

# 0011-01-16-03-001 USB Stick Driver Installation Instructions

Document No:  
0011-01-16-03-001 (Issue A)

## INTRODUCTION

This document outlines how to install the virtual COM port drivers for the CEL ZM357S-USB and ZM357S-USB-LR USB Sticks on the Windows/Mac/Linux platforms.

## HARDWARE REQUIREMENTS

1. CEL EM357 USB Stick

## SOFTWARE REQUIREMENTS

1. Driver installation package for appropriate operating system (or source code for Linux)

**TABLE OF CONTENTS**

**Introduction**..... 1

**Hardware Requirements**..... 1

**Software Requirements**..... 1

**Windows Driver Installation**..... 3

**Mac OS Driver Installation**..... 4

**Linux Driver Installation**..... 8

**References**..... 9

**Revision History**..... 9

## WINDOWS DRIVER INSTALLATION

**Note:** Make sure that no CEL USB Sticks are attached to the system before proceeding as this may interfere with proper UART enumeration/operation.

Extract the files in the driver installation package to a folder on your local hard drive. Start the driver installation by double-clicking the appropriate driver installation executable.

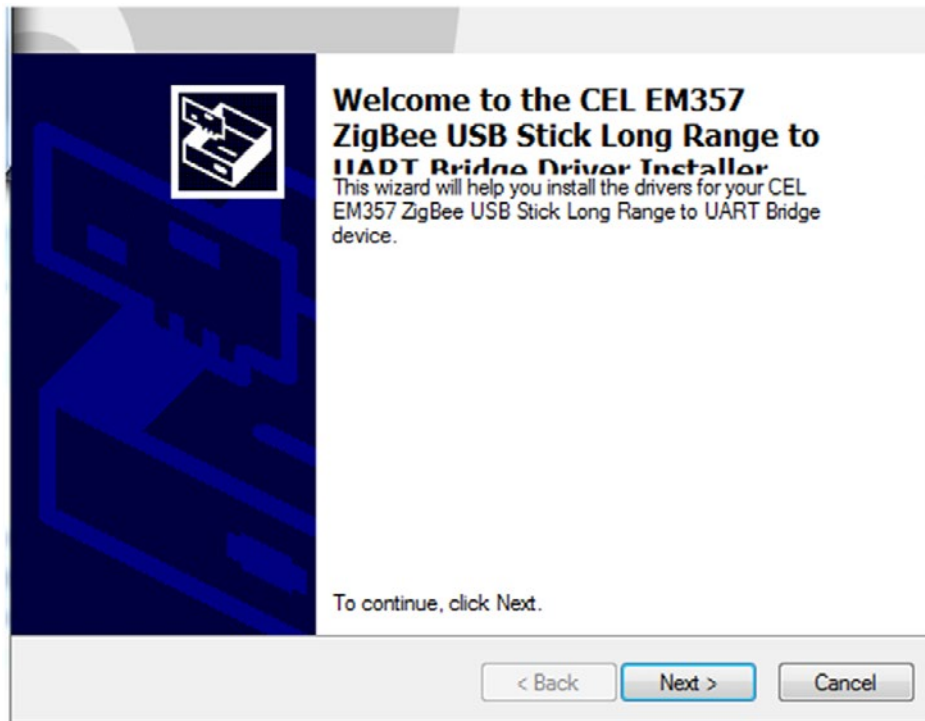
### Windows 32-bit

- CeLEM357UsbInstaller\_x86.exe – ZM357S-USB
- CeLEM357usbLongRangeInstaller\_x86.exe – ZM357S-USB-LR

### Windows 64-bit

- CeLEM357UsbInstaller\_x64.exe – ZM357S-USB
- CeLEM357usbLongRangeInstaller\_x64.exe – ZM357S-USB-LR

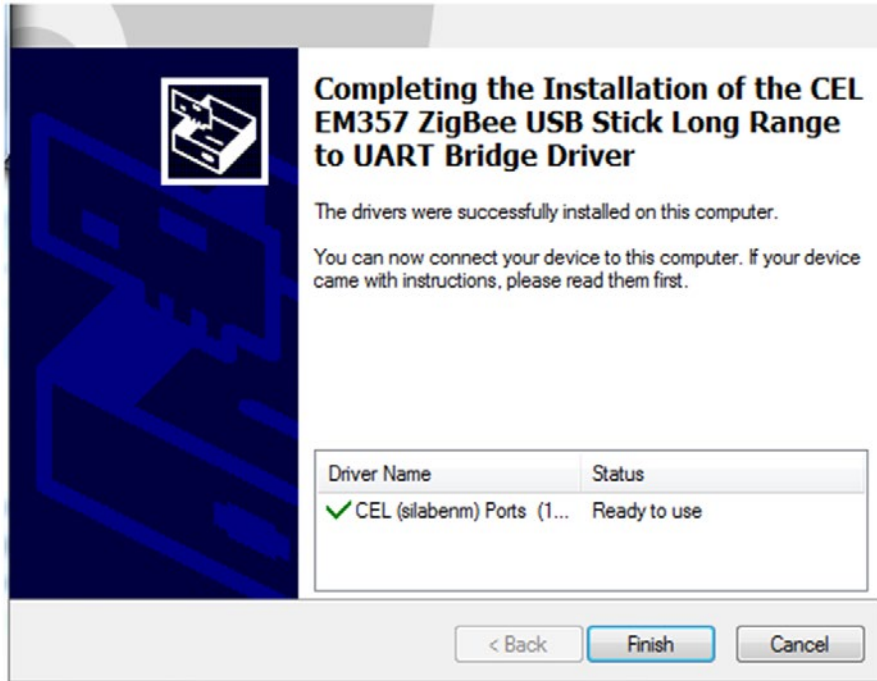
The screen shown in Figure 1 should appear.



**Figure 1.** Driver Installation Welcome Screen

Click “Next >”.

After the install tool finishes, you will see the screen shown in Figure 2.



**Figure 2.** Driver Installation Success

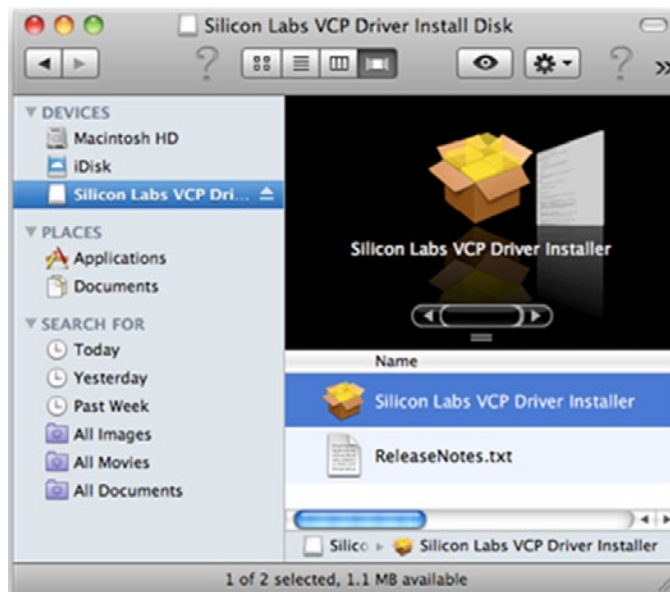
The driver is now installed. Click “Finish”.

**MAC OS DRIVER INSTALLATION**

Download the `Mac_OSX_VCP_Driver.zip`. This zip folder contains the custom CEL `SiLabsUSBDriverDisk.dmg`.

Double-click the `.dmg` file and this will mount the Silicon Labs VCP Driver under Devices (see Figure 3). This is just as if you inserted a USB flash drive, or attached an external disk.

Double-click Silicon Labs VCP Driver (mounted device) and this will open the contents of the driver. Double click the Silicon Labs USB Driver Installer to run the driver installation. The following shows the installation process for Snow Leopard (OSX 10.6.8).



**Figure 3.** Mounting DMG file to Silicon Labs USB Driver Installer

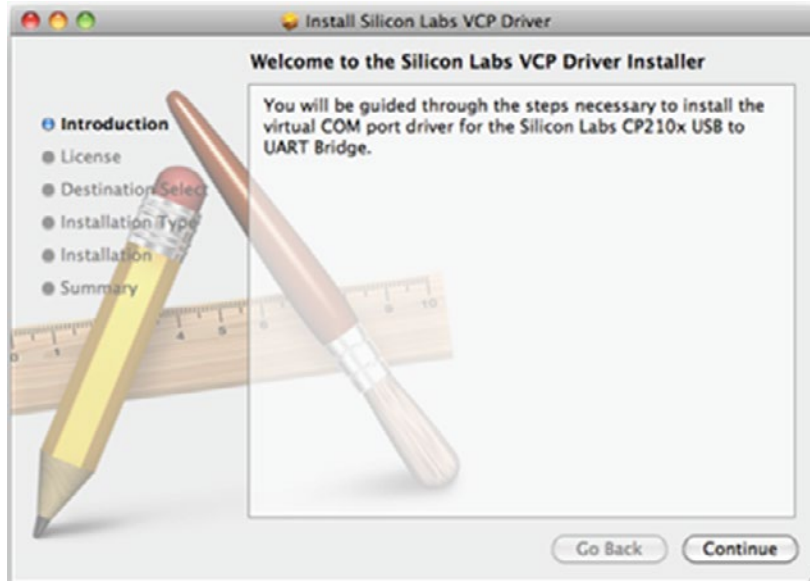


Figure 4. Silicon Labs VCP Driver Installer

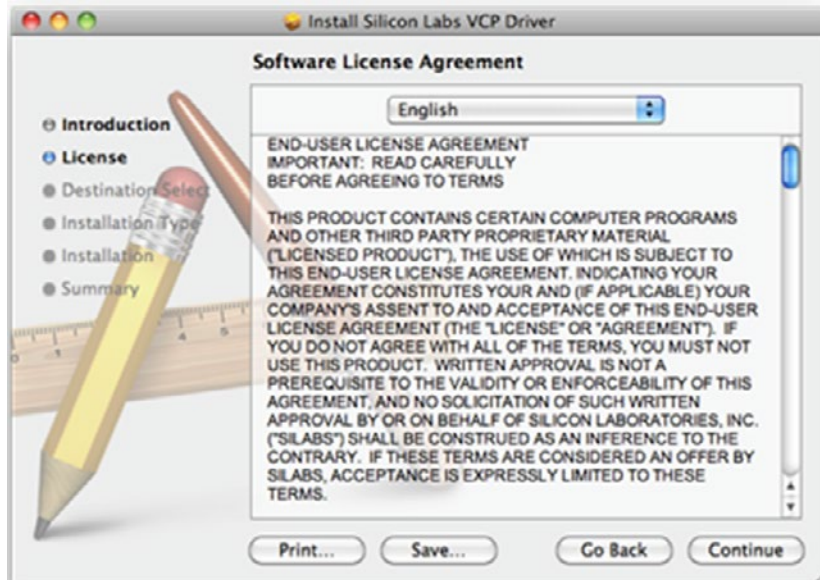


Figure 5. Software Agreement

Choose "Continue".

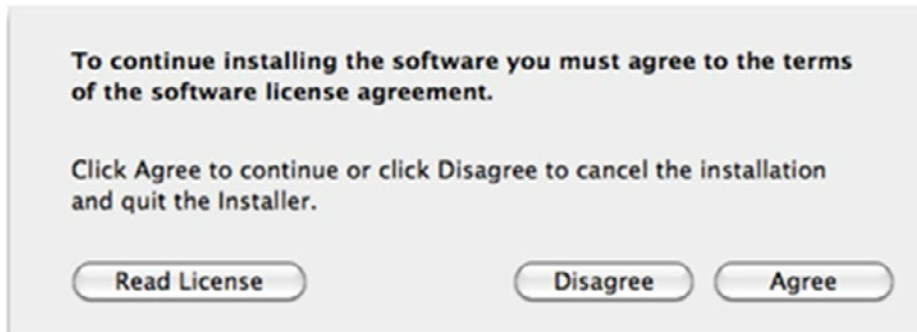


Figure 6. Agree to the license terms



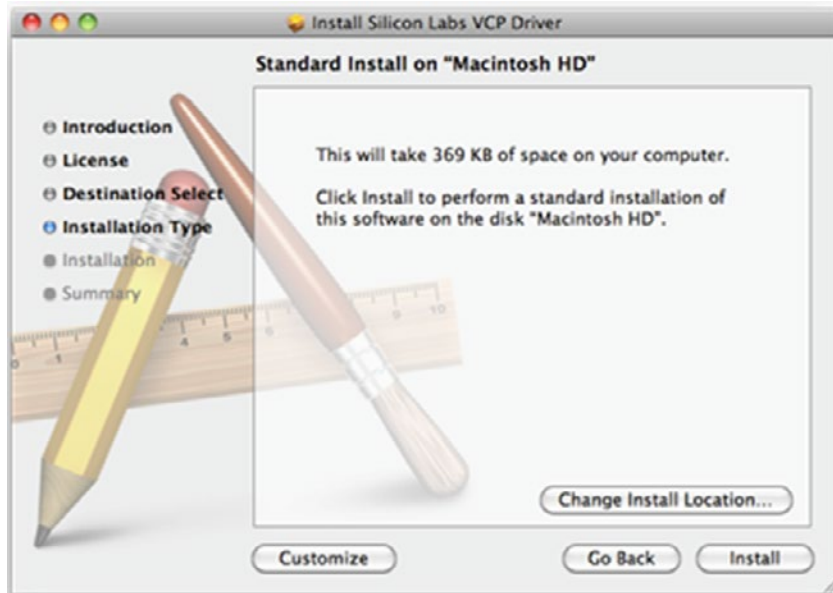


Figure 7. This driver will require 369 kB of space, choose "Install".

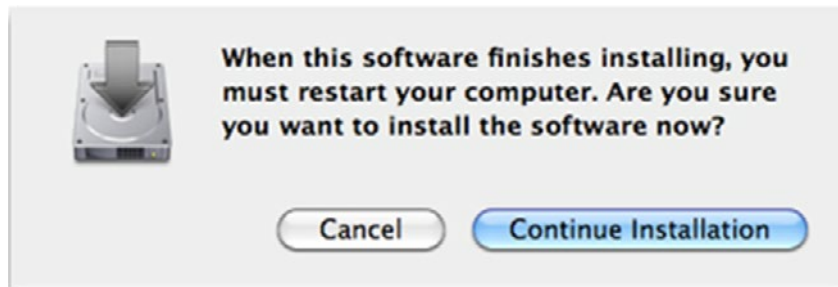


Figure 8. Choose "Continue Installation"

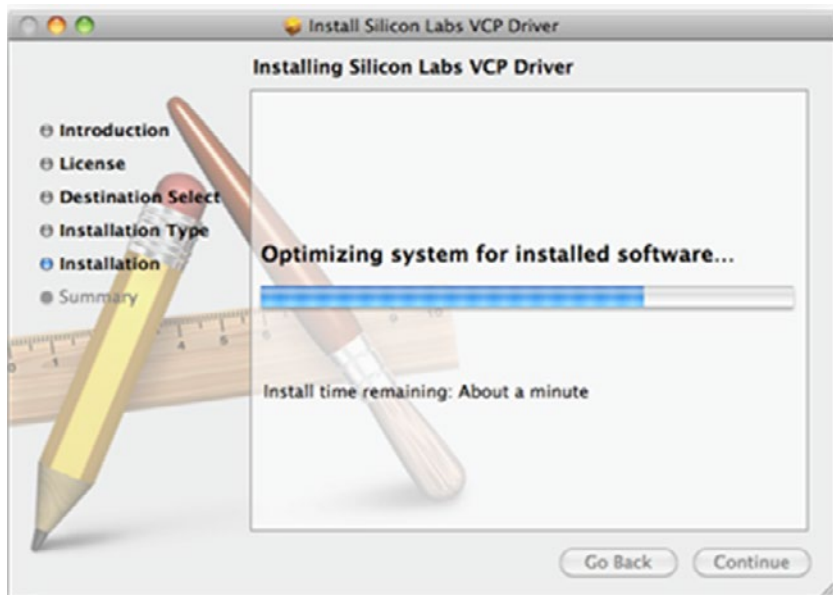


Figure 9. Installing the Driver

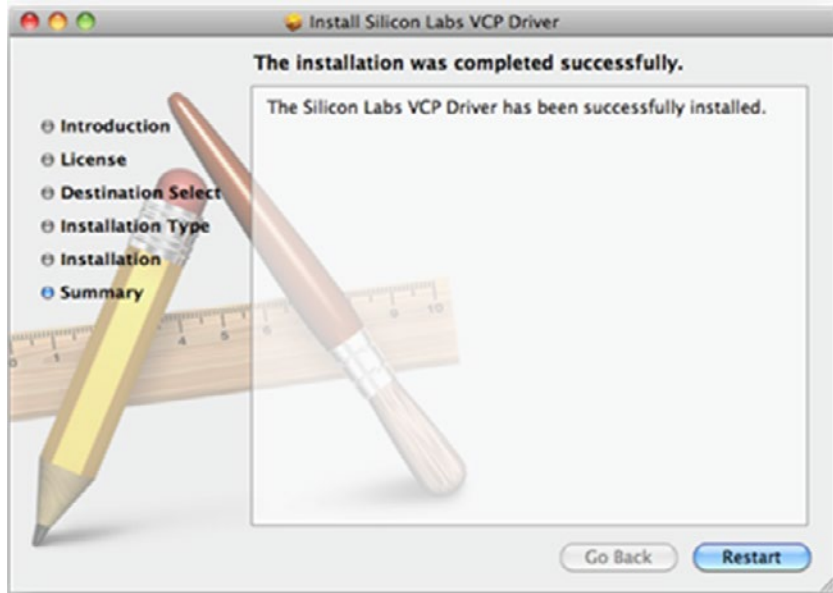


Figure 10. Choose "Restart"

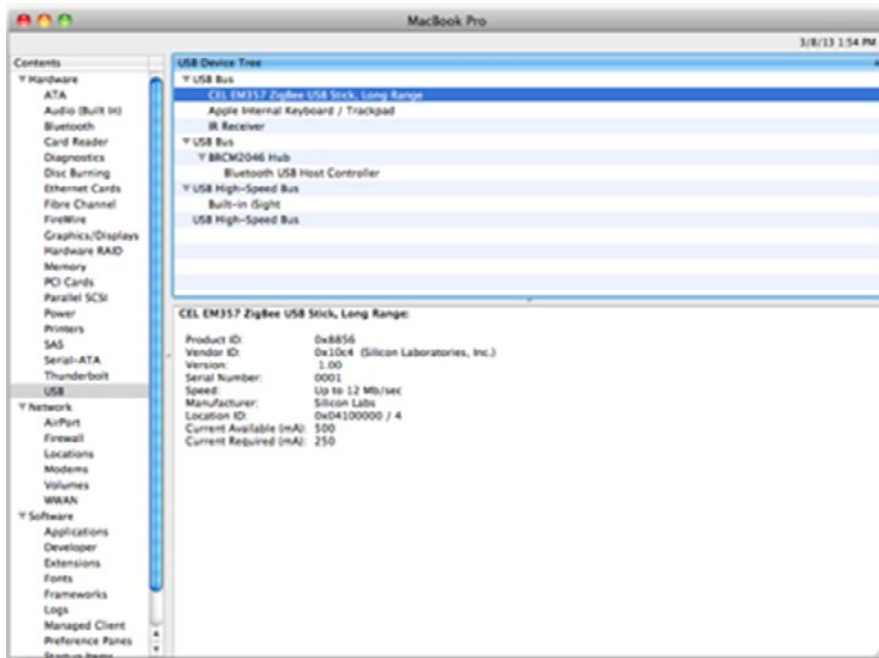


Table 11. Verifying Correct Installation

To verify correct installation:

1. Choose the Apple Logo at the top left of your desktop
2. Select "About This MAC"
3. Select "More Info"
4. Under "Hardware/USB" you should see "CEL EM357 ZigBee USB Stick"

## LINUX DRIVER INSTALLATION

The following procedure has been validated on Ubuntu 10.04.4 (kernel version 2.6.32-38 generic) and Ubuntu 12.04.2 (kernel version 3.5.0-23-generic).

1. Download the kernel source code;

Get the latest kernel source via: `sudo apt-get install build-essential linux-source` or the version running on the build system via: `sudo apt-get source linux-image-$(uname -r)`  
 (Optionally, you can obtain a specific version from: <https://www.kernel.org/pub/linux/kernel/v3.x/>)  
 kernel source should now be in “/usr/src/”

2. Modify /usr/src/(linux kernel source)/drivers/usb/serial/cp210x.c to include CEL USB Stick ID's  

```
{ USB_DEVICE(0x10C4, 0x8856) }, /* CEL EM357 ZigBee USB Stick, Long Range */
{ USB_DEVICE(0x10C4, 0x8857) }, /* CEL EM357 ZigBee USB Stick */
```

3. Prepare the build environment

```
cd /usr/src/(linux kernel source)/
cp /usr/src/linux-headers-(kernel version)/Modules.symvers .
make oldconfig
make prepare
make scripts
```

4. Make the USB serial drivers:

```
make M=./drivers/usb/serial
```

**Note:** If usbserial driver will not compile on current source due to compilation errors in other modules, rebuild with errors ignored.

```
make -i M=./drivers/usb/serial
```

Load the updated module into the kernel:

```
sudo modprobe ./drivers/usb/serial/cp210x.ko
```

**Note:** If there is an old version already loaded, it can be removed via: “rmmod cp210x” and then the new module can be loaded.



**REFERENCES**

Reference Documents	Download
<b>California Eastern Laboratories</b>	
0011-01-07-03-000 CEL EM357 USB Sticks Datasheet	<a href="#">Link</a>
CEL – USB Driver – <i>Scroll to Downloads Section</i>	<a href="#">Link</a>
CEL – DMG File Mac_OSX_VCP_Driver.zip. This zip folder contains the custom CEL SiLabsUSBDriverDisk.dmg – <i>Scroll to Downloads Section</i>	<a href="#">Link</a>
<b>Silicon Labs</b>	
Reference VCP drivers	<a href="#">Link</a>
<b>External References</b>	
Ubuntu forums	<a href="#">Link</a>

**REVISION HISTORY**

Previous Versions	Changes to Current Version	Page(s)
0011-01-16-03-001 (Issue A) July 31, 2013	Initial Release	N/A

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