

DATA LOGGING SOLUTIONS

# VACCINE TEMPERATURE MONITORING



Aiding in the Compliance of State Regulations and  
CDC Guidelines for the Vaccines for Children (VFC) Programs










# The MadgeTech Advantage



Ensure safety, quality and efficiency by measuring and recording crucial data for inconsistencies that directly impact the success of a business. Our customizable data logging solutions provide real-time monitoring for applications where the slightest change in environment could be destructive. Coupled with the accuracy and reliability of our products, we also offer free software and cloud services, making compliance and validation reporting a breeze.

The MadgeTech **Vaccine Temperature Monitoring System (VTMS)** and **VFC2000** are the most complete, user-friendly solutions on the market. Our loggers offer highly precise measurement, continuous, real-time data analysis and unmatched ease of use. Both devices provide local monitoring directly on the unit's LCD display and the VTMS also provides remote monitoring from a PC, each with customizable alarms. Additionally, MadgeTech 4 Software provides detailed, easy to understand graphs and data tables to track long term data and generate comprehensive reports for regulators. The combined power of MadgeTech data loggers and MadgeTech 4 Software provides users with the best possible system for monitoring vaccine temperatures.

## Benefits:

-  Calibration
-  ISO/IEC 17025 Accreditation
-  IQ/OQ/PQ On-Site Services
-  Free Technical Support
-  Free Software
-  Cloud Services
-  21 CFR Part 11 Compliance

MadgeTech data loggers are designed, manufactured and serviced in the USA and distributed worldwide. Pacific Sensor Technologies Pty Ltd. (PST) is the Australian distributor for MadgeTech data loggers.



**HEADQUARTERS**  
Warner, New Hampshire

# Continuous Vaccine Temperature Monitoring



Capable of measuring and recording temperatures as low as  $-100\text{ }^{\circ}\text{C}$  ( $-148\text{ }^{\circ}\text{F}$ ), the MadgeTech **VFC2000** comes with all the tools needed to ensure vaccine distribution and storage plans are operating in compliance with CDC and VFC regulations.

A simple solution for continuous vaccine temperature monitoring, the **VFC2000** displays current, minimum, and maximum readings as well as a battery level indicator. Equipped with an LED indicator, the VFC2000 reminds users to conduct the required 24-hour temperature check. If temperatures fluctuate out-of-range, the VFC2000 will trigger an audio and visual alert.

## Benefits & Features

- **Continuous Real-Time Monitoring:** Get current, max, min and average readings on the spot with the large, easy-to-read display
- **Low Temperature Monitoring:** Measure temperatures as low as  $-100\text{ }^{\circ}\text{C}$  ( $-148\text{ }^{\circ}\text{F}$ )
- **Audible and Visual Alerts:** Instantly notify staff when thresholds are in danger
- **LED Indicators:** Reminds users to conduct the required 24-hour temperature check
- **Calibration Certificate Included:** Annual or biennial calibration option
- **Simple Set-Up and Operation:** Any user can set-up and operate in minutes
- **Easy Reporting:** Satisfies all CDC and VFC requirements using the free MadgeTech 4 Software
- **Optional Equipment:** 30 ml glycol bottle buffer also available

# Wireless Vaccine Temperature Monitoring



While refrigerators and freezers can be fitted with any number of thermometers or digital data loggers, in order to aid in compliance with state and CDC regulations as well as VFC guidelines, the best possible wireless monitoring solution remains the **MadgeTech Vaccine Temperature Monitoring System (VTMS)**.

For applications that require real-time monitoring, the **VTMS** is a wireless vaccine temperature monitoring system that eliminates the need for manual temperature monitoring. Customizable features include user-programmable alarms, the VTMS will alert or notify users via email or text when thresholds are breached, allowing users to take immediate action.



## Benefits & Features

- **Continuous Real-Time Monitoring:** Get current, max, min and average readings on the spot with the large, easy-to-read display
- **Wireless Monitoring:** Monitor multiple loggers simultaneously via an administrative PC
- **Low Temperature Monitoring:** Measure temperatures as low as -100 °C (-148 °F)
- **Audible and Visual Alerts:** Instantly notify staff when thresholds are in danger
- **Long Term Performance:** Made to last for years with very little maintenance
- **Simple Set-Up and Operation:** Any user can set-up and operate in minutes
- **Easy Reporting:** Satisfies all CDC and VFC requirements using the free MadgeTech 4 Software
- **Optional Equipment:** 30, 60 and 250 ml glycol bottle buffer also available

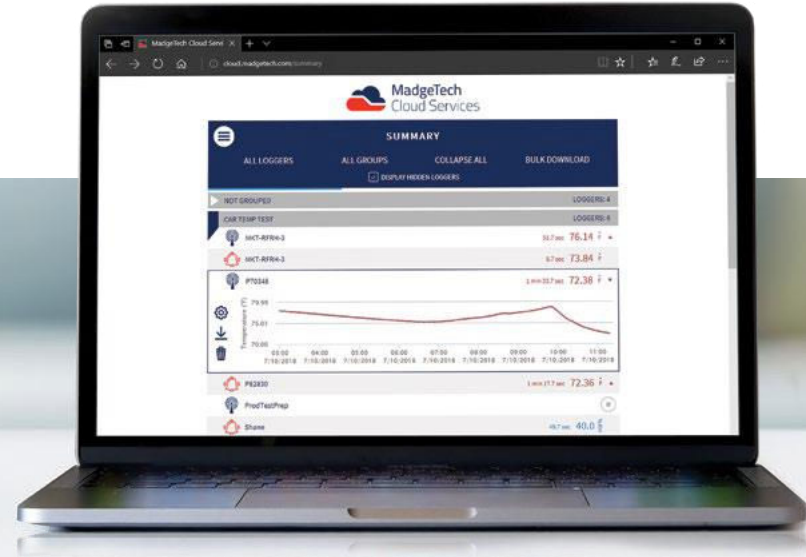
# Meets or Exceeds CDC and VFC Requirements



Thermometers and data loggers associated with vaccine storage are held to high standards to qualify for participation in government inoculation programs, including Vaccines for Children. The MadgeTech **VTMS** and **VFC2000** are one hundred percent compliant to all CDC regulations and VFC requirements. In many key areas, the MadgeTech solutions actually exceed those standards.

 Exceeds VFC Requirements	MadgeTech VTMS and VFC2000	 Meets VFC Requirements	MadgeTech VTMS and VFC2000
<b>Accuracy of <math>\pm 0.5</math> °C</b>	Provides high accuracy temperature monitoring and features a device accuracy of $\pm 0.05$ °C.	<b>Current, Minimum &amp; Maximum Temperature Display</b>	Displays current, minimum and maximum temperatures, which indicate the coldest and warmest temperatures recorded since the device was reset. Simple and easy to read LCD display of information without requiring button presses or determination of proper data displayed.
<b>Out-of-Range Alarms</b>	Offers both LED visual alarm indication and an audible buzzer on the device itself. In addition, the software can send alarms to an unlimited number of users in the event of a temperature excursion.	<b>User-Programmable Logger Interval</b>	Configured by the user to take readings at user-specified intervals to create a complete overview and detailed record of the vaccine storage environment.
<b>Low Battery Indicator</b>	The on-board LCD display will clearly indicate the battery level. In addition, this device is capable of running off of external power, which allows the battery to simply function as a backup.	<b>Certificate of Calibration</b>	Certificate of calibration included.
<b>4,000 Reading Memory Storage</b>	Stores over 16,000 readings in stand alone memory mode. Real-time mode has no limitations to memory and can offer much greater visibility to temperature trends and analysis.	<b>Detachable, Buffered Temperature Probe Reporting</b>	Probe assembly included. Glycol bottle is optional.
			The <b>FREE</b> MadgeTech 4 Data Logger Software is designed to streamline the process of downloading data and reviewing it in a user-friendly, time efficient manner. See page 7 for more information. MadgeTech also offers free and unlimited software support.

## Access Data Instantly and Securely from Anywhere in the World



The **MadgeTech Cloud** is compatible with all MadgeTech wireless data loggers, providing users with instant access to real-time data from any location. With the MadgeTech Cloud, data loggers can securely transmit data to be viewed on any Internet enabled device such as a computer, tablet or smartphone.

### Scalable Solution

The MadgeTech Cloud is designed to support organizations of any size. From a single data logger to a network consisting of hundreds of loggers, the MadgeTech Cloud provides facilities with on-demand data supervision, attainable results, and flexibility like never before. The MadgeTech Cloud gives users the power to have control of all their critical data right in the palm of their hand.

### Cloud Capabilities

All wireless MadgeTech data loggers can transmit data to the MadgeTech Cloud to be saved, viewed and controlled. The data is available for viewing from any Internet enabled device anywhere in the world. Equipped with many features, the MadgeTech Cloud is flexible enough to adapt to any data logging needs.

### New Logger Groups

Assembling data loggers is easier than ever thanks to the MadgeTech Cloud's Logger Groups. Users have the ability to organize data loggers into groups and subgroups, making all data easily accessible from one central location.

### Email & Text Message Alerts

The MadgeTech Cloud allows users to configure alarms to alert for no readings, channel thresholds or battery level. When an alarm is triggered, text message or email notifications are instantly sent, giving users the ability to view the data and assess the situation immediately.



Quick and  
Easy Setup



View Data  
From Anywhere



Access Data  
Instantly



Email and Text  
Notifications

# MadgeTech 4 Software

The simple, easy-to-use, Windows-based software enables the user to effortlessly collect, display and analyze data. A variety of powerful tools can be used to examine, export, and print professional quality reports with just a click of the mouse. This software can be downloaded for free from the MadgeTech website.

## MadgeTech 4 Software Customizable Features and Options

**MadgeTech 4 Software** can communicate with multiple loggers through multiple interface cables. Capable of simultaneous start, stop and download of over 100 devices, this software serves as your virtual command center for large scale facilities and small. Display your data in graphs, with tabbed views and multi-monitor support. Utilize the infinite graphing flexibility by combining channels and datasets as desired. All graphing makes use of accelerated graphics hardware for real-time updating and high performance visuals.

MadgeTech 4 Software is designed with a built-in database for automatic storage of downloaded data. The look and feel is organized much like standard email programs to aid in user friendliness and ease of use. MadgeTech 4 Software also offers extensive alarming options across multiple devices, wireless and non-wireless. Alarm output options include email, on-screen, text message and run-a-program alerts.

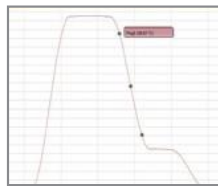
MadgeTech 4 Software has a powerful and comprehensive statistics system that allows the user to customize and view statistics as desired. Another feature is customizable engineering units. This enables users to support and program devices with many different unit types as well as the ability to display them as an alternate unit if desired.

## Software Features

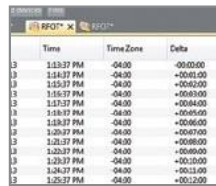
- Multiple Graph Overlay
- Statistics
- Digital Calibration
- Zoom In / Zoom Out
- Cooling Flags
- Lethality Equations (F0, PU)
- Mean Kinetic Temperature
- Full Time Zone Support
- Data Annotation
- User Friendly File Management
- Min. / Max. / Average Lines
- Time-slice
- Data Table View
- Automatic Report Generation
- Summary View
- Workflows / Automation



Cooling Flags

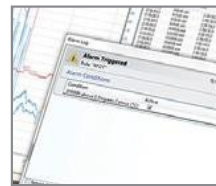


Graph View

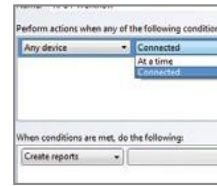


Time	Time Zone	Delta
1:13:37 PM	-04:00	-00:00:00
1:14:37 PM	-04:00	-00:01:00
1:15:37 PM	-04:00	-00:02:00
1:16:37 PM	-04:00	-00:03:00
1:17:37 PM	-04:00	-00:04:00
1:18:37 PM	-04:00	-00:05:00
1:19:37 PM	-04:00	-00:06:00
1:20:37 PM	-04:00	-00:07:00
1:21:37 PM	-04:00	-00:08:00
1:22:37 PM	-04:00	-00:09:00
1:23:37 PM	-04:00	-00:10:00
1:24:37 PM	-04:00	-00:11:00
1:25:37 PM	-04:00	-00:12:00

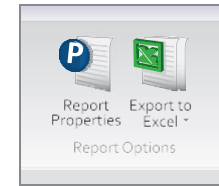
Tabular Data View



Alarm Notifications



Automation



Export to Excel