

Running Freescale IEEE™ 802.15.4 Boards on MAC OS X Based Computers

1 Introduction

This note describes how to install the USB drivers needed to run Freescale 802.15.4 development boards on the Mac OS X. The following drivers will be installed:

- Install and modify Silicon Labs VCP driver
- Install FTDI VCP driver

This note and the drivers used are not supported in any way by Freescale Semiconductor. The Freescale Test Tool and the ZigBee Test Client (ZTC) are not supported on Mac OS X.

NOTE

This note requires an Intel based Mac with minimum Mac OS X version 10.4.10 (Tiger).

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2 Installing the Silicon Labs Driver for CP210x

This section describes step-by-step how to install and modify the Silicon labs driver on the MAC to work with the MC1321x-SRB and MC1321x-NCB boards.

1. Start the Mac and use the internet browser to download the Mac OS X driver from the Silicon Labs website:

http://www.silabs.com/tgwWebApp/public/web_content/products/Microcontrollers/USB/en/mcu_vcp.htm

2. Double click on the `cardinal-osx-v1_02_2release.img` and run the `SLAB_USBtoUARTInstaller.app` by double clicking on the icon.



Figure 1. Running the SLAB_USB Installer

3. Modify the driver info file as follows:
 - a) Reboot and start the `terminal.app` application found in the Applications\Utilities folder.
 - b) Go to the following driver folder:

```
cd /System/Library/Extensions/SLAB_USBtoUART.kext/Contents
```

- c) Modify the VID and PID of the driver info file. Change the Product ID in line 40 to 10 and change the Vendor Id in line 42 to 2301. (Root access or “sudo” access is required to launch an editor.) Enter the following in the terminal application:

```
sudo nano Info.plist
```



Figure 2. Modifying info.plist

- d) Refresh the cache to ensure that the CP120x is loaded with the correct driver info by touching the Extensions directory. To touch the directory, enter the following in the terminal application:

```
Sudo touch /System/Library/Extensions
```

4. Reboot, connect the board, and run a UART terminal program of choice.

3 Installing the FTDI Driver for the FT232x

This section describes step-by-step how to install an FTDI driver to work with the MC1319x-EVB and the MC1322x boards.

1. Start the Mac and use the internet browser to download the Mac OS X driver from the FTDI website:

<http://www.ftdichip.com/drivers/vcp.htm>

2. Double click on the FTDIUSBSerialDriver_v2_2_7.dmg and run the FTDIUSBSerialDriver.pkg by double clicking on the icon.



Figure 3. Running the FTDIUSB Installer

3. Reboot, connect the board, and run a UART terminal program of choice.

4 Demonstration

This section describes a small demonstration of how to use the UART on MAC OS X. The ZTerm program is used in this demonstration.

A public beta can be downloaded from <http://homepage.mac.com/dalverson/zterm>

The Freescale MC1321x-SRB is used for this demonstration.

1. Connect the MC1321x-SRB to the PC using the USB port.
2. Start Zterm and configure the modem by selecting Settings-> Modem Preferences from the menu and then selecting the desired serial port as shown in Figure 4.

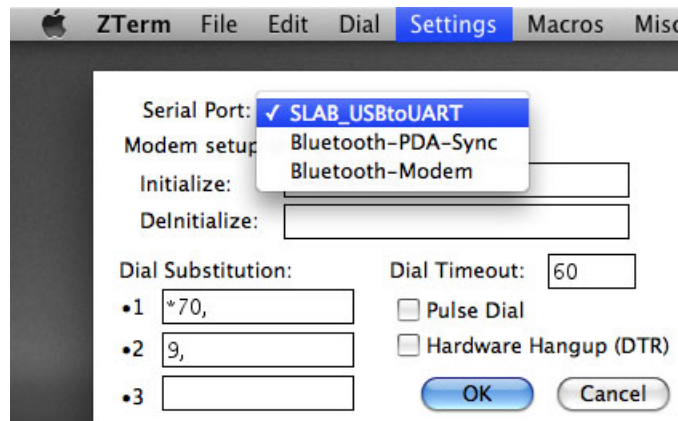


Figure 4. Modem Configuration

3. Configure the baud rate and hardware flow control settings by selecting Setting-> Connection from the menu and set the options as shown in Figure 5. Ensure that the Hardware Handshake flow control option is selected for use in a BeeStack application.

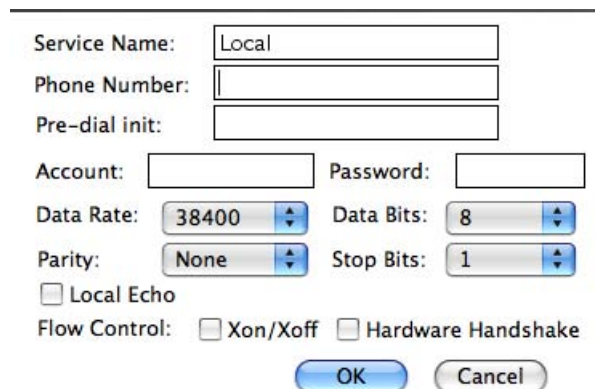


Figure 5. Connection Configuration

4. Use the Freescale BeeKit Wireless Connectivity Toolkit to generate an application from any HCS08 BeeStack Codebase and enable the UART option.

5. Add the following code to the end of BeeApp_Init()

```
(void)UartX_Transmit("Hello World from MC1321x-SRB\r\n",30,NULL);
```

6. Download and run the code, then monitor the ZTerm window for the message as shown in [Figure 6](#).

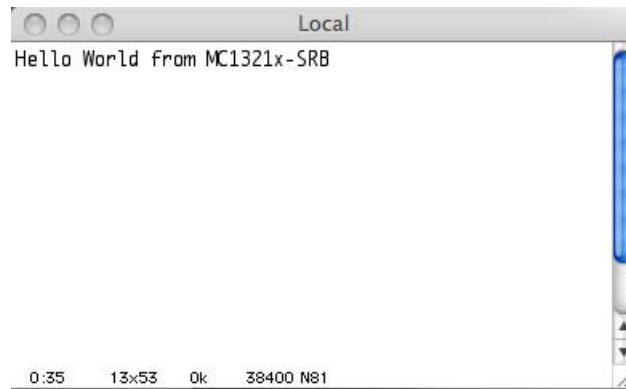


Figure 6. ZTerm Window

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