

2019



VACCINE TEMPERATURE

monitor / record / alert



Data Loggers / Wireless Loggers with Alerts

Dual Probe Vaccine Temperature Data Logger w/ Software-Less Reporting

Exceeds CDC & VFC Data Logger Requirements for Vaccine Temperature Monitoring and Compliance



Thermco's new Dual Probe ACCRT8017 Data Logger is the most powerful logger to date. Designed to meet today's CDC's and VFC's requirements for vaccine storage and monitoring. Monitor both the refrigerator and freezer temperatures simultaneously or add the optional ACCRTAMB ambient temperature sensor and log the room temperature, and either a refrigerator or freezer. The ACCRT8017 can record 24 million records. Each record contains... date, time, sensor temp readings, sensor status: normal - hi alarm - low alarm – sensor failure, and battery status: charging or power level remaining. ACCRT8017 is a self-contained data logger that requires No PC Software to generate a complete Excel .CSV report. Large easy to read display for viewing both channels current-min-max temperatures plus time and battery status. Each data logger is certified, serialized and traceable to NIST from Thermco's own ISO17025 calibration laboratory, accredited by ILAC-MRA to assure accuracy and compliance with all regulatory requirements. (accreditation no. 69071)

ACCAF1 Flash-Alert SD Wi-Fi / Memory Card accessory for ACCRT8017 that will upgrade the data logger with the following functions... Wireless Email and SMS Alerts, 2 Daily Status Reports, and a Real-Time Dashboard via Web Browser.

FEATURES:

- *EXCEEDS* Current CDC & VFC Requirements for Vaccine Storage And Monitoring
- NIST Traceable Certificate
- High Accuracy $\pm 0.3^{\circ}\text{C}$ ($\pm 0.6^{\circ}\text{F}$)
- Log 24 Million Readings on 2G Micro SD Card
- Data File in Excel .CSV Format
- Retrieve Data from Logger with Removable
- SD Memory Card or by USB cable to PC
- Logger Records Date, Time, P1 & P2 Temp, and Battery Level in .CSV file
- Logging Interval Selectable from 1 to 720 Minutes
- Detachable Shatter Proof Vaccine Size Bottle Probes
- Bottles Filled with Bio-Safe Glycol Buffer Medium
- Large LCD Display shows Current Min Max Temperature for each Sensor plus Time and Low Battery Indication
- User Adjustable Low and High Alarm Limits Setting for Each Sensor
- Audible and Flashing LED Alarm Indicators
- Temperatures in $^{\circ}\text{C}$ or $^{\circ}\text{F}$
- Time in 12 or 24 Hour Format
- Flip Out Desk Stand
- Battery Life About 10 Months in Continuous Operation with no alarms

CATALOG NO.	DESCRIPTION
ACCRT8017	Dual Probe Vaccine Data Logger to Monitor Refrigerator or Freezer. Includes... 2yr. NIST Traceable Certificate, 2 Vaccine Bottle Sensors, 2GB Micro SD Card, Micro SD Card Reader, MicroSD to SD card adapter, Mini USB Cable, 3 x AA batteries ,110v USB Power Adapter
ACCRTAMB	Optional: Ambient Room Temperature Sensor
ACCAF1	Optional: Flash-Alert SD Wi-Fi / Memory Card Provides SMS Alerts (Information and availability soon)

SPECIFICATIONS:

Measuring Range	External (Bottle Probe): -50 to 70°C (-58 to 158°F) Internal: 0 to 50°C (32 to 122°F)
Display Accuracy	$\pm 0.3^{\circ}\text{C}$ ($\pm 0.6^{\circ}\text{F}$) Over Full Range
Display Resolution	0.1°
Display Reading Update	10 Seconds
Memory	Removable 2G Micro SD Card (Max: 4G)
Memory Capacity	24 Million Readings
Data Logging Interval	Once Per Minute to Once Per 720 Minutes User Option
Alarm Limit Setting Resolution	0.1°
Default Alarm Value	Low -10°C , High 50°C
Time Accuracy	± 1 Second Per Day
Time Display Format	12/24 Hour Format User Option
Effective Calendar Period	2016 - 2099
Battery	1.5 Volt Type AAA x 3 Pieces
Battery Life	About 8000 Hours In Continuous Operation with No Alarm Triggered
Working Ambient Temperature	0 to 50°C (32 to 122°F)
Display Size	54(W) X 64(H) mm
External Sensor Cable Length	2000 mm
External Sensor Bottle Size	19.5 Dia. X 40mm (H) Pe Bottle
Product Size	83 (W) X 120 (H) X 26 (D) mm

Flash-ALERT Wireless Email & SMS Alert Notifications

Upgrade Card for ACCRT8017

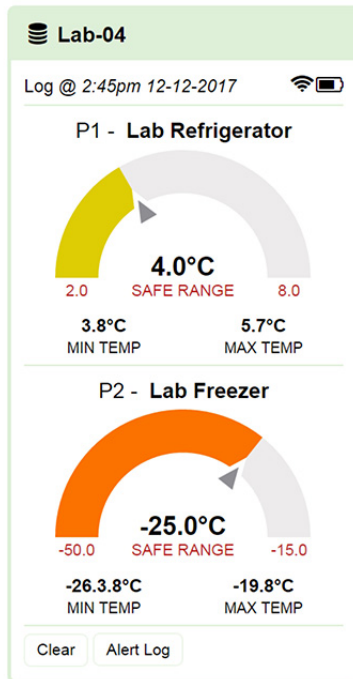
Catalog No. ACCFA1

Flash-Alert SD Wi-Fi / Memory Card



Accessory for ACCRT8017 Data Logger
Upgrades logger with the following functions...

- **Wireless Email and SMS Alerts**
temperature excursions, sensor failure, power loss, battery low, and recovery alerts
- **No Monthly Subscription Needed !**
- **2 Daily Status Reports**
current-min-max temperatures & battery level status
- **Real-Time Dashboard via Web Browser**
as seen on right



Ambient Room Temperature Sensor

Accessory for ACCRT8017 Data Logger

Catalog No. ACCRTAMB



LogTag® Vaccine Temperature Data Logger with 30-Day Summary



EXCEEDS CDC/VFC Vaccine Monitoring Guidelines

The LogTag® TRED30-16R is a CDC / VFC compliant ISO/IEC 17025 NIST traceable temperature data logger used to monitor & record the temperatures of vaccines in refrigerators or freezers. The LogTag TRED30-16R measures and stores up to 15.9K readings over a temperature range of -40° to +99°C (-40° to +210°F) via external bottle probe. The display is designed to show “At A Glance” if temperature excursions have occurred during the current day and up to the previous 29 days. The display also shows the current temperature reading, the current time, recording status and battery status. The alarm is triggered if temperature readings are outside preset alarm limits. The status indicator changes from a ✓ to a ✗ and, if configured, the audible alarm will sound. The day marker will also appear if not already present. The alarm status indicator and audible alarm can be easily cleared, but the day marker remains to ensure a visible record of excursions is shown on the display. A simplified alarm clearance, stop & start procedure is available as an option. Details of any excursions in the preceding 30 days can be checked directly by inspecting the statistics history on the recorder's display or in more detail by downloading the logged data via a standard LogTag® Interface cradle to LogTag® Analyzer operating software.

Summary of TRED30-16R updates from previous model TRED30.

- Built-in audible alarm.
- New, easy to read LCD display with 30 day summary in calendar format.
- Up to 15.9K recordings - Enough memory for 66 days at 6 minute logging.
- Auto-pause function - unplugging the external probe automatically suspends alarm & statistics processing.

FEATURES:

- NIST Traceable Certificate
- Data Logging – Records time and temperature data for later download
- Day alarm summary - Displays in calendar format alarms for the last 30 days
- Current time & temperature - Shows the current time and temperature when not in review mode
- Push Button Logging start with optional delayed start or specific Time & Date start
- Rapid Download! Takes only seconds to download recordings
- ‘Pre-Start’ logging - LogTag® can be configured to record even if it has not been started
- High performance at low cost
- Thin flat case – Fits easily into packaging and thin enough to be easily mailed “letter rate”
- Real time clock records time & temperature simultaneously
- Easy to use LogTag Analyzer software that runs on any PC configures LogTag® for recording then downloads resulting data for analysis. Data can also be exported to formats compatible with other applications such as Excel

CATALOG NO.	DESCRIPTION
LTTRED3016R	Temperature Data Logger - 15.9K logs w/Probe and Vial Note: LTIUSB (USB Interface Cradle) required for operation
LTTRED3016RUSB	VFC Compliant Temperature Data Logger, w/Probe, Vial and USB Interface Cradle
LTISOLOGTEMP	ISO17025/IEC Accredited Temperature Calibration
LTIUSB	USB Interface Cradle
LTBRACKET	Wall Mount Bracket

SPECIFICATIONS:

Temperature Sensor Measurement Range	-40°C ~ +99°C (-40°F ~ +210°F)
Operating Temp Range	-30°C ~ +60°C (-22°F ~ +140°F)
Storage Temp Range	-10°C ~ +40°C (-14°F ~ +104°F)
Rated Temperature Reading Accuracy	±0.5°C (±0.9°F) for -20°C to +40°C (-4°F to +104°F), typically ±0.3°C (0.6°F) ±0.8°C (±1.4°F) for -40°C to -20°C (-40°F to -4°F), Typically ±0.5°C (0.9°F)
Rated Temperature Reading Resolution	0.1°C (0.2°F) for measurements -40°C to +50°C (-40°F to +122°F) Please see the Rated Native Resolution chart above. LogTag Analyzer® currently displays to one decimal place of °C or °F. The native resolution is what is stored in the LogTag®.
Recording Capacity	15.9K temperature readings. 66 days @ 6min logging. Day summary statistics memory (for display on LCD): up to 30 days of Max/Min/duration and alarm trigger statistics.
Sampling Frequency	Configurable from 30 seconds to hourly.
Sensor Reaction Time	Typically less than 2 minutes (T90) in moving air
Logging Start Options	Push button start or specific date & time. Optional start delay of up to 18 hours.
Recording Indication	State indicator REC
Download Time	Typically less than 10 seconds for full memory
Environmental	IP61 (when vertically mounted or hung).
Power Source	3V CR2032 (LiMnO2) coin cell battery, user replaceable
Battery Life	Typically 1 year of operation.
Size	93mm(H) x 54.5mm(W) x 8.6mm(T)
Weight	41 grams without External Probe
Case Material	Polycarbonate
Standard External	Standard: 1.5m (4'11").
Probe Cable Lengths	Extended: 3m (9'10") (recommended maximum).
External Probe Type	PTFE (FDA food contact rated) coaxial.

Software-Less Reporting Generation



FEATURES:

- EXCEEDS Current CDC & VFC Requirements for Vaccine Storage And Monitoring
- NIST Traceable Certificate
- High Accuracy $\pm 0.5^{\circ}\text{C}$ ($\pm 1.0^{\circ}\text{F}$)
- Log 24 Million Readings on 2G Micro SD Card
- Data File in Excel .CSV Format
- Retrieve Data from Logger with Removable SD Memory Card or by USB cable to PC
- Logger Records Int/Ext Min/Max Temps into Memory
- Logging Interval Selectable from 1 to 720 Minutes
- Detachable Shatter Proof Vaccine Size Bottle Probe Filled with BioSafe Glycol
- Large LCD Display shows Internal / External Current Min/Max Temps, Time and Battery Strength
- User Adjustable Low and High Alarm Limits Setting for Each Sensor
- Audible and Flashing LED Alarm Indicators
- Temperatures in $^{\circ}\text{C}$ or $^{\circ}\text{F}$
- Time in 12 or 24 Hour Format
- Flip Out Desk Stand
- Battery Life About 10 Months in Continuous Operation with no alarm triggered

Record Room Temperature and Refrigerator (or Freezer) Simultaneously

Thermco's new ACCRT8002 Data Logger is the most powerful logger designed to meet today's CDC's and VFC's requirements for Vaccine Storage and Monitoring. The ACCRT8002 is a SELF CONTAINED DATA LOGGER that requires NO PC SOFTWARE to generate a complete Excel CVS report. Monitor both the Ambient Room and Refrigerator (or Freezer) Temperatures Simultaneously.

Large Easy to Read Display for viewing the current Room and External Bottle Probe Temperatures -- Min and Max Recorded Temperatures -- Time and Battery Strength.

Each Thermometer is Certified, Serialized and Traceable to NIST in Thermco's own ISO17025 Calibration Laboratory, accredited by ILAC-MRA to assure accuracy and compliance with all regulatory requirements. (Accreditation No. 69071)

CATALOG No.	DESCRIPTION
ACCRT8002	Ambient - Refrigerator/Freezer Vaccine Data Logger w/ Vial & Probe, Mini USB Cable, 110v USB Power Adapter Micro SD Card, USB Card Adapter
SPECIFICATIONS:	
Measuring Range	External Bottle Probe: -50 to 70°C (-58 to 158°F) Internal Unit Sensor: 0 to 50°C (32 to 122°F)
Display Accuracy	±0.5°C (±0.9°F) Over Full Range
Display Resolution	0.1°
Display Reading Update	10 Seconds
Memory	Removable 2G Micro SD Card (Max: 4G)
Memory Capacity	24 Million Readings
Data Logging Interval	Once Per Minute to Once Per 720 Minutes User Option
Alarm Limit Setting Resolution	0.1°
Default Alarm Value	Low -10°C, High 50°C
Time Accuracy	±1 Second Per Day
Time Display Format	12/24 Hour Format User Option
Effective Calendar Period	2014 - 2099
Battery Life	About 8000 Hours In Continuous Operation With No Alarm Triggerred
Battery	1.5 Volt Type AAA x 3 Pieces
Working Ambient Temperature	0 to 50°C (32 to 122°F)
Display Size	70(W) X 64(H) mm
External Sensor Cable Length	2000 mm
External Sensor Bottle Size	19.5 Dia. X 40mm (H) Pe Bottle
Product Size	94 (W) X 110 (H) X 25 (D) mm



Fridge-tag® 3 Wireless Vaccine Temperature Data Logger



Fridge-tag® 3 is the ideal Temperature Data Logger for the continuous monitoring of sensitive Vaccines and Pharmaceuticals stored in medical refrigerators & freezers.

Real-time SMS text messaging notifications of temperature excursion are transmitted wirelessly by Cellular GSM (Global System for Mobile communication). The Fridge-tag® 3 is not dependent on Wi-Fi and local networks in order to send sms messages, and even during power outages can send critical Alerts to your Cell Phone. No software needed to generate temperature & alarm data. As soon as the Fridge-Tag® 3 is connected via USB to a PC or Mac it creates a PDF and an .CSV file. The PDF file provides a daily summary of temperature activity (selectable: 28, 56, 84 or 112 day overview) PLUS 8 weekly graphs of temperature performance. Temperature readings are recorded every 5 minutes and can be found in a table within the TXT file. Thanks to the electronic signature the raw data can be verified as compliant with FDA regulations 21 CFR Part 11. This means that each month you obtain a report and the assurance that your temperature-sensitive goods are stored in accordance with regulations. The data logger's external thermometer probe is sealed in a Bio-Safe glycol filled bottle to buffer temperature variations. Meets and exceeds the latest VFC CDC requirements published in the Guidelines for Storage and Temperature Monitoring of Refrigerated Vaccines

Receive Real-time Temperature Excursion Alerts via SMS Notifications

Software-Less PDF Generation of Temperature, Alarm Data Plus Graphs

FEATURES:

- NIST Traceable Certificate
- Removable Probe
- True Seal Flat Ribbon Probe Cable
- Bio-Safe Glycol / Water Probe Medium
- Current Temperature Display
- No Software Needed for Reporting or Computer Connection
- 30 Day Status on Screen
- Press for 30-Days of Min/Max History
- PDF report... 60 days of temperature & alarm data
- High/Low Alarm
- 43,200 Temperature Observations Monthly
- Meets FDA 21 CFR Part 11 requirements
- Accuracy $\pm 1^{\circ}\text{F}$ (0.5°C)
- Weekly Graphs
- 4 graphs – Each with 1 Week of Temperature Data
- 56 Days of Information
- Date in USA Format
- Date of Activation
- Give State Health Departments a warning when a device will be out of calibration
- Battery Level Indicator
- Showing Full, Middle and Low

CATALOG No.	DESCRIPTION
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BERFRIDGETAG3	Wireless Vaccine Data Logger, NIST Traceable Certificate, Vial & Probe Note: 2 year data plan required for SMS Alerts
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SPECIFICATIONS:

External Dimensions	(L x W x H) 136 x 98 x 21 mm	Battery	Lithium Polymer Li-ion battery - Complies with IATA DGR Packaging Instruction UN3481 PI 967 section II and is therefore not considered as dangerous good.
Size of the LCD Display	95 x 27 mm	Protection Class	IP50 (IP64 without external sensor)
Weight	170 g	2D Code on Label	GS1 and data matrix
Storage Condition	(inactive) 0°C to +30°C +32°F to +86°F	Operating Lifetime	Min. 3 years useful life / at least 72 hours power back up
Operating Temperature	(Main housing) +5°C to +50°C* +41°F to +122°F (Display visible) -10°C to +55°C +14°F to +131°F	Activation	Press SET and READ button simultaneously for more than 3 seconds
Alarm Temperature Range	-30 to +50°C in 0.1°C increments (-22 to +122°F)	Stopping	No stop function
Alarm Limits	2 individually programmable alarm limits (1 upper and 1 lower alarm limit)	Configuration	Pre-set by Berlinger & Co AG or for self configuration via SMS or server
Warning Limits	2 individually programmable alarm limits (1 upper and 1 lower alarm limit)	Data Communication	Optional: To be pushed on a regular interval to a predefined server
Alarm Time	1 Minute to 23h 59min	Alarm Indication	Buzzer, SMS or server
Temperature measurement interval	Every minute (Log interval programmable. Recommended 5, 10, 15 minutes)	Manipulation	Fridge-tag® 3 GSM cannot be manipulated or reset without destroying it.
Accuracy of temperature measurement	+/- 0.8°C from -25 to -10°C (+/-1.44°F from -13 to +14°F) +/- 0.5°C from -10 to +40°C (+/-0.9°F from +14 to +104°F) +/- 0.8°C from +40 to +55°C (+/-1.44°F from +104 to +131°F)	Format of the original document	ASCII (it can also be imported by many ERP systems) / PDF
Measurement accuracy of the time	Daily time updates (depending on network operator) if not supported +/- 30 min / year	Free software for verifying PDF and ASCII Files	JAVA™ / The software verifies the digital signature of the ASCII and PDF files. FDA regulation 21 CFR Part 11 compliant. Software is compliant with GAMP 5 requirements.
Calibration	Every device is calibrated / NIST / ILAC traceable	Standards	ASTM 2500, 21 CFR Part 11, 21 CFR Part 820, ICH Q8/Q9, ANSI/IEEE 829/830/1008, EN 12830, 2002/95 EC Directive (RoHS), EN/IEC 60529 IP protected classes, IATA Regulations, EN 301511, EN 301489-1/7, EN 60950-1 + A2:2013, EN 62133, FCC part 15B
Memory Space	30 day as a display and 60 days overview in a PDF report		
Date / Time programming	Date and time will be set automatically when device is activated (via GSM network)		

Fridge-tag® 2L Vaccine Data-Logger

Software-Less PDF & Graph Report Generation

3 Year NIST Traceable Certificate & Updated Features (in red)



Fridge Model Shown w/ Yellow Label
Freezer Model Shown w/ Blue Label



Exact measurement of temperature and time

The Fridge-tag® 2L is a high-precision, electronic temperature monitor. It is 100% calibrated and has a measurement precision of $\pm 0.5^{\circ}\text{C}$. Temperature measurement occurs every minute throughout the entire monitoring time. This guarantees faultless and extremely accurate measurement results. Even if an alarm limit has been exceeded and the Fridge-tag® 2L alarm is displayed, it accumulates each additional temperature threshold violation. The precision time measurement is generated by a built-in quartz clock. NIST/ILAC Traceable with 3yr. Certificate.

Data read-out without software via USB

As soon as the Fridge-tag® 2L is connected via USB to a PC or Mac, it creates a PDF or an ASCII file. Thanks to the electronic signature the raw data can be verified to be in compliance with the FDA regulations 21 CFR Part 11. Any changes are immediately recognized and the document rejected. This means that each month you obtain a report and the assurance that your temperature-sensitive goods are stored and recorded in accordance with regulations.

FEATURES:

- **NIST Traceable with 3yr, Certificate**
- **Audible Alarm**
- **Now with Weekly Temperature Graphs**
- **Improved Battery Life**
- **Battery Level Indicator**
- **Improved LCD Contrast**
- **Daily Verification Log w/Time-Stamp**
- **Longer Sensor Cable 62" (optional)**
- **Removable Probe**
- **True Seal Flat Ribbon Probe Cable**
- **Bio-Safe Glycol / Water Probe Medium**
- **Current Temperature Display**
- **No Software Needed for PDF Reporting**
- **30 Day Status on Screen**
- **Press for 30-Days of Min/Max History**
- **High/Low Visual Alarm**
- **43,200 Temperature Observations Monthly**
- **Meets 21 CFR Part 11 requirements**
- **Accuracy $\pm 0.5^{\circ}\text{C}$ (1.0°F)**

CATALOG No.	DESCRIPTION
BERFRIDGETAG2L	Fridge - Vaccine Data Logger, Alarm Setting $>8.0^{\circ}\text{C}$ for 60min. & $<2.0^{\circ}\text{C}$ for 15 min. User configurable alarms.
BERFREEZTAG2L	Freezer - Vaccine Data Logger, Alarm Setting $>-15.0^{\circ}\text{C}$ for 60 min. Factory alarm set; non-configurable.

SPECIFICATIONS:

External dimensions (L x W x H)	128 x 75 x 14.5mm	Temperature measurement interval	Every minute
Size of the LCD display	95 x 27mm	Accuracy of temperature measurement	$\pm 0.5^{\circ}\text{C}$ (-5°C to 30°C), $\pm 0.6^{\circ}\text{C}$ (beyond this range) $\pm 1.0^{\circ}\text{F}$ ($+23^{\circ}\text{F}$ to $+86^{\circ}\text{F}$), $\pm 1.1^{\circ}\text{F}$ (beyond this range)
Weight	96g	Accuracy of time	± 30 minutes / year
Storage condition (inactive)	-30°C to $+60^{\circ}\text{C}$ / -22°F to $+140^{\circ}\text{F}$	Calibration	Every device is calibrated / NIST/ILAC traceable
Operating temperature	-30°C to $+55^{\circ}\text{C}$ / -22°F to $+131^{\circ}\text{F}$	Date/Time programming	Date and time will be set when device is activated (see operation manual)
(Display visible)	-10°C to $+55^{\circ}\text{C}$ / $+14^{\circ}\text{F}$ to $+131^{\circ}\text{F}$	Protection class	IP67
Alarm temperature range	-30°C to $+50^{\circ}\text{C}$, in 0.1°C increments / -22°F to $+122^{\circ}\text{F}$	Operating lifetime	up to years - expiry date printed on label
Alarm limits	2 individually programmable alarm limits (1 upper and 1 lower alarm limit)	Manipulation	Fridge-tag® 2 cannot be manipulated or reset without destroying it.
Alarm time	1 Minute to 23h 59min		

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