Regulatory Compliance** 



**External Probe:** 

Memory EEPROM, Storage:

Measurement Intervals

Programmable from 2 secs per reading. Examples:

7 days = 0 min. 10 sec.

Lenath Width Depth

Yes

MaxiThermal Software

Note Attachment

Celsius or Fahrenheit display

3 Months

Standard Probe, 3 meter cable with

stainless steel tips.

Optional bracket

# **2C\TEMP-RH™** Data Loggers

**Get Waterproof Temperature & Humidity** with Digital Display and USB Connectivity.

The 2C\TEMP-RH multi-use data logger is a cost-effective solution for temperature monitoring of refrigerated vaccines, biological material, chemicals, pharmaceuticals and documenting the transportation of fruits and vegetables.

The 2C\TEMP-RH is our top-of-theline data logger with dual 8k memory banks for temperature and humidity, 0.2°C midpoint temperature accuracy and resolution, and 3% midpoint humidity accuracy. This is a must have device if you work in a laboratory or metrology department.

Functions include: The convenient palmsized design has a digital display that provides real-time viewing of all temperature and humidity information including min./max. temperature and current humidity values. One quick look provides instant product acceptance or "quarantine" decisions. The internal thermistor accurately records time and temperatures for user-selectable readings in Celsius, or Fahrenheit. The internal software is user programmable and provides the following features: start time delay, sampling intervals, high and low alarm values, recording status, and measurement data.

Visual Alarms: All our data loggers have the ability to program alarm limits. Should the temperature reach levels outside these limits,



MARATHON PRODUCTS

-29° C to +72° C -20° F to +160° F

# **Temperature Accuracy**

(NIST-traceable) ±0.2°C from 0° to 10°C ±0.5°C at extremes

## Memory EEPROM, Storage

2 banks of 8k memory (7680 data points)

#### **Humidity Range** 0% to 100%

# **Humidity Accuracy**

(NIST-traceable) ±3% from 25% to 75% ±5% at extremes

the onboard red LED will light until reset by the user.

#### Computer Ready:

Marathon's easy-to-use MaxiThermal software is available for Microsoft Windows 2000, XP. Vista & 7. Simply plug the unit into a standard USB port on your PC. The MaxiThermal software and USB cable are available as separate accessory items.



#### 2C\TEMP-RH DATA LOGGER SPECIFICATIONS

Memory EEPROM, Storage: 16k memory (8k per sensor) -29° C to +72° C / -20° F to +160° F Temperature Range:

Temperature Accuracy: ±0.2°C from 0° to 10°C / ±0.5°C at extremes

±0.4°F from 32° to 50°F / ±0.9°F at extremes

**Humidity Range:** 

±3% from 25% to 75%, ±5% at extremes **Humidity Accuracy:** 

0.2°C / 0.4°F Temperature Resolution:

Measurement Intervals: Programmable from 2 seconds to months. Examples:

> 4 days = 0 min. 43 sec.7 days = 1 min. 15 sec. 16 days = 2 min. 50 sec. 30 days = 5 min. 19 sec.60 days = 10 min. 38 sec. 90 days = 15 min. 57 sec. 365 days = 1 hr. 4 min. 39 sec.

Temperature Sensor: NIST-traceable Precision Thermistor

LED indicator and audible alarm set by High and Low Alarm Limits: temperature and time

Internal Clock Accuracy: Better than 2 minutes per month

Computer Interface: Mini USB Connector

Start time, Interval, User description, Alarm values, Internal Software Provides:

Recording status, Measurement data, Software version,

Serial number, Model type

One CR2450 Lithium Battery with a 2 year operating **Power Source:** life and

a 5 year shelf life.

Size: Depth

> 9.0 cm / 3.5 in. 5 cm / 1.96 in. 2.8 cm / 1.1 in.

Weight: 106 grams / 3.7 oz. 12 months Warranty: **CE Marking File CE Certified:** 

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance



# **2c\temp-LCD**<sup>™</sup> **Data Loggers**

Our Multi-use Temperature Logger with Real-Time LCD Display for Instant Acceptance or Quarantine Decisions.

**2c\temp-LCD** is the revolutionary, multi-use, user programmable, electronic temperature data recorder specifically designed for measuring temperatures during the transportation of refrigerated vaccines, biological material, chemicals, pharmaceuticals, and for documenting the transportation of perishable commodities. The 2c\temp-LCD is NIST-traceable and comes with a Certificate of Conformance.

#### **Functions include:**

- Internal Thermistor: accurately records time and temperatures for user selectable readings in Celsius or Fahrenheit.
- LCD display: Shows Current temperature, Max Temperature, Minimum Temperature, Run Time, Alarm Status, and Recording.

**Small Form Factor:** 2c\temp-LCD has an extended battery life and can endure rough handling. The internal software records the following: time mechanism, start time, sampling intervals, end description for special instructions, alarm values, recording status, measurement data, software version, serial and tracking number, model type and after the fact report generation options.

# **Cloud Computing**

Temperature Logger Management TRACEABILITY, HACCP COMPLIANCE

Marathon's Temperature data logger customers can share data and access their temperature and RH files remotely, anywhere, at anytime via the Internet.

Our cloud-based software provides compliance with HACCP rules and regulations for all of your perishable shipments.

**Visual Alarms:** All our data loggers can be programmed with alarm limits. Should the temperature reach levels outside these limits, the LDC will display "ALARM." To start the recorder, simply press the start button!

**USB Interface:** To download recorded information, simply plug the optional USB Cradle into the standard USB port of your PC.

#### 2c\temp-LCD DATA LOGGER SPECIFICATIONS

Memory EEPROM, Storage: 8k (7,680 data points)

Temperature Range: -35°C to +50°C / -31°F to +122°F

Temperature Accuracy: ±0.2°C at 0° to 10°C / ±1.0°C at extremes

±0.4°F at 32° to 50° F / ±1.8°F at extremes

Measurement Intervals: User programmed from 2 seconds to months.

For example: 4 days = 0 min. 43 sec. 7 days = 1 min. 15 sec.

7 days = 1 min. 15 sec. 16 days = 2 min. 50 sec. 30 days = 5 min. 19 sec. 60 days = 10 min. 38 sec. 90 days = 15 min. 57 sec. 365 days = 1 hr. 4 min. 39 sec.

Temperature Sensor: NIST-traceable Precision SMT Thermistor

Indicators: Start/Stop and Alarm

High and low alarm limits: LCD display. ALARM set by temperature and time.

Computer Interface: USB Cradle

Internal Software Provides: Times, Start time, Interval, User description, Alarm values,

Recording status, Measurement data, Software version,

Serial number, Model type

Power Source: Lithium Battery (1 year operating, 3 year shelf life)

Size: Length Width Depth 6.4 cm / 2.5 in. 3.3 cm / 1.3 in. 0.9 cm / 0.35 in.

Weight: 56.7 grams / 2.0 oz.

Options: MaxiThermal software

USB cradle

Serialization: This recorder is programmed at the factory with a unique

serial number for positive tracking.

Waterproof Enclosure: The product package is hermetically sealed to

an IP66 rating.





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# **2c\temp-USB**™ Data Loggers

Waterproof Temperature Data logger with USB Connectivity!

The 2c\temp-USB multi-use data logger is a cost-effective solution for temperature monitoring of refrigerated vaccines, biological material, chemicals, pharmaceuticals and documenting the transportation of fruits and vegetables. Its convenient palm-sized design lets it fit into tight quarters.



It is a mid-range data logger with a generous 16k memory and a 3 year battery life. With increased accuracy over the 2c\temp and echo, this is an excellent general purpose data logger.

**Functions include:** The internal thermistor accurately records time and temperatures for user-selectable readings in Celsius or Fahrenheit. The internal software is user programmable and provides the following features: start time delay, sampling intervals, high and low alarm values, recording status, and measurement data.

**Visual alarms:** It features the ability to program alarm limits. Should the temperature reach levels outside these limits, the onboard red LED will light until reset by the user. Operation is as easy as pressing the START button on the recorder.

#### **Temperature Range**

-29° C to +72° C -20° F to +160° F

### **Temperature Accuracy**

(NIST-traceable) ±0.5°C at 20° ±1.0°C at extremes

#### Measurement intervals

2 seconds to weeks

### Memory EEPROM, Storage

16k memory, (15,360 data points)

#### Computer ready:

MaxiThermal software is used to read the logger. It runs on Windows 2000, XP, Vista, & 7. To download recorded information, simply plug the unit into the standard USB port of PC. your The MaxiThermal software and USB cable are available as separate accessory items.



#### 2c\temp-USB DATA LOGGER SPECIFICATIONS

Memory EEPROM, Storage: 16k (15,360 data points)

Temperature Range: -29° C to +72° C / -20° F to +160° F

Temperature Accuracy: ±0.5° C at 20° C / ±1.0° C at extremes
±0.9° F at 68° F / ±1.8° F at extremes

Temperature Resolution: 0.2°C / 0.4°F

Measurement Intervals: Programmable from 2 seconds to weeks. Examples:

4 days = 0 min. 22 sec. 7 days = 0 min. 38 sec. 16 days = 1 min. 25 sec. 30 days = 2 min. 39 sec. 60 days = 5 min. 19 sec. 90 days = 7 min. 58 sec. 365 days = 32 min. 20 sec.

Temperature Sensor: NIST-traceable Precision Thermistor

High and Low Alarm Limits: LED indicator alarm set by temperature and time

Internal Clock Accuracy: Better than 2 minutes per month

Computer Interface: Mini USB Connector

Internal Software Provides: Start time, Interval, User description, Alarm values,

Recording status, Measurement data, Software version,

Serial number, Model type

Power Source: Two 3.6 Volt Lithium Battery with a 3 year battery life

and 5 year shelf life. Battery is rated at six months,

if used continuously at -29C

Size: Length Width Depth

9.0 cm / 3.5 in. 5.0 cm / 2 in. 2.0 cm / 0.8 in.

Weight: 106 grams / 3.7 oz.
Warranty: 12 months
CE Certified: CE Marking File

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance

# c\temp-LCD™ Data Loggers

Our Single-use Temperature Logger with Real-Time LCD Display for Instant Acceptance or Quarantine Decisions.

**c\temp-LCD** is the revolutionary, single-use, preprogrammed, electronic temperature data recorder specifically designed for measuring temperatures during the transportation of refrigerated vaccines, biological material, chemicals, pharmaceuticals, and for documenting the transportation of perishable commodities. The c\temp-LCD is NIST-traceable and comes with a Certificate of Conformance.

#### **Functions include:**

- Internal Thermistor: accurately records time and temperatures for user selectable readings in Celsius or Fahrenheit.
- LCD display: Shows Current temperature, Max Temperature, Minimum Temperature, Run Time, Alarm Status, and Recording.

Small Form Factor: c\temp-LCD has an extended battery life and can endure rough handling. The internal software records the following: time mechanism, start time, sampling intervals, end description for special instructions, alarm values, recording status, measurement data, software version, serial and tracking number, model type and after the fact report generation options.

# Cloud Computing

#### Temperature Logger Management TRACEABILITY, HACCP **COMPLIANCE**

Marathon's Temperature data logger customers can share data and access their temperature and RH files remotely, anywhere, at anytime via the Internet.

Our cloud-based software provides compliance with HACCP rules and regulations for all of your perishable shipments.

Visual Alarms: All our data loggers can be programmed with alarm limits. Should the temperature reach levels outside these limits. the LDC will display "ALARM." To start the recorder, simply press the start button!

**USB** Interface: To download recorded information, simply plug the optional USB Cradle into the standard USB port of your PC.



Memory EEPROM, Storage: 8k (7,680 data points)

-35°C to +50°C / -31°F to +122°F Temperature Range:

Temperature Accuracy: ±0.2°C at 0° to 10°C / ±1.0°C at extremes ±0.4°F at 32° to 50° F / ±1.8°F at extremes

Measurement Intervals: Pre-programmed from 2 seconds to months.

> For example: 4 days = 0 min. 43 sec.

7 days = 1 min. 15 sec. 16 days = 2 min. 50 sec. 30 days = 5 min. 19 sec. 60 days = 10 min. 38 sec. 90 days = 15 min. 57 sec. 365 days = 1 hr. 4 min. 39 sec.

Temperature Sensor: NIST-traceable Precision SMT Thermistor

Indicators: Start/Stop and Alarm

High and low alarm limits: LCD display. ALARM set by temperature and time.

Computer Interface: **USB Cradle** 

Internal Software Provides: Times, Start time, Interval, User description, Alarm values,

Recording status, Measurement data, Software version,

Serial number, Model type

Lithium Battery (1 year operating, 3 year shelf life) Power Source:

Size: Width Lenath Depth 6.4 cm / 2.5 in. 3.3 cm / 1.3 in. 0.9 cm / 0.35 in.

56.7 grams / 2.0 oz. Weight:

Quantity: Minimum 20 units. Your order is shipped on the same day

if the order is placed before 2 p.m. PST.

MaxiThermal software Options:

**USB** cradle

Serialization: This recorder is programmed at the factory with a unique

serial number for positive tracking

Waterproof Enclosure: The product package is hermetically sealed to

an IP66 rating.

Recyclable: c\temp-LCD recorders are designed for single use, and we encourage recycling. Please call Marathon Products for complete disposal or recycling instructions.

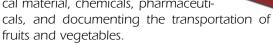




# c\temp-USB<sup>™</sup> Data Logger

The Waterproof Single-use Solution with USB Connectivity.

**c\temp-USB** is the revolutionary single-use pre-programmed electronic temperature recorder developed by Marathon Products. It is specifically designed for measuring temperatures during the transportation of refrigerated vaccines, biological material, chemicals, pharmaceuti-



**Functions include:** The internal thermistor accurately records time and temperatures for user selectable readings in Celsius or

Fahrenheit. The larger format cytemp-USB has an extended battery life, is waterproof and can endure rough handling. The internal software records the following: time measurements, start time, intervals, end description for special instructions, alarm values, recording status, measurement data, software version, serial and tracking number, model type and after the fact report generation options.

**Visual alarms:** All our data loggers can be programmed with alarm limits. Should the temperature reach levels outside these limits, the onboard red LED will light until reset by the user. To start the recorder, simply press the START button!

# **Temperature Range**

-29°C to 72°C / -20°F to 160°F

### **Temperature Accuracy**

±0.2°C from 0° to 10° C ±0.5°C at extremes

±0.4°F from 32° to 50° F ±0.9°F at extremes

#### **Measurement Intervals**

Pre-programmed from 1 minute to hours depending on model type (duration).

#### **Number of Measurements**

8K memory (7680 data pts.)

### Computer ready:

MaxiThermal software is used to read the logger. It runs on Windows 2000, XP, Vista, & 7. To download recorded information, simply plug the unit into the standard USB port of your PC. The MaxiThermal software and USB cable are available as separate accessory items.



#### c\temp-USB SPECIFICATIONS

Memory EEPROM, Storage: 8k (7,680 data points)

Temperature Range: -29°C to 72°C / -20°F to 160°F

Temperature Accuracy:  $\pm 0.2^{\circ}\text{C}$  at 0° to 10°C /  $\pm 0.5^{\circ}\text{C}$  at extremes  $\pm 0.4^{\circ}\text{F}$  at 32° to 50° F /  $\pm 0.9^{\circ}\text{F}$  at extremes

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Measurement Intervals: Pre-programmed from 1 minute to hours depending on model type (duration)

4 days = 0 min. 43 sec. 7 days = 1 min. 15 sec. 16 days = 2 min. 50 sec. 30 days = 5 min. 19 sec. 60 days = 10 min. 38 sec. 90 days = 15 min. 57 sec. 365 days = 1 hr. 4 min. 39 sec.

Temperature Sensor: NIST-traceable Precision Thermistor

Indicators: Start/Stop and Alarm

Alarm Limits: LED indicator alarm set by temperature and time.

Computer Interface: mini USB connector

Internal Software Provides: Times, Start time, Interval, User description,

Alarm values, Recording status, Measurement data, Software version, Serial number, Model type.

Power Source: Lithium Battery (2 Year Shelf Life)

Size: Length Width Depth

13.0 cm / 5.1 in. 6.8 cm / 2.7 in. 2.0 cm / 0.8 in.

Weight: 71 grams / 2.5 oz.

Quantity: Minimum 20 units. Your order is shipped on the

same day if the order is placed before 2 p.m. PST.

Recyclable: c\temp-USB recorders are designed for single use, and we encourage recycling. Please call Marathon Products for complete disposal or recycling instructions.

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB, HACCP and Regulatory Compliance

# MaxiThermal™ On-Line Software

NO LIMITS — Any File. Any Location. Any Time. Any Users.

### CLOUD-BASED DATA LOGGER ACCESS with 21CFR:11 Compliant Database

MaxiThermal On-Line Enterprise SaaS is the ideal solution for managing and

analyzing data from multiple data loggers with multi-user access from multiple locations, for all your clinical shipments. CLOUD-BASED ACCESS OR ON YOUR SERVER, it is easy to find and sort all your data files using our File Management Software.



**Location Independence:** Data logger files sourced anywhere can be centrally stored, managed and monitored.

Flexible Hosting Options: From single Windows PC to

multiple servers in multiple locations; local in-house servers to cloud-based services.

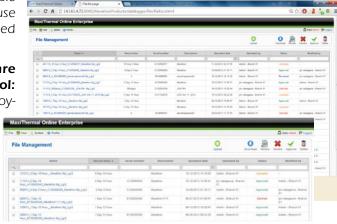
# Web-based Software with Dashboard Control:

Means hassle-free deployment for access by an unlimited number of users with a standard web browser. An intuitive and interactive



Secure Login

**Dashboard Control** 



dashboard makes it easy to view, manage, save and retrieve multiple data files with ease.

**Concurrent & Secure Access:** Enable multiple users to simultaneously perform analytics and administration functions while constraining actions based on permissions.

**Audit Trail:** Individual actions and exceptions are logged to the database for accountability and traceability.

# Bulk Administration:

Multiple logger data files can be managed effortlessly from a single web page.

# Historical Analytics:

View aggregated logger data for any period in the past in graphical or tabular formats.

Multiple Sensor Inputs & Attribute Filters: Data files

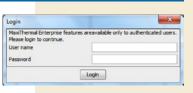
from different sensors are stored and managed in a central file database. Temperature, CO2, Humidity, Vibration Monitoring, (Electrical Power Consumption, N2, and O2 are Pending). A single click is all it takes to filter for specific status & conditions, e.g. Alarms.

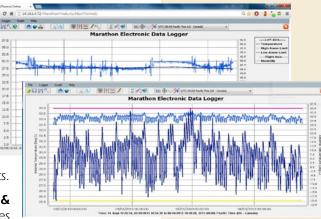
Support for all popular browsers: Flexible, intuitive interface ensures that MaxiThermal-Online will work the same way regardless of your business browser standard.

# Print Logger Reports & Data:

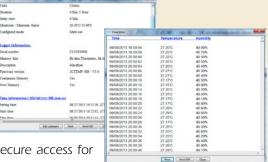
Centralized storage with remote secure access for all loggers' data files.

Marathon Products MaxiThermal-Online, a flexible, easy-to-use solution.





Export to Microsoft Excel for further analysis and reporting.



**Print Logger Report & Data** 

# LoggerPulse Software

Any File. Any Location. Any Time. Any Users.



Our enterprise software is the ideal solution for managing and analyzing data from multiple data loggers from multiple locations.

**Location Independence:** Data loggers located anywhere can be centrally managed and monitored.

**Flexible Hosting Options:** From single Windows PC to multiple servers in multiple locations; local in-house servers to cloud-based services.

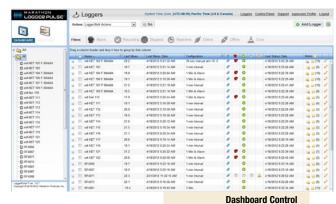
#### 21CFR COMPLIANT

- Controls for closed and open systems
- Electronic audit trails for regulatory compliance.
- Electronic audit trails for regulatory compliance.

**Web-base Software:** Means hassle-free deployment for access by an unlimited number of users with a standard web browser.

**Dashboard Control:** An intuitive and interactive dashboard makes it easy to view status, manage, and program multiple loggers with ease.

Alarm Notifications: Highly customizable alarm notifications ensure that the right people are alerted when loggers detect a problem. Alarm notifications can be sent as a phone call to land lines and mobile phones, as email to regular email accounts or to mobile phones as text messages.



**Real-time Analytics:** Multiple users can concurrently monitor data streamed in real-time from any number of loggers.

**Real-time Data:** Logger data can be displayed individually

or aggregated.

**Bulk Administration:** Programming, starting and stopping hundreds of loggers can be done effortlessly from a single web page.

**Concurrent & Secure Access:** Enable multiple users to simultaneously perform analytics and

administration functions while constraining actions based on permissions.

| COCCO | Company | Compan

Real-Time Analytics

**Audit Trail:** Individual actions and exceptions are logged to the database for accountability and traceability. User notes are incorporated for explanation and follow up.

**Historical Analytics:** View aggregated logger data for any period in the past in graphical or tabular formats. Export to Microsoft Excel for further analysis and reporting.

Attribute Filters: A single click is all it takes to filter for specific status and conditions, e.g.

Alarms.

Multi-Sensor Inputs:
Temperature, Humidity,
Vibration Monitoring,
Electrical Power
Consumption, CO2, N2,
O2 (Pending).



**Historical Analytics** 

**Support for all popular browsers:** Flexible, intuitive interface ensures that LoggerPulse will work the same way regardless of your business browser standard.

# Don't ship without us!®





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