OMRON

OMRON CORPORATION

Image Sensing Component
HVC-P

Evaluation Software
Driver Installation

Manual

TABLE OF CONTENTS

■ **Revision History**

Date	Rev	Contents
2014/01/30	A	First release

Additional Notes

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You may not copy the contents of this document except for the purpose of evaluating the HVC-P sample.
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This document provides details on how to use the HVC-P device (hereafter referred to as "the Device" and the HVC-P Evaluation Software (hereafter referred to as "the Application").

1 Preparations

●Items to Prepare
・A PC with high-speed Internet connection (running Windows 7).
・As administrator privileges are required for the installation, we recommend using a PC with an administrator account login.
・USB 2.0 cable (A male to B male) (not included).

●Installation Procedure
・Follow the instructions described in **2 Install COM Drivers**.
・Use the **Installation Check Sheet** provided at the end of the installation manual. Please refer to it when contacting the HVC Customer Service with issues regarding the installation.

●Operating Environment
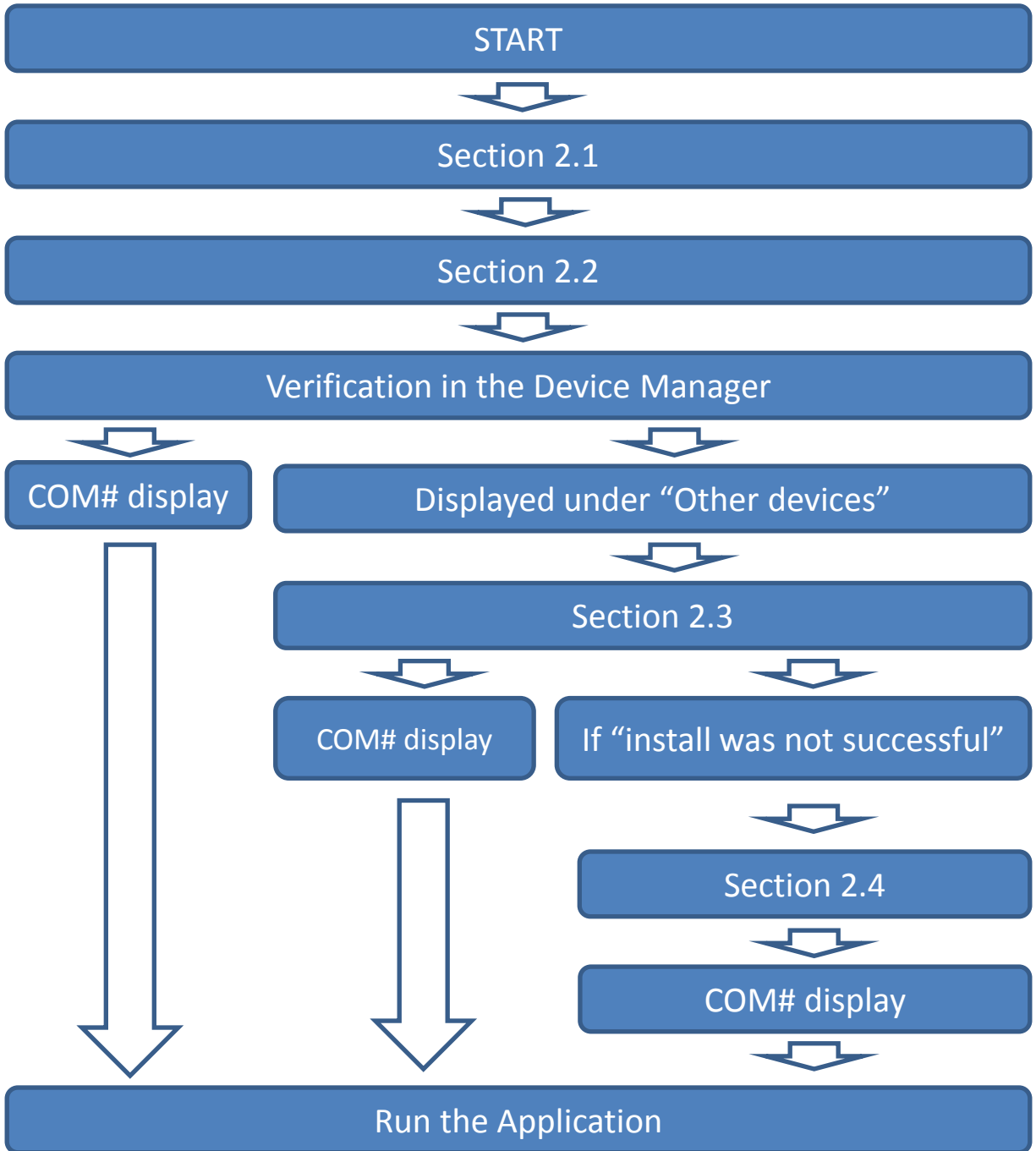The Application was tested in the following environment.
・OS   Windows 7 Professional SP1 64bit / 32bit
・CPU   Intel® Core™ i7-3770 CPU @ 3.40GHz

Please note that errors might occur due to the specs of the PC used. Please refer to **4 Troubleshooting** for details.

2 Install COM Drivers

Please follow sections 2.1 and 2.2 for installing the drivers.
Please refer to sections 2.3 and 2.4 should errors occur.

START

Section 2.1

Section 2.2

Verification in the Device Manager

COM# display

Displayed under "Other devices"

Section 2.3

COM# display

If "install was not successful"
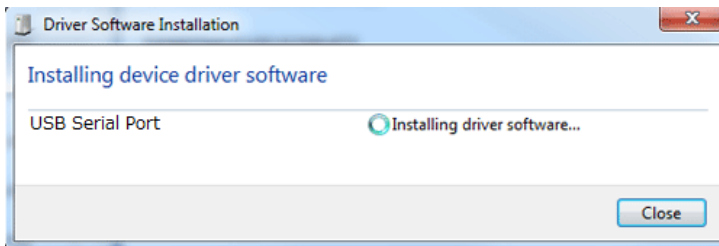
Section 2.4

COM# display

Run the Application

2.1 Automatic Installation

① Start the PC if not already running.
② Verify that the Internet connection is working.
③ Close any running application.
④ Connect the Device to the PC with the USB cable.
⑤ The installation will start shortly.
⑥ The windows below will be usually displayed during the installation, but not always. In such a case, proceed to Section 2.2 after a few moments.
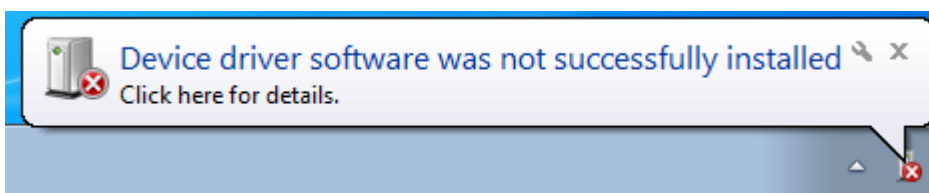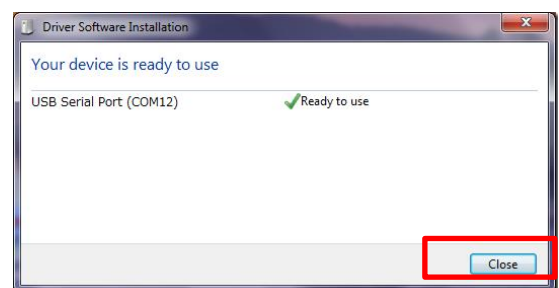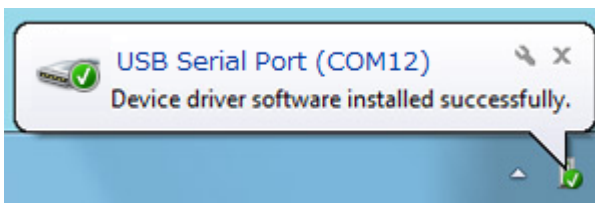

The status is displayed as below.

The installation may take a few minutes. Please do not click on "Close" until the installation is complete.

× Do not click to close

⑦ The windows above will change to the ones below when the installation is complete, but sometimes nothing will be displayed. Regardless, proceed to Section 2.2 after a few moments.
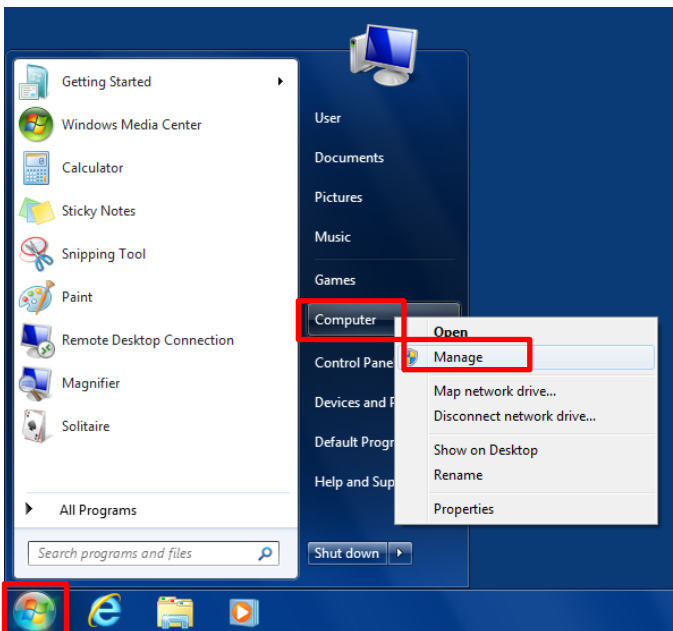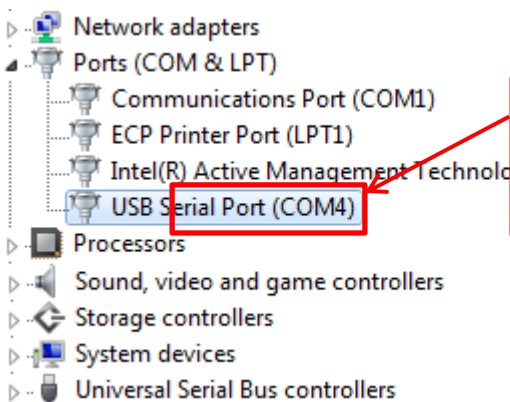
2.2 Verify Installation

Verify the COM port number in the device manager.

① Start the PC if not already running.

② Verify that the Internet connection is working.

③ Close any running application.

④ Connect the Device to the PC with the USB cable.

⑤ Open Device Manager on the PC.

   From "Start" go to "Computer", right-click it and select "Manage".

⑥ Click on Device Manager

⑦ Proceed to Section 3.1 if "USB Serial Port(COM#)" is displayed under "Ports (COM & LPT)".

Verify the COM number of the port. The COM number is COM4 in the example to the left. Write it down for later.
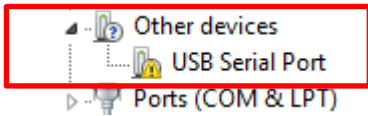
⑧ Proceed to Section 2.3 if it is listed under "Other devices".
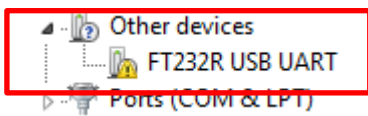
2.3 Reinstallation

Reinstall the drivers if the COM number was not displayed.

Follow instructions ① to ⑥ as in Section 2.2.

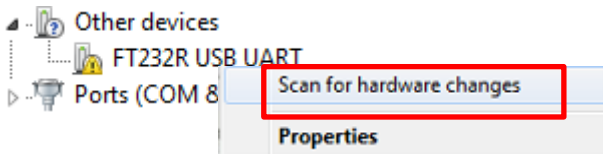Proceed to ⑩ if "USB Serial Port" is displayed under "Other devices".
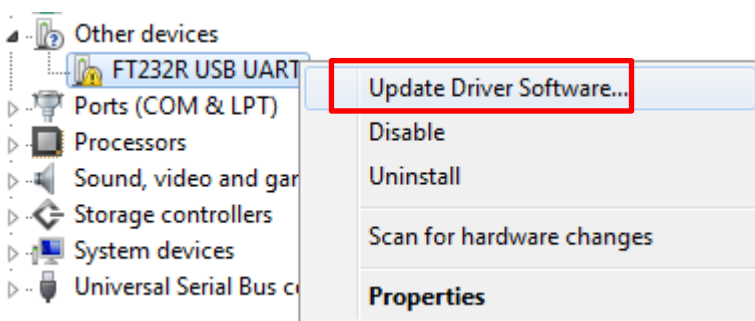

Proceed to ⑦ if "FT232R USB UART" is displayed.

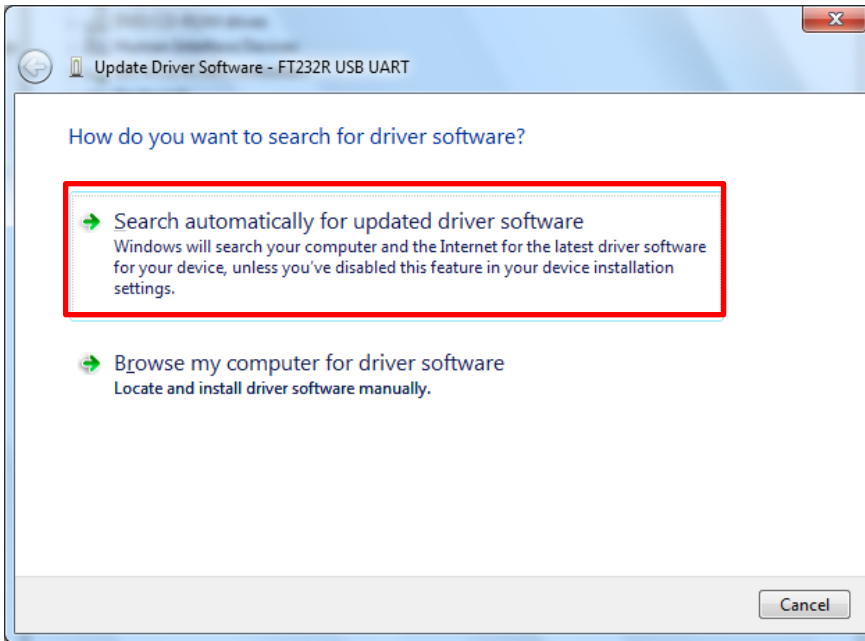⑦ When "FT232R USB UART" is displayed, right click on it.
   If "Scan for hardware changes" is displayed, verify the Internet connection and return to ③ in Section 2.1.

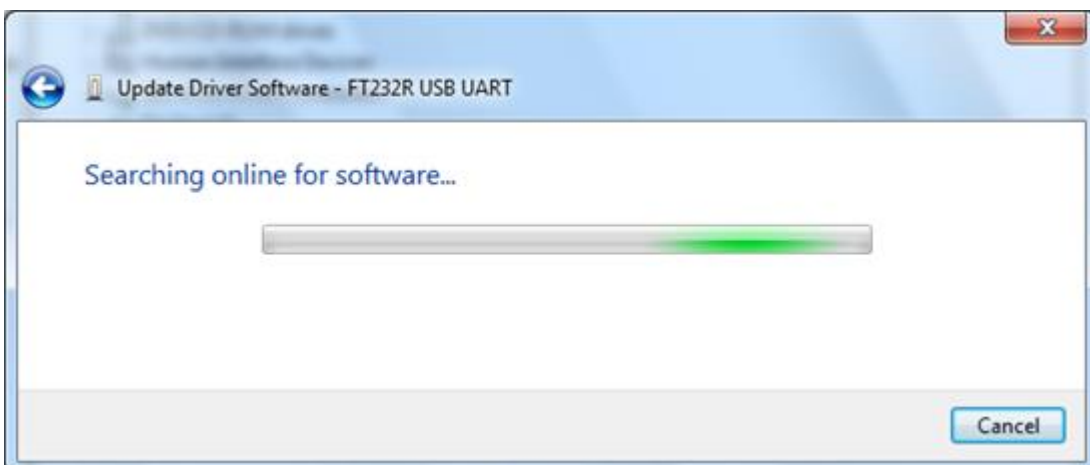If "Update Driver Software" is displayed, select it and proceed to ⑧.
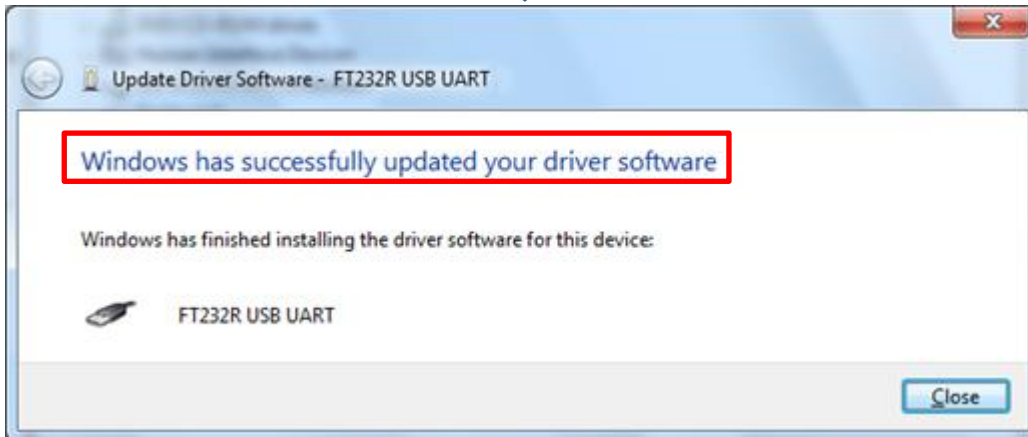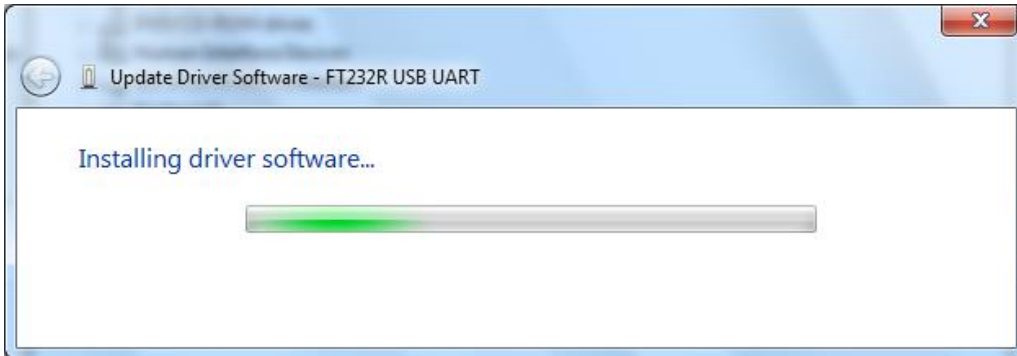
⑧ Driver Software Update

Click on "Search automatically…"

⑨ The update driver software windows will be as displayed below when searching for the drivers.

If "Windows has successfully…" is displayed, disconnect the USB cable and restart from Section 2.3 to verify the USB Serial Port display.
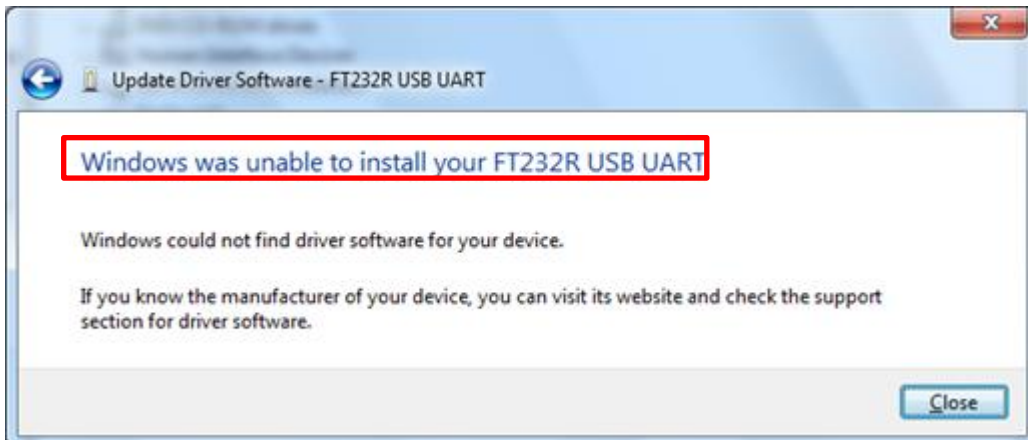
Proceed to Section 2.4 if the device driver was not successfully installed.

⑩ USB Serial Port Display
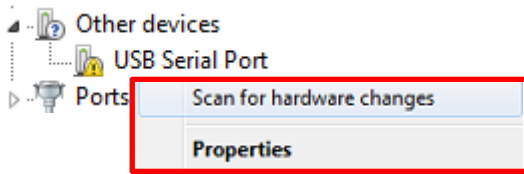
If the menu to the left is displayed, verify that the PC is connected to the Internet and restart from ③.
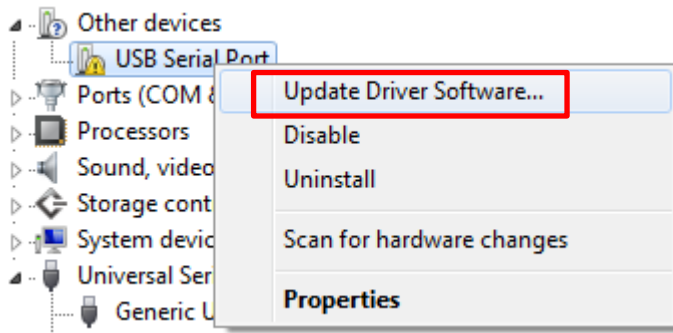
Click on "Update Driver Software"

⑪ Update Driver Software
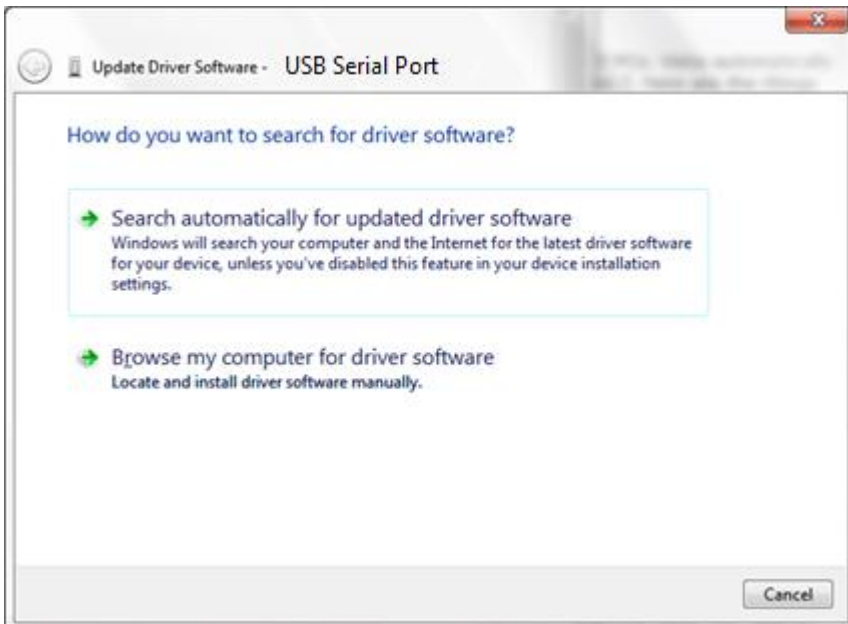
Click on "Search automatically …".

⑫The "Update driver software" windows will be as displayed below.
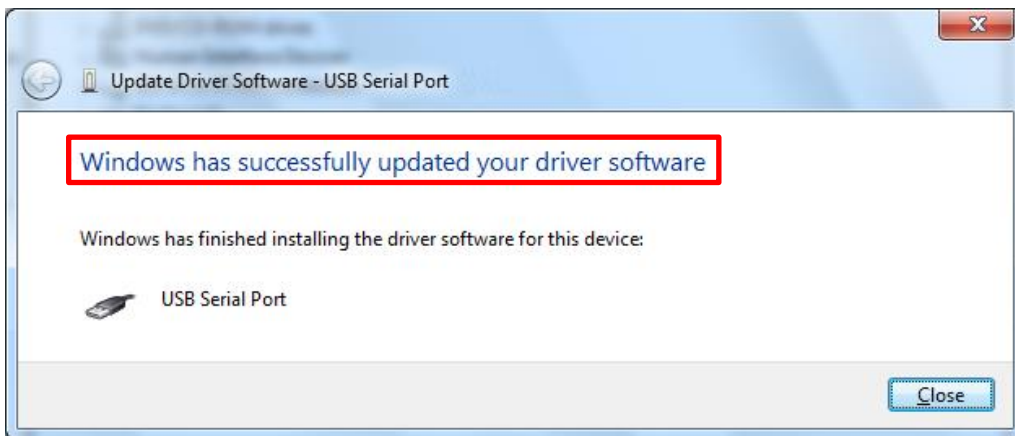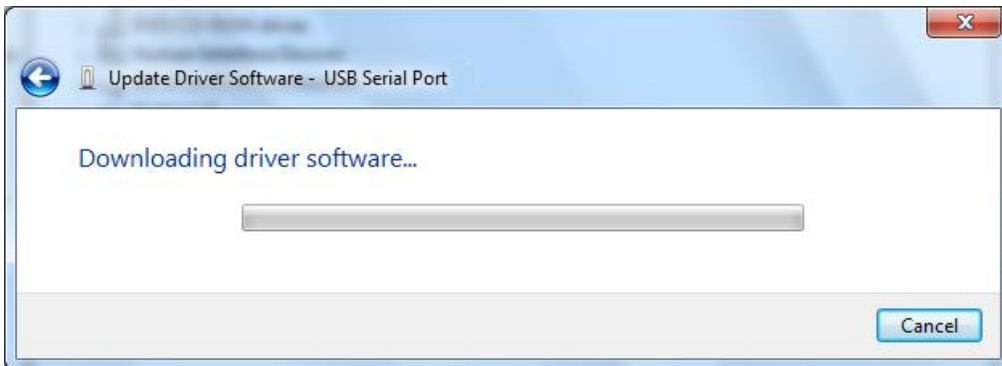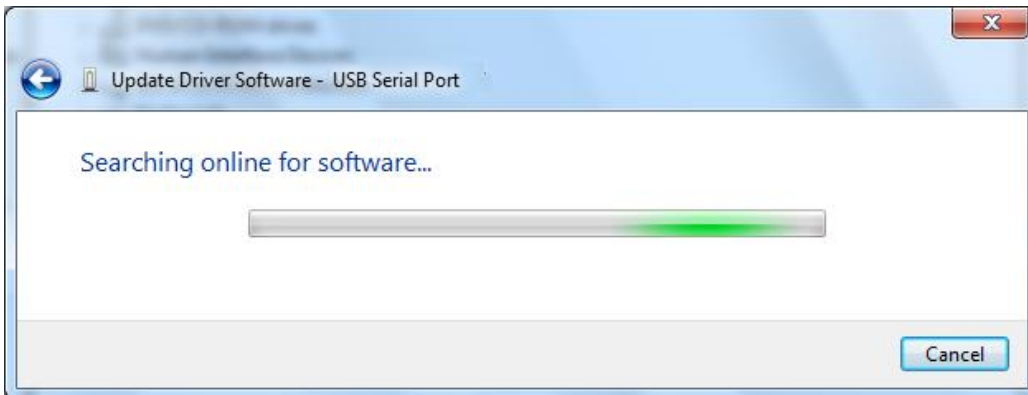
If "Windows has successfully…" is displayed, proceed to ⑬.
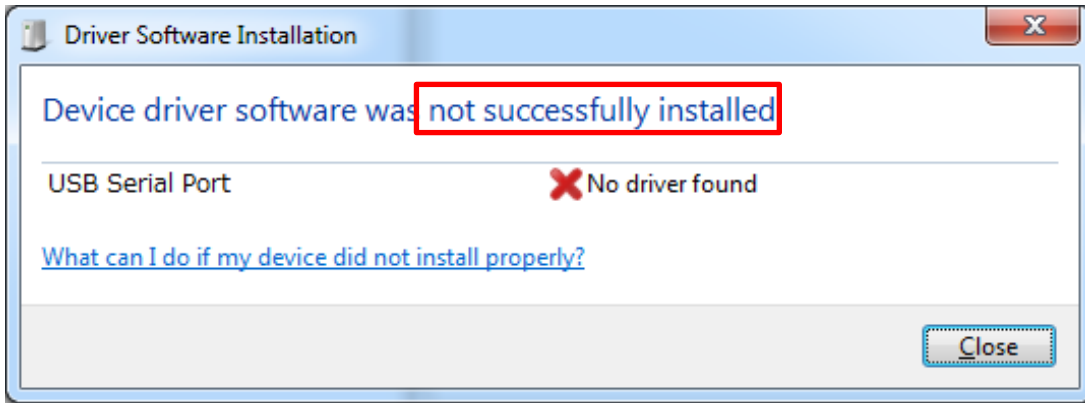
Proceed to Section 2.4 if the device driver was not successfully installed.

⑬ Verify the COM number in "Ports (COM & LPT)" in the Device Manager.
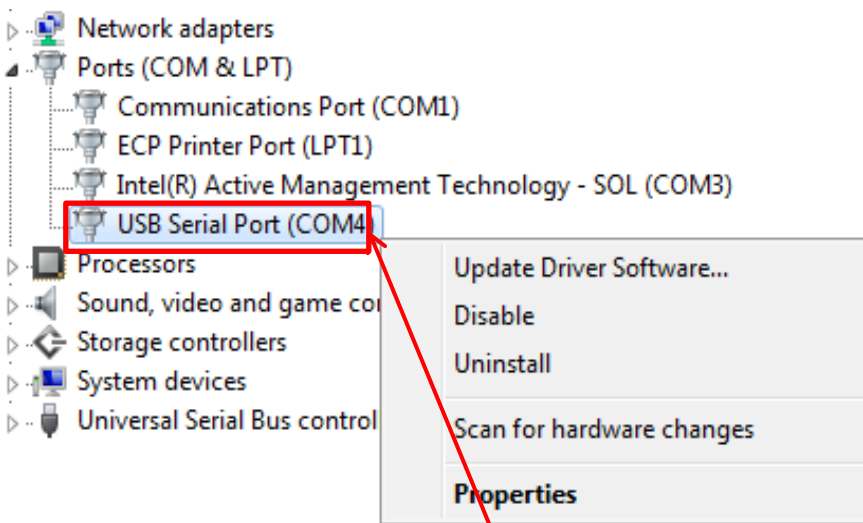
Verify the COM number of the port. The COM number is COM4 in the example above. Write it down for later.

⑭ Proceed to **3 Run Application**.

2.4 Manual Installation

① Confirm the Operating System type.

Confirm the System type (32-bit/64-bit) and download the appropriate drivers.

② Download the drivers.
The VCP drivers can be downloaded from the FTDI website.
http://www.ftdichip.com/Drivers/VCP.htm

Currently Supported VCP Drivers:

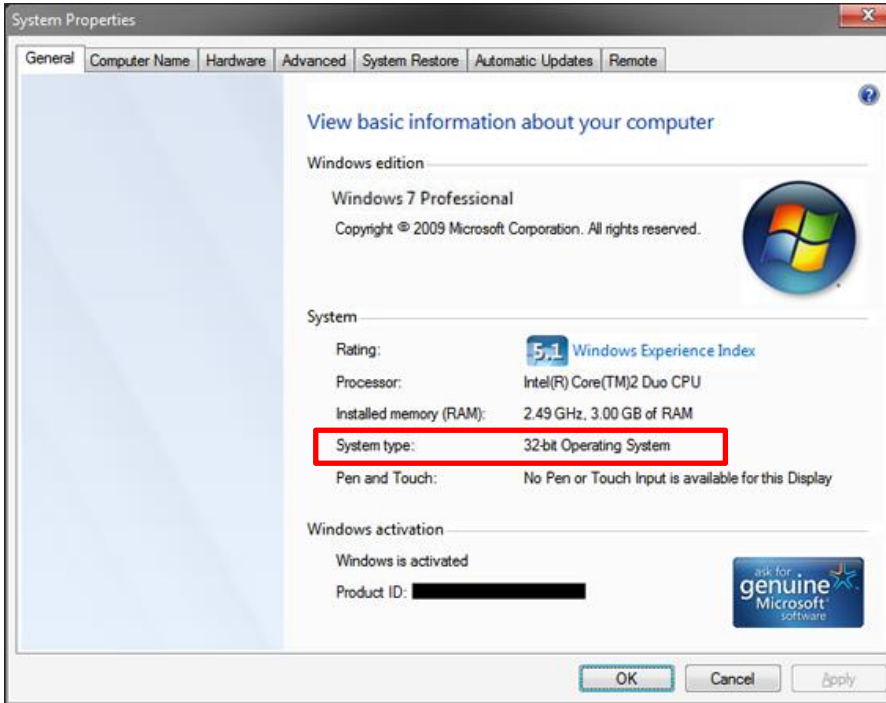| Operating System	Release Date	Processor Architecture							Comments
		x86 (32-bit)	x64 (64-bit)	PPC	ARM	MIPSII	MIPSIV	SH4	
Windows 8.1	2013-10-21	2.08.30 8.1	2.08.30 8.1	-	-	-	-	-	2.08.30 WHQL Certified for Win 8.1 Available as setup executable Release Notes
Windows*	2013-08-01	2.08.30	2.08.30	-	-	-	-	-	2.08.30 WHQL Certified Available as setup executable Release Notes
Linux	2009-05-14	1.5.0	1.5.0	-	-	-	-	-	All FTDI devices now supported in Ubuntu 11.10, kernel 3.0.0-19 Refer to TN-101 if you need a custom VCP VID/PID in Linux
Mac OS X	2012-08-10	2.2.18	2.2.18	2.2.18	-	-	-	-	Refer to TN-105 if you need a custom VCP VID/PID in MAC OS
Windows CE 4.2-5.2**	2012-01-06	1.1.0.10	-	-	1.1.0.14	1.1.0.10	1.1.0.10	1.1.0.10	
Windows CE 6.0	2012-01-06	1.1.0.10	-	-	1.1.0.14	1.1.0.10	1.1.0.10	1.1.0.10	

32-bit version   64-bit version

③ Download the files.
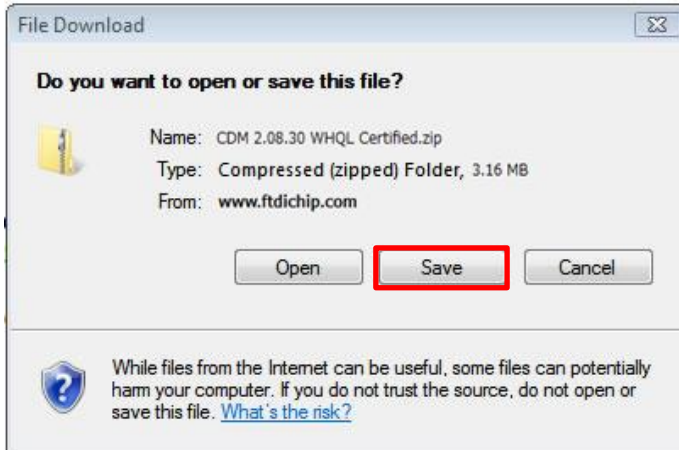
Click on "Save"

Example: Save in Downloads
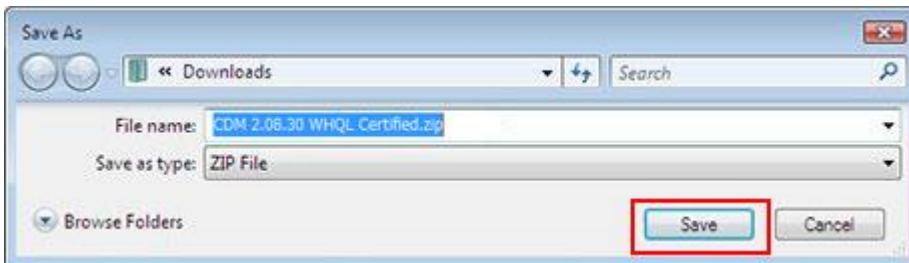
④ Unzip the files
Unzip the downloaded CDM 2.08.30 WHQL Certified.zip file.

CDM 2.08.30 WHQL Certified.zip

Further unzip the CDM v2.08.30 WHQL Certified.zip file.
This will create the CDM v2.08.30 WHQL Certified folder.

CDM v2.08.30 WHQL Certified

⑤ Connect the HVC-P to the PC with the USB cable.
⑥ The installation will start shortly.
⑦ The windows below will be displayed during the installation.
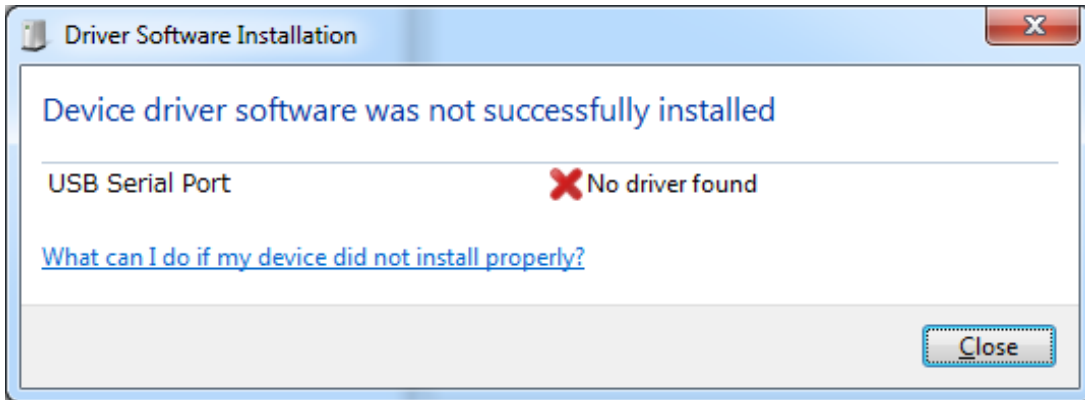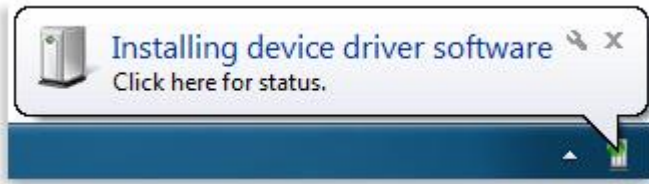
⑧ Open the Device Manager.
   From "Start" go to "Computer" and right-click on "Manage".
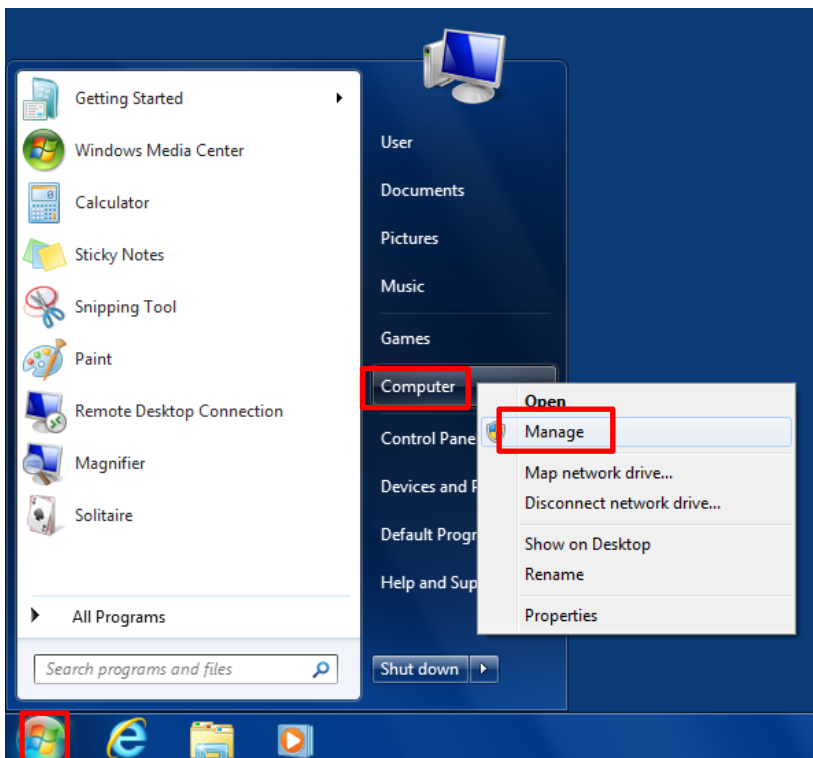
⑨ Click on "Device Manager", then "Other devices".

⑩ Right-click on "USB Serial Port".
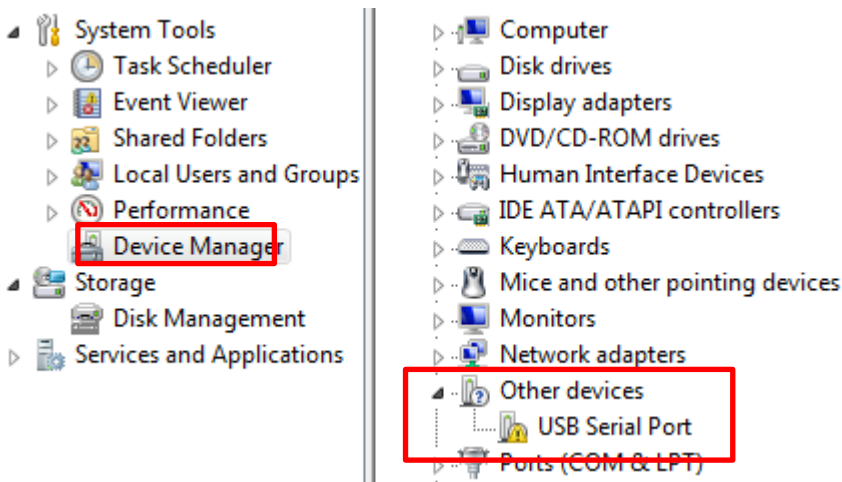
Click on "Update Driver Software".
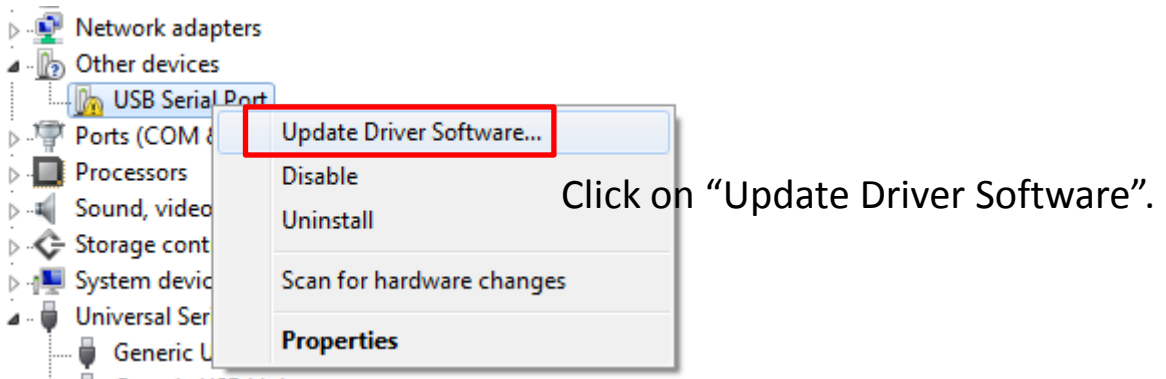
⑪ Update the driver software.

Click on "Browse my computer…"

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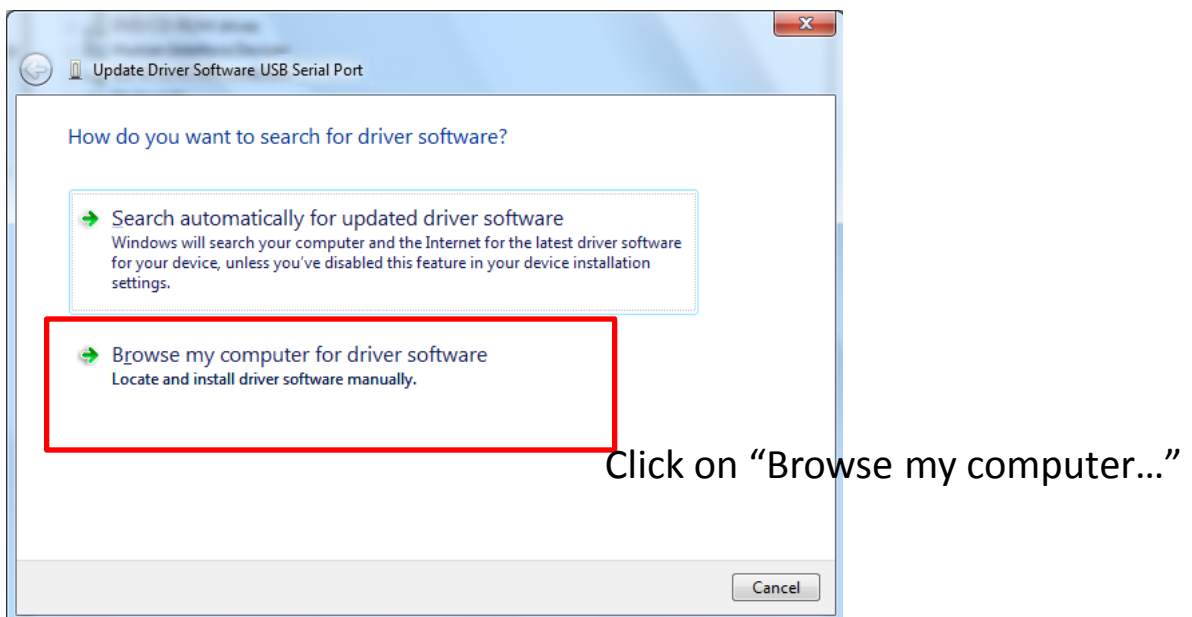
⑫ Click on "Browse" and select the folder unzipped earlier.
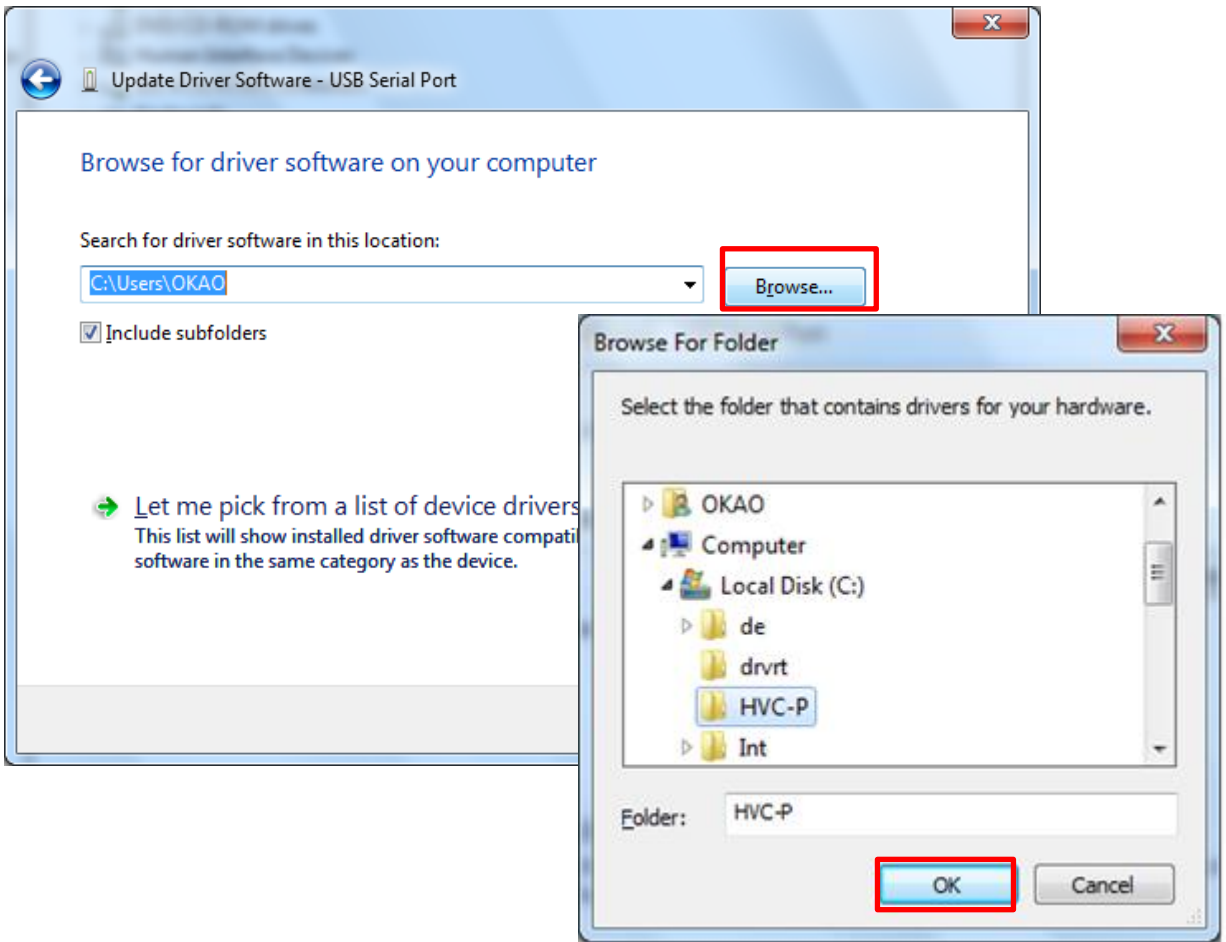
⑬ Click on "Next".
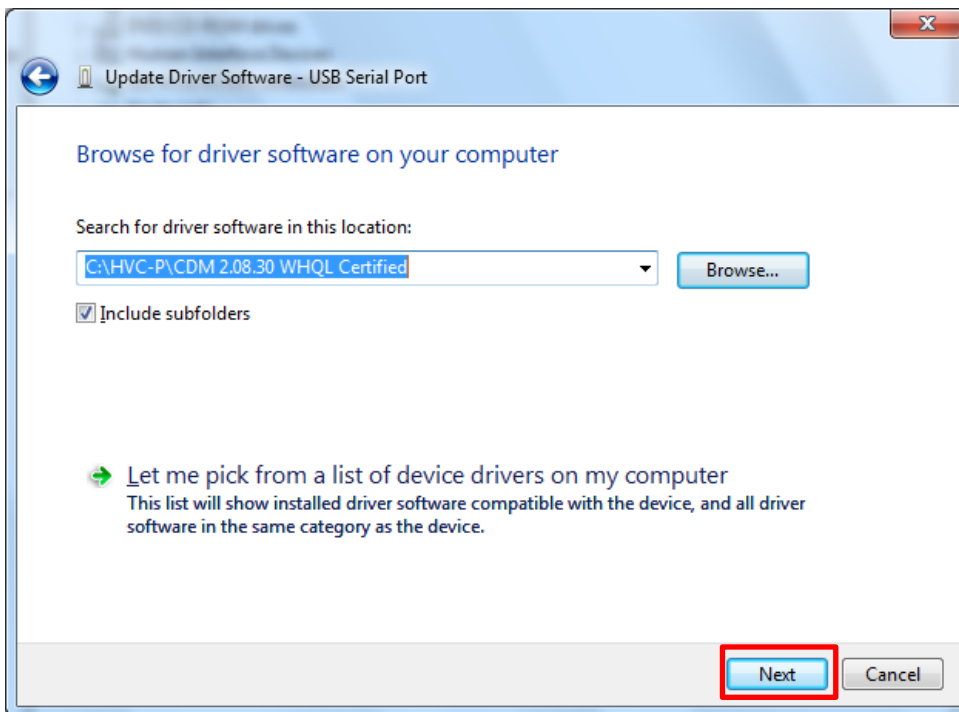
⑭ Close the window if "Windows has successfully…" is displayed.

⑮ Verify the COM number in "Ports (COM & LPT)" in the Device Manager.
The installation is complete if "USB Serial Port (COM#)" is displayed.
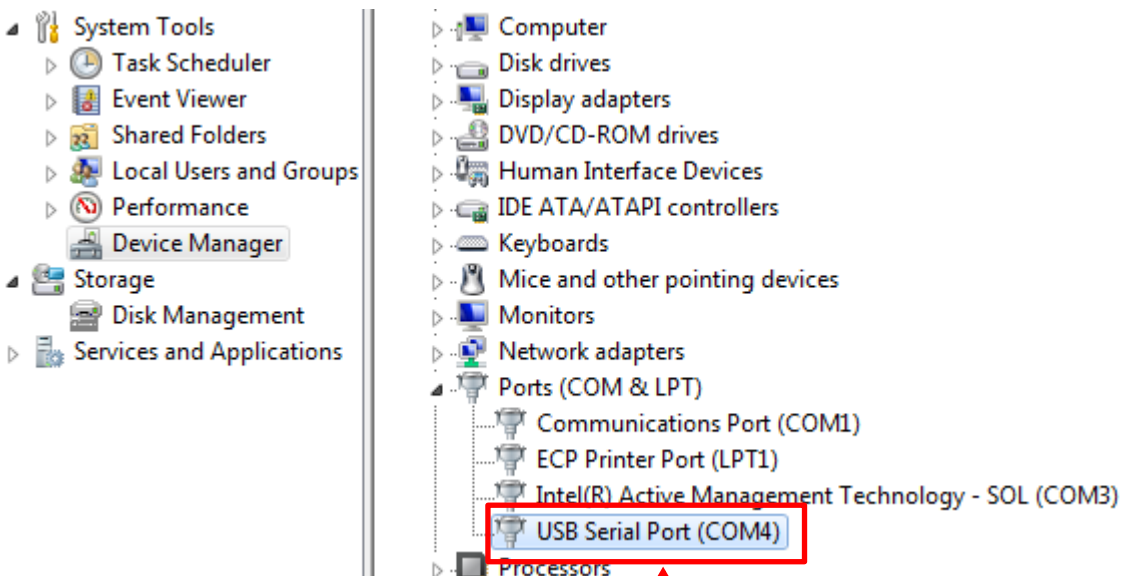
Verify the COM number of the port. The COM number is COM4 in the example above. Write it down for later.

Proceed to **3 Run Application**.

⑯ If the above is not displayed, proceed to Section 4.5.

3 Run Application

Please make sure to also refer to the HVC-P Evaluation Software Manual before using the Application

3.1 Set Device Baud Rate

This is for the transmission rate for the UART signal of the Device. The possible values are 9600, 38400, 115200, 230400, 460800, 921600 (921600 is the default value).

Make sure that the Baud rate set in the Application matches the value manually set on the Device.

Setting the Baud rate on the Device must be done manually through the DIP switch (identified as SW-2 on the image below) on the back of the Device.
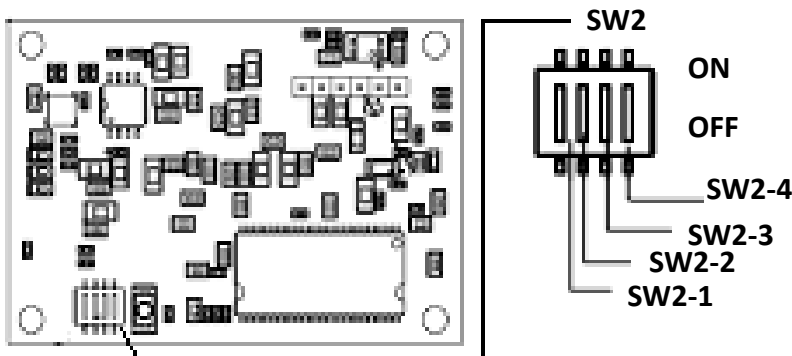
Make sure to leave SW2-1 to ON at all times.
The possible settings for SW2-2, SW2-3 and SW2-4 are displayed below.

Please refer to the HVC-P Instruction Sheet for details.

3.2 Set Application Baud Rate

Click on the "HVC-PDemo.exe" file   HVC-PDemo.exe
to start the Application.

The window displayed below will open the first time the
Application is run.

Select the Port number written down from in Section 2.2.
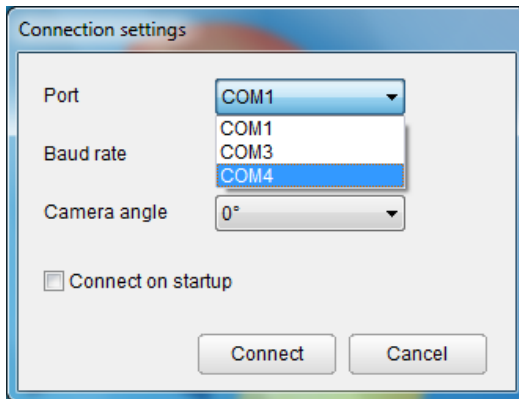
③ Select the Baud rate.

Make sure to select the Baud rate matching the value manually
set for the Device.
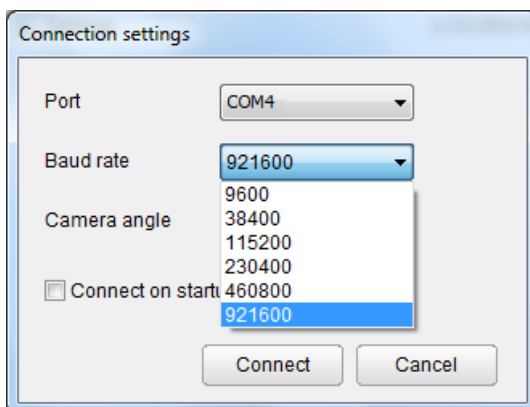
④ Click on "Connect" to start the Application.
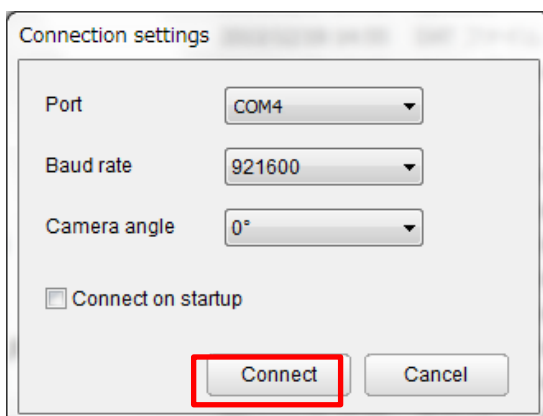
4 Troubleshooting

The Device won't power-up.
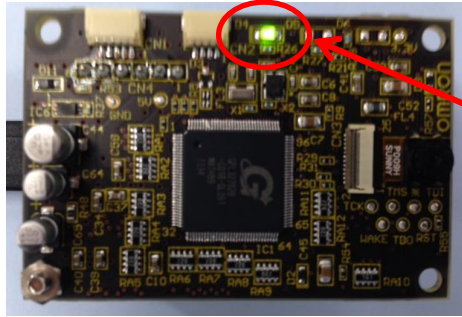
Location of the LED

Suspected cause	The cable or connector is not working properly.
Items to verify	

① Verify the USB cable connection to the PC.
② Verify the USB cable connection to the Device.

Error Message:
Device driver software was not successfully installed
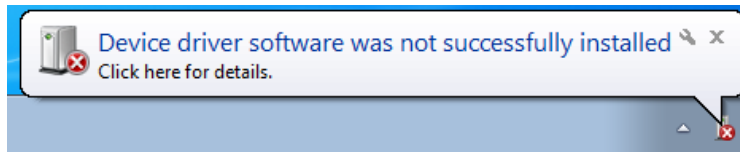
Suspected cause	The driver installation failed.
Items to verify	

① Reinstall the drivers as described in Section 2-3.

"Other devices" is displayed in the Device Manager

Suspected cause	The driver installation is not complete.
Items to verify	

① Reinstall the drivers as described in Section 2-3.

The Port (COM#) is unknown.	
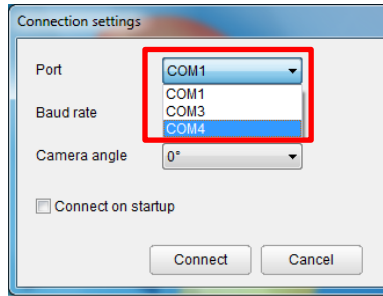
Items to verify
① Identify the Port (COM#) from the Device Manager.   Please refer to Section 2.2 for details.

Error message: **Device is not responding.** **Please verify connection.**	
Suspected cause	① The cable is not properly connected. ② The transmission setting is incorrect. ③ The USB driver install was not completed. ④ The port setting (COM#) is incorrect. ⑤ The drivers are updated.
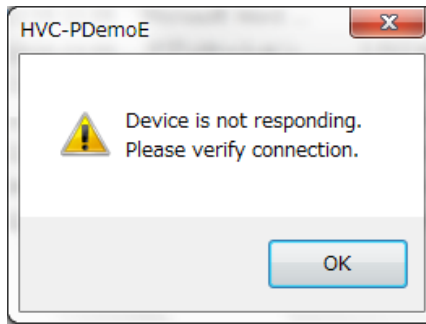
Items to verify
① Verify the cable and the connector. ② Verify the Baud rate setting on the Device (refer to Section 3.1) and in the Application (refer to Section 3.2).   Verify the Port (COM#) setting in the Device Manager (refer to Section 2.2). ③ Verify that the driver installation is complete. Refer to Section 4.1 to see the windows displayed while the installation is still running. ④ Change the Port (COM#) settings (refer to Section 4.3) ⑤ Update the drivers (refer to Section 4.6).

Error message:
Communication error.
Please lower the Baud rate or change the USB driver settings.

HVC-PDemoE

⚠ Communication error.
Please lower the Baud rate or change the USB driver settings.

Please refer to Application manual for details.

OK
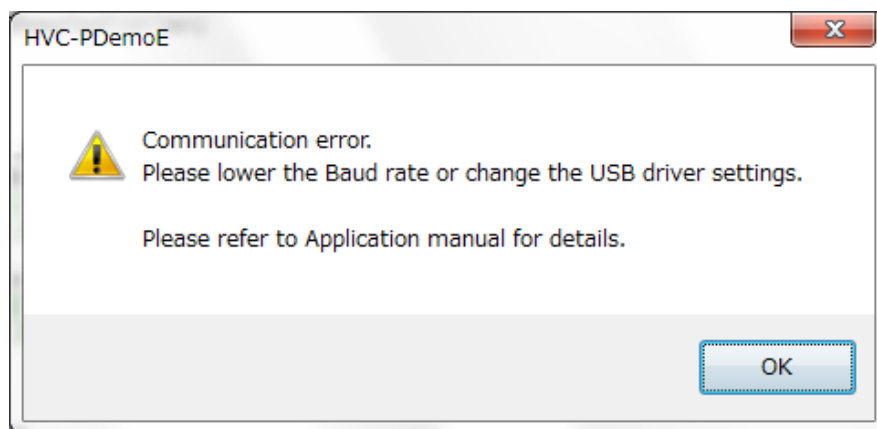
Suspected cause	The PC used is not powerful enough.
Items to verify	

① Lower the Baud rate setting.
   Change the setting on the Device (refer to Section 3.1) and in the Application (refer to Section 3.2).
② Change the USB driver settings (refer to Section 4.2).

Please contact the HVC Customer Service should any issue continue to occur.
Contact information is given in the HVC-P Instruction Sheet.

4.1 Display during Installation

The windows below will be displayed during the installation of the USB drivers.

The status is displayed as below.
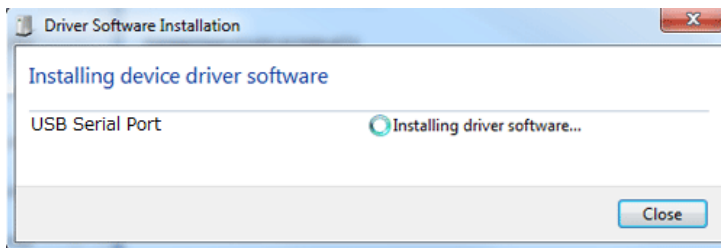
Clicking on the "Show hidden icons" button on the taskbar will display the following windows. The status of the driver installation can be verified from here.

Click on the USB driver icon.
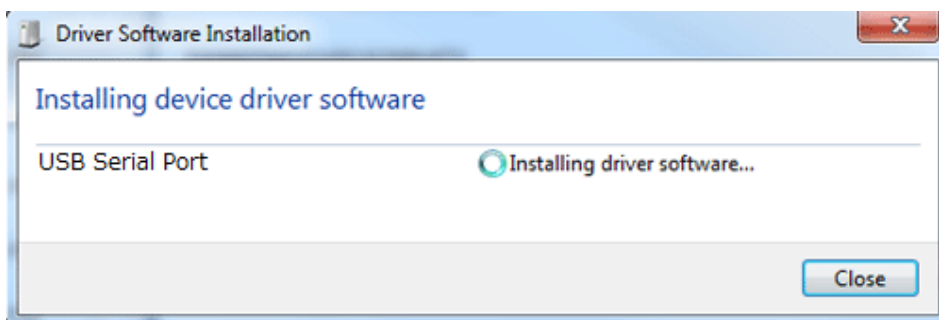
4.2 Change USB Driver Settings

Right click on the "USB Serial Port(COM#)" displayed under "Ports (COM & LPT) in the Device Manager and select "Properties".
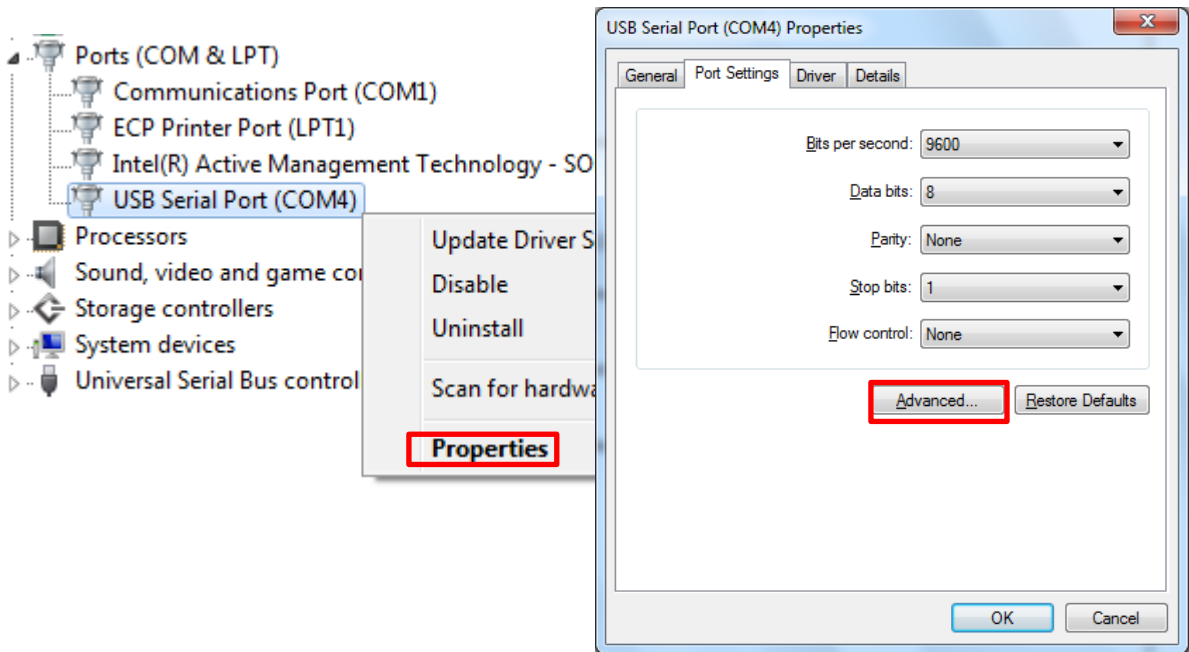
Click on "Advanced" in the "Port Settings" tab.
The transmission performance will improve if the "Latency Timer (msec)" in "BM Options" is set lower than 16.
However, setting the value too low will increase the rate of interruption of the USB and increase the load on the system. Please make sure to set a balanced value.
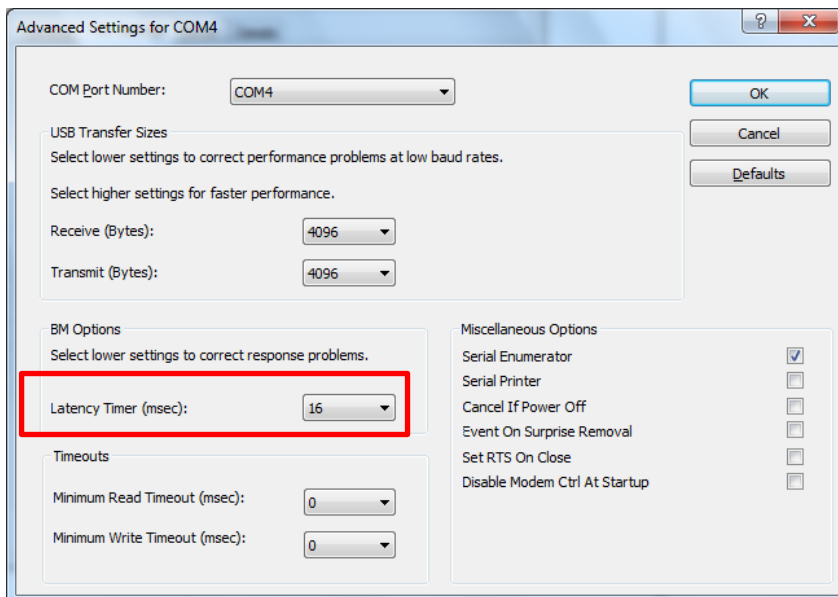
4.3 Change COM Port Settings

The Port COM# identified in Section 2 is sometimes not displayed in the Port setting of the Application.

In the example below, the device manager displays COM3 but it is not displayed in the Port setting of the Application.
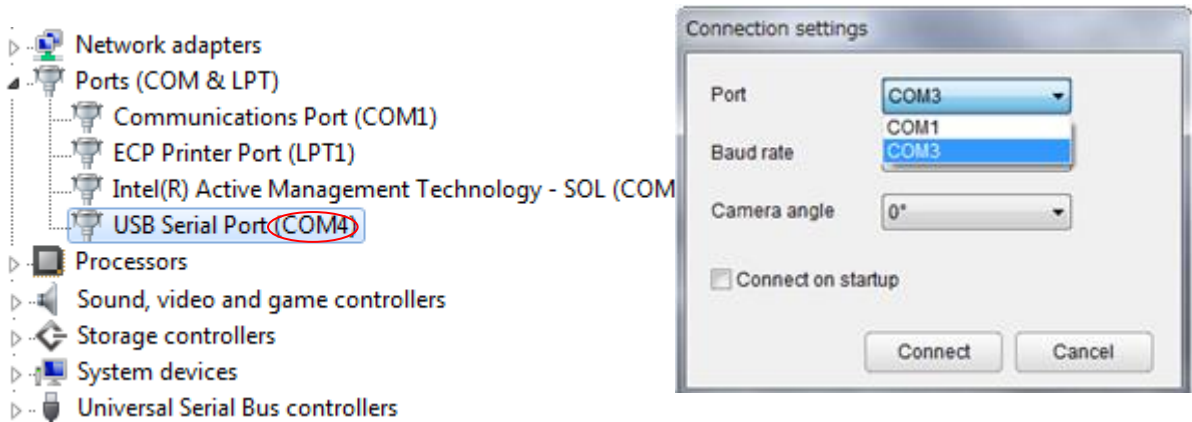
COM4 is not displayed.

Refer to ⑤ to ⑦ of Section 2.2 on how to access the Device Manager.
Right click on the "USB Serial Port (COM#)" displayed under "Ports (COM & LPT).

SG-B5T-010A
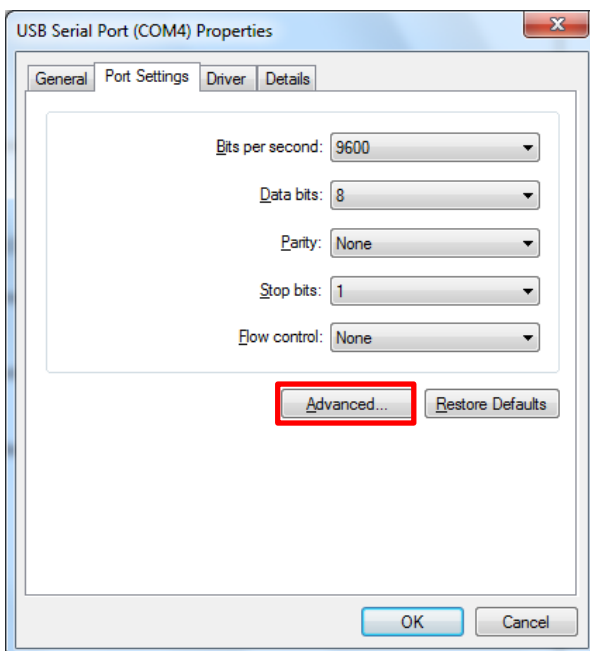
Open "Advanced" in the "USB Serial Port (COM#) Properties" window.
Click on "COM Port Number" and select an available COM#, i.e. one that is not "(in use)".
Select a different COM# if the same error message appears.
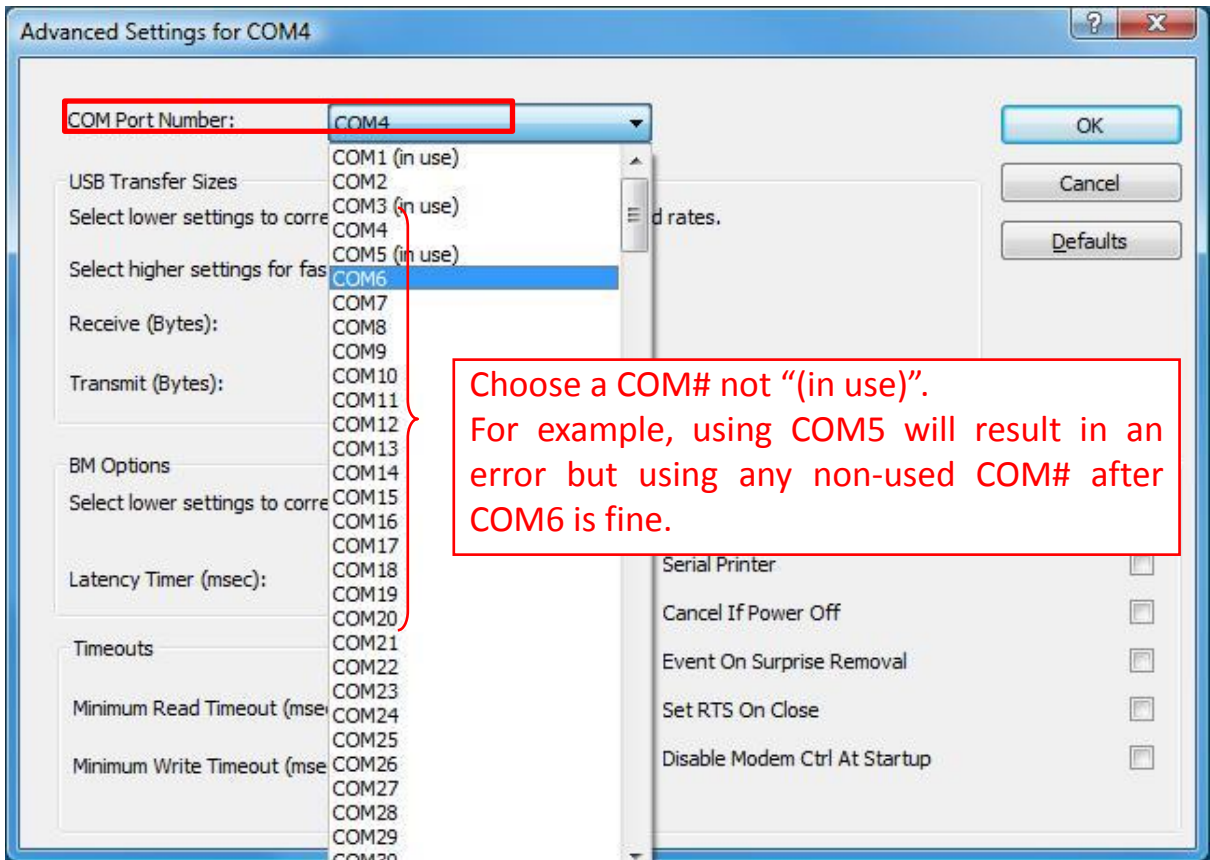
Click "OK" to close the window.

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4.4 Caution while Using the Application
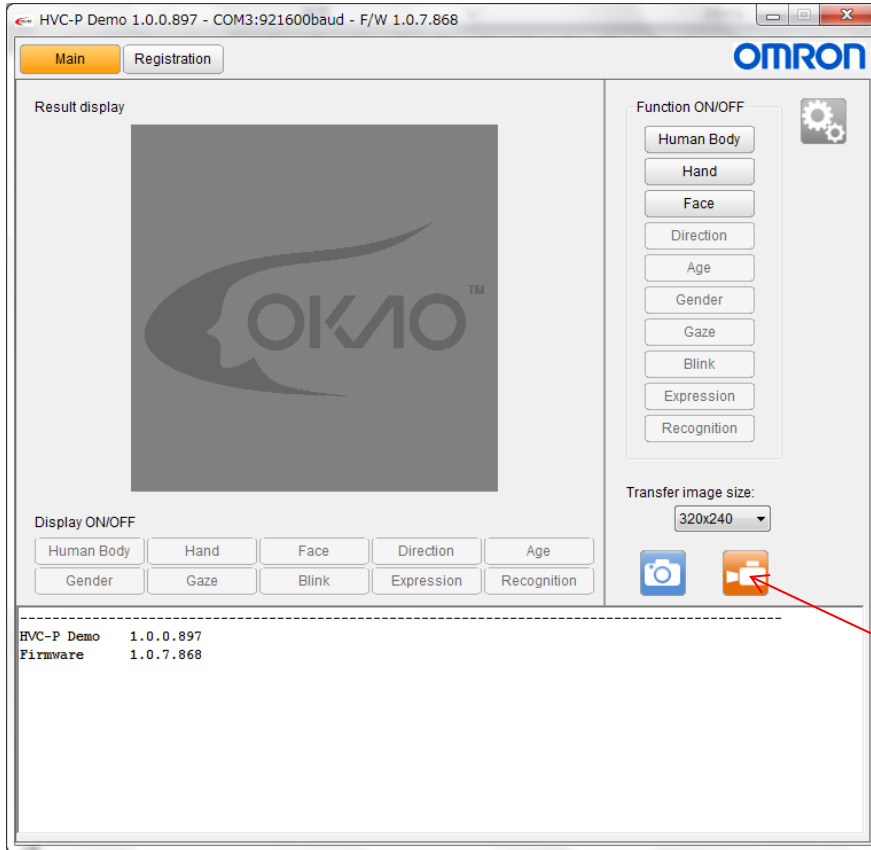
 Display when process not running

 Display when process is running

Changing the transfer image size or clicking on the "x" to close the Application while a detection process is running (the "Continuous" button has been clicked once) will display a "Please wait." message and the Application may sometimes freeze.

Please make sure to click on the "Continuous" button a second time to stop the running process before changing the transfer image size or closing the Application.

4.5 Delete Driver

If the drivers still cannot be successfully installed after following Section 2.3 and 2.4, delete them once before trying again.
Proceed from ① to ④ of Section 2.1.

⑤ Open the Device Manager.
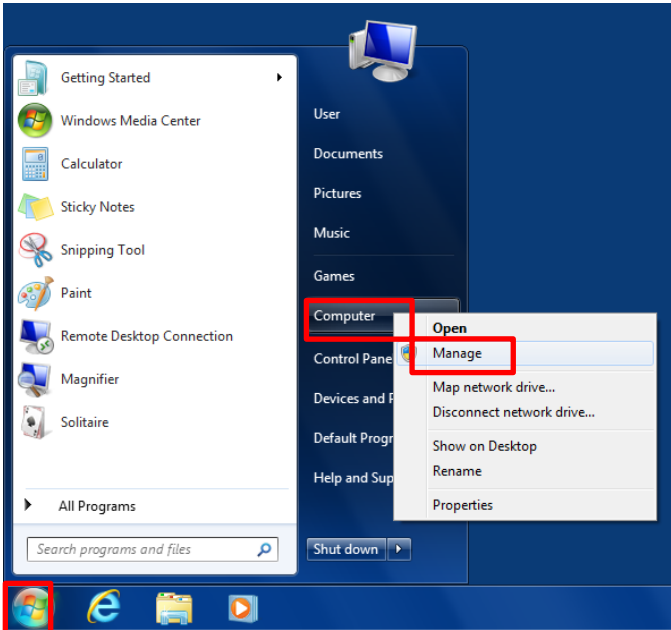
⑥ Click on "Device Manager".

The image below displays the Device Manager when the USB serial port is listed under "Other devices".
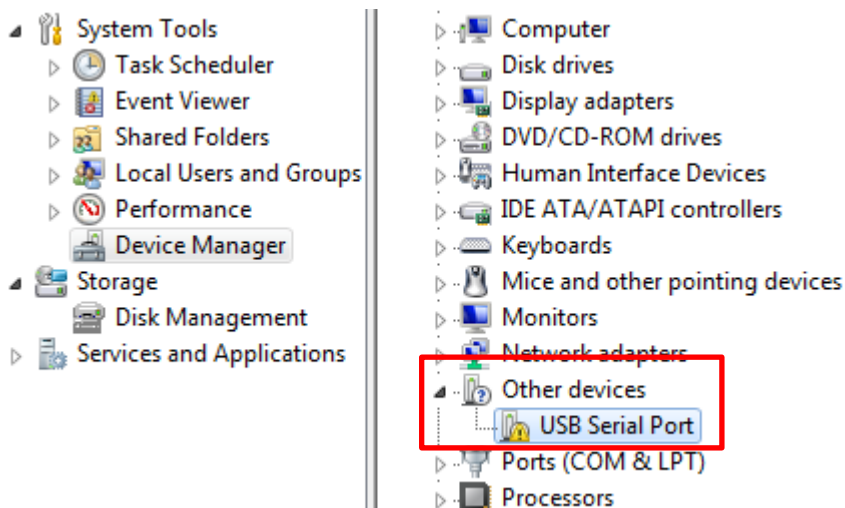
⑦ Select "USB Serial Port" and right-click.

Network adapters
Other devices
    USB Serial Port
Ports (COM &   Update Driver Software...
Processors   Disable
Sound, video   **Uninstall**   Click on "Uninstall"
Storage cont
System devic   Scan for hardware changes
Universal Ser
    Generic U   **Properties**

⑧ Click "OK".

Confirm Device Uninstall

USB Serial Port

Warning: You are about to uninstall this device from your system.

OK   Cancel
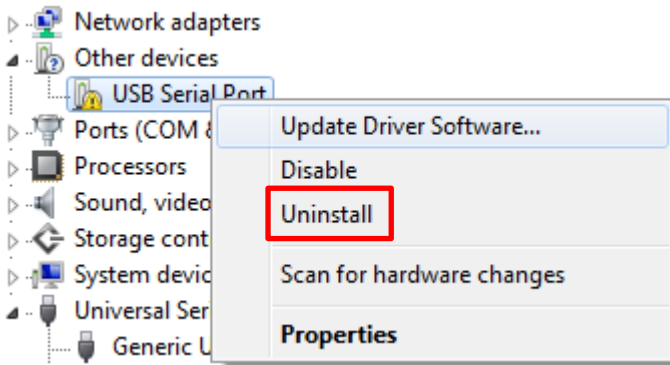
⑨ Verify that the USB serial ports was deleted from the Device Manager.

System Tools   Computer
    Task Scheduler   Disk drives
    Event Viewer   Display adapters
    Shared Folders   DVD/CD-ROM drives
    Local Users and Groups   Human Interface Devices
    Performance   IDE ATA/ATAPI controllers
    Device Manager   Keyboards
Storage   Mice and other pointing devices
    Disk Management   Monitors
Services and Applications   Network adapters
                                      Ports (COM & LPT)
                                          Communications Port (COM1)
                                          ECP Printer Port (LPT1)
                                          Intel(R) Active Management Technology - SOL (COM3)
                                      Processors
                                      Sound, video and game controllers
                                      Storage controllers
                                      System devices
                                      Universal Serial Bus controllers

⑩ Disconnect the USB cable from the PC.
When reinstalling, start from Section 2.1.

4.6 Update Drivers

Drivers update may be required when the Application is not running properly.

Proceed from ① to ⑥ of Section 2.2.
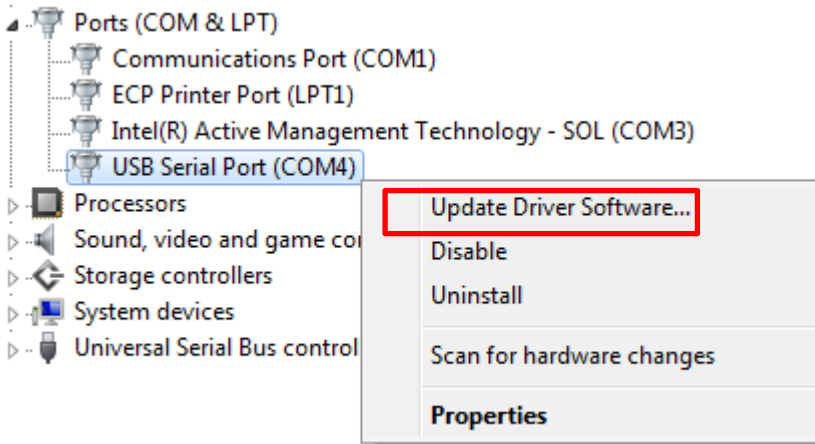
⑦ Right click on "USB Serial Port (COM#) and select "Update Driver Software"

⑧ Update the drivers.

Click on "Search automatically..."

⑨ The windows below will be displayed when updating the drivers.

Update Driver Software - USB Serial Port

Searching online for software...

Cancel

Driver Software Installation

Installing device driver software

USB Serial Port   Installing driver software...

Close

Update Driver Software - USB Serial Port (COM4)

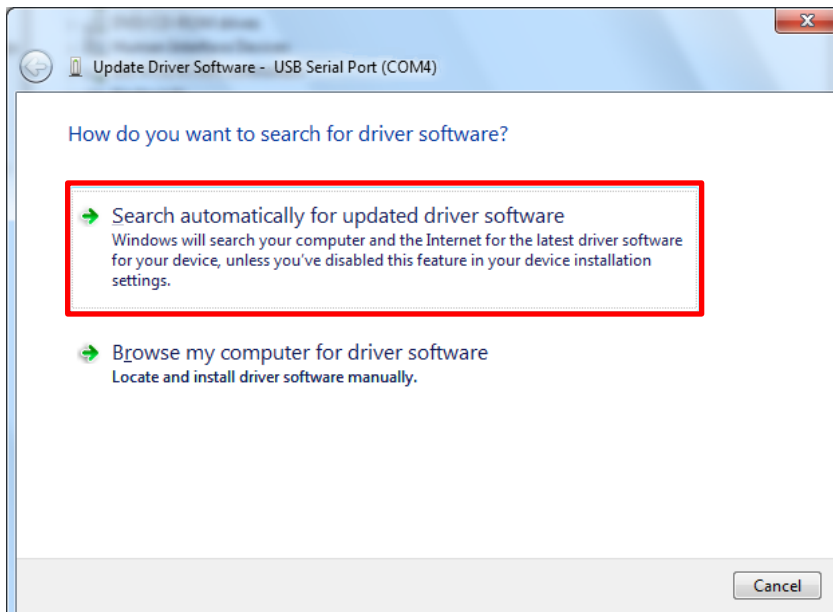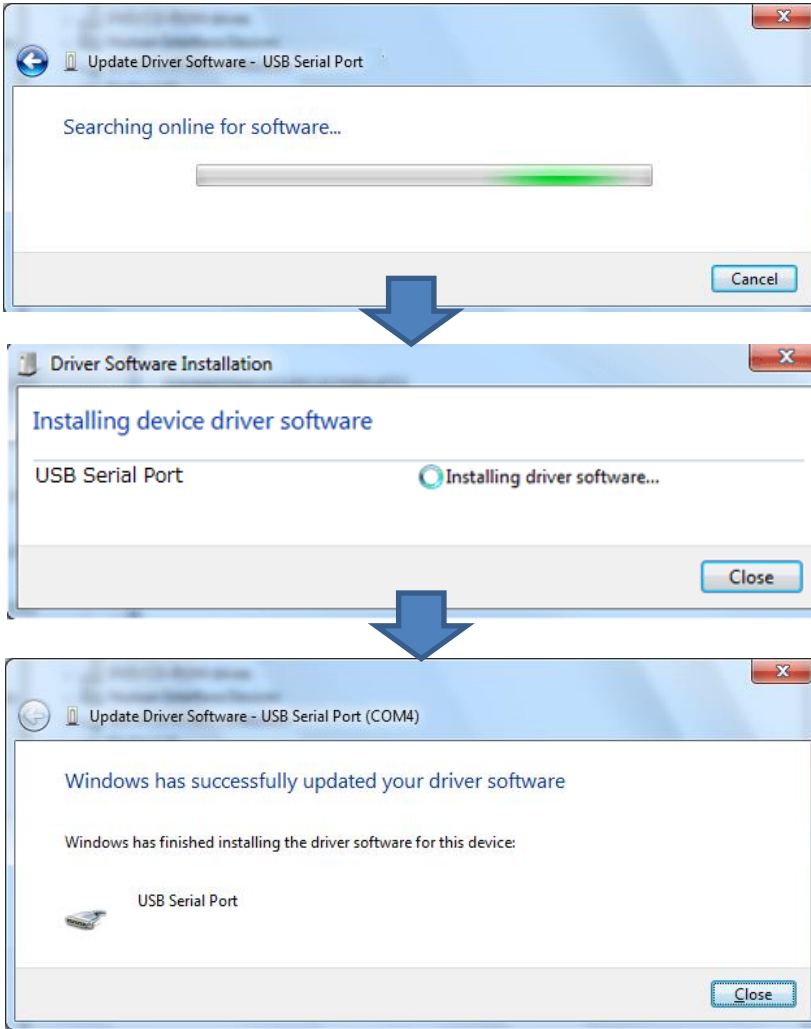Windows has successfully updated your driver software

Windows has finished installing the driver software for this device:

USB Serial Port

Close

⑩ Verify the COM number in "Ports (COM & LPT)" in the Device Manager.

▷ Network adapters
▲ Ports (COM & LPT)
    Communications Port (COM1)
    ECP Printer Port (LPT1)
    Intel(R) Active Management Technology - SOL (COM3)
    USB Serial Port (COM4)
▷ Processors
▷ Sound, video and game controllers
▷ Storage controllers
▷ System devices
▷ Universal Serial Bus controllers

Verify the COM number of the port. The COM number is COM4 in the example above. Write it down for later

5 Information

The Device is using the FT232R drivers from FTDI.
The latest VCP (Virtual COM Port) drivers can be downloaded from FTDI's website.

- ・FTDI website
  http://www.ftdichip.com/
- ・Latest drivers
  http://www.ftdichip.com/Drivers/VCP.htm

SG-B5T-010A

Installation Check Sheet

Please use the check sheet when proceeding with the installation.

Preparations

☐ PC with an Internet Connection | P2 |
Maker/Model _____
OS（Windows Edition）_____
System
  Processor _____
  RAM _____
  System Type _____ bit

☐ Administrator Privileges
☐ USB 2.0 cable (A male to B male)

Driver Installation

☐ COM#   COM_____ | P3 to P17 |

This is the COM number displayed after a successful installation.

Baud Rate Setting

☐ DIP-SW setting of the Device
  ☐ 9600   ☐ 38400   ☐ 115200 | P18 |
  ☐ 230400 ☐ 460800   ☐ 921600

☐ Baud Rate setting of the Application
  ☐ 9600   ☐ 38400   ☐ 115200 | P19 |
  ☐ 230400 ☐ 460800   ☐ 921600

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