TEMPERATURE MEASUREMENT

TEMPERATURE MEASUREMENT& CALIBRATION SPECIALISTS





Temperature Monitoring & Control



product catalog 2012 ISO 9001-2008

Table of Contents

About Marathon Products, Inc. , , , , , , 1
Applications , , , , , , , , , , , , , , , , , , ,
EDL-Net [™] , , , , , , , , , , , , , , , , , , ,
EDL-RF2™,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
EDL-M5 [™] , , , , , , , , , , , , , , , , , , ,
microDL [™] Series , , , , , , , , , , , , , , , , , 10
microDL-80C [™] , , , , , , , , , , , , , , , , , , ,
EDL-CO2 TM , , , , , , , , , , , , , , , , , , ,
General Purpose Data Loggers , , , , , 16
2c\temp-US™ , , , , , , , , , , , , , , , , , , ,
2C\TEMP-RH™, , , , , , , , , , , , , , , , , , ,
ezLogger™,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,22
edl™ & edl-jr™ , , , , , , , , , , , , , , , , , , ,
edI-USB™ , , , , , , , , , , , , , , , , , , ,
c\temp™, , , , , , , , , , , , , , , , , , ,
c\temp-USB™ , , , , , , , , , , , , , , , , , , ,
TempCheck3™ , , , , , , , , , , , , , , , , , , ,
MDAS-Pro Software,,,,,,,,,,,,,,34
MaxiThermal Software, , , , , , , , , , , , 36
MaxiThermal Enterprise Software, , , ,38
LoggerPulse [™] Software, , , , , , , , , , , 40
21CFR Software ,,,,,,,,,,,,,,,,42
Accessories , , , , , , , , , , , , , , , , , , ,
Package Validation Services, , , , , , , , , 48
Remote Calibration Services, , , , , , , , , 48

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Marathon Products, Inc.

Since 1991, Marathon Products has been designing, manufacturing and distributing temperature recording data collectors for monitoring the cold chain. Our growth is due to our commitment to customer service and to continuous product improvement.

Today, our customers are Fortune 500 companies including governmental laboratories, research organizations, pharmaceutical and drug discovery companies, hospitals, blood banks, IVF clinics, chemical manufacturers, the aerospace and semiconductor industries, the transportation industry and many others where obtaining accurate and reliable timetemperature information is critical for validating product and material safety.

> Marathon Products' state-of-the-art technology delivers reliable data logging solutions for applications from cryogenics to high temperatures.

> > Jon Nakagawa President, CPA, CEO

Quality Management System: ISO 9001-2008

Applications & Industries Served

Marathon Products, Inc. line of temperature data Loggers serve these industries

PRODUCT	EDL-Net	EDL-RF2	EDL-M5
Beverages			
Cheese & Dairy			
Confectionary			
Cosmetics			
Flower & Plants			
Food Processing			
Fresh & Frozen Foods			
Fresh Produce			
Fruit & Nuts			
Meat, Poultry & Seafood			
Air, Land & Sea Shipping Cryogenic Shipping & Storage Temperature & Humidity Mapping Temperature Validation	•		

MARATHON COMPLIES WITH REQUIREMENTS FOR:

- Food Safety-HACCP FDA GxPs ISO 9000 Series
- ISO 14000 Series ISO Series 13485 ISO16949 21 CFR-Part 1
- CE Marking
 NIST Traceability
 FCC



MARATHON PRODUCTS The EDL-Net[™]

Remote temperature data logging via Ethernet connectivity for Hospitals, Laboratories and Research Organizations, with Alarm Notification via cell phone or e-mail.

Use our Ethernet enabled EDL-Net data loggers to enjoy real-time temperature data collection and monitoring at anytime, from anywhere in the world over a local network or via an internet connection. Leverage your existing LAN or WiFi network for monitorng temperature data. Marathon's Ethernet enabled loggers will allow you to monitor multiple floors, rooms, buildings, and locations simultaneously.

In the lab, our NIST-calibrated and traceable thermistor probes have been tested sterile and can be used in incubators. In hospitals, clinics, pharmacies and blood banks, the EDL-Net is perfect for quality assurance and

> quality control, monitoring low temperature freezers,



blood stor-

age, vaccines and biologics via state-of-the-art high-performance temperature sensors and data logging.

Our advanced MDAS-Pro software can be programmed by the user to detect high and low temperature excursions, power outages, trigger audible and visible alarms as well as send alert notifications via cell phone and/or e-mail. Marathon's 21 CFR: Part

BENEFITS:

- Alarm notifications via e-mail, phone, pager or SMS
- Multiple Alarm options: local and remote
- Interchangeable sensors: -80°C to 72°C
- Precision temperature data capture
- Powerful software with real time display
- Audit Trails for Regulatory
 Control
- 8K to 64K EEPROM memory options
- Power outage detection capabilities

11 compliant software, with secure supervisory controls, will allow database creations for products, part numbers, dates, locations, identification numbers, statistical analysis, and more.

The EDL-Net quickly and reliably collects temperature data, documents standards compliance, and provides proof for certification.

Please visit our web site at http://www.marathonproducts.com for more information.

EDL-Net SPECIFICATIONS

Temperature Range:	-40°C to 72°C / -40°F to 160°F
	-80°C to 30°C / -112°F to 70°F
Temperature Accuracy:	0.2°C at center, 0.5°C at extremes
Measurement Intervals:	2 second increments to months
No. of Measurements:	8,000 to 64,000 EEPROM memory options
Start:	Remote start via software or push button
Alarm Programming:	High and low alarm limits set by temperature and time
Alarm Modes:	Continuous or cumulative with LED Indicators:
Alarm Notifications:	Alert notification to e-mail, phone, pager and SMS
Alarm Reset:	Push button—manually or by software
Power Source:	User replaceable internal 3V lithium battery for data logging function. Battery backup—Failsafe prevents data loss.
Accessories:	 Optional flat cable probes External audible alarm boxes Phone Dialer
Physical Properties	

 Width
 3.11 in. / 79.0 mm

 Height
 3.60 in. / 91.4 mm

 Depth
 1.11 in. / 28.3 mm

 Weight:
 8 oz. / 230 grams

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





MARATHON PRODUCTS EDL-RF2[™]

Remote Temperature Facilities Management for Hospitals, Laboratories and Research Organizations using Wireless Sensor Connectivity.

> Using 900 MHz RF (Radio Frequency) connectivity, EDL-RF2 can leverage a wireless RF connection to monitor and document temperature data in real time, from anywhere in the world. Avoid expensive installation costs for managing temperature data. Marathon's Ethernetenabled base stations will allow you to monitor multiple floors, buildings, and refrigeration rooms simultaneously and provides alarm notification via phone or e-mail.

BENEFITS:

- Alarm notifications via e-mail, phone, pager and SMS
- Multiple Alarm options: local and remote
- Interchangeable sensors: -80°C to 72°C
- Precision temperature data capture
- Powerful software with real time display
- Audit Trails for Regulatory
 Control
- 8K to 64K EEPROM memory options
- Power outage detection capabilities



With 256-bit AES Encryption the EDL-RF-2 is specially suited for hospitals, clinics, laboratories and research organizations. With expanded individual sensor memory and backup batteries the EDL-RF2 protects against any data loss caused by a network interruption, computer malfunction or other system failure. This makes the EDL-RF2 the most reliable and robust wireless temperature logger on the market today. In the lab. our NISTcalibrated and traceable thermistor probes have been tested sterile and can be used in incubators. EDL-RF2 is the perfect tool for quality assurance and quality control, for monitoring low temperature freezers, blood storage, vaccines and biologics. The EDL-RF2 is ideal for quickly and reliably collecting temperature data in real time, documenting standards compliance, and proof for certification.



EDL-RF2 SPECIFICATIONS

Temperature Range:	-40°C to 72°C / -40°F to 160°F -80°C to 30°C / -112°F to 70°F
Temperature Accuracy:	0.2°C at center, 0.5°C at extremes
Measurement Intervals:	2 second increments to months
No. Measurements:	8,000 to 64,000 EEPROM memory options
Range:	Indoor urban environments 900—2,000 ft. and more with relays. Line of sight 2 miles with high-gain antennas
Start:	Remote start via software or push button
Alarm Programming:	High and low alarm limits set by temperature and time
Alarm Modes:	Continuous or cumulative with LED Indicators:
Alarm Notifications:	Alert notification to e-mail, phone, pager and SMS
Alarm Reset:	Push button—manually or by software
Power Source:	Adaptor to A/C for wireless connectivity and user replaceable internal 3V lithium battery for data logging function. Battery backup—Failsafe prevents data loss.
Base Station:	ISM 900 MHz operating frequency with 256-bit AES Encryption. Powerful transceiver allowing 2-way communi- cation and reliable long-range data integrity
Accessories:	 Optional flat cable probes External audible alarm boxes Wireless and Ethernet local Base Stations Relays for extending wireless communication Phone Dialer

Physical properties

Width	3.11 in. / 79.0 mm
Height	3.6 in. / 91.4 mm
Depth	0.97 in. / 24.8 mm
Weight:	9 oz. / 250 grams

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



MARATHON PRODUCTS

EDL-M5[™]

Rugged Remote Temperature Management for Facilities, Warehouses, Trucking, and Exterior Sites "Wireless Sensor Connectivity"

The EDL-M5 has a powerful 2-way 900MHz radio for long range wireless connectivity and is ideal for remotely monitoring multiple buildings, trucks, warehouses and sites simultaneously. With expanded individual sensor memory and back-up batteries the EDL-M5 protects against any data loss caused by a network interruption, computer malfunction or other system failure. This makes the EDL-M5 the most durable. reliable, and robust wireless temperature logger on the market today. With 256-bit AES Encryption the EDL-M5 can be securely accessed at anytime from anywhere over a local net-EDL-M5 work or via the internet.

In the lab, our NISTcalibrated and traceable thermistor probes have been tested sterile and can be used in most clean environments. EDL-M5 is perfect for quality assurance and quality

control, for monitoring low temperature facilities, storage, warehouses, and trucking via state-of-the-art high performance temperature sensors and data logging.

The EDL-M5 is an ideal tool for reliably collecting, recording and storing temperature measurement data in real time, documenting standards compliance, and as proof for certification.

BENEFITS:

- Alarm notifications via cell e-mail, phone, SMS or pager
- Multiple Alarm options: local and remote
- Interchangeable sensors: -80°C to 72°C
- Precision temperature data capture
- Powerful software with real time display
- Audit Trails for Regulatory Control
- 8K to 64K EEPROM memory options
- Power outage detection and backup capabilities

EDL-M5 SPECIFICATIONS

EDT-MD PLEOLLICATION2			
Temperature Range	–40°C to 72°C / –40°F to 160°F –80 C to 30 C / –112°F to 86°F)		
Temperature Accuracy	0.2°C at center, 0.5°C at extremes		
Temperature Sensor	NIST-traceable precision thermistor		
Indicators	Battery Check, System Connected, Alarm, On		
Range	Up to 2000' indoor/urban range Outdoor RF line of sight range with high gain antenna 20 miles		
Start	Push button and remote start via software		
Alarm	High/low alarm limits set by temperature and time limits		
Alarm Modes	Continuous or cumulative with LED indicators		
User notifications	Alarm conditions on screen via e-mail and cell phone		
Power Source	Four D cells alkaline. Battery backup—Failsafe prevents data loss.		
Accessories	 Optional probes External battery connectors to outside power supply Adaptor to AC outlets External relays for greater distance, Ethernet connectors. 		
	Physical properties		
	Width 6.32 in. / 16.05 cm		

Width	6.32 in. / 16.05 cm
Height	4.88 in. / 12.40 cm
Depth	2.89 in. / 7.34 cm
Weight:	2 lbs 8.6 oz. / 1.27 kilograms (with 4 D cells)

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





MARATHON PRODUCTS **microDL**TM For all your FDA shipments

The microDL is a revolutionary multi-use programmable data logger for displaying and recording temperatures for shipping and storage applications. Now all of your critical biologics, cancer drugs and vaccines can be immediately temperature qualified with our display technologies. Small, yet so powerful, this investigative temperature-collecting device is your answer for regulatory compliance.

With optional memory sizes of 4K, 8K, 32K and 64K, and accuracy and resolution of 0.2C, our digital display technology gives you onthe-spot verification that the internal temperatures of your packaged contents meets specifications prior to shipment. Research laboratories and physicians can now immediately validate temperature information for clinical studies and patient administration.

Alarm conditions can be programmed for start/delay, high/low, continuous or cumulative time over

Red micro-DL™

microd

Plastic or 404 Stainless Steel back. Memory capacity from 4k to 8k

Silver micro-DL

Increased memory from 32k to 64k. 404 Stainless Steel back.

alarm conditions. Push the start button to view critical temperature information upon arrival.

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

Pressing the start button will display the following information: current temperature, elapsed time in days, MKT (mean kinetic temperature), high

microC

temperature, low temperature, alarm time over high temperature, alarm time below low temperature and alarm conditions.

The microDL is a state-of-the-art, water-resistant data logger with non-volatile memory for data retention. For a complete analytical solution, simply download all of its data to your PC with the proprietary microDL USB Reader and MDAS-Pro software. Marathon's easy-to-use software is available for PCs running Microsoft Windows 2000, XP, Vista and Windows 7. 21CFR compliant software is available with full database capabilities









Flexible Teflon Probe with Stainless Steel Tip

Detachable-Flat Flex Probe

1.191

microDL SPECIFICATIONS

Measurement Intervals	User programmable from 2 seconds to months
Power Source	Two 3 volt lithium coin cells. 10 year shelf life with approx. 3 year continuous operating mode.
Alarm Limits	High & Low Alarms set by temperature and time
Size: Diameter: Height:	1.25 in. / 25.20 cm 0.75 in. / 1.25 cm
Water Resistant - Splash I	Proof
Reader Station	USB 1.1 Port Interface
Software Compatibility	Windows 2000, XP, Vista, & 7
Standard Stainless Steel F Length Diameter	Probe 24 in. / 61 cm, or custom lengths Outside: 0.136 in. / 3.49 mm Inside: 0.099 in. / 2.5 mm
Micro Probe Length Diameter	0.278 in. / 7.06 cm, or custom lengths 0.07 in. / 1.8 mm
Flat Flex Length Width	20 in. / 50.6 cm, or custom lengths 0.3 in. / 0.76 cm
Detachable Flat Flex Length Width	Custom Lengths 0.3 in. / 0.76 cm
Flexible Teflon Probe with Total Length Stainless Steel Tip Diameter	20 in. / 50.8 cm, or custom lengths

Inside: 0.099 in. / 2.5 mm



Model number	mdl4	mdl8	mdl32	mdl64
EEPROM Memory	4K	8K	32K	64K (var.)
Temperature Range			_	
Low to High	-10°C to 72°C	-40°C to 72°C	-40°C to 72°C	-40°C to 72°C
Low to High	14°F to 161°F	-40°F to 161°F	-40°F to 161°F	-40°F to 161°F
Temperature Accuracy				
At zero	0.5°C / 1.0°F	0.2°C / 0.4°F	0.2°C / 0.4°F	0.2°C / 0.4°F
Extremes	1.0°C / 2.0°F	0.5°C / 1.0°F	0.5°C / 1.0°F	0.5°C / 1.0°F
Features				
Stainless steel backs	No	Yes	Yes	Yes
Variable memory	No	No	No	Yes
Continuous memory	No	No	Yes	Yes
Weight	8 g / 0.3 oz.	17 g / 0.6 oz.	17 g / 0.6 oz.	17 g / 0.6 oz.
Mean Kinetic Temp.	No	No	Yes	Yes
Warranty	60 days	12 months	12 months	24 months

marathon products microDL-80C[™]

Record and Log Ultra-low Temperatures in Shipments, Refrigerators or Freezers

Our multi-use microDL-80C digital display technology now operates at ultra-low temperatures of -80C (-112F). The compact, coin-sized unit with the external thermistor probe can now help you verify that internal temperatures of your dry ice packages meet specifications prior to acceptance of your shipment. Simply push the start button to view critical temperature information upon arrivals. With



optional memory sizes of 8k, 32k and 64k, accuracy and resolution of 0.2C, and a one meter long flexible ribbon probe this product is the answer for data logging ultra low temperature freezers or dry ice shipments.

Flexible - Pressing the button will display the following visual information: whether or not the logger is Recording, the Current Temperature, Elapsed Time in Days, MKT (Mean Kinetic Temperature), High Temperature, Low Temperature,

For FDA, GxP, JCAHO, CAP, HFAP, CARF, CHAP, ACHC, URAC, HQAA, AABB and Regulatory Compliance Alarm Time Over High Temperature, Alarm Time Below Low Temperature and Alarm Conditions. Customizable settings include: Delay to Start, Stop, Elapsed Time as well as customizable

sampling time intervals. Also available: User Descriptions for initialization and for downloading the data.

Visual Alarms - All our data loggers have the ability to program alarm limits. Should the temperature reach levels outside these limits, the digital display will show a notice until reset by the user.

Computer Ready - You can download the recording to your PC and plot the data, at any time. Our proprietary microDL USB Reader is needed to download temperature information to a computer. Marathon's easy-to-use MDAS-Pro software is available for PCs running Microsoft Windows 2000, XP, Vista and



Micro Probe



Polyester Film-Flat Flex Probe



Flexible Teflon Probe with Stainless Steel Tip

Detachable-Flat Flex Probe

1.191

microDL SPECIFICATIONS

Measurement Intervals	User programmable from 2 seconds to months
Power Source	Two 3 volt lithium coin cells. 10 year shelf life with approx. 3 year continuous operating mode.
Alarm Limits	High & Low Alarms set by temperature and time
Size: Diameter: Height:	1.25 in. / 25.20 cm 0.75 in. / 1.25 cm
Water Resistant - Splash I	Proof
Reader Station	USB 1.1 Port Interface
Software Compatibility	Windows 2000, XP, Vista, & 7
Standard Stainless Steel F Length Diameter	Probe 24 in. / 61 cm, or custom lengths Outside: 0.136 in. / 3.49 mm Inside: 0.099 in. / 2.5 mm
Micro Probe Length Diameter	0.278 in. / 7.06 cm, or custom lengths 0.07 in. / 1.8 mm
Flat Flex Length Width	20 in. / 50.6 cm, or custom lengths 0.3 in. / 0.76 cm
Detachable Flat Flex Length Width	Custom Lengths 0.3 in. / 0.76 cm
Flexible Teflon Probe with Total Length Stainless Steel Tip Diameter	20 in. / 50.8 cm, or custom lengths

Inside: 0.099 in. / 2.5 mm

GAF CERTIFIED

Model number	mdl8	mdl32	mdl64
EEPROM Memory	8K	32K	64K (variable)
Temperature Range			
Low to High	-80°C to 30°C	-80°C to 30°C	-80°C to 30°C
Low to High	-112°F to 86°F	-112°F to 86°F	-112°F to 86°F
Temperature Accuracy			
At zero	0.2°C / 0.4°F	0.2°C / 0.4°F	0.2°C / 0.4°F
Extremes	0.5°C / 1.0°F	0.5°C / 1.0°F	0.5°C / 1.0°F
Features			
Stainless steel backs	Yes	Yes	Yes
Variable memory	No	No	Yes
Continuous memory	Yes	Yes	Yes
Weight	17 g / 0.6 oz.	17 g / 0.6 oz.	17 g / 0.6 oz.
Mean Kinetic Temperature	Yes	Yes	Yes
Warranty	12 months	12 months	24 months

marathon products edl-CO2[™]

Extreme low temperature

The edl-CO2 is the world's first compact multi-use programmable data logger capable of operating at -81C while in direct contact with "dry ice" for extended environmental monitoring. Program



and set your data logger for up to 6 months and monitor critical applications requiring low temperature environments. Laboratory freezers, blood banks and research laboratories can now benefit from our advanced circuits and latest software enabling technologies.

Temperature Range -80°C to 30°C (-112°F to 86°F)

Temperature Accuracy (NIST traceable) ±0.2°C at zero degrees ±2.5°C at extremes

Measurement intervals 2 seconds to months

Number of measurements 7,600 samples

The internal software provides the following features: start time, stop time, intervals, zoom, statistical analysis, descriptions for special instructions, measurement data and after the fact report generation options. User selectable features also include language conversions from English to: Japanese, French, German, Spanish, and Portuguese.

To start the recorder, simply press the start button!

edI-CO2 SPECIFICATIONS

Memory EEPROM:	8k
Temperature Range:	-80°C to 30°C / -113°F to 86°F
Temperature Accuracy: At zero: At extremes:	±0.2°C / ±0.4°F ±2.5°C / ±4.6°F
Measurement Interval:	Programmable from 2 seconds to months
Temperature Sensor:	NIST-traceable Precision Thermistor
Alarm Limits:	LED indicator. High and Low Alarm set by temperature and time
Internal Clock Accuracy:	Better than 2 minutes per month
Indicators:	Power and Alarm
Computer Interface:	Serial Port RS232 Cable, USB Converter
Internal Software Provides:	Start time, Interval, User description, Alarm values, Recording status, Measurement data, Software version, Serial number, Model type
Power Source:	Two AA 3.6 Volt Lithium Batteries. 2 Year Shelf Life – Battery is rated at six months, if used continuously at -80°C
Accessories:	External Probes
Physical properties	
Width	2.65 inch / 6.73 cm
Length	5.06 inch / 12.85 cm
Depth	0.66 inch / 1.69 cm
Weight:	3.7 oz. / 106 grams

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

MARATHON PRODUCTS General Purpose Data Loggers Get the facts!

These multi-use data loggers are a low-cost and effective solution for temperature monitoring of refrigerated vaccines, biological material, chemicals, pharmaceuticals and documenting the transportation of fruits and vegetables. All units share the same basic palm-sized design. Optional probes are available but not required.

The internal thermistor accurately records time and temperatures for user-selectable readings in Celsius, Fahrenheit and Kelvin. 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.

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.

The 2c\temp is our entry level data logger that offers the best value against all competition. You won't find a better product with these features.

Temperature Range -29°C to 72°C (-20°F to 160°F)

Temperature Accuracy (NIST traceable) ±0.2°C at zero degrees ±2.0°C at extremes

Measurement intervals 2 seconds to months

Memory EEPROM, Storage 4k & 8k memory,

Number of measurements Up to 7,600 samples

The echo has the same specifications as the 2c\temp, but includes a built-in audible alarm with a very clear electronic sound which can be heard even under noisy circumstances.

The 3c\temp is a mid-range data logger with a generous 8k memory and increased accuracy over the 2c\temp and echo. An excellent general purpose data logger.

Our proprietary IC-9P serial cable is needed to download temperature information to a computer. We also offer a USB to Serial Port adaptor.

GENERAL PURPOSE DATA LOGGERS SPECIFICATIONS

	2c\temp & echo	3c\temp
Memory EEPROM, Storage:	4k,	8k
Temperature Ranges:	-29°C to 72°C / -20°F to 160°F	-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, 2.0°F at extremes	0.2°C at 20°C, 0.5°C at extremes 0.4°F at 68°F, 1.0°F at extremes
Temperature Resolution:	0.5°C / 0.9°F	0.2°C / 0.4°F
Warranty:	3 months	12 months
Features:		
Measurement Intervals:	Programmable from 2 seconds to month	15
Temperature Sensor:	NIST-traceable Precision Thermistor	
High and Low Alarm Limits:	LED indicator and audible alarm set by	temperature and time
Internal Clock Accuracy:	Better than 2 minutes per month	
Computer Interface:	Serial Port RS232 Cable, USB Converter	
Internal Software Provides:	Start time, Interval, User description, Ala Measurement data, Software version, So	· · · · · · · · · · · · · · · · · · ·
Power Source:	Two 3.6 Volt Lithium Battery with a 12 n Battery is rated at six months, if used co	
CE Certified:	CE Marking File	
Accessories	FLAT-FLEX probe	
Physical properties		
Width Length Depth Weight:	2.65 in. / 6.73 cm 5.06 in. / 12.85 cm 0.66 in. / 1.69 cm 3.7 oz. / 106 grams	

9

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



www. marathonproducts.com

MARATHON PRODUCTS **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 8k 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) ±0.2°C at zero degrees ±2.0°C at extremes

Measurement intervals 2 seconds to weeks

Memory EEPROM, Storage 8k memory,

Number of measurements 8k memory (7680 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. The your MaxiThermal software and USB cable are available as separate accessory items.



2c\temp-USB DATA LOGGER SPECIFICATIONS

Memory EEPROM, Storage:	8k
Temperature Range:	-29° C to +72° C / -20° F to +160° F
Temperature Accuracy:	0.2°C at 20°C, 0.5°C at extremes / 0.4°F at 68°F, 1.0°F at extremes
Temperature Resolution:	0.2°C / 0.4°F
Measurement Intervals:	Programmable from 2 seconds to weeks. 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
High and Low Alarm Limits:	LED indicator and audible 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:	9 cm(l) x 5 cm(w) x 2 cm (h) / 3.5 in.(l) x 2 in (w) x 0.8 in.(h)
Weight: 106 g / 3.7 oz.)	
Warranty:	12 months
CE Certified:	CE Marking File

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

MARATHON PRODUCTS **2C\TEMP-RH**[™] **Data Loggers**

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

The 2CXTEMP-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,

Temperature Range

MARATHON PRODUCTS

2CITEMP-RH

-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 tracable) ±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:	2 banks of 8k memory
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
Humidity Range:	0% to 100%
Humidity Accuracy:	±3% from 25% to 75%, ±5% at extremes
Temperature Resolution:	0.2°C / 0.4°F
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
High and Low Alarm Limits:	LED indicator and audible 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: life and	One CR2450 Lithium Battery with a 2 year operating a 5 year shelf life.
Size:	9 cm (l) x 5 cm (w) x 2.8 cm (h) / 3.5 in.(l) x 1.96 in.(w) x .1.1 in.(h)
Weight:	106 g / 3.7 oz.
Warranty:	12 months
CE Certified:	CE Marking File

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

21

MARATHON PRODUCTS

ezLogger[™] Temperature & Humidity Data Logger

- USB Connection to PC
- Configuration & Management Software
- User-selectable alarm thresholds
- Measurement intervals from 10 seconds to over 18 hours
- 21CFR: Part 11 software is available
- LEDs indicate logger status
- IP67 protection
- RoHS compliant

This data logger measures and stores up to 16,382 relative humidity and 16,382 temperature readings from 0 to 100%RH and -35°C to 80°C (-31°C to 176°F) measure-

ment ranges. The user can easily set up the logging rate and start time, and download the stored data by plugging the module straight into a PC's USB port and running the MDAS-Pro software under Windows 2000, XP, Vista or Windows 7 (32-bit only). Relative humidity, temperature and dewpoint (the temperature at

which water vapor present in the air begins to condense) data can then be graphed, printed and exported to other applications.

The data logger is supplied complete with a long-life lithium battery, which can typically allow logging for a year. Status indication is via flashing red and green LEDs. The logger is protected against ingress from water and dust to IP67 standard when the plastic cap and seal are fitted.

MDAS-Pro is the configuration and graphing software.

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

ezlogger temp/RH

MARATHON PRODUCTS, INC.



Example: ezLogger Humidity-Temperature Plot

ezLogger SPECIFIC	ATIONS	Min.	Тур.	Max.
Relative Humidity	Measurement range %RH	0		100
	Repeatability (short term) %RH		±0.1	
	Accuracy (overall error) (20-80%RH) %RH		±3.0**	
	Internal resolution %RH		0.5	
	Long term stability %RH		0.5	
Temperature	Measurement range	-35°C / -31°F		80°C / 176°F
	Repeatability		±0.1°C / ±0.2°F	
	Accuracy (overall error) (20-80%RH)		±0.5°C / ±1°F	
	Internal resolution		0.5°C / 1°F	
Dew Point	Accuracy (overall error) (25°C, 40-100%RH)		±1.1°C / ±2°F***	
Logging rate		every 10s		every 12hr
Operating temperature range		-35°C / -31°F		80°C / 176°F
1- 2AA 3.6V Lithium Battery Life			1* year	

Physical properties

Length	4.25 in. / 11.0 cm
Diameter	0.875 in. / 2.5 cm
Weight:	1.4 oz. / 40 grams

MARATHON PRODUCTS edl[™] Data Loggers Get the facts!

These multi-use data loggers are perfect for monitoring temperatures down to -40C (-40F) without a probe. Both units use thermistor technology and share the same basic palm-sized design so it's perfect where space limitations exist.

The edl is our top of the line data logger with 32k memory, 0.1C accuracy and resolution. This is a must have device if you work in a laboratory or metrology department.

The edl-jr is the work horse of our product line with a full 8k memory and the ability to measure down to -40C. A favorite in the pharmaceutical and transportation industries.

Functions include: start, stop, elapsed time as well as customizable time intervals. Also available: user descriptions for initialization and for downloading the data; high and low alarm values, recording status, real time measurement display and more. View up to sixteen temperature profiles at a time; download data without stopping the original program; attach probes or an audio alarm; all with precision accuracy of +/- 0.1 degree C at center of range and traceable to NIST standards.

Visual Alarms: All our data loggers have the ability to program alarm limits. Should the temperature reach levels outside these **Temperature Range** -40°C to 72°C -40°F to 160°F

Temperature Accuracy (NIST traceable) ±0.1°C at center of range ±0.3°C at extremes

Measurement intervals 2 seconds to months

Number of measurements

31,600 samples

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

Computer Ready: Marathon's easy-to-use MDAS-Pro software is available for Microsoft Windows 2000, XP, Vista and Windows 7. Our proprietary IC-9P serial cable is needed to download temperature information to a computer.

edI DATA LOGGER SPECIFICATIONS

Memory EEPROM, Storage: 32k		
Temperature Range:	-40°C to 72C°C / -40°F to 162°F	
Temperature Accuracy:		
At zero	±0.1°C at center of range,	
At Extremes	±0.3°C at extremes	
Measurement Interval:	Programmable from 2 seconds to months	
Temperature Sensor:	NIST-traceable Precision Thermistor	
Alarm Limits:	LED indicator. High and Low alarm set by temperature and time	
Internal Clock Accuracy:	Better than 2 minutes per month	
Indicators:	Power and Alarm	
Computer Interface:	Serial Port RS232 Cable, USB Converter	
Internal Software Provides:	Start and End time, Interval, User description, Alarm values, Recording status, Measurement data, Language selection, Temperature scale, Start delay.	
Power Source:	One 3.6 Volt Lithium Battery 2 Year Shelf Life	
Physical properties		
Width	1.97 inch / 5 cm	
Length	3.54 inch / 9 cm	
Depth	0.63 inch / 1.6 cm	
Weight:	1.85 oz. / 52.5 grams	

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



MARATHON PRODUCTS edi-USB[™] Data Logger

Low Temperature Waterproof Data Logger with USB Connectivity.

The edi-USB multi-use data logger is perfect for monitoring temperatures down to -40°C (-40°F) without a probe. It uses thermistor technology and has a convenient palm-sized design so it's perfect where space limitations exist.

The edl-USB is our top-of-the-line data logger with 64k memory, 0.1C accuracy and resolution. This is a must have device if you work in a laboratory or metrology department.

Functions include: start, stop, elapsed time as well as customizable time intervals. Also available: user descriptions for initialization and for downloading the data; high and low alarm values, recording status, real time measurement display and more. View up to eight temperature profiles at a time; download data without stopping the original program, all with precision accuracy of $\pm 0.1^{\circ}$ C at center of range and traceable to NIST standards.

Visual alarms: 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. **Temperature Range** -40°C to 72°C

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-40°F to 160°F

Temperature Accuracy

(NIST traceable) ±0.1°C at center of range ±0.3°C at extremes

Measurement intervals

2 seconds to months

Number of measurements 64k memory (64,000 samples)

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.



edI-USB	DATA	LOGGER	SPECIFICATIONS

Memory EEPROM, Storage:	64k
Temperature Range:	Low -40°C / -40°C / 233.2°K High +72C°C / +162°F / 345.2°K
Temperature Accuracy: At zero	±0.1°C at center of range,
At Extremes	±0.3°C at extremes
Measurement Interval:	Programmable from 2 seconds to months 4 Days. 5 sec 7 days. 9 sec 16 days. 21 sec 30 days. 39 sec 60 days. 1 min 9 sec 90 days. 2 min 0 sec 365 days. 8 min 5 sec
Temperature Sensor:	NIST-traceable Precision Thermistor
Alarm Limits:	LED indicator set by temperature and time
Internal Clock Accuracy:	Better than 2 minutes per month
Indicators:	Power and Alarm
Computer Interface:	Mini USB Connector
Internal Software Provides:	Start and End time, Interval, User description, Alarm values, Recording status, Measurement data, Language selection, Temperature scale, Start delay.
Power Source:	One 3.6 Volt Lithium Battery 2 Year Shelf Life
Size:	9 cm(l) x 5 cm(w) x 2 cm (h) /

3.5 in.(l) x 2 in (w) x 0.8 in.(h)

Weight 1.85 oz./52.5 g.

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

MARATHON PRODUCTS **c\temp[™] Data Loggers**

The Single-use Solution

c\temp is the revolutionary single-use pre-programmed electronic temperature recorder developed by Marathon Products. Designed for measuring temperatures during the transportation of chemicals, pharmaceuticals and vaccines, the internal thermistor accurately records time and temperatures for user selectable readings in Celsius, Fahrenheit and Kelvin. Because of its small size, it is suitable for applications where space limitations exist.

The larger format c\tempAA has an extended battery life and can endure rough handling. It is recommended for citrus, produce and dry ice shipments.

The internal software provides the following features: time mechanism, 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. User selectable software features also include, language conversion on the fly from English to Spanish, Portuguese, Japanese, French and German.

To start the recorder, simply press the start button!

Temperature Range

-29°C to 72°C / -20°F to 160°F -40°C to 72°C / -40°F to 160°F -80°C to 30°C / -113°F to 86°F

Temperature Accuracy

±0.2°C at zero degree ±1.0°C at extremes ±0.4°F at zero degree ±2.0°F at extremes

Measurement Intervals

Pre-programmed from 1 minute to 11 minutes depending on model type (duration)

Operating Models

5, 7, 10, 30 and 60 days



c\temp SPECIFICATIONS

Memory EEPROM, Storage: 8k

Temperature Range:

	J			
	c\temp–Red Case c\temp–Gray Case c\temp–Blue Case	-29°C to 72°C / -20°F to 160 -40°C to 72°C / -40°F to 160 -80°C to 30°C / -113°F to 80	0°F	
	c\tempAA–Red Case c\tempAA–Yellow Case c\tempAA–Blue Case	-29°C to 72°C / -20°F to 16 -40°C to 72°C / -40°F to 160 -80°C to 30°C / -113°F to 80	0°F	
Tempera	ature Accuracy:	$\pm 0.2^{\circ}\text{C}$ / $\pm 0.4^{\circ}\text{F}$ at 0°C, $\pm 1.0\text{C}$ / $\pm 2.0^{\circ}\text{F}$ at extremes		
Measur	ement Intervals:	Pre-programmed from 1 minute to 11 minutes depending on model type (duration)		
Tempera	ature Sensor:	NIST-traceable Precision The	ermistor	
Indicato	rs:	Start/Stop and Alarm		
Alarm Limits:		LED indicator. High and low alarm set by temperature and time		
Comput	er Interface:	Serial Port RS232 Cable, US	B Converter	
Internal Software Provides:		Times, Start time, Interval, User description, Alarm values, Recording status, Measurement data, Software version, Serial number, Model type.		
Power S	Source:	Lithium Battery (2 Year Shel	f Life)	
Physica	al Properties	c\temp	c\tempAA	
Quantity	Length Width Depth Weight: /:	3.54 in. / 9 cm 1.97 in. / 5 cm 0.63 in. / 1.6 cm 1.85 oz. / 52.5 g Minimum 20 units	5.06 in. / 12.85 cm 2.65 in. / 6.73 cm 0.66 in. / 1.69 cm 3.7 oz. / 106 g	

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



29

MARATHON PRODUCTS **c\temp-USB**[™] **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-

cals, and documenting the transportation of fruits and vegetables.

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

Fahrenheit. The larger format c\temp-USB has an extended battery life, is waterproof and can endure rough handling. The internal software records the following: time mechanism, 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 (±0.4°F) from 0° to 10° C (30° to 50° F); ±0.5°C (±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 PC. your The MaxiThermal software and USB cable are available as separate accessory items.



Memory EEPROM, Storage: 8k

Temperature Range:	-29°C to 72°C / -2	20°F to 160°F	
Temperature Accuracy:	$\pm 0.2^{\circ}$ C at 0° to 10°C, $\pm 0.5^{\circ}$ C at extremes ($\pm 0.4^{\circ}$ F at 32° to 50° F, $\pm 0.9^{\circ}$ F at extremes)		
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 Pre	ecision Thermistor	
Indicators:	Start/Stop and Alarm		
Alarm Limits:	LED indicator alarm set by temperature and time.		
Computer Interface:	mini USB connect	or	
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 g (2.5 oz.)		
Quantity:	Minimum 20 units	;	

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

MARATHON PRODUCTS

Single-use Strip Chart Temperature Recorder

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The TempCheck3 is a reliable and cost-effective strip chart temperature recorder for all shipping and transit applications. The TempCheck3 is driven by a high-torque quartz motor and displays the time and temperature on strip chart paper in both Celsius and Fahrenheit.



Full Serialization:

The recorder and the strip chart share the same serial number for positive identification.

Factory Sealed:

A unique feature is the silver polyester tamper evident seal. If any attempt is made to remove the seal, the word VOID appears on the seal and the case.

Verification:

Marathon offers, at no cost to the user, a posttrip verification service. Simply return the instrument for us to check and verify the accuracy against our NIST-traceable standards.



TempCheck3 SPECIFICATIONS

Run Tim	е	7 days; 16 days; 30 days; and 60 days
Operating Range		-25°C to +35°C / -13°F to +95°F
Accuracy	/	±1°C / ±2°F
Thermal	Sensor	Bi-metal coil
Drive So	urce	Solid state quartz-controlled motor
Power S	ource mercury free	One AA 1.5 volt carbon zinc battery,
Starting Procedure		1. Fill in documentation tag 2. Peel off top tag 3. Pull and remove start tab
Wall mo	unting options	Self-adhesive double foam tape
CE Certified		Yes
Physica	l Properties	
	Size (L x W x H)	4.75 in. x 4.25 in. x 2.5 in. 12.1 cm x 10.8 cm x 6.4 cm
	Weight	4.6 oz / 0.2 kg
Carton		
	Quantity	24 units
	Weight	13 lbs (5.9 kg)
	Size (L x W x H)	15 in. x 11 in. x 10 in. 38.1 cm x 27.9 cm x 25.4 cm

Note: a minimum order consists of 24 units; product shipment is Same Day if the order is placed before 2pm Pacific Standard Time.

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

PLEASE PI	RESS HARD	
MARA	THON	
	San Leandro, CA 94577 marathon products.com	
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MARATHON PRODUCTS Marathon's Data Analysis Software

Get the most from your data loggers

Marathon's Data Analysis Software (MDAS-

Pro) allows you to view up to 16 multiple traces at one time, enables you to transfer the information recorded in the logger to your computer, and to view, print and generate a report of the measurement data. The graphic representations include rotating 3D views, unlimited zooms, view temperature data points on the graph, view the total elapsed time or the exact time when it was recorded. The graph and all data points (date, time and temperature) can be printed, as well as the ability to add a Note to the file for including information pertinent to that graphic trace. Users have the ability to view the numeric data within a screen window, calculate the Mean Kinetic Temperature of the recording as well as export data in a CSV format. A summary report showing the Start and Stop Time, High, Low, Median and Average temperatures as well as the Alarm information is also displayed. The data from the logger is downloaded to your PC via our proprietary RS232 serial interface cable or USB interface. MDAS-Pro offers language support for English, French, German, Portuguese and Spanish. A separate installation program for Chinese and Japanese is also available on the CD-ROM with this version of the software. The software has been designed for the Microsoft operating system platforms and is compatible with Windows 98, 2000, XP. Vista and Windows 7.

MARATHON

MDAS-P
edl-RF Software

The edl-RF software has all of the above features of the MDAS-Pro as well as the following special features:

- Local access or remote ethernet access versions
- Remote programming of logger
- Remote Start and Stop
- Alarm notification appears onscreen and/or via a sound alert
- Alarm messages can also be sent via e-mail, SMS and by telephone
- Manual or automatic alarm reset
- Real time data display
- Logger can be identified with the station ID and managed individually
- Control an unlimited number of loggers at a time
- Pre-programmed automatic read, erase and export
- Mean Kinetic Temperature calculation for controlled room temperature profiling
- The data from the base station is downloaded to your PC through a USB cable (Local Access) or over the LAN (Ethernet Access).

c\temp Software

Our c'temp software is Read Only and it is not for programming. This is used to read data collected from our c'temp single-use data loggers. It has all the features of the MDAS-Pro, but excludes the ability to program the devices.



MDAS-Pro Temperature Plots



MDAS-Pro Temperature Plots with Recorded Data



MDAS-Pro Temperature Plots with Logger General Information

MARATHON PRODUCTS MaxiThermal[™]USB Software

Get the most from your USB data loggers

Marathon's MaxiThermal Software allows you to view up to 8 multiple traces at one time, enables you to transfer the recorded information in your loggers to your computer, and to view, print and generate a report of the measurement data. The araphic representations are a simple X – Y plot of time versus temperature with unlimited zoom, view temperature data points on the graph, view total elapsed time, or the exact time when it was recorded. The graph and all data points (date, time and temperature) can be printed, as well as the ability to add a user note to the file for including information pertinent to that particular plot.

Users have the ability to view numeric data in a screen window and Data can be Exported as a CSV file for use in other software. A Summary Information report showing the specific logger information, the Start and Stop Time, Duration of Recording, Measurement Interval, Highest, Lowest, Median and Average Temperatures as well as the High and Low Alarm information.

The data from the logger is easily downloaded to your PC via a standard USB 1.1 interface. MaxiThermal software is compatible with Windows 98. NT, 2000, XP, Vista and Windows 7.

Works with c\temp-USB, 2c\temp-USB, 2c\temp-RH, & edl-USB

MARATHON PRODUCTS, INC.

MaxiTherma



Recorded Data Window

MARATHON PRODUCTS MaxiThermal[™] Enterprise Software

Safe Server-Based File Storage & Retrieval

Marathon's MaxiThermal Enterprise Software. Stay connected to your files. A simple, scalable and affordable solution to manage logger data, documents, media and all your content online. It can be hosted on a customer's local server, on a server in the cloud, or as a service at Marathon Products.

Save time and money by having all your files in one place and easily accessable to everyone in your company from anywhere. User access is controlled by log-in accounts with different privilege levels.

MaxiThermal Enterprise allows users to upload and download Marathon logger data files, and any other type of file, to a central repository which is accessible by multiple users. Files on MaxiThermal Enterprise servers are always available to registered users via the internet. Double clicking on a file will download and open the file with the associated application program.

In File Management, files can be sorted on Branch Name (where the file originated), File Name, Upload Date, Status (Reviewed, Declined, Approved), Description, and Logger Serial Number. There is an automatic audit trail for deleted files. Once files have been uploaded to the MaxiThermal server, Administrators and Superusers can Review, Decline or Accept individual files.

MaxiThermal Enterprise Software is compatible with Windows 98. NT, 2000, XP Vista and Windows 7.

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

NO LIMITS - Any location. Any time. Any users.

Features:

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 deploy-

ment 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

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Copyright # 2010-2010, Warshort Produce, Inc.	A D 874801	-79.4 4/7	12012 9 19 02 AM	3 Min			0	4/18/2012 19:22:34 AM		

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.

Dashboard Control

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.

BulkAdministration:

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

LOCCCR PULSC	& Loggers		System Time Zone: (G	TC-08:00) Pacific Ter	ne (US & Canada)	Loggers Control Panel Supp	port supervoer Profile Logo
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Real-Time Analytics

the Time (US & Canada) Loggers Control Panel Support superviser Profile Log

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. User notes are incorporated for explanation and follow up.

& Loggers

LOCCER PULSE

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.

Historical Analyics

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

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

MARATHON PRODUCTS **21CFR DB[™] Software for Regulatory Compliance**

Marathon CRM Software

Meeting the FDA's requirements for electronic records and electronic signatures used in the pharmaceutical and biotech industries, our database and Customer Relationship Management Software has been designed for the biotech, medical, and pharmaceutical industries to comply with the Code of Federal Regulations Section 21CFR Part 11 as required by the Food and Drug Administration.

Marathon 21CFR DB validates data and works seamlessly with Marathon's intelligent data collection devices. The software provides sophisticated data encryption and storage, administrative and multi-level user security profiles, and tools for manipulating and retrieving data. In conjunction with Marathon's time and temperature data loggers, the software provides a complete analytical solution for quality assurance.

§ 11.10	Controls for closed systems Comply	
§ 11.30	Controls for open systems Comply	
§ 11.50	Signature manifestations Comply	
§ 11.70	Signature/record linking Comply	
§ 11.100	General requirements Comply	
§ 11.200	Electronic signature	
	components and controls Comply	

Our industry focused approach benefits your operations even if your best practices do not require regulatory compliance.

CONTROLS FOR CLOSED AND OPEN SYSTEMS

- Password protection (up to 10 alpha-numeric characters).
- Unique user names, login names, and alpha-numeric passwords up to 10 characters. Users can never be deleted.
- Multiple levels of security privileges: system access can be customized for each user by the administrator.
- Encrypted Data means no risk of record alteration. Recorded files are encrypted to 128 bits or more in a RC4 variant. Recorded files are in binary, compressed and checksummed format proprietary to Marathon Products, Inc.
- Sort by dates, product codes, tracking numbers, shipper or any user-defined attribute to electronically manage your data.

 Microsoft Access Database: industrystandard format allows exporting to other databases. Complete and accurate electronic copies are available for reviewing the data, copying the raw data, exporting or printing into a "pdf" format.

ELECTRONIC AUDIT TRAILS FOR REGULATORY COMPLIANCE.

- Secure computer generated, timestamped run-time audit trail of authorship, signatures, detailed configuration changes, imports and exports, administrator activities, etc.
- Audit trails are embedded in the history file guaranteeing retention alongside the records and available for review/copying.

 A separate Audit log monitoring individual logins, is kept outside the Marathon 21CFR DB™ program and can be deleted according to your Standard Operating Procedures.

ELECTRONIC AUDIT TRAILS FOR REGULATORY COMPLIANCE.

 Signed records contain printed name, date, time and meaning. Meaning includes Reviewed and Declined Review, Approved and Declined Approved, Record Created and Record Imported. Signed authorization (authorship) and optional operator entered note. Name, timestamp and meaning are all embedded in the binary format history file.



SYSTEMS REQUIREMENTS

Microsoft Windows Operating Systems 98, 2000, XP, Vista and Windows 7 for client workstations. We recommend that the database software be installed on a Windows 2000 or 2003 server by your IS or IT department. All Marathon's electronic temperature data loggers are backward compatible with the Marathon 21CFR DB™ program.



Review & Approve

SOFTWARE FEATURES

- Secure Database
- Electronic Signatures
- Levels of access permission, privileges, and authorization to customize user actions
- Audit Trails
- User Names, Login Names & Passwords
- Password Minimum Number of Characters and Expire Interval
- Record Statistics & Details
- Microsoft Access Database
- Intelligent Handling of Time Zones
- Export Data to other 21CFR Databases
- Read Logger
- Mean Kinetic Temperature

21CFR DB ADDITIONAL FEATURES:

- Becord Search Filter
- Customized Filter Attributes
- Record Summary
- Customized Data Entries & Queries
- Real-time Display
- Import Record

MARATHON 21CFR DB Full Database

5 users plus administrator Up to 120 traces in one

graph One document containing the set of testing procedures \$250 and the template to perform

the in-house validation A document reports how the 21CFR DB software addresses the 21 CFR Part **11 Requirements**

RECOMMENDED FOR:

- · Companies with multiple locations
- Manage more than 100 records a year
- · Require more than 2 users
- · Require software validation documents in place for FDA inspections
- · Use multi-use & single use units.
- Logger Initialization

2 years of customer support, service packs and version upgrades (including enhancements), 90 day warranted satisfaction or full refund

MARATHON 21CFR LE Limited Edition

- 2 users plus administrator
- 1 trace by graph only

Optional Validation Manual,

21CFR LE software addresses the 21 CFR Part **11 Requirements**

RECOMMENDED FOR:

- · Companies with only one location
- Manage less than 100 records a year
- · Require no more than 2 users
- · Write their own validation manual
- Use multi-use & single use units.
- Logger Initialization

1 year of customer support, service packs and version upgrades (including enhancements) 90 day warranted satisfaction or full refund.

VIEWER **Read Only**

2 users plus administrator 1 trace by graph only

Optional Validation Manual, \$250

A document reports how the A document reports how the 21CFR Viewer software addresses the 21 CFR Part **11 Requirements**

RECOMMENDED FOR:

- · Locations that only receive units.
- Read-only version. It cannot program loggers.
- No Logger Initialization

1 year of customer support, service packs and version upgrades (including enhancements) 90 day warranted satisfaction or full refund.

MARATHON PRODUCTS

Enhance your Temperature Recording Experience

RF BASE STATION MODULE

For use with the edl-RF series loggers.

Interface: DB9 pin serial or USB, Version 1.1. Compliant

- Size: 2.75 in. x 5.50 in. x 1.125 in. / 6.99 cm x 13.97 cm x 2.86 cm
- Weight: 7.1 oz / 200g
- Cable length:
- Power Requirement: 120V AC
- Indoor Range: up to 1500 ft. / 450 m
- Outdoor Range (RF line of sight): 7 miles / 11km
- Certifications: FCC Part 15.247, Industry Canada (IC)

MICRO-DL READER STATION

For use with the microDL Red and microDL Silver series loggers.

- Interface: USB, Version 1.1 Compliant
- Height: 0.96 in. / 24 mm
- Diameter: 1.76 in. / 44.84 mm
- Weight: 0.5 oz. / 16 g
- Cable length: 32 in. / 81.3 cm

IC-9P CABLE

For use with the 2c\temp, 3c\temp, echo, edljr., edl, edlCO2 series loggers.

- Interface: RS232 DB9 pin serial
- Cable length: 3.3 in. / 1.0 m

USB TO SERIAL CONVERTER

For use with the 2c\temp, 3c\temp, echo, edljr., edl, edlCO2 and EDL-RF series loggers.

- USB Version 1.1 Compliant
- Software Driver Supports Windows 98, 2000, XP, Vista & Windows 7
- Interface: Male DB9 pin serial
- Cable length: 13 in. / 33.02 cm

WATERPROOF CONTAINER

For use with the c\temp, 2c\temp, 3c\emp, edljr. and edl series loggers. (shown with a red c\temp inside)

- Watertight up to 100 ft. / 30.48 m
- · Crushproof & Dust-proof with high impact polycarbonate
- · Stainless Steel pins in hinges (will not rust)
- Size: 0.D.: 4.837 in. x 3.682 in. x 1.652 in. / 12.285 cm x 9.347 cm x 4.196 cm
- Size: I.D.: 4.003 in. x 2.488 in. x 1.293 in. / 10.167 cm x 6.319 cm x 3.284 cm

PROBES

For use with all Marathon loggers. (shown with microDL).

0.278 in. / 7.06 cm, or custom lengths

20 in. / 50.6 cm, or custom lengths

- Standard Stainless Steel Probe
- Length 24 in. / 61 cm, or custom lengths Diameter Outside: 0.136 in. / 3.49 mm Inside: 0.099 in. / 2.5 mm
- Micro Probe Length Diameter
- Flat Flex Length Width
- Detachable Flat Flex Length Width

Custom Lengths 0.3 in. / 0.76 cm

0.07 in. / 1.8 mm

0.3 in. / 0.76 cm

 Flexible Teflon Probe with Stainless Steel Tip Total Length 20 in. / 50.8 cm, or custom lengths Stainless Steel Tip 6 in. / 15.24 cm Diameter 0utside: 0.136 in. / 3.49 mm Inside: 0.099 in. / 2.5 mm







Polyester Film-Flat Flex Probe





Flexible Teflon Probe with Stainless Steel Tip

Package Validation Services

Marathon offers package validation services to test, verify and report on package viability for various temperature-sensitive shipping requirements. Our laboratory staff works with you through the testing process and our Environmental Chambers can be programmed for practical temperature control solutions to meet regulatory-compliance standards using industry-standard test methods.

Whether your valuable product demands near-zero, dry ice, or liquid nitrogen temperatures, we can test and give you feedback on whether your packaging will meet all of the cold-chain management requirements for your product to arrive in perfect condition.

Remote Calibration Services

Enjoy the cost savings and convenience of having your Marathon Products' data logging devices calibrated remotely.

Marathon Products' engineers can perform annual or periodic calibration of our wireless and/or Ethernet connected temperature data loggers from our headquarters. Instead of having to disrupt operations and ship everything back to a vendor's lab, customers can schedule calibration to match their operational requirements.

Remote calibration of edl Loggers for Ethernet and RF units can be summarized in four steps;

- 1) Record measurements at known temperatures,
- Determine how much recalibration is required,
- 3) Load new calibration values in the logger,
- Confirm that the new measurements are correct.



Calibration at 3 temperature points 60°C, 0°C, and -30°C



Don't ship without us!®

PRODUCTS, INC.

Visit us on the Web at www.marathonproducts.com Call us +1 800-858-6872

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