

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
DALLAS DIVISION**

LUCIO DEVELOPMENT LLC,	§	
	§	
Plaintiff,	§	Case No:
	§	
vs.	§	PATENT CASE
	§	
MAXIM INTEGRATED PRODUCTS, INC.,	§	
	§	
Defendant.	§	
_____	§	

**COMPLAINT**

Plaintiff Lucio Development LLC (“Plaintiff” or “Lucio”) files this Complaint against Maxim Integrated Products, Inc. (“Defendant” or “Maxim”) for infringement of United States Patent No. 7,069,546 (hereinafter “the ‘546 Patent”).

**PARTIES AND JURISDICTION**

1. This is an action for patent infringement under Title 35 of the United States Code. Plaintiff is seeking injunctive relief as well as damages.
2. Jurisdiction is proper in this Court pursuant to 28 U.S.C. §§ 1331 (Federal Question) and 1338(a) (Patents) because this is a civil action for patent infringement arising under the United States patent statutes.
3. Plaintiff is a Texas limited liability company with its office address at 555 Republic Dr., Suite 200, Plano, Texas 75074.
4. On information and belief, Defendant is a Delaware corporation with its principal place of business at 160 Rio Robles, San Jose, CA 95134. On information and belief, Defendant may be served with process through its registered agent, CSC – Lawyers

Incorporating Service Company, 211 E. 7<sup>th</sup>, Street Suite 620, Austin, Texas 78701.

5. This Court has personal jurisdiction over Defendant because Defendant has committed, and continues to commit, acts of infringement in this District, has conducted business in this District, and/or has engaged in continuous and systematic activities in this District.

6. On information and belief, Defendant's instrumentalities that are alleged herein to infringe were and continue to be used, imported, offered for sale, and/or sold in this District.

### **VENUE**

7. Venue is proper in this District pursuant to 28 U.S.C. §1400(b) because acts of infringement are occurring in this District and Defendant has a regular and established place of business in this District at 14675 Dallas Parkway, Suite 300, Dallas, TX 75254.

### **COUNT I** **(INFRINGEMENT OF UNITED STATES PATENT NO. 7,069,546)**

8. Plaintiff incorporates paragraphs 1 through 7 herein by reference.

9. This cause of action arises under the patent laws of the United States and, in particular, under 35 U.S.C. §§ 271, *et seq.*

10. Plaintiff is the owner by assignment of the '546 Patent with sole rights to enforce the '546 Patent and sue infringers.

11. A copy of the '546 Patent, titled "Generic Framework for Embedded Software Development," is attached hereto as Exhibit A.

12. The '546 Patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

13. On information and belief, Defendant has infringed and continues to infringe one or more claims, including at least Claim 1, of the '546 Patent by making, using, importing,

selling, and/or offering for sale a software platform for embedded software development, which is covered by at least Claim 1 of the '546 Patent. Defendant has infringed and continues to infringe the '546 Patent directly in violation of 35 U.S.C. § 271.

14. Defendant, sells, offers to sell, and/or uses embedded software development packages including, without limitation, its 1-Wire Public Domain Kit, and any similar products ("Product"), which infringe at least Claim 1 of the '546 Patent.

15. The 1-Wire Public Domain Kit is a software development kit (SDK) containing a 1-Wire API written entirely in C. 1-Wire SDK is portable across various microcontroller platforms. 1-Wire SDK provides one or more generic application handler programs, each such program comprising computer program code for performing generic application functions common to multiple types of hardware modules used in a communication system. For example, 1-Wire SDK includes higher level API functions and assembly code functions ("generic application functions") for various microcontroller platforms ("hardware modules"). API functions and assembly code functions are common and uniform across all 1-Wire SDK supported hardware modules. Certain elements of this limitation are illustrated in the screenshots below and in the screenshots referenced in connection with other elements herein.

## IBUTTON: 1-WIRE PUBLIC DOMAIN KIT

The 1-Wire® Public Domain Kit is a software development kit (SDK) containing a 1-Wire API written entirely in C. The API source included in the kit is portable across multiple PC operating systems, handheld operating systems, and microcontroller platforms. The kit also contains over 20 sample 1-Wire/iButton applications, all written in C. For microcontroller platforms without an available C compiler, the kit also includes assembly code functions representing low-level 1-Wire bus protocol algorithms such as reset/presence detect, byte I/O, and bit I/O. The following download is source code only, and contains the Public Domain Kit's API, the example programs, different platform-specific link files, and assembly language files for microcontrollers without a C compiler.

**Download Version 3.10**—source code only. (Now supports the DS9490 USB 1-Wire Adapter.)

- [1-Wire Public Domain Kit + examples + all link files + assembly language files](#) (ZIP, 785kB)

\*See the table below to download precompiled binary builds for specific platforms and 1-Wire adapters.

### Kit Advantages

1. The 1-Wire Public Domain Kit enables the developer to create a 1-Wire master in software that can identify and communicate with slave devices. The 1-Wire protocol is a single-wire-and-ground network with one master and one or more slave devices (such as iButtons and 1-Wire chips). The kit provides all the 1-Wire transport and file-level services to communicate with any 1-Wire device, including iButtons.
2. The developer can easily port 1-Wire programs to multiple PC and microprocessor platforms. There are provided "TODO" templates (link files) to be completed for a specific platform. The kit provides several platform example implementations with their source code.
3. The kit contains higher level API functions, such as **ReadAtoDResults()** and **ReadTemperature()** for different 1-Wire sensors, along with **MemoryBank** and **File** functions for writing and reading 1-Wire memory.

Source: <https://www.maximintegrated.com/en/products/ibutton/software/1wire/wirekit.cfm>

## SOFTWARE DEVELOPMENT KITS

To help get your iButton® and 1-Wire® application up and running quickly, we offer several Software Development Kits (SDKs) that ensure interoperability among all iButton applications. Most of our software examples are part of our SDKs. For an overview of each SDK, click on the links below.

### [1-Wire Public Domain Kit](#)

This kit is a public-domain API written in C and portable across multiple PC operating systems, handheld operating systems, and microcontroller platforms. The kit contains over 20 sample 1-Wire/iButton applications, all written in C. For microcontroller platforms without a C compiler available, the kit also includes assembly code functions representing low-level 1-Wire bus protocol algorithms such as reset/presence detect, byte I/O, and bit I/O.

### [1-Wire API for Java](#)

The 1-Wire API for Java™ is the foundation for developing robust 1-Wire and iButton software on platforms that have a Java virtual machine. It contains 25 example programs with source (including the OneWireViewer utility) to demonstrate iButtons and other 1-Wire devices.

### [1-Wire SDK for Windows](#)

1-Wire SDK for Windows® demonstrates the 1-Wire .NET API (OW.NET), the TMEX API, and a Pure C# library written for Microsoft's Compact .NET framework (aimed at Windows CE/Mobile applications). The kit includes sample programs with source code that exercises iButtons and other 1-Wire devices. Examples are available in many programming languages, including C#, VB.NET, C, VB6, Pascal (Borland Delphi), etc.

### [1-Wire Software Authorization SDK](#)

This SDK contains a set of solutions to control authenticate and authorize use of software programs. The kit offers copy protection, and aids in managing the cost of software distribution.

Source: <https://www.maximintegrated.com/en/products/ibutton/software/sdk/sdks.cfm>.

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- [1-Wire Public Domain Kit + examples + all link files + assembly language files](#) (ZIP, 785kB)

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3. The kit contains higher level API functions, such as [ReadAtoDResults\(\)](#) and [ReadTemperature\(\)](#) for different 1-Wire sensors, along with MemoryBank and File functions for writing and reading 1-Wire memory.

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### 1-Wire Software Authorization SDK

This SDK contains a set of solutions to control authenticate and authorize use of software programs. The kit offers copy protection, and aids in managing the cost of software distribution.

Source: <https://www.maximintegrated.com/en/products/ibutton/software/sdk/sdks.cfm>.

16. 1-Wire SDK generates specific application handler code to associate the generic application functions with specific functions of a device driver for at least one of the types of the hardware modules. For example, in addition to the generic drivers, 1-Wire SDK also includes specific application handler code that is specific to the application and specific to particular microcontroller families. Certain elements of this limitation are illustrated in the

screenshots below and in the screenshots referenced in connection with other elements herein.

Maxim>Products> iButton > Software Resources > iButton: 1-Wire Public Domain Kit  
**IBUTTON: 1-WIRE PUBLIC DOMAIN KIT**

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## Kit Advantages

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Source: <https://www.maximintegrated.com/en/products/ibutton/software/1wire/wirekit.cfm>

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PRODUCTS  
POWER  
SENSORS  
ANALOG  
INTERFACE  
COMMUNICATIONS  
**DIGITAL**  
EMBEDDED SECURITY  
MICROCONTROLLERS  
ALL  
WHAT'S NEW  
MARKETS  
DESIGN  
SUPPORT  
ORDER  
ABOUT US

Maxim > Products > Digital > 1-Wire > Software Tools > 1-Wire SDK for Windows

### 1-WIRE SDK FOR WINDOWS

This SDK complements the [1-Wire® Drivers](#) installation package with documentation and examples to aid 1-Wire project development under Microsoft OS platforms. The 1-Wire SDK includes Compact.NET 1-Wire API is aimed at Windows® CE/Mobile platforms and was written entirely in C# for Microsoft's Compact .NET framework. Includes examples in C#, along with TMEX API examples in C, C++, Pascal (Borland Delphi), and Microsoft Visual Basic. All examples are provided with source. Both 32-bit and 64-bit examples are included.

Download SDK Version 4.10

- [1-Wire SDK for Windows V4.10](#) (ZIP, 2.1MB)

On-Line Documentation

- [1-Wire SDK HTML Documentation](#)

Legacy Software

The following are links to legacy 1-Wire SDKs.

Download Version 3.10 or 4.00 (1-Wire SDK for Windows—TMEX API only)

- [SDK Version 4.00](#) (ZIP)
- [SDK Version V3.10](#) (EXE)

Source: <https://www.maximintegrated.com/en/products/digital/one-wire/software-tools/sdk-windows.html>

Keywords: 1-Wire, 1-Wire Drivers, OneWire, OneWire Drivers, 1-Wire Drivers Installation, Driver Installation, iButton, API, software, software distribution, examples, TMEX, RTE, iButton TMEX RTE, 1wire  
[Related Parts](#)

APPLICATION NOTE 1740

## White Paper 6: 1-Wire® Drivers Installation Guide for Windows

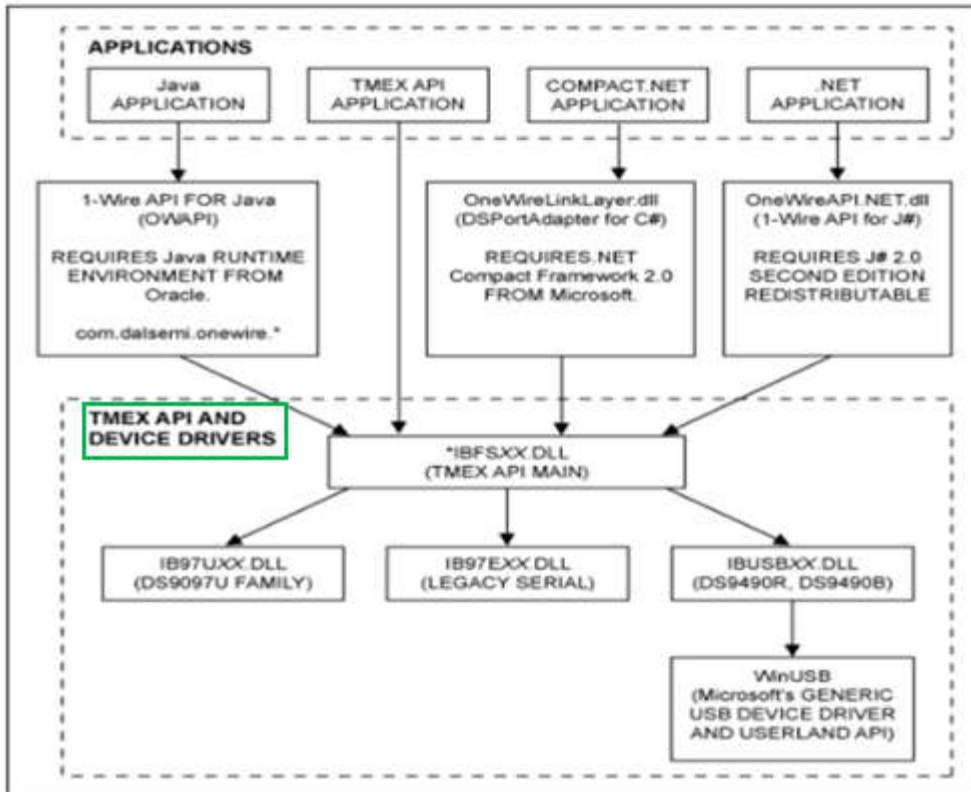
*Abstract: The software application developer has two options for installing 1-Wire device drivers on Microsoft® Windows® 32- and 64-bit platforms (Windows 7, Windows Server 2008, Windows Vista®, and Windows XP® service pack 2 or greater). The first option uses Maxim's 1-Wire Drivers installation program; the second option is to develop a custom installation program. This application note discusses the installation process for 1-Wire drivers. It explains which drivers and dlls go with which 1-Wire port adapter (USB, serial port, and parallel port). It also lists the subdirectory to which each dll and driver must be copied and the appropriate registry keys that need to be created. This white paper also covers the installation of both the TMEX API and the 1-Wire API for .NET.*

### Introduction

This white paper discusses the installation process of the 1-Wire drivers for the following Microsoft Windows 32-bit and 64-bit operating systems: Windows 7, Windows Server 2008, Windows Vista, and Windows XP (service pack 2 or greater). There are two ways to accomplish a 1-Wire drivers installation. The first option uses Maxim's 1-Wire drivers installation program, and the second option is to develop a custom installation program.

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/1740>

17. 1-Wire SDK generates specific application handler code and defines a specific element in the specific code to be handled by one of the generic application functions for that hardware module. For example, 1-Wire SDK generates system-specific application handler code by defining specific elements such as functions and data structures (“specific element”) corresponding to specific hardware modules. The system-specific application handler code and data structures are made available by the generic application handler code in the API of the 1-Wire SDK. Certain elements of this limitation are illustrated in the screenshots below and in the screenshots referenced in connection with other elements herein.



\*Note: XX in the DLL name is either "32" for 32-bit or "64" for 64-bit Windows.

Figure 1. 1-Wire drivers and API connectivity.

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/1740>.

Maxim>Products> iButton > Software Resources > iButton: 1-Wire Public Domain Kit

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Source: <https://www.maximintegrated.com/en/products/ibutton/software/1wire/wirekit.cfm>

18. 1-Wire SDK compiles the generic application handler programs together with the specific application handler code to produce machine-readable code to be executed by an



embedded processor in the at least one of the types of the hardware modules. For example, when a specific application is needed for a particular hardware, the generic functions and the specific functions are compiled together to yield a machine readable code. Maxim Integrated and/or its customers compile the 1-Wire SDK's generic functions and the specific functions using Keil C Compiler and/or any other 1-Wire SDK compiler supported by Maxim Integrated. Certain elements of this limitation are illustrated in the screenshots below and in the screenshots referenced in connection with other elements herein.

[Maxim](#) > [Design Support](#) > [Technical Documents](#) > [Application Notes](#) > [Microcontrollers](#) > APP 2783

Keywords: DS5250, C compiler, Keil C compiler, DS5250 evaluation kit, secure microcontrollers, micro, microcontroller, secure micros  
[Related Parts](#)

APPLICATION NOTE 2783

### [Using the Keil C Compiler for the DS5250](#)

*Abstract: This application note describes how to get up and running using the Keil  $\mu$ Vision2 suite of tools to build applications for the DS5250 secure microcontrollers in C. development was done using the DS5250 Evaluation Kit and Keil  $\mu$ Vision2 version 2.37, which includes the C compiler 'C51' version 7.05.*

#### Overview

This application note describes how to use the Keil  $\mu$ Vision2 suite of tools to create and compile a C application for the DS5240 or DS5250 High-Speed Secure microcontroller. The process for loading the compiled application into the microcontroller's external encrypted RAM using the ROM bootloader and Microcontroller Tool Kit is also described.

All development for this application note was done using the DS5250 and the DS52x0 Evaluation Kit Board (Rev A). The C application was created and compiled using Keil's  $\mu$ Vision2 version 2.40 and the Keil C51 Compiler version 7.10. The compiled application was loaded into the DS52x0 Evaluation Kit Board RAM using the Microcontroller Tool Kit version 2.2.0.

#### Creating and Compiling the C Application

This section describes the process to create and compile a sample C application for the DS5250 using Keil's  $\mu$ Vision2 integrated development environment.

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/2783>

Live Chat

In Keil  $\mu$ Vision2, select Project -> Create New Project from the menu. Enter the name of your new project. The Select Device for Target dialog will appear as shown below in **Figure 1**. Under Database, select Dallas Semiconductor and DS5250. Check the boxes for Use Extended Linker and Use Extended Assembler, and then hit OK to continue.

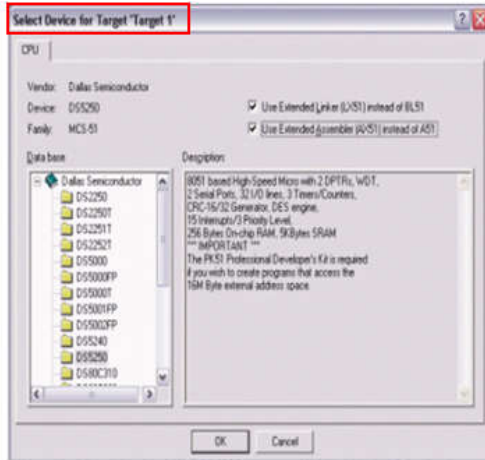


Figure 1. Selecting the DS5250 for a new Keil  $\mu$ Vision2 Project.

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/2783>

### Compiling the Project

To compile the project, press F7, or select Project -> Build Target from the menu. If no errors occur, messages should appear indicating that compilation completed successfully, as shown in **Figure 3**.

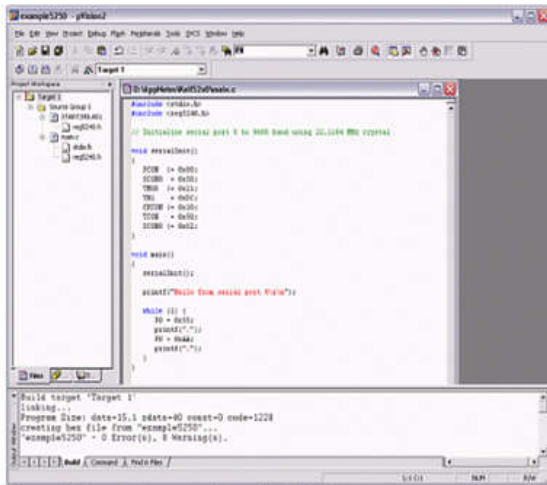


Figure 3. Compilation output from Keil  $\mu$ Vision.

### Loading the Compiled Application with the Microcontroller Tool Kit

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/2783>

10. Once loading completes, set the DIP switch B1 to the OFF position.

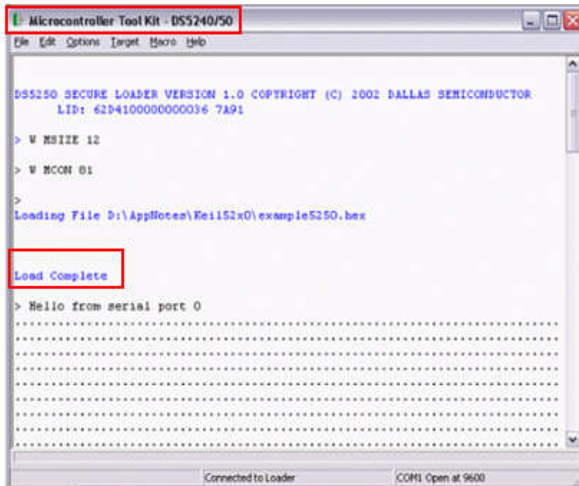


Figure 4 Output from microcontroller tool kit.

#### Summary

Together, Keil's  $\mu$ Vision2 and Dallas/Maxim's Microcontroller Tool Kit ease building and loading applications on the DS5240 and DS5250 High-Speed Secure Microcontrollers.

Source: <https://www.maximintegrated.com/en/app-notes/index.mvp/id/2783>

19. Defendant's actions complained of herein will continue unless Defendant is enjoined by this court.

20. Defendant's actions complained of herein are causing irreparable harm and monetary damage to Plaintiff and will continue to do so unless and until Defendant is enjoined and restrained by this Court.

21. Plaintiff is in compliance with 35 U.S.C. § 287.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff asks the Court to:

- (a) Enter judgment for Plaintiff on this Complaint on all causes of action asserted herein;
- (b) Enter an Order enjoining Defendant, its agents, officers, servants, employees, attorneys, and all persons in active concert or participation with Defendant who receive notice of the order from further infringement of United States Patent No. 7,069,546 (or, in the alternative, awarding Plaintiff a running royalty from the time of judgment going forward);
- (c) Award Plaintiff damages resulting from Defendant's infringement in accordance with 35 U.S.C. § 284;
- (d) Award Plaintiff pre-judgment and post-judgment interest and costs; and
- (e) Award Plaintiff such further relief to which the Court finds Plaintiff entitled under law or equity.

Dated: January 31, 2019

Respectfully submitted,

*/s/ Jay Johnson*

**JAY JOHNSON**

State Bar No. 24067322

**D. BRADLEY KIZZIA**

State Bar No. 11547550

**KIZZIA JOHNSON, PLLC**

1910 Pacific Ave., Suite 13000

Dallas, Texas 75201

(214) 451-0164

Fax: (214) 451-0165

[jay@kjpllc.com](mailto:jay@kjpllc.com)

[bkizzia@kjpllc.com](mailto:bkizzia@kjpllc.com)

**ATTORNEYS FOR PLAINTIFF**

## **EXHIBIT A**