

## Thermochron *i*Button Starter Kit

### General Description

The DS1921K Thermochron™ *i*Button® Starter Kit provides the basic hardware for a quick evaluation of Maxim's Thermochron *i*Button family that communicates using the 1-Wire® protocol. The kit uses the USB port of a Microsoft Windows®-based Personal Computer running Vista®, XP SP2 (or higher), or Microsoft Server Operating Systems Windows 2003 or 2008. The kit includes a DS1921 Thermochron *i*Button and all hardware required to communicate with it. The DS1921K is also capable of evaluating any other *i*Button, including the high-capacity Thermochrons (DS1922L, DS1922T, and DS1923), the Hygrochron™ (DS1923), and the temperature-only *i*Button (DS1920). Please note that the DS1921 is the only *i*Button included in the kit. All other *i*Buttons may be purchased separately. The easy setup process includes the free download of 1-Wire drivers and the OneWireViewer demonstration software to easily communicate with *i*Buttons through the PC's USB port. The download site for the free 1-Wire drivers and bundled OneWireViewer is found at:

<http://www.maxim-ic.com/1-wiredrivers>

For software developers who wish to create custom *i*Button applications, Maxim provides documentation and a free library of source code examples at <http://www.maxim-ic.com/ibutton> under the Software Development Kits link. Please check our website regularly for software updates.

To evaluate plastic-packaged 1-Wire devices instead of the *i*Button form factor, use the DS9090K instead of the DS1921K. To evaluate any *i*Buttons other than Thermochrons, see the DS9092K.

### Ordering Information

PART	TYPE
DS1921K#	EV Kit

# Denotes an RoHS-compliant device that may include lead(Pb) that is exempt under the RoHS requirements.

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### Features

- ◆ Starter Kit to evaluate the DS1921 Thermochron *i*Button temperature recording device with a Microsoft Windows-based PC
- ◆ Easy Setup with USB Adapter
- ◆ Free download of 1-Wire drivers and OneWireViewer Demonstration Software
- ◆ Compatible with other Thermochron *i*Buttons DS1922L, DS1922T, DS1922E, DS1923 (not included)



### EV Kit Contents

QTY	DESCRIPTION
1	DS1921G-F5# Thermochron <i>i</i> Button
1	DS9093F Snap-in Fob, Black
1	DS1402D-DR8 dual Blue Dot™ Receptor
1	DS9490R USB to 1-Wire adapter

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### Getting Started

- Go to <http://www.maxim-ic.com/1-wiredrivers> and download the latest 1-Wire drivers with bundled OneWireViewer demonstration software. Follow the instructions on the download site for selecting the correct driver package and to start the installation wizard.
- **IMPORTANT:** Do not install the DS9490R into your USB port until you have completed the installation wizard in the previous step.
- After running the 1-Wire installation wizard, make sure you have internet available and plug the DS9490R USB adapter in to a free USB port in your PC. Windows will continue the installation of the USB driver but first search the Microsoft web-site for updates. If you do not have internet available, the USB driver installation process can hang up for more than 10 minutes before it times out.
- Plug the RJ-11 Modular connector of the DS1402D-DR8 Blue Dot Receptor into the DS9490R USB adapter.
- Optionally snap the iButton into the key fob. This makes easier removal of the iButton from the Blue Dot Receptor.
- Start OneWireViewer software by clicking on its icon. This application may also be found under Microsoft Start under the folder "1-Wire Drivers x86".
- Snap the iButton (optionally with key fob) into the Blue Dot Receptor and you will see its address displayed. Click on the address to access screens that show all the functions of each iButton. Then, follow the instructions for missioning and reading the contents of a Thermochron.

For more details on using the OneWireViewer, please see the following application notes:

[Application Note 437 3: OneWire Viewer and iButton® Quick Start Guide](#)

[Application Note 335 8: OneWireViewer User's Guide](#)

[Application Note 3809: Exporting DS192x Logger Data from the OneWireViewer into Excel](#)

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### Software Development

For developing applications for the Thermochron as well as other iButtons, Maxim offers three software development kits (SDKs):

**1-Wire SDK for Windows.** This SDK is aimed primarily at PC host environments running Microsoft Windows. The kit contains sample programs in C#, VB.NET, VB 6.0, C, and Delphi, along with HTML documentation for help in utilizing our Windows APIs. These APIs include the 1-Wire API for .NET, the much smaller 1-Wire API for Microsoft's Compact .NET Framework (Windows CE/Mobile), and the TMEX API at the lowest level. The source to the Hygrochron Viewer is offered in this particular kit (in C#) to demonstrate DS1922L/T/E iButtons, along with the DS1923 humidity logging iButton. Download here:

<http://www.maxim-ic.com/products/ibutton/software/tmex/index.cfm>.

**1-Wire API for Java.** This is the foundation for developing robust 1-Wire and iButton software on platforms that have a Java Virtual Machine. It includes the above-mentioned OneWireViewer utility and its Java source code. It can be found here:

[http://www.maxim-ic.com/products/ibutton/software/1wire/1wire\\_api.cfm](http://www.maxim-ic.com/products/ibutton/software/1wire/1wire_api.cfm).

**1-Wire Public Domain Kit.** This kit includes a public domain API and example programs written entirely in C and designed to be portable across multiple computer operating systems, handheld operating systems, and microcontroller platforms. The kit contains many sample 1-Wire applications written in C. See the "humalog" and "thermo" Thermochron examples. The SDK's download page is here:

<http://www.maxim-ic.com/products/ibutton/software/1wire/wirekit.cfm>.

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### Revision History

REVISION DATE	DESCRIPTION	PAGES CHANGED
12/05/08	Updated the <i>General Description</i> section.	1
	Added <i>Ordering Information</i> section.	
	Added <i>EV Kit Contents</i> section.	
	Removed outdated items from <i>Features</i> list.	
	Reformatted with Maxim logo.	
	Added <i>Getting Started</i> and <i>Software Development</i> Sections.	2
4/23/09	Added reference to Application Note 4373.	2



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