



**icaste JCommUSB 4.0**

For 32 Bit Windows 7, Vista, XP, Server 2003 and Server 2008.

# **JCommUSB 4.0**

## **Installation Guide**

### **Book 1 of 1**

Document Release: Final 1.0

Date: July. 2010

Copyright 2008 icaste LLC. All rights reserved.

Produced in United States

The information in this document is subject to change without notice. The statements, configuration, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to icaste LLC.

Icaste, icaste logo, JCommUSB and JCommSerial are trademarks of icaste LLC.

Microsoft, Windows, Windows Driver Framework, Visual C++, and Visual Studio are registered trademarks of the Microsoft Corporation.

Java is a registered trademark of Sun Microsystems Inc.

# Revision History

## July 2010

Final 1.0. New document for JCommUSB 4.0.

# Contents

<b>Revision History</b> .....	<b>2</b>
July 2010 .....	2
<b>Contents</b> .....	<b>2</b>
<b>About this Document</b> .....	<b>3</b>
Subject .....	3
Applicable Solutions .....	3
Intended Audience.....	3
Notations .....	3
<b>Sample Code</b> .....	<b>3</b>
<b>Sample Code Comments</b> .....	<b>3</b>
<b>Additional Code Comments</b> .....	<b>3</b>
<b>Overview</b> .....	<b>4</b>
Prerequisites.....	4
<b>Developer</b> .....	<b>4</b>
<b>Tools</b> .....	<b>4</b>
<b>Dependencies</b> .....	<b>4</b>
<b>API Installation Instructions</b> .....	<b>5</b>
Acquiring and Extracting the API .....	5
Installing the API.....	5
Install the USB Driver .....	8
<b>Determine the USB Hardware ID</b> .....	<b>8</b>
<b>Install the Driver</b> .....	<b>9</b>
Testing the API .....	12
Using the API.....	13
Un-Installing the Driver for a Single Device .....	13
Un-Installing the API.....	13
Support.....	13

## About this Document

### Subject

This document describes the installation process for JCommUSB 4.0 API.

### Applicable Solutions

JCommUSB 4.0

### Intended Audience

This document is intended for software developers well versed in Java and familiar with application installation on the Windows 32 bit platform.

### Notations

#### Sample Code

All code samples will be in Courier 9pt font black.

These are samples of the actual compiled source code

`Example Source Code`

#### Sample Code Comments

All code sample comments will be in Courier 9pt font green.

These are samples of the actual source code comments.

`Example Sample Code Comments`

#### Additional Code Comments

All additional comments to sample source code will be Arial 9pt blue italic.

These are additional comments for clarity and are not, and shall not be included in the source code.

*Example Additional Comments to Source Code*

# Overview

## Prerequisites

### Developer

Understanding of Java is required.

Understanding application installation on the Windows 32 bit OS is required.

### Tools

A working install of the Java run time environment is required to run the API.

A working install of the Java software development kit is required to develop applications that leverage the API.

### Dependencies

The following 32 bit Windows platforms are supported:

- Windows 7
- Windows Vista
- Windows Server 2008
- Windows XP (SP3)
- Windows Server 2003

## API Installation Instructions

### Acquiring and Extracting the API

The API is usually delivered as a direct download from the icaste.com website checkout confirmation page. If the user encounters problems downloading the API from the checkout confirmation page they must contact support@icaste.com to obtain an alternate download link

The API is delivered in a single ZIP file, the contents of which should be extracted to a temporary location.

The API ZIP contains the following files:

- Setup.exe
- JCommUSB\_4\_0.msi
- JCommUSB\_4\_0\_Installation\_Guide.pdf
- JCommUSB\_License\_Agreement.pdf

### Installing the API

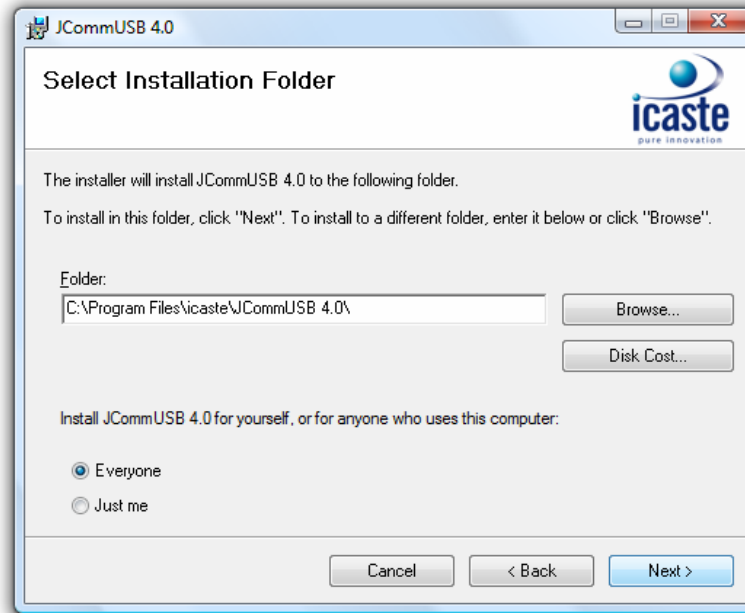
Follow these steps to install the API

1. Navigate to the temporary folder that holds the extracted files.
2. Double click on "setup.exe" to start the setup wizard.
3. When the setup wizard starts click "next" to continue.

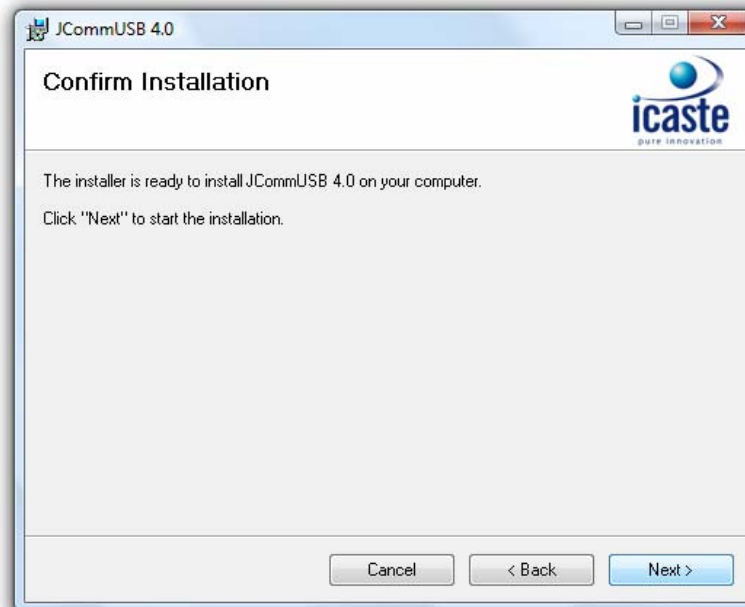


Installation Guide

- The setup wizard will prompt for the API install directory. The API installation directory can be left at the default value or changed by clicking “browse”. Choose the installation directory and click “next”.

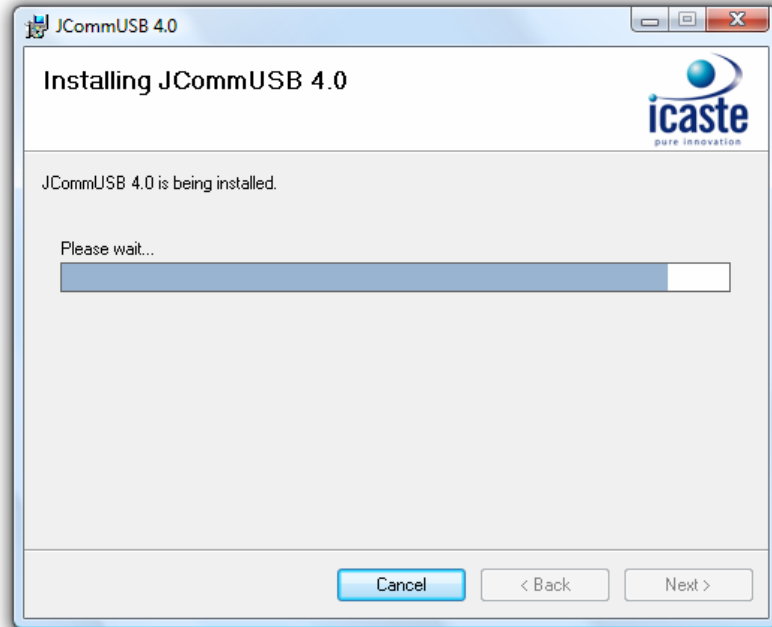


- At the confirmation page click “next” to begin the installation.

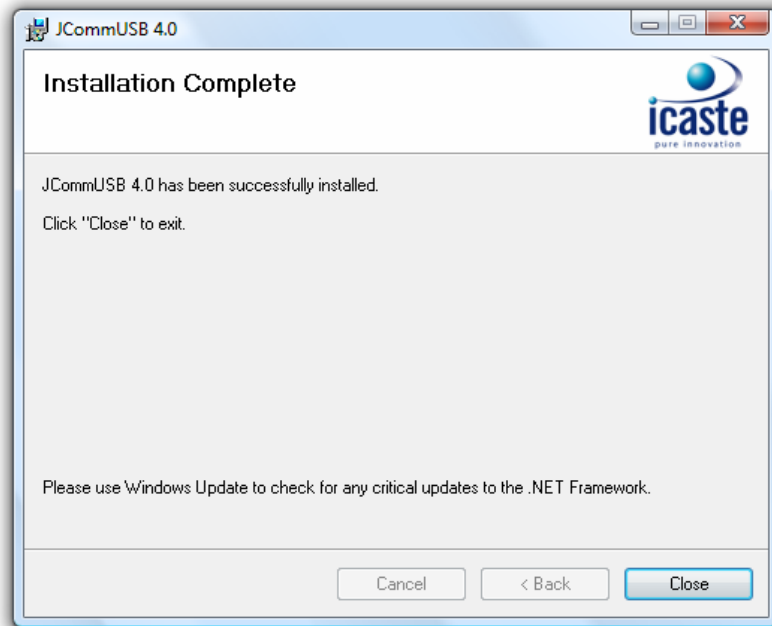


Installation Guide

6. The setup wizard will install the API, this can take several minutes.



7. When the installation is complete click "close" to exit the setup wizard.



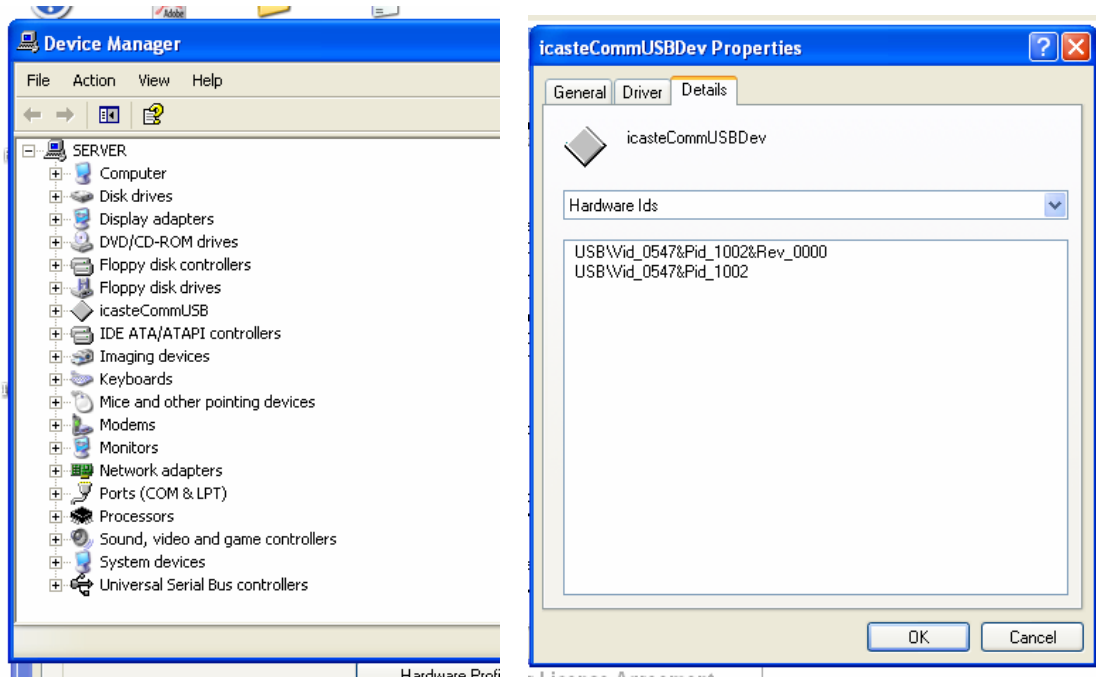
## Install the USB Driver

Now the API has been installed, you must install the icasteCommUSB driver for your USB device.

### Determine the USB Hardware ID

In order to install the driver we must determine the Hardware ID of your USB device. The USB Hardware ID is a 21 digit string that consists of the 4 digit Hex Vendor ID and the 4 digit Hex Product ID of your device.

1. Navigate to "Control Panel" and double click "System".
2. In the system properties page click the "Hardware" tab.
3. In the Hardware page click the "Device Manager" button.
4. In the "Device Manager" locate your device, left click it and select "Properties".
5. In the "Properties" page click the "Details Tab".
6. Use the drop down box to select "Hardware IDs".



You must note the string that starts "USB\", there may be more than one, however they should all contain the same first 21 characters. We only need to note the first 21 characters, this should contain "USB\" followed by the Vendor ID and Product ID.

Example:

USB\vid\_07b8&pid\_b02a&rev\_0525

USB\vid\_07b8&pid\_b02a

In this case we just need to note "USB\vid\_07b8&pid\_b02a".

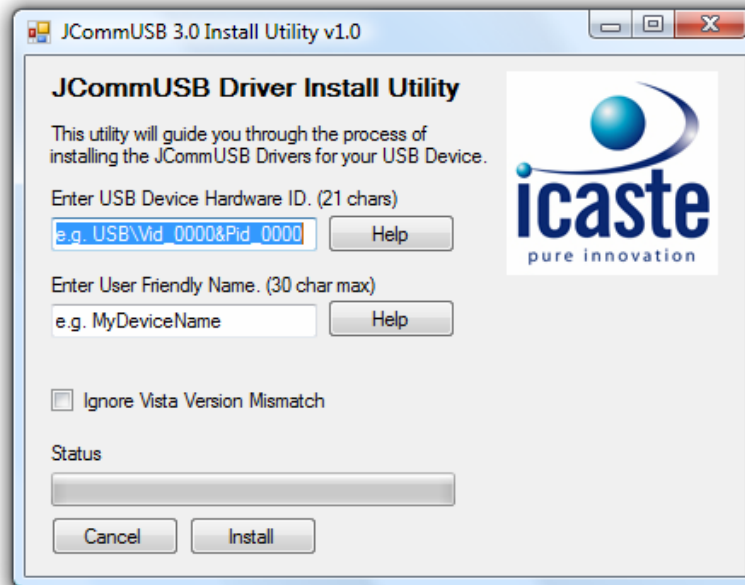
Make a note of this Hardware ID, it will be needed during installation.

Installation Guide

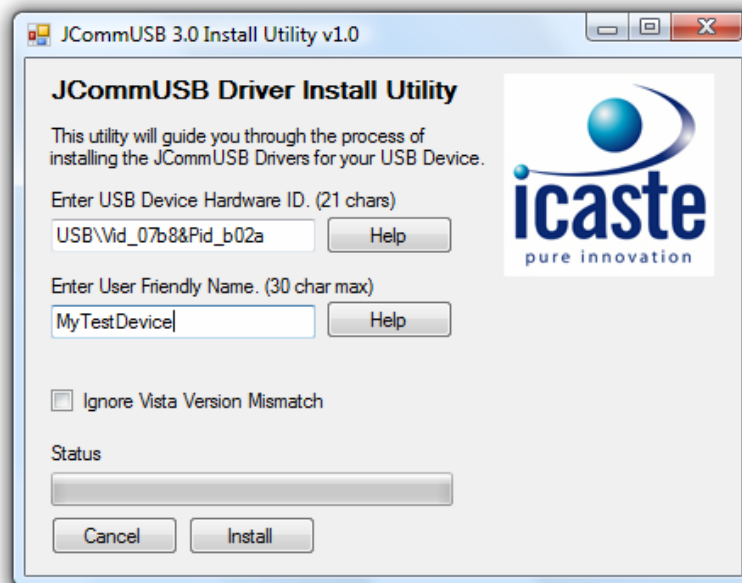
### Install the Driver

Now we have the hardware ID, we can use the “Driver Install Utility” to install the Driver.

1. Go to “All Programs”->”JCommUSB\_4\_0”, select “Driver Install Utility”.



2. Enter your 21 character hardware ID string into the “Hardware ID” text box and add a user friendly name to the “Friendly Name” text box.

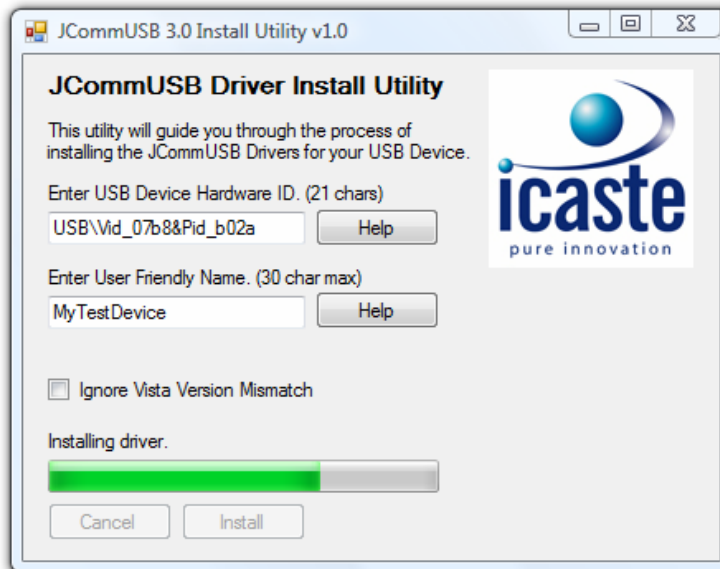


Installation Guide

3. Click “Install” to start the driver installation. You may be prompted by the Windows Security Manager, select “Install This Driver Anyway”.



4. The Driver Install Utility will now install the driver for your device.



Installation Guide

5. When the install completes click “Exit” to close the utility.



## Testing the API

Once the driver is installed for your device you can use the "Install Tester" utility to verify the install was successful.

Navigate to "Start"->"Programs"->"JCommUSB"->"Install Tester".

The source code for the test utility can serve as a basis for your application, and can be found in "Start->Programs->JCommUSB\_4\_0->USBTester Source".

```
C:\Windows\system32\cmd.exe
C:\Program Files\icaste\JCommUSB 4.0>java -jar JCommUSB_4_0.jar
Start USBTester!
Device Path of Device at index 0 = \\?\usb#vid_0547&pid_1002#5&3a8ffae1&0&0#(5a44bde9-d92c-4a97-b2b8-63ba19e74635)

Device Desc Data
Device Class 0
Device Sub Class 0
Device E0 max packet size 64
Device Manufacturer String index 1
OSR.COM
Device Num Configs 1
Device Vendor ID 1351
Device Product ID 4098
Device Product String Index 2
OSR USB-FX2 LK
Device Protocol 0
Device Version 0
Device Serial Number String Index 0

Config Desc Data
Conf Current Index 1
Conf Max Power 50
Conf Num Interfaces 1
Conf String Desc Index 4
HighSpeed

Interface Index 0 Current Setting 0
Interface Data for Interface index 0, Setting Index 0
Interface Class -1
Interface SubClass 0
Interface Num Alternate Settings 1
Interface Num Endpoints 3
Interface Protocol 0
Interface String Index 0

Endpoint Info for Interface Index 0, Setting Index 0, Endpoint Index 0
Endpoint Address -127
Endpoint Interval 1
Endpoint MaxPacket Size 73
Endpoint Pipe Type: 4
INTERRUPT PIPE

Endpoint Info for Interface Index 0, Setting Index 0, Endpoint Index 1
Endpoint Address 6
Endpoint Interval 0
Endpoint MaxPacket Size 512
Endpoint Pipe Type: 3
BULK PIPE

Endpoint Info for Interface Index 0, Setting Index 0, Endpoint Index 2
Endpoint Address -120
Endpoint Interval 0
Endpoint MaxPacket Size 512
Endpoint Pipe Type: 3
BULK PIPE

Other Data
Supported Languages
LangID 0 1033
ReadWhite Time Out 100000000
Control Time Out 100000000
Max Iso Frame Range = 1024
Get Current Frame Number =4758119

END!
```

## Using the API

Follow these steps to use the API in your application:

1. Copy JCommUSB\_4\_0.jar to your project directory or workspace. JCommUSB\_4\_0.jar can be found in the install directory you selected during installation
2. Add JCommUSB\_4\_0.jar to your classpath or netbeans project library.
3. Use the following import statement in your Java Class file:  

```
import com.icaste.JCommUSB_4_0.*;
```

## Un-Installing the Driver for a Single Device

Follow these steps to un-install the Driver for a single device:

1. Navigate to "Device Manager"
2. Click the icasteCommUSB branch to expand the tree.
3. Locate the icasteCommUSBDev you'd like to remove.
4. Right click and select "Uninstall".

If you have more than one device listed under icasteCommUSB and you did not use a custom name, you can identify the device to be removed by its hardware ID, or by disconnecting all icasteCommUSBDev's except the one you wish to uninstall.

## Un-Installing the API

Follow these steps to un-install the API:

1. Navigate to "Control Panel -> Programs and Features".
2. Locate the JCommUSB API, left click and select "Remove".
3. Follow the un-install wizard to complete the un-install.

## Support

If you encounter problems during the API installation process, contact [support@icaste.com](mailto:support@icaste.com) for best effort support.