

Renesas Synergy™ Platform

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Installing Synergy Signed USB CDC Driver

Apr 13, 2018

Introduction

The USB Communication Device Class (CDC) driver must be installed on the Windows® host PC (7/8/10) for the Synergy MCU configured as a CDC Device to be recognized by the Windows® host PC.

This application note walks through the instructions to install the Synergy signed USB CDC driver on the Windows® host PC. The Synergy signed USB CDC driver provided along with this application note supersedes all previous versions of the Synergy USB CDC drivers.

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1. Background Information

This USB CDC driver package is created with the following USB Vendor and Product IDs:

- **Vendor ID: 045B**
- **Product ID: 5300** (This Product ID is dedicated for Synergy USB CDC Class devices)

This USB CDC driver package is officially signed by Microsoft Trusted Signing Authority.

2. Required Resources

Hardware

1. Any Synergy Kit (such as Starter Kit, Target Board Kit, or Development Kit)
2. Two micro USB cables
3. Host PC running Windows 7/8/10

Software

1. e² studio or IAR Embedded Workbench (any version)
2. Any Synergy project using USB CDC

3. Updating an Existing or New Synergy Project using USB CDC

In a Synergy project using USB CDC, the USB Vendor ID and Product ID need to be updated to match the requirements for this Synergy signed USB CDC driver.

To change the Vendor ID and Product ID, open the Synergy project using USB CDC and go to the USBX Device Configuration properties window (applies to both e² studio and IAR Embedded Workbench for Synergy projects).

Under the **USBX Device Configuration** properties window, update the **Vendor ID** to **0x045B** and **Product ID** to **0x5300** and **class code** to **Miscellaneous** as shown in Figure 1 below.

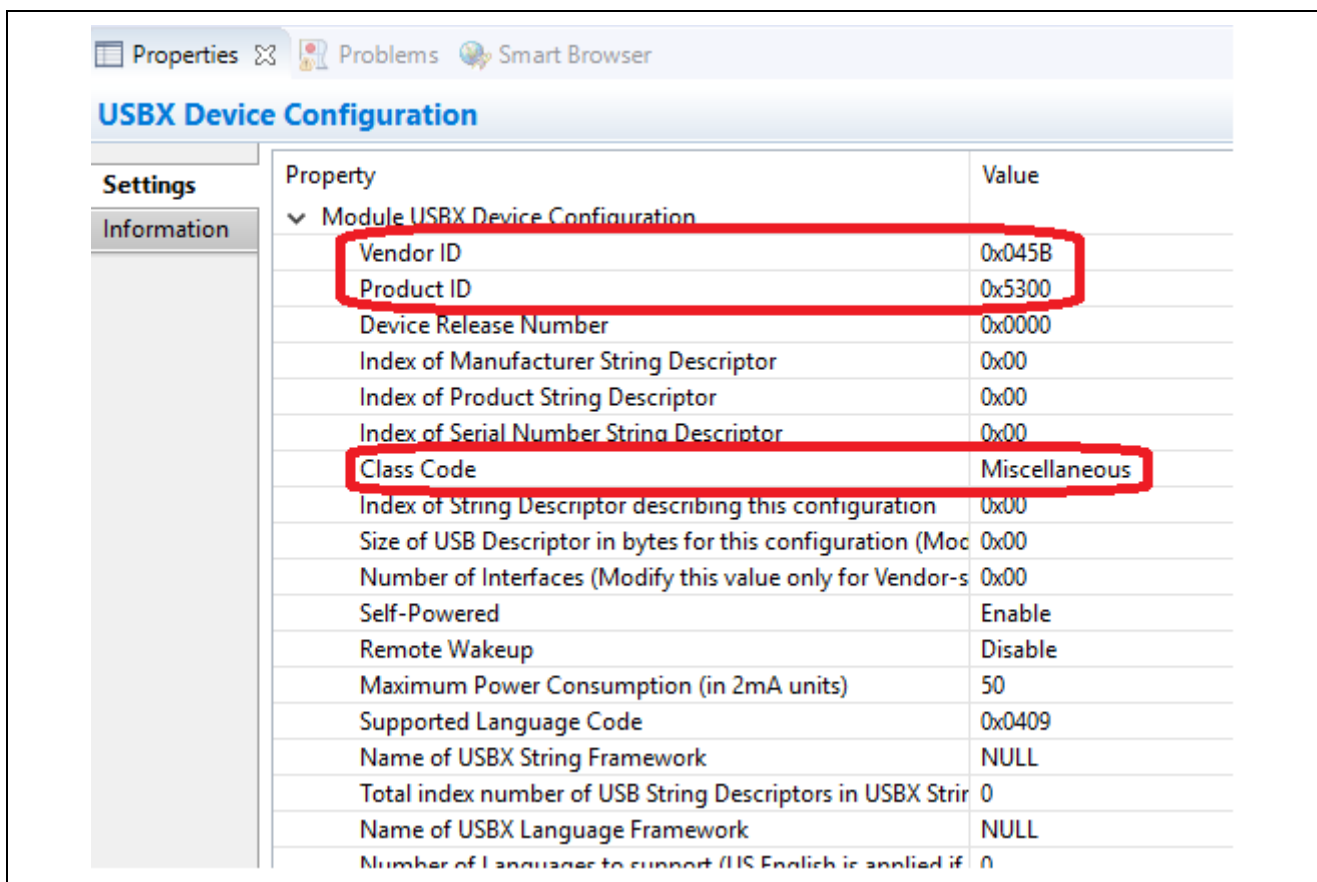


Figure 1 USBX Configuration in the Synergy Configurator

To implement the above changes, make sure to click on **Generate Project Content** in the Synergy Configurator (applies to both e² studio and IAR Embedded Workbench for Synergy projects) as shown in Figure 2 below.

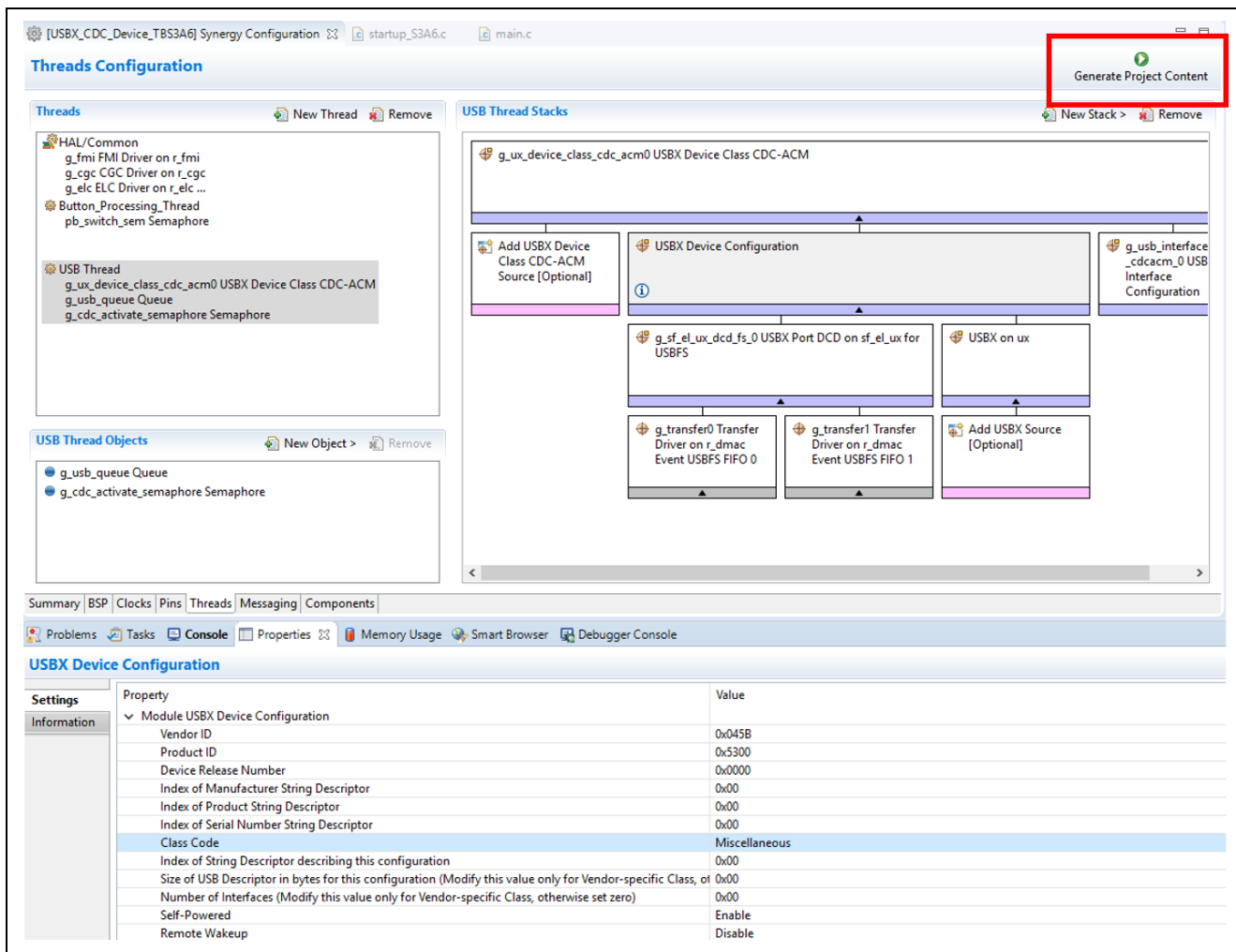


Figure 2 Generate Project Content

Rebuild the Synergy project using USB CDC and reprogram the Synergy Kit with the rebuilt project. Make sure to connect the debug USB port on the Synergy Kit while reprogramming the Synergy Kit to the Windows PC.

Now you can use the Synergy Kit acting as the USB CDC device to install and test the Synergy signed USB CDC driver.

4. USB CDC Driver Installation Procedure

Please follow the following instructions to install the Synergy signed USB CDC driver.

4.1 Installing Synergy signed USB CDC Driver

The following instructions are meant for the users who have not previously installed any Synergy USB CDC drivers and are installing the Synergy signed USB CDC driver for the first time.

- Using the second micro USB cable, connect the USB device port of the Synergy Kit acting as the USB CDC device to your Windows PC.
- Launch the Windows Device Manager.
- On a Windows 7 PC, the Synergy Kit will be listed as an **Unknown device**. On Windows 10, the default `usbser.sys` driver will be loaded and the Synergy Kit will be listed as a **USB Serial COM port** device.
- Right-click the **Unknown Device** or **USB Serial COM port** and select the **Update Driver Software** option as shown in Figure 3 below.

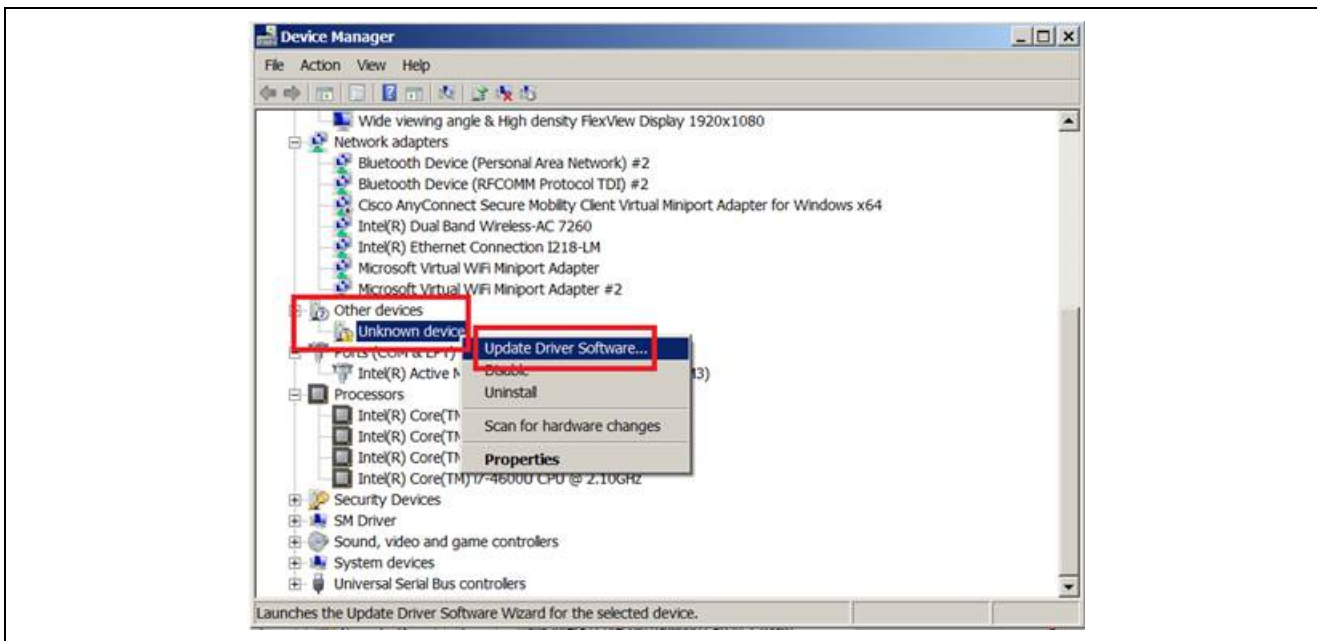


Figure 3 Device Manager in Windows 7

5. Select the directory in which the Synergy signed USB CDC driver is located on the Windows PC.

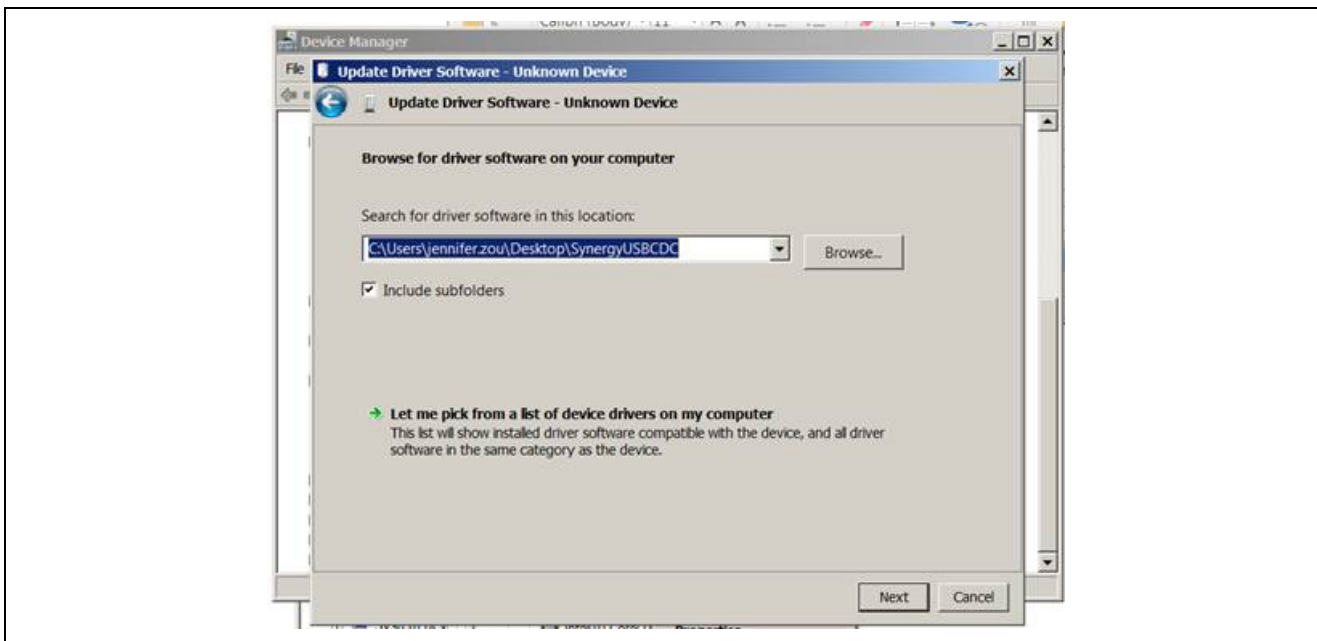


Figure 4 Update Driver Software

6. Click on **Next** and follow the instructions to install the Synergy signed USB CDC driver.
7. The Synergy Kit will be listed as **Synergy Communication Port** in the Windows Device Manager, confirming successful installation of the Synergy signed USB CDC driver.

4.2 Updating an Existing USB CDC Driver

The following instructions are meant for the users who have previously installed any Synergy USB CDC drivers and are updating to the new Synergy signed USB CDC driver.

1. Using the second micro USB cable, connect the USB device port of the Synergy Kit acting as the USB CDC device to your Windows PC.
2. Launch the Windows Device Manager.

3. Locate the Synergy Kit (configured as a USB CDC device) in Device Manager under **Ports (COM & LPT)**. The device will show up as <Name of the device> as shown in Figure 5 below.
4. Right click on the <Name of the device> and uninstall the driver.

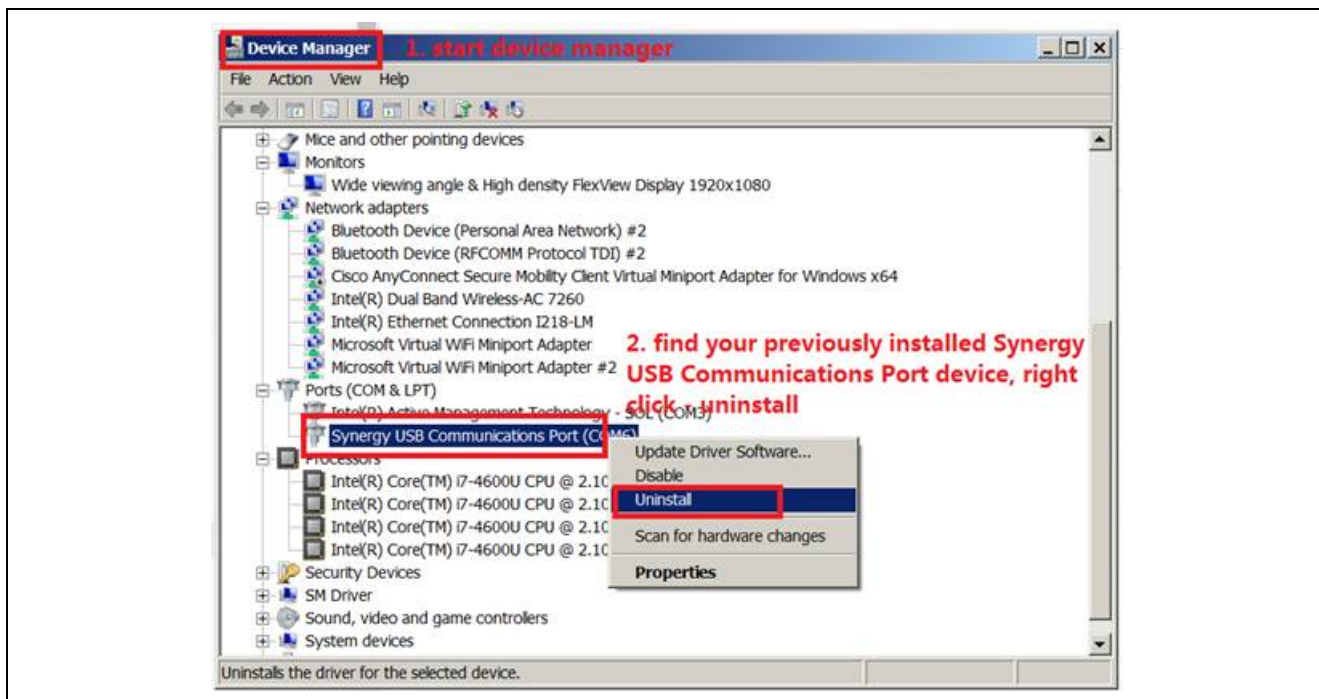


Figure 5 Device Manager in Windows 7

5. Select **Delete the driver software for this device** and press **OK**.

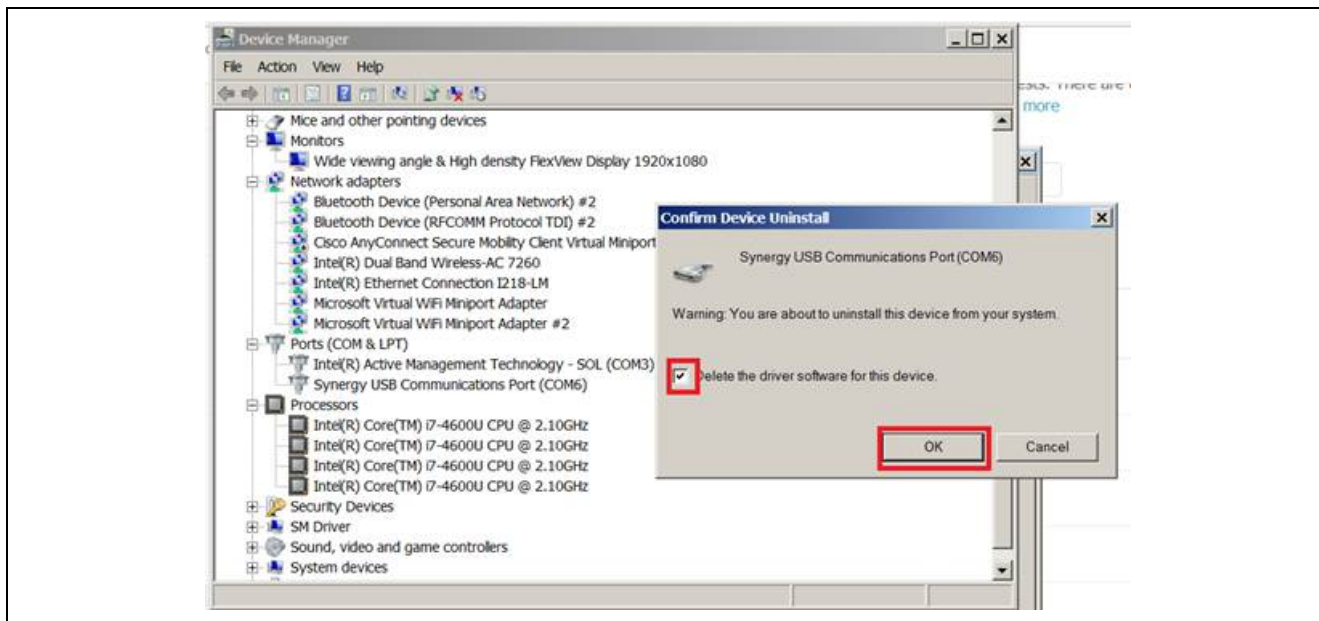


Figure 6 Delete Driver

8. Unplug the Synergy Kit acting as the USB CDC device and plug in again.
9. On a Windows 7 PC, the Synergy Kit will be listed as an **Unknown device**. On Windows 10, the default usbser.sys driver will be loaded and the Synergy Kit will be listed as a **USB Serial COM port device**.
10. Right-click the **Unknown Device** or **USB Serial COM port** and select the **Update Driver Software** option as shown in Figure 3 below.

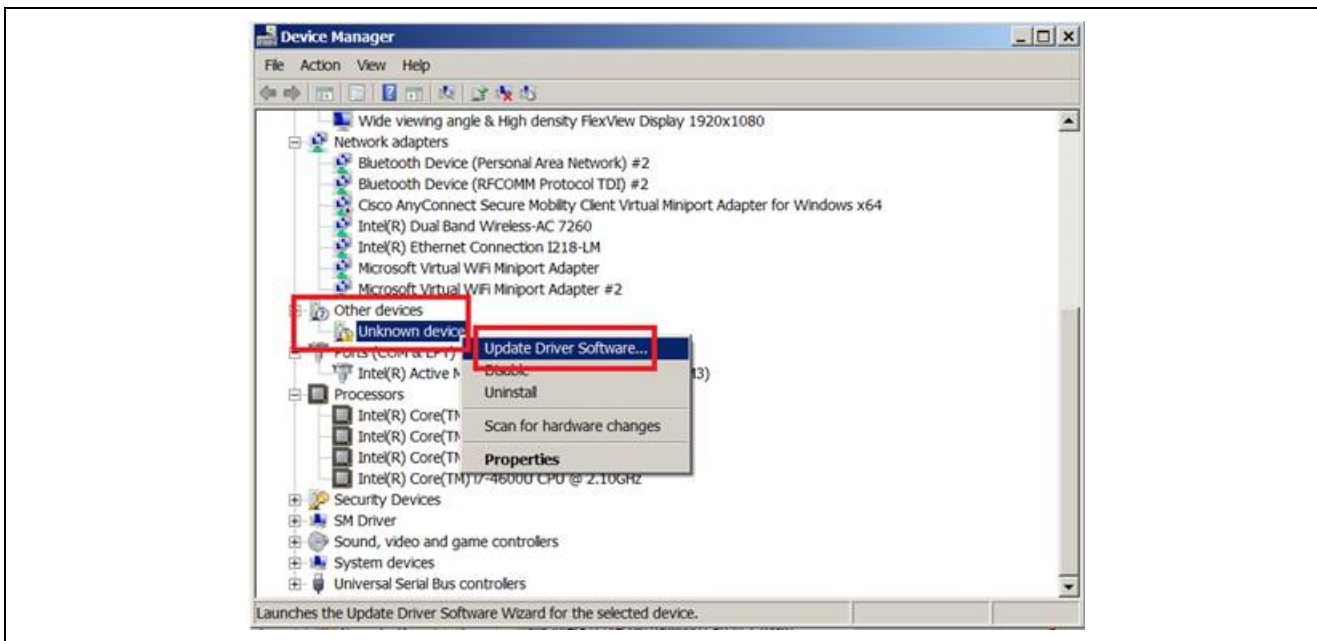


Figure 7 Device Manager in Windows 7 and 10 <add picture>

11. Select the directory in which the Synergy signed USB CDC driver is located on the Windows PC.

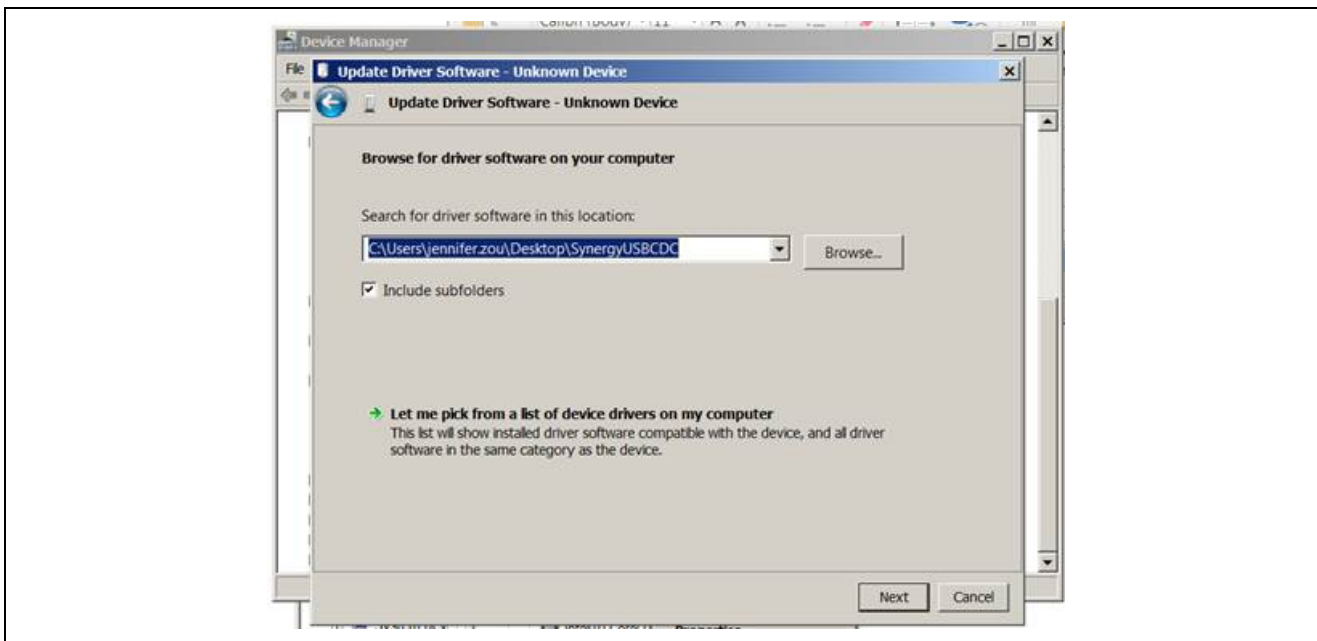


Figure 8 Driver Location

- 12. Click on 'Next' and follow the instructions to install the Synergy signed USB CDC driver.
- 13. The Synergy Kit will be listed as **Synergy Communication Port** in the Windows Device Manager confirming successful installation of the Synergy signed USB CDC driver.

Website and Support

You can use the following self-service help and support resources:

Documentation: renesassynergy.com/docs

Knowledgebase: renesassynergy.com/knowledgebase

Forums: renesassynergy.com/forum

Training: renesassynergy.com/training

Videos: renesassynergy.com/videos

You can also obtain personalized technical support through online chat and web ticket at renesassynergy.com/support.

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Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Apr 13, 2018	-	Initial release.

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