Getting Started with the Tahoe-II Development Kit

Welcome! Thank you for purchasing the Device Solutions Tahoe-II Developers Kit. This document takes you through:

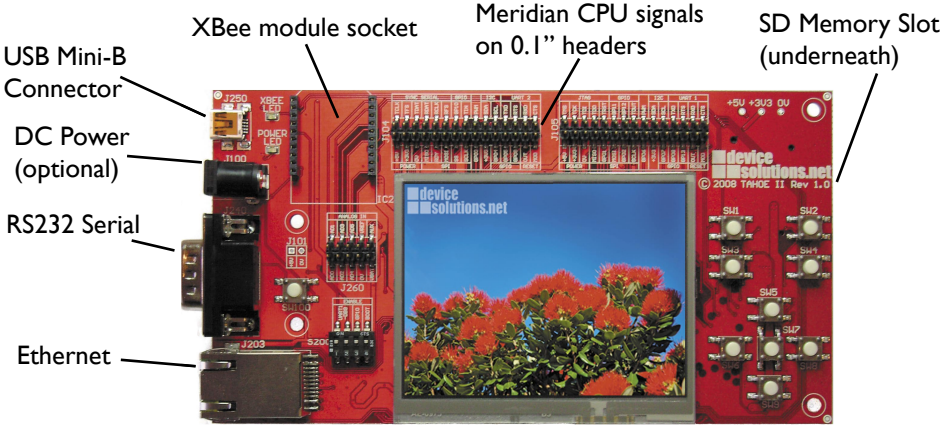
1. Unpacking the Tahoe-II Development Kit,
2. Setting up your system, and
3. Writing your first application

1 Unpacking

Your box includes:

- Tahoe-II Development Board (shipped in an anti-static bubble bag)
- USB Cable
- Tahoe-II Developers Kit CD
- Getting Started Guide (this document, also included on the CD)

The Tahoe-II board has the following connectors:



You will use the USB Mini-B connector to power and communicate with the Tahoe-II from your PC.

The Tahoe-II ships with the .NET Micro Framework run-time pre-installed.

Setup

This section of the guide will take you through:

- Verifying your PC hardware capability
- Installing Visual Studio 2008 with Service Pack 1
- Installing the Microsoft .NET Micro Framework SDK
- Installing the Tahoe SDK
- Installing the USB Driver

Verify PC Hardware Capability

In order to develop software for the Tahoe-II, you will need a PC capable of running Microsoft Visual Studio 2008. The Microsoft web site (http://msdn.microsoft.com/vstudio) has details of these requirements.
Your PC will also need an available USB port for download and debug of applications to the Tahoe-II hardware.

Software Setup

Before you can get started developing software for the Tahoe-II, you will need to install the following on your development PC:

- **Visual Studio 2008 with SP1**
  If you do not have Visual Studio 2008, you can download the free *Visual C# 2008 Express Edition* to develop application software on the Tahoe-II. This is available from www.microsoft.com/express. Note Visual Studio 2008 **and** Service Pack 1 are required - older versions are not supported.
- **Microsoft .NET Micro Framework SDK (version 3.0)**
  This is also available for download from www.microsoft.com/downloads
  Search for "*Micro Framework SDK*".
  Follow the instructions from Microsoft to install this product.
- **Tahoe SDK**
  The Tahoe SDK supports the original Tahoe board as well as the Tahoe-II. This is included on the CD, however you should also check for a later version at www.DeviceSolutions.net/Support/Downloads.aspx.

The Microsoft SDK and the Tahoe SDK both integrate into Visual Studio and install help files. These contain detailed information about the Micro Framework, the Tahoe-II board and supporting software libraries.

Installing the Tahoe SDK

Before you begin installing the Tahoe SDK, uninstall any previous version by using the Add/Remove program application from Windows Control Panel.

Installation from CD

1. Put the installation CD into your computer's CD drive. The installation should automatically begin. Follow the instructions on-screen to install the SDK.
2. If installation does not start, you can run the Setup manually by locating the *TahoeSDK.msi* file on the CD and following the on-screen instructions.

Installation from downloaded files

1. Download the latest version of the SDK.
2. Unzip the files in the downloaded zip to a temporary directory.
3. Run *TahoeSDK.msi* from the Setup folder of the installation directory.
4. Follow the installation instructions.

Connecting and Configuring the USB connection

A USB connection is required when developing software for the Tahoe-II.

- Put the installation CD into your computers CD drive.
- Connect the Tahoe hardware to your PC's USB Port with the supplied USB cable.
- When you connect the Tahoe-II board to your PC for the first time, a dialog box similar to below will pop up prompting you that a new USB device has been detected and a USB driver is required in order for the device to work. Follow the instructions from the OS driver wizard to install the Meridian USB driver that supports the Tahoe-II board.

Writing Applications

Now that you have the tools installed, you can begin your first application.

We are going to setup the default "Hello World" application and run it on the emulator and the Tahoe-II.

First, we are going to create the new project:

1. Open Visual Studio
2. From the main menu, select *File | New | Project*
3. From the *New Project Dialog*, select *Visual C# | Micro Framework | Windows Application*
4. Choose a name for the application and press *OK*
5. Press *F5* to build and run the application. The emulator window will appear and you will see "Hello World" in the middle of the screen.
6. When you are done, close the emulator window and return to Visual Studio.

We can now build and download the application to the Tahoe-II board:

7. Connect the Tahoe-II board to your PC.
8. Right-click on the project in the *Solution Explorer* (you specified the name in step 4) and select *Properties*
9. Select the *.NET Micro Framework* tab
10. Under *Deployment*, change the *Transport* to USB. You will see the Meridian selected as the *Device*.
11. Press *F5* to run again, and look at the Tahoe-II LCD!

What next?

The Microsoft SDK includes many useful sample applications that demonstrate how to use the features of the .NET Micro Framework. This includes the graphics libraries, touchscreen and networking features.

For detailed information on programming the .NET Micro Framework, refer to the Visual Studio help.

For information on the Tahoe-II hardware, refer to the Tahoe-II Technical Reference Manual.

For Support options, please go to www.DeviceSolutions.net/Support.aspx