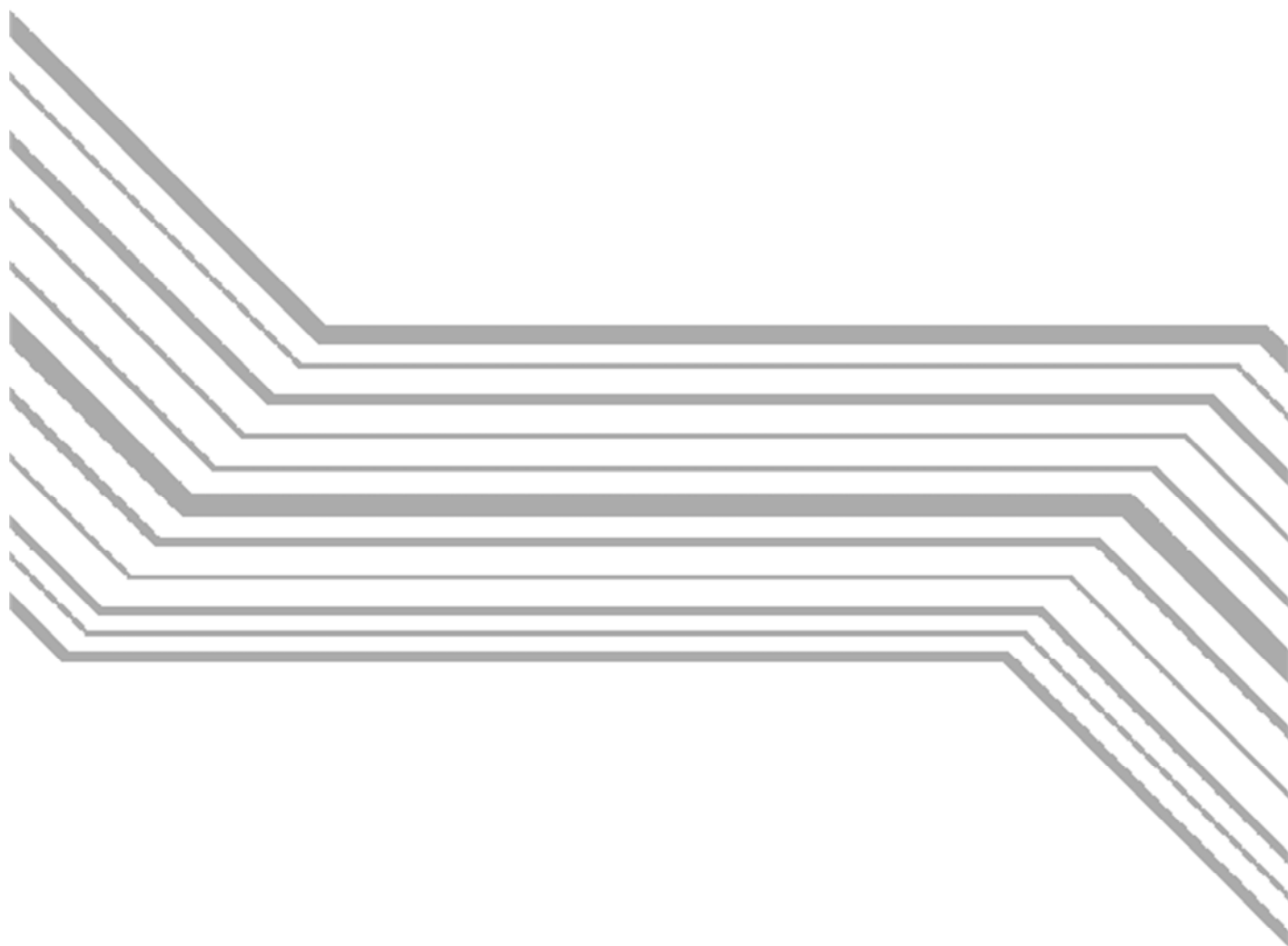


DENSO



Active USB-COM Port Driver

Installation Guide

Copyright © 2013 DENSO WAVE INCORPORATED

All rights reserved. No part of this publication may be reproduced in any form or by any means without permission in writing from the publisher.

Specifications are subject to change without prior notice.

Microsoft, Windows, Windows XP and Windows Vista, Windows 7, Windows 8, Windows 8.1 are registered trademarks of Microsoft Corporation. Other products and company names mentioned in this manual are trademarks or registered trademarks of their respective holders.

Preface

This manual describes installation/uninstallation of Active USB-COM Port Driver. Please read first before using devices those need Active USB-COM Port Driver.

■ Obtaining This Product and the Latest Information

This product and the latest information can be obtained by accessing the below URL.
<http://www.qbdirect.net/>

Those customers who have purchased DENSO WAVE products can obtain more detailed information from our exclusive Web site for registered users (QBdirect). Please refer to the following URL.

<http://www.qbdirect.net/>

■ Related Publications

Operator's Guide and User's Manual of the USB devices made by DENSO WAVE that use Active USB-COM Port Driver.

■ Screen Indication

The lettering in the screens in this manual is a little different from that in the actual screens. Device names used are only for description purpose, so they will not appear if you have not set devices having those names.

■ Intellectual Property Precaution

DENSO WAVE INCORPORATED ("DENSO WAVE") takes reasonable precautions to ensure its products do not infringe upon any patent or other intellectual property rights of other(s), but DENSO WAVE cannot be responsible for any patent or other intellectual property right infringement(s) or violation(s) which arise from (i) the use of DENSO WAVE's product(s) in connection or in combination with other component(s), product(s), data processing system(s) or equipment or software not supplied from DENSO WAVE; (ii) the use of DENSO WAVE's products in a manner for which the same were not intended nor designed; or (iii) any modification of DENSO WAVE's products by other(s) than DENSO WAVE.

■ Limited Warranty on Software Products

In no event will DENSO WAVE be liable for direct, indirect, special, incidental, or consequential damages (including imaginary profits or damages resulting from interruption of operation or loss of business information) resulting from any defect in the software or its documentation or resulting from inability to apply the software or its documentation.

Contents

1.	OVERVIEW OF ACTIVE USB-COM PORT DRIVER	1
1.1	USAGE ENVIRONMENT	1
1.2	FEATURES	1
1.3	NOTICE	2
1.4	DIFFERENCES FROM USB-COM PORT DRIVER 1.X	2
2.	INSTALLATION.....	3
2.1	STEPS OF INSTALLATION	3
2.2	[STEP1] INSTALLATION OF VIRTUAL SERIAL PORT DRIVER.....	4
2.3	[STEP2] INSTALLATION OF USB DRIVER	10
2.4	HOW TO UNPLUG THE HARDWARE IN SAFETY.....	14
2.5	CHANGING THE COM PORT NUMBER.....	14
2.6	HOW TO USE MICROSOFT ACTIVESYNC THROUGH CU (WINDOWS XP ONLY).....	15
3.	UNINSTALLATION.....	19
3.1	UNINSTALLATION OF ACTIVE USB-COM PORT DRIVER.....	19
3.2	UNINSTALLATION OF SERIAL CABLE USING IRDA PROTOCOL DRIVER	23

1. Overview of Active USB-COM Port Driver

This section describes the overview of Active USB-COM Port Driver.

1.1 Usage environment

■ Supported Windows OS

Windows XP (32bit), Windows Vista (32bit), Windows 7 (32bit/64bit),
Windows 8 (32bit/64bit), Windows 8.1 (32bit/64bit)

■ Supported Devices

The operations of the following USB devices made by DENSO WAVE have been checked with Active USB-COM Port Driver.

Product	Models
2D Code Scanner	QK12-U, QK20-U, QK21-U, QB30-SU, GT10Q-SU, GT15Q-HU, AT10Q-SM/HM, AT20Q-SM(U), AT21Q-SM(U), AT25Q-SM(U), AT26Q-SM(U), WS1-QB
Bar Code Handy Scanner	HC56TU, HC56IITU, GT10B-SU, GT11B-SU, AT20B-SM(U), AT21B-SM(U)
Bar Code Handy Terminal ^{*1}	BHT-900 Series, BHT-1300 Series
Communication Unit	CU-8021, CU-221, CU-321, CU-421, CU-521, CU-621, CU-821, CU-921, CU-1321 ^{*2}
Bluetooth Communication Adapter	BA10-RKU, BA11-RKU

*1 Case that the USB connector of the side of the BHT body is used as a COM port.

*2 The CU-1321 only is not recognized as the USB device. Please hold the BHT-1300 on the CU-1321.

1.2 Features

Active USB-COM Port Driver has following features.

- The USB device can be removed from the PC USB port while the application opens the Serial Port with which the USB device is connected. (It will be kept opening when the USB device is plugged into the USB Port again.)
- The Virtual Serial COM Port is always existed on PC even if the USB device is removed from the PC USB Port, so that the Serial Port can be opened anytime.
- On the task tray or the Device Manager, the COM port is confirmed which port the USB device is connected with.
- The communication unit (CU-221/CU-421) can be removed from the PC USB Port while connecting with PC by both serial IrDA protocol driver and Microsoft ActiveSync. (Windows XP only.)
(It will be able to be re-connected when the CU is plugged into the USB Port again.)

1.3 Notice

Precautions in using Active USB-COM Port Driver are as follows:

- Please install the Active USB-COM Port Driver as the Administrator.
- The USB device can be removed and plugged into PC during communication. (COM port is opened.) However, communication data are lost while the USB device is removed. Please recovery the lost data with your application.
- This driver and the USB-COM Port Driver 1.x can not be used at the same time. The installer of this driver requires the uninstallation of USB-COM Port Driver 1.x. Please comply with the displayed message,
- The multiple use of the USB device is available when this driver is installed at the multiple times. However, this driver can not be individually uninstalled. (All the installed drivers are uninstalled at one time at the Windows Control Panel “Add or Delete Programs” (XP) or “Programs and Features” (Vista, 7, 8, 8.1) utility.)

1.4 Differences from USB-COM Port Driver 1.x

The differences between Active USB-COM Port Driver and USB-COM Port Driver 1.x are shown on the below table.

Function	Active USB-COM	USB-COM 1.x
Need for the operation of “safely remove the USB device” when the USB device is removed	No need	Need
Serial Port Number release when the USB device is removed	Non-release	Release
Plugging the USB device into/off, during communication (COM Port is opened)	Possible	Impossible
Plugging the USB device into/off, while using Serial IrDA Protocol Driver	Possible	Impossible
Supported Windows Version	XP(32bit), Vista(32bit), 7(32bit/64bit), 8(32bit/64bit), 8.1(32bit/64bit)	XP(32bit)

Note:

When using USB-COM Port Driver 1.x, if the connection of the USB device is checked with your application software, the check algorithm may be re-made. Understand the features of Active USB-COM Port Driver and match them.

2. Installation

This section describes how to install Active USB-COM Port Driver. Here, the installation steps of Windows 8.1, Windows 8, Windows 7 and Windows XP are described. Perform them in accordance with the installation wizard about Windows Vista, too.

Note:

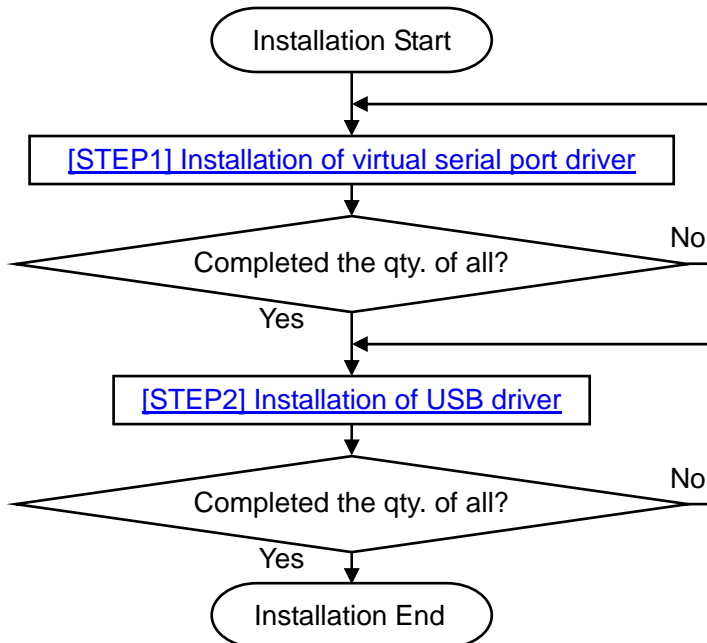
In case of Windows Vista and Windows 7, when a new device is connected, the search of its driver is started automatically. Then, quite a bit of time for search is spent. The above problem may be improved with setting to skip the search of Windows Update. About setting it, comply with the OS specification.

2.1 Steps of installation

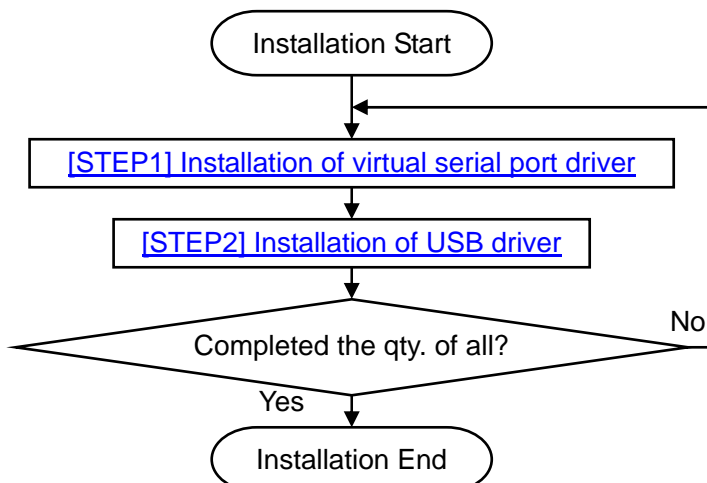
This driver consists of the virtual serial port driver and the USB driver.

The steps of the driver's installation are following. Please comply with the below steps.

■ The case that the number of the connected USB device is determined



■ The case that one USB device is added repeatedly

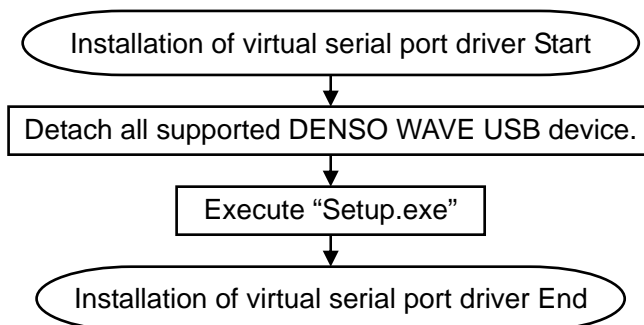


Note:

- If you use multiple USB ports, please execute "Setup.exe" in each USB port. The more you execute "Setup.exe", the more you can add COM ports.
- Multiple USB ports cannot be assigned to 1 COM port.
- If you use multiple USB ports even if you use 1 USB device, you should add the COM port as same number as USB ports you use by executing the "Setup.exe".
- In case of the PC that supported USB2.0 Specification, the two USB controllers (EHCI and UHCI (or OHCI)) are assigned to 1 USB port. In this case, the USB port is assigned the different COM port number in via EHCI and via UHCI (or OHCI). If you use separate the COM port numbers, please execute "Setup.exe" twice.

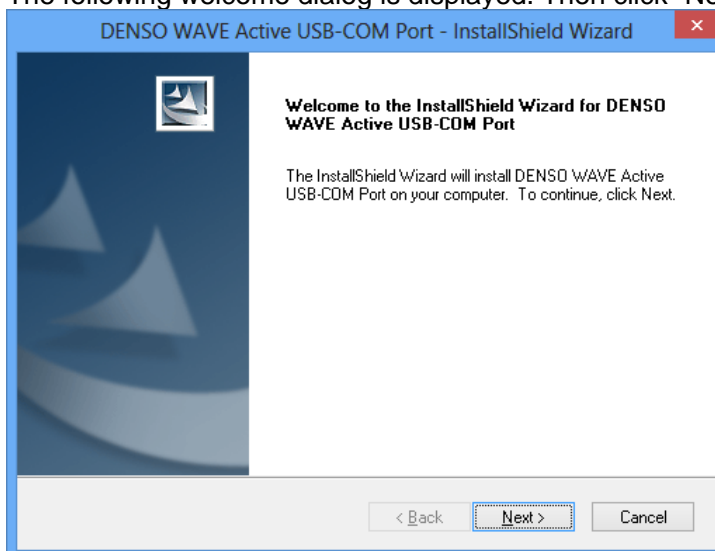
2.2 [STEP1] Installation of virtual serial port driver

To install the virtual serial port driver, please execute "Setup.exe". The step is as below.

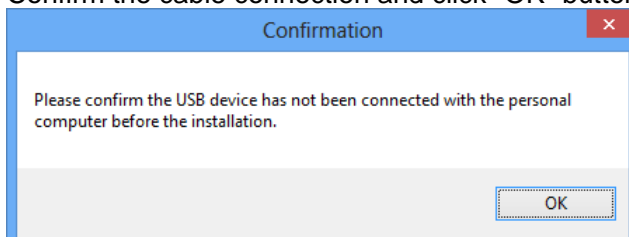


[Windows 8, Windows8.1]

- 1) Execute "Setup.exe". The user account control message window is displayed. Then click "Yes" button.
- 2) The following welcome dialog is displayed. Then click "Next>" button.



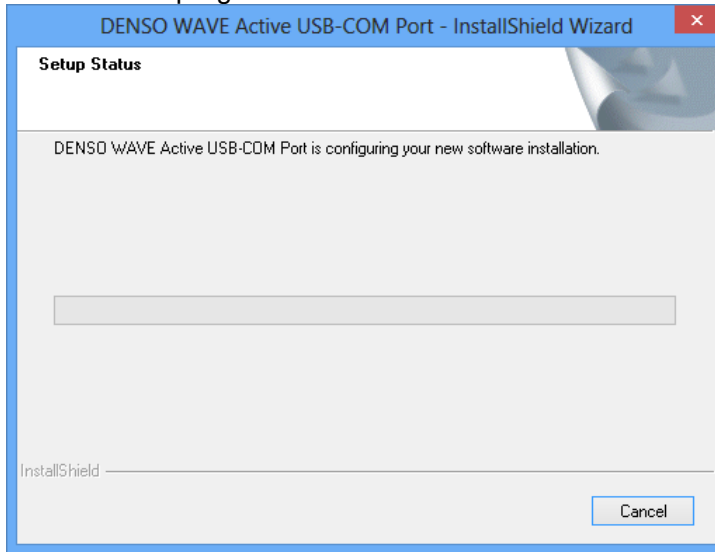
- 3) Confirm a target USB device not connecting with PC. Confirm the cable connection and click "OK" button.



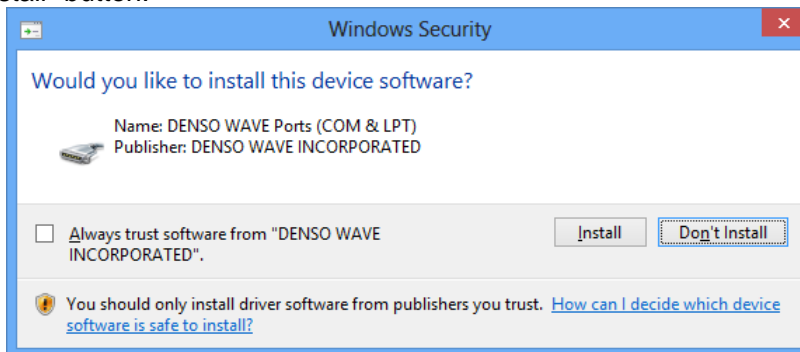
Note:

Even if it is the installation for the second device, please confirm detachments of all devices that use this driver.

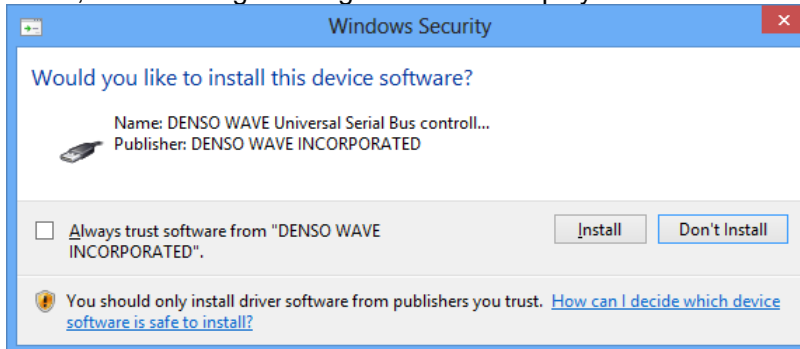
4) Installation is progressed.



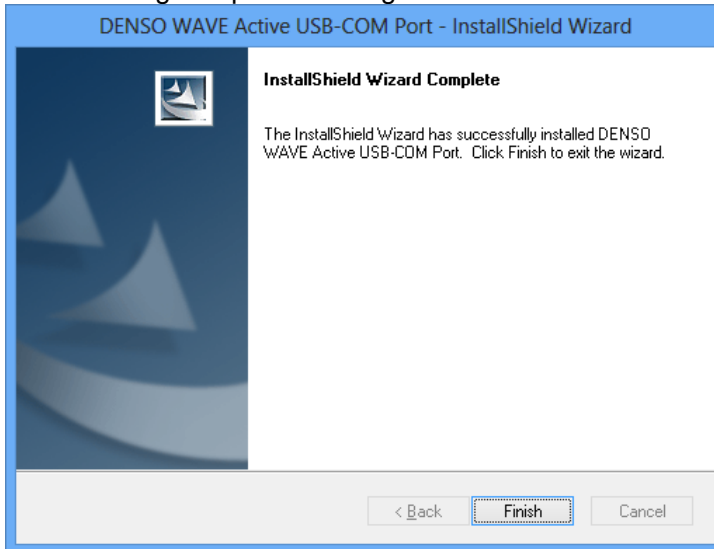
When the installation is started, the following message window is displayed. Please click "Install" button.



And then, the following message window is displayed. Please click "Install" button.

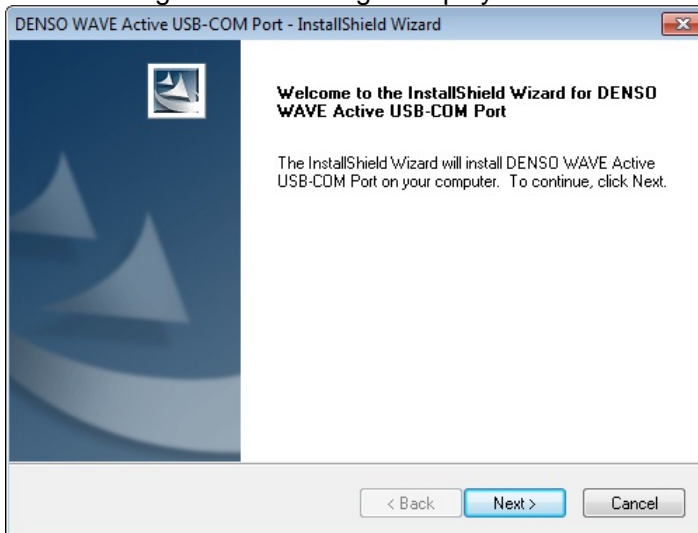


- 5) The following completion dialog comes out. Then click “Finish” button.

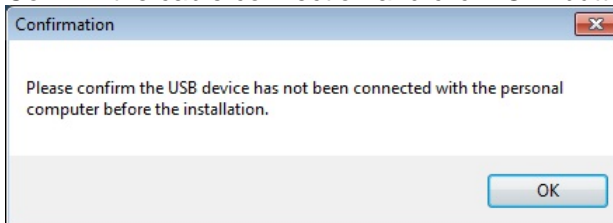


[Windows 7]

- 1) Execute “Setup.exe”. The user account control message window is displayed. Then click “Yes” button.
- 2) The following welcome dialog is displayed. Then click “Next>” button.



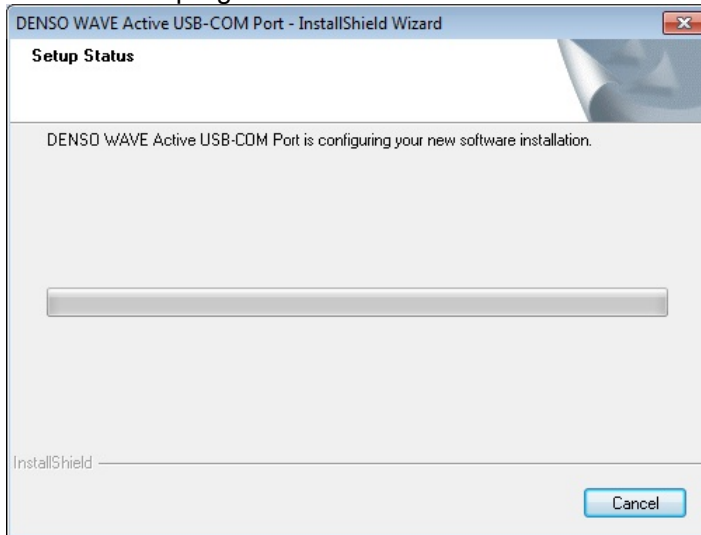
- 3) Confirm a target USB device not connecting with PC. Confirm the cable connection and click "OK" button.



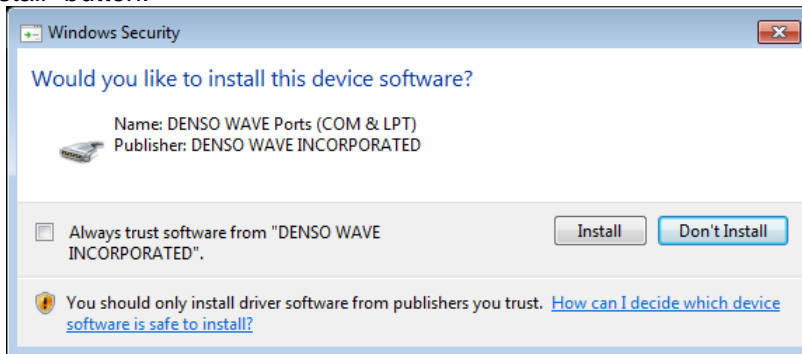
Note:

Even if it is the installation for the second device, please confirm detachments of all devices that use this driver.

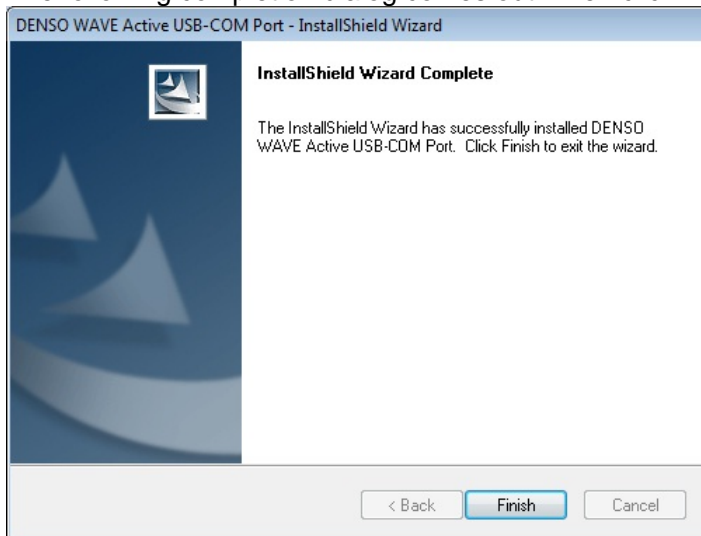
4) Installation is progressed.



When the installation is started, the following message window is displayed. Please click "Install" button.

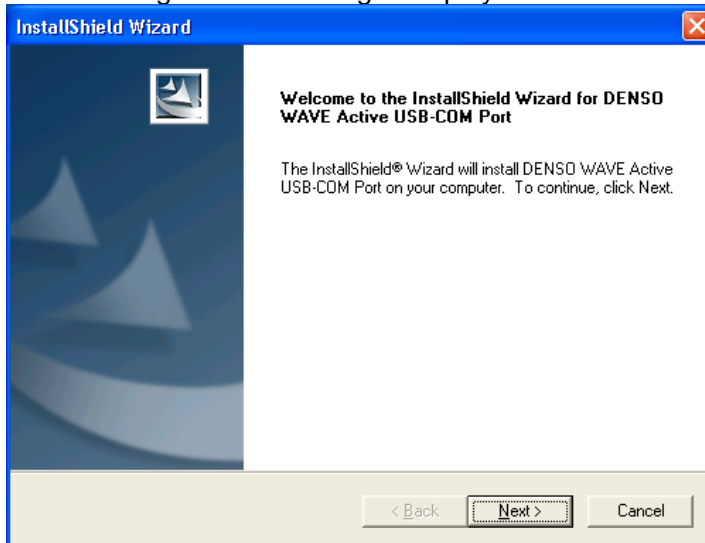


5) The following completion dialog comes out. Then click "Finish" button.

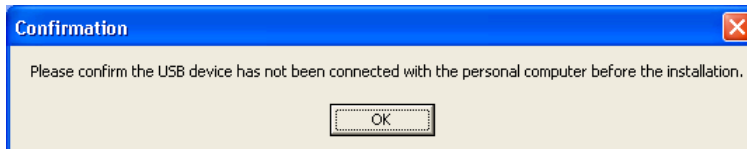


[Windows XP]

- 1) Execute "Setup.exe".
- 2) The following welcome dialog is displayed. Then click "Next>" button.



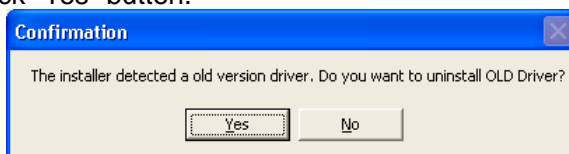
- 3) Confirm a target USB device not connecting with PC. Confirm the cable connection and click "OK" button.



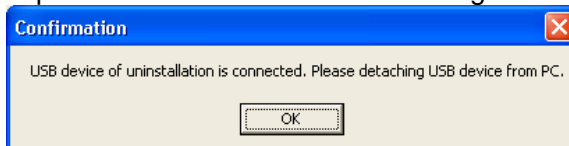
Note:

Even if it is the installation for the second device, please confirm detachments of all devices that use this driver.

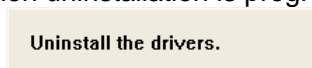
If you have installed the DENSO WAVE USB-COM Port Driver Version 1.x, the following confirmation dialog comes out. For updating a driver, you have to uninstall a old version driver. Click "Yes" button.



If the following confirmation dialog is displayed, the old version driver is working now. Then please detach the USB device using the old driver.

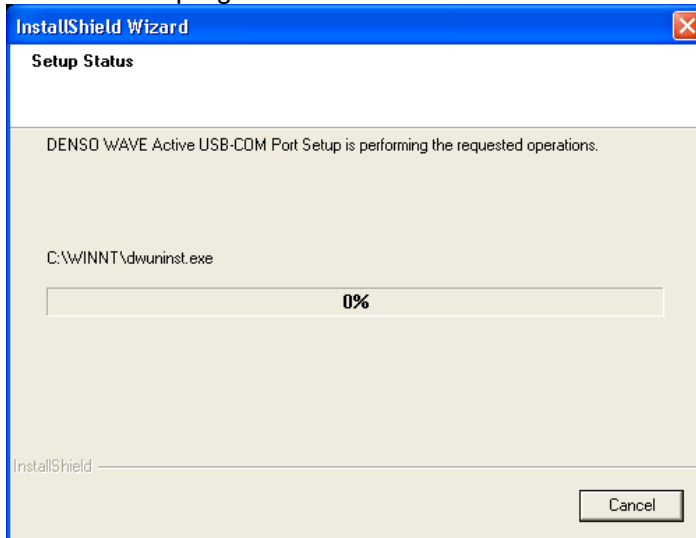


When uninstillation is progressed, the following message is displayed.



After uninstillation of the old version, click "Finish" button and reboot your PC. After rebooting, please try again the driver installation from the first step.

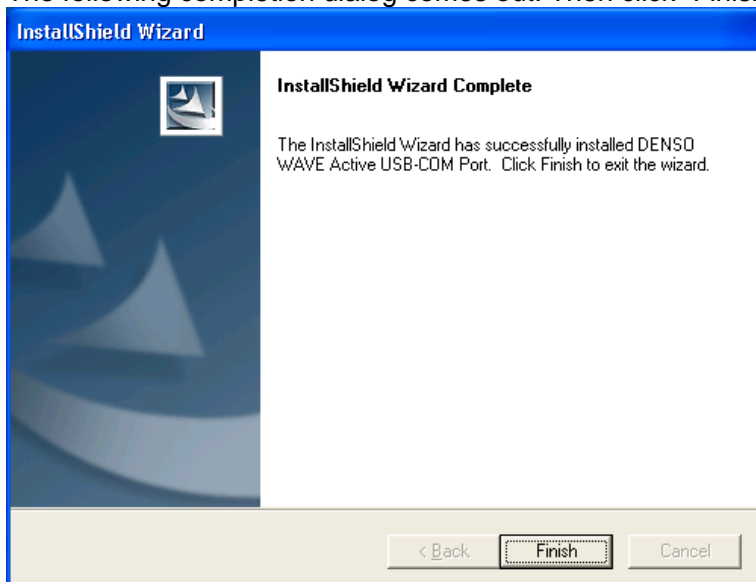
- 4) Installation is progressed.



- 5) Additionally, when the following caution dialog of Windows Logo comes out, click "Continue Anyway" button.

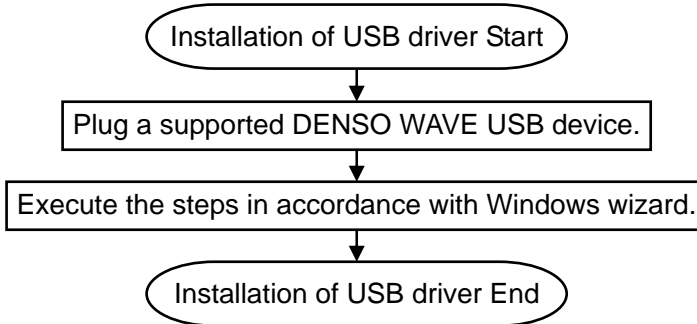


- 6) The following completion dialog comes out. Then click "Finish" button.



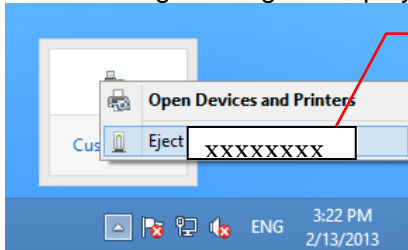
2.3 [STEP2] Installation of USB driver

To install the USB driver, please plug a USB device in the USB port. The step is as below.



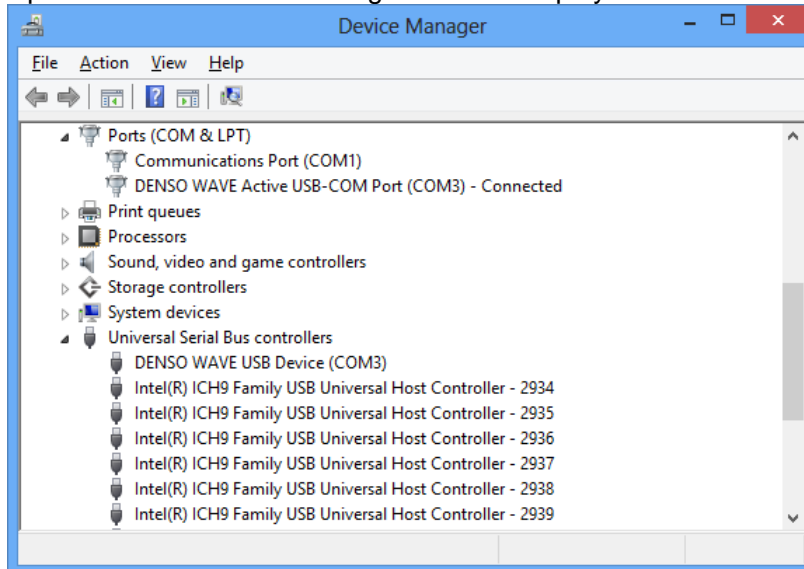
[Windows 8, Windows 8.1]

- 1) Connect a target USB device to your PC.
- 2) The following message is displayed on Task Bar and the installation is finished.



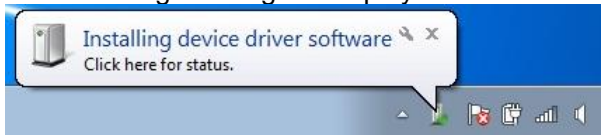
CU-421 is displayed as "USB Device CU-221/321".
 CU-621 and CU-821 are displayed as "USB Device CU-521".
 BHT-1300 on CU-1321 is displayed as "USB Barcode Handy Terminal".

- 3) Open the status. The following window is displayed.

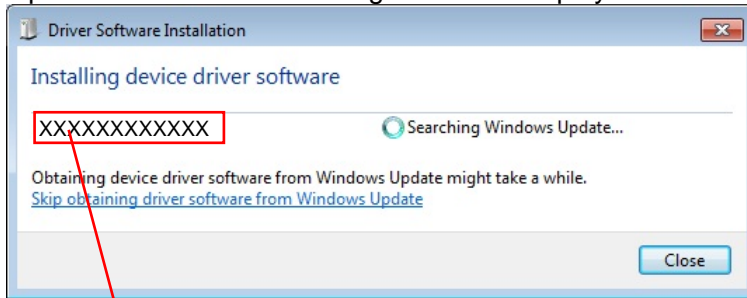


[Windows 7]

- 1) Connect a target USB device to your PC.
- 2) The following message is displayed on Task Bar.



- 3) Open the status. The following window is displayed.



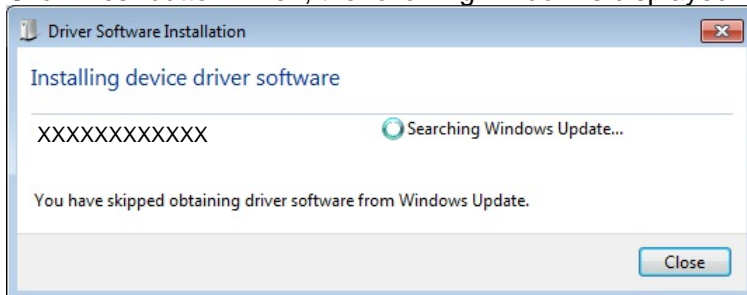
CU-421 is displayed as "USB Device CU-221/321".
CU-621 and CU-821 are displayed as "USB Device CU-521".
BHT-1300 on CU-1321 is displayed as "USB Barcode Handv Terminal".

- 4) Click "Skip obtaining driver software from Windows Update". The following window is displayed.

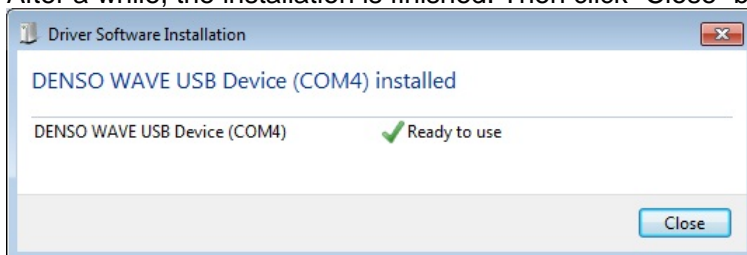


If the PC does not connect to the network, "Skip obtaining driver software from Windows Update" is not described.

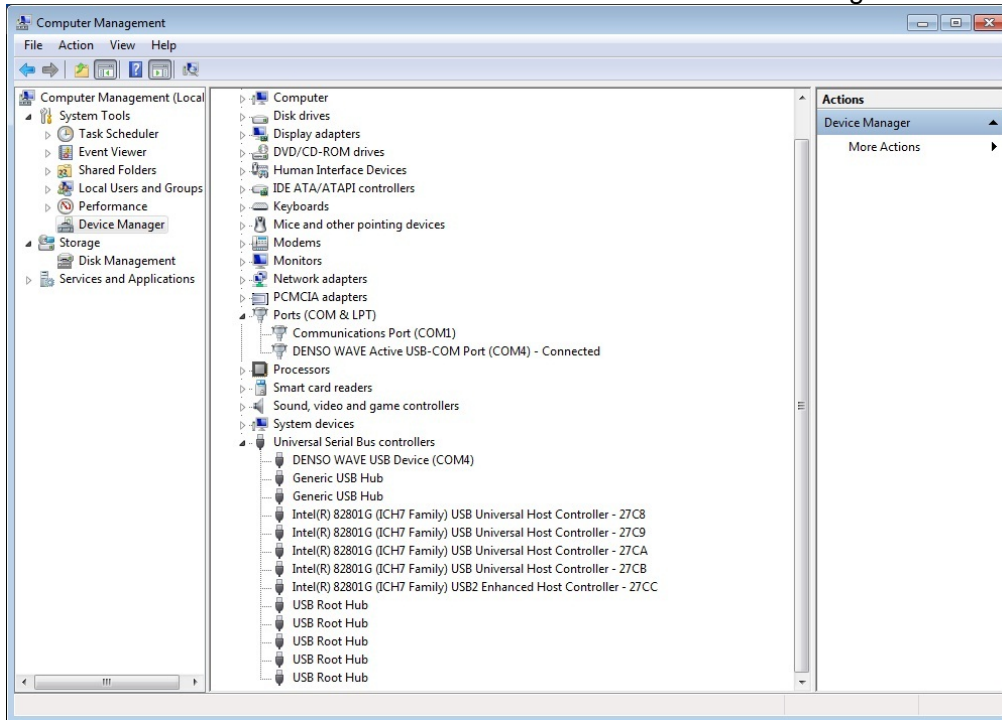
- 5) Click "Yes" button. Then, the following window is displayed.



- 6) After a while, the installation is finished. Then click "Close" button.

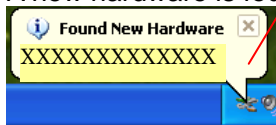


7) Please confirm the installed driver on the screen of the device manager.



[Windows XP]

- 1) Connect a target USB device to your PC.
- 2) A new hardware is found.



CU-421 is displayed as "USB Device CU-221/321".
 CU-621 and CU-821 are displayed as "USB Device CU-521".
 BHT-1300 on CU-1321 is displayed as "USB Barcode Handy Terminal".

- 3) After a short time, if the following "Found New Hardware Wizard" dialog comes out, select "No, not this time" and click "Next>" button.



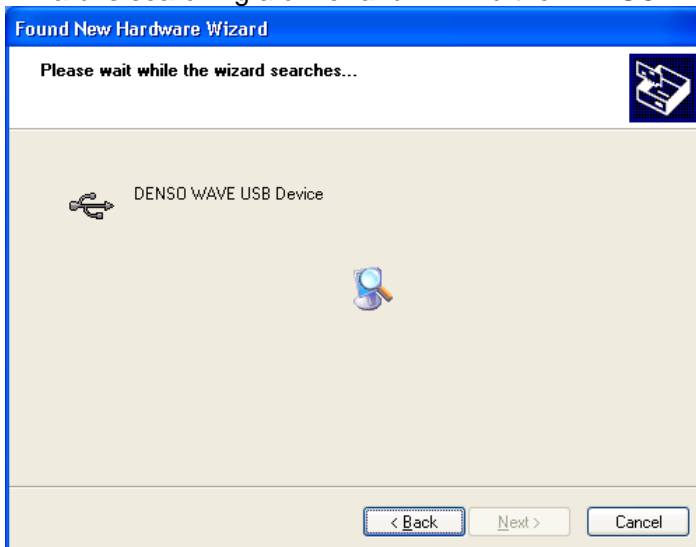
TIP:

In case of Windows Service Pack, The above dialog is not displayed.

- 4) The following "Found New Hardware Wizard" dialog comes out. Select "Install the software automatically [Recommended]" and click "Next>" button.



- 5) Wizard is searching a driver and will find the DENSO WAVE USB Device's driver.



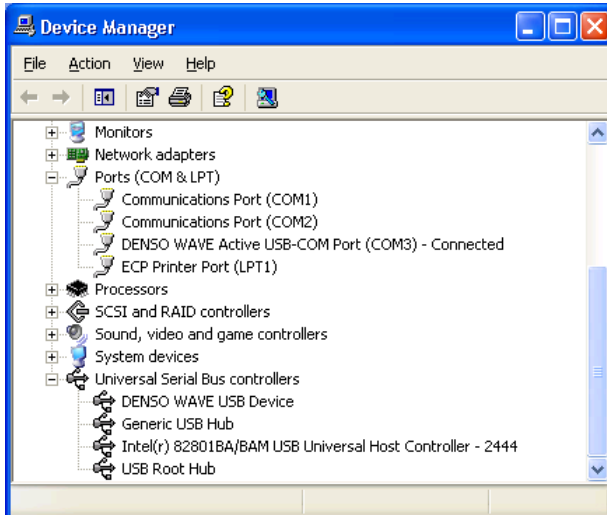
- 6) After the driver is found, the following Windows Logo caution is displayed. Please click "Continue Anyway" button.



7) The following completion dialog comes out. Then click “Finish” button.



8) Please confirm the installed driver on the screen of the device manager.



2.4 How to unplug the hardware in safety

If you need to confirm the status of the USB device or unplug the device under USB device connection, the message “Unplugging DENSO WAVE USB Device (COMx) in safety” is displayed on the task tray.

2.5 Changing the COM port number

You can change the COM port number on the device manager.

Note:

In installation, the unused smallest COM port number is assigned. In case of changing a COM port number manually, the unused COM port number that is equal to COM1 or more than can be assigned.

You should change the COM port number after removing the device.

In case though you change the COM port number, the display of device manager or task tray icon is not be updated, please make the imaginary serial port enable after making the port disable temporality in order to update the display of COM port number.

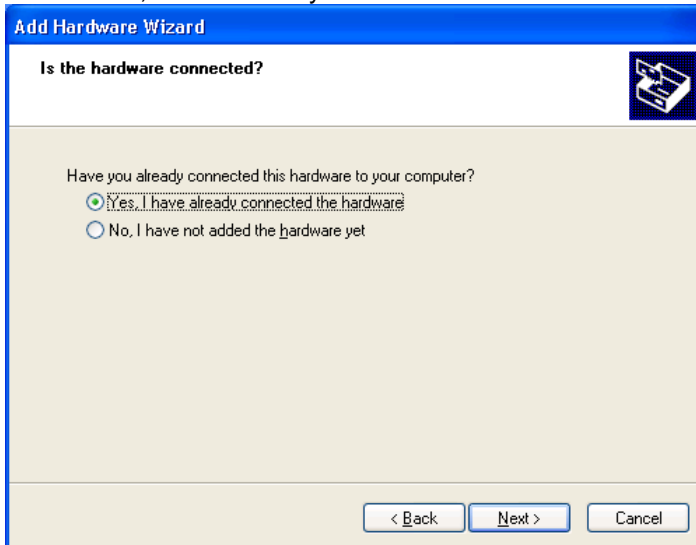
2.6 How to use Microsoft ActiveSync through CU (Windows XP only)

If you need to use the Microsoft ActiveSync through the CU-221 or CU-421 as a IrDA device, the installation of the “Serial Cable using IrDA Protocol” driver is needed.

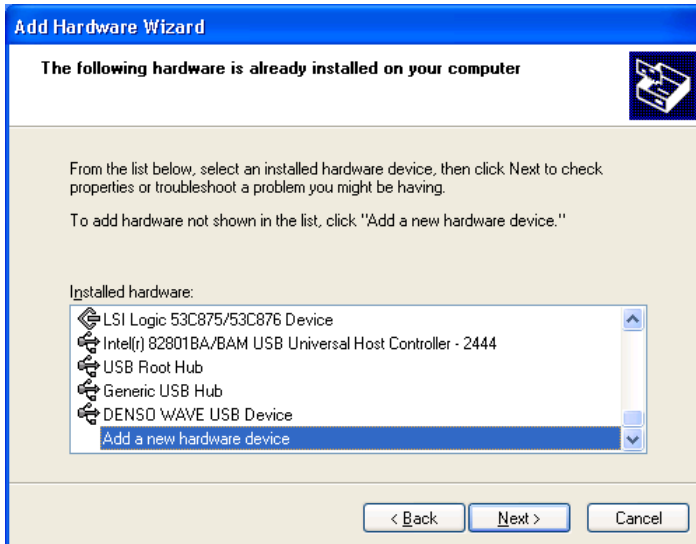
- 1) Open “Add Hardware Wizard” on the control panel.
- 2) Click “Next>” button on the following welcome dialog.



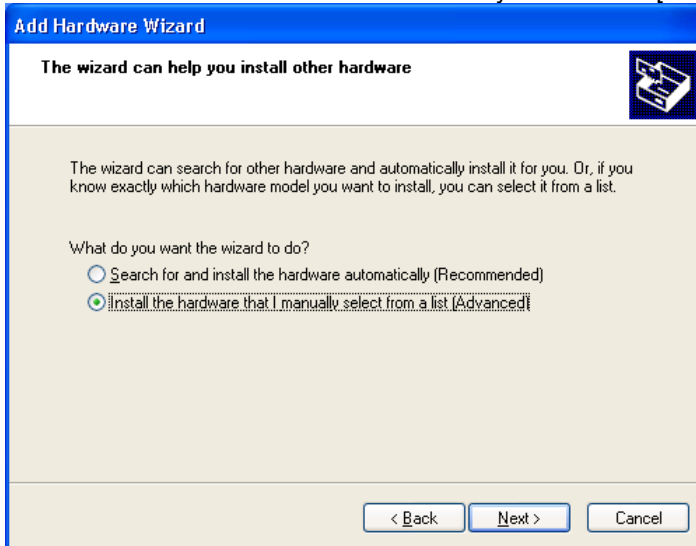
- 3) Select “Yes, I have already connected the hardware” and click “Next>” button.



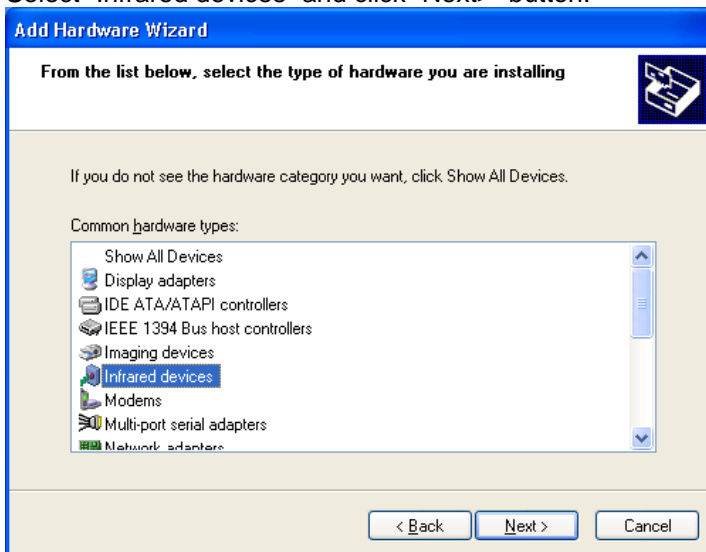
- 4) Select “Add a new hardware device” and click “Next>” button.



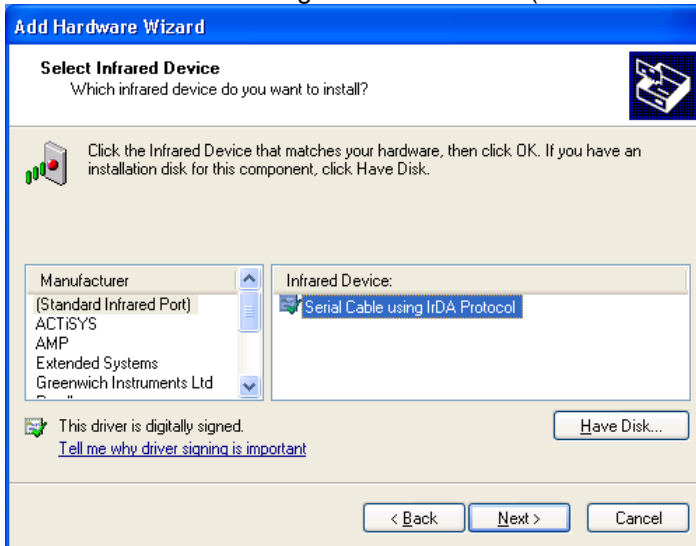
- 5) Select “Install the hardware that I manually select a list [Advanced]” and click “Next>” button.



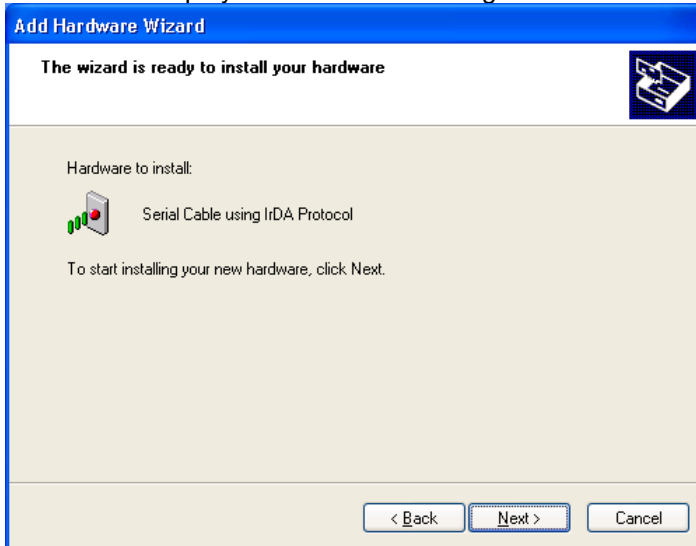
- 6) Select “Infrared devices” and click “Next>” button.



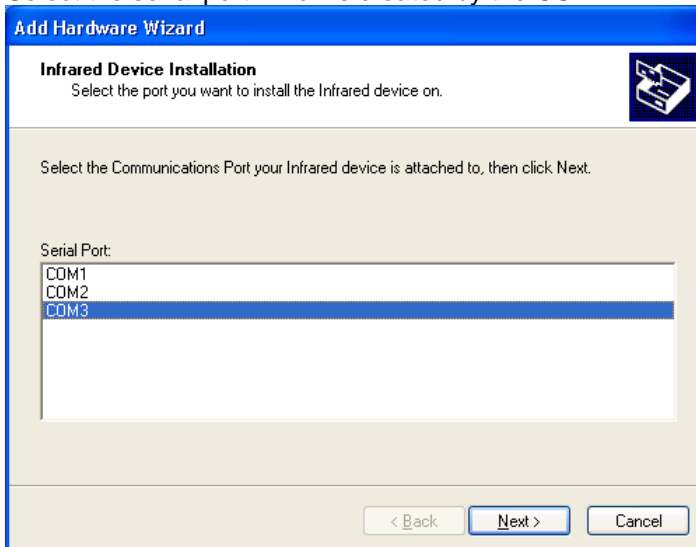
- 7) Select “Serial Cable using IrDA Protocol” in “(Standard Infrared Port)” and click “Next>” button.



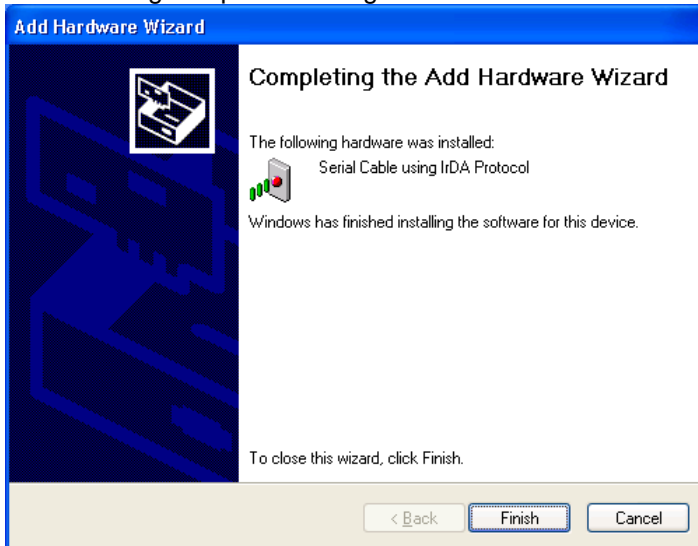
- 8) Confirm the display of “Serial Cable using IrDA Protocol” and click “Next>” button.



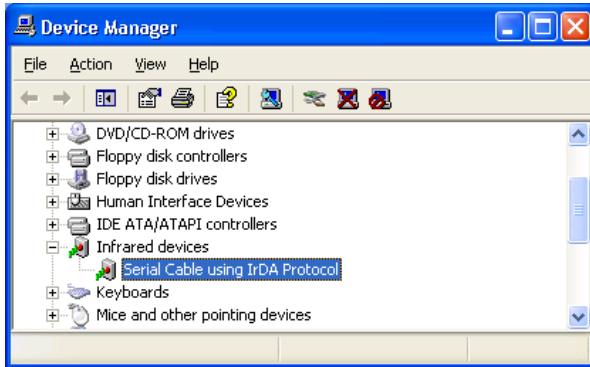
- 9) Select the serial port which is created by the CU-XXXX. Then click “Next>” button.



10) The following completion dialog comes out. Then click “Finish” button.



11) Confirm the installed driver on the screen of the device manager.



12) Installation of the IrDA protocol driver has been finished.

Please confirm the communication on Microsoft ActiveSync through the installed COM port.

3. Uninstallation

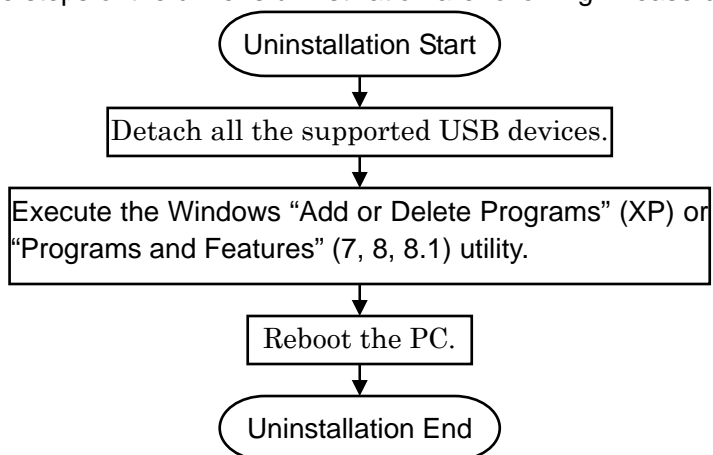
This section describes how to uninstall Active USB-COM Port Driver.

TIP:

The following uninstallation steps are common for them of Windows XP, Windows Vista, Windows 7, Windows 8 and Windows 8.1. Here, the uninstallation steps of Windows XP, Windows 7 and Windows 8 are described.

3.1 Uninstallation of Active USB-COM Port Driver

The steps of the driver's uninstillation are following. Please comply with the below steps.

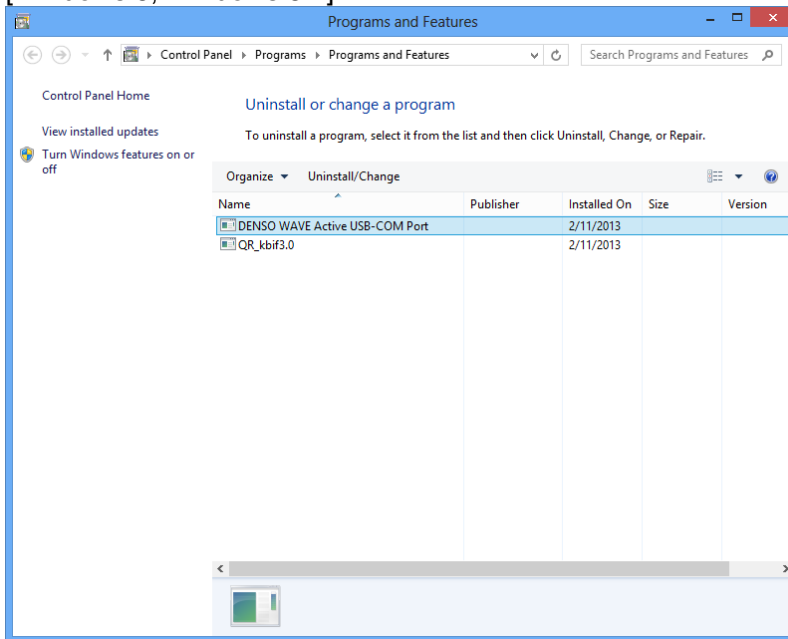


Note:

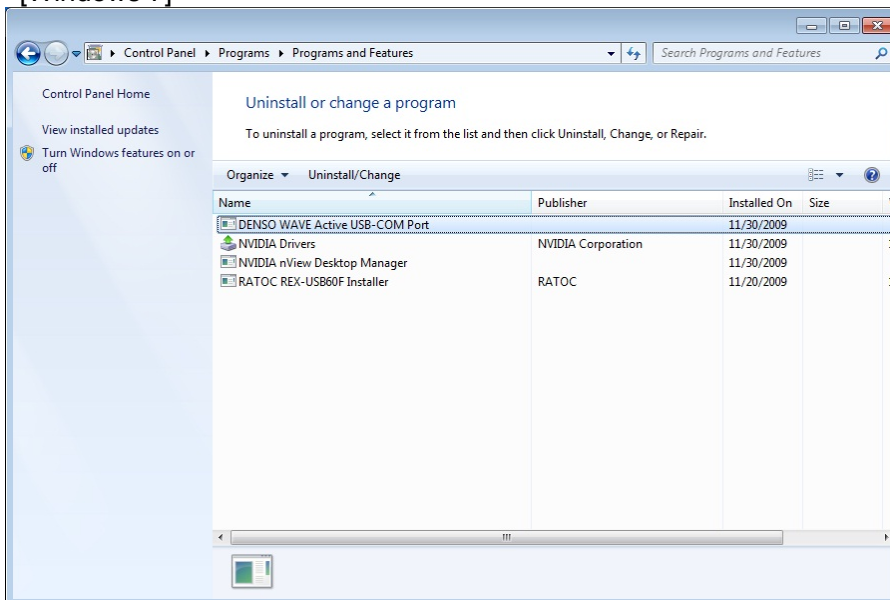
- You need to uninstall those drivers in the order of reverse with those installation orders. Thus, you need to uninstall drivers in order of IrDA protocol, USB device and serial port.
- When two or more devices that use this driver for the same PC are installed, the driver uninstallation means uninstalling all USB devices that use the Active USB-COM Port Driver. So, you cannot remove a device selectively.

- 1) Close all software that use Active USB-COM Port Driver, and detach all the supported USB devices.
- 2) If the IrDA Protocol is used on Active USB-COM Port Driver, remove IrDA Protocol Driver at first. (Refer to section 3.2)
- 3) Open "Add or Remove Programs" form control panel and click "Change/Remove" button of "DENSO WAVE Active USB-COM Port"

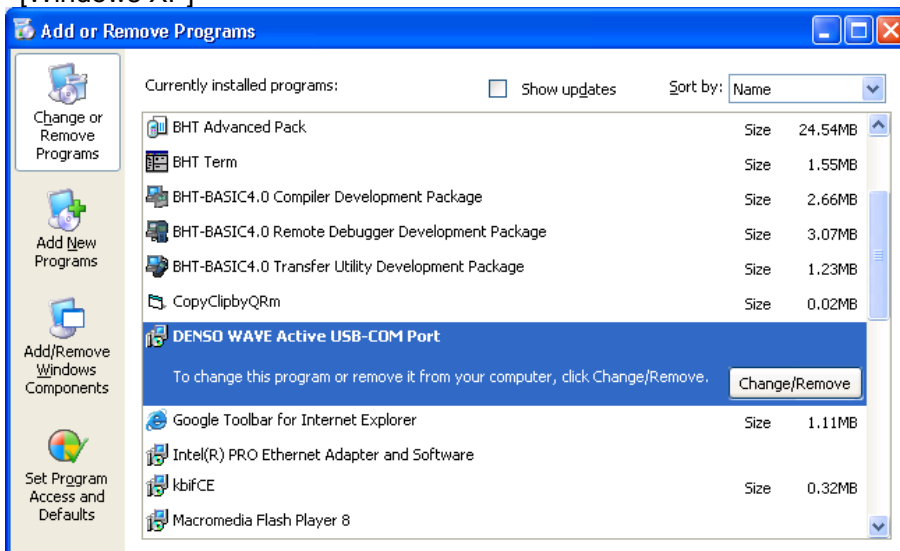
[Windows 8, Windows 8.1]



[Windows 7]

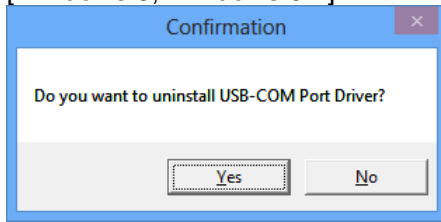


[Windows XP]

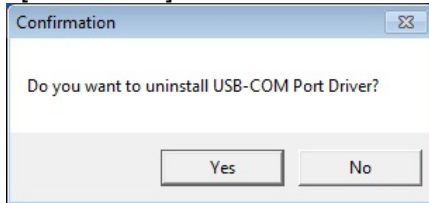


- 4) The following confirmation message comes out. Then click "Yes" to start uninstallation.

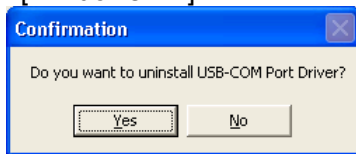
[Windows 8, Windows 8.1]



[Windows 7]

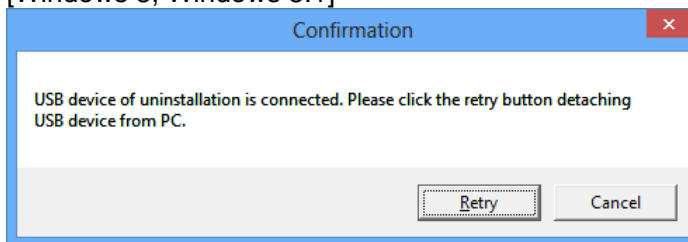


[Windows XP]

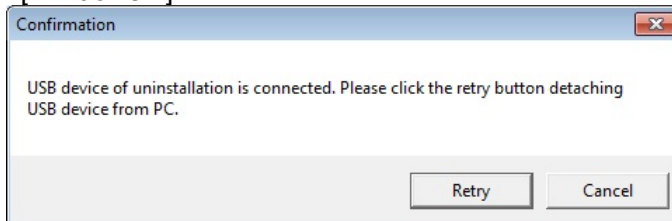


- 5) If the following message is displayed, the target USB device is still connecting. Please detach the target USB device and click "Retry" button.

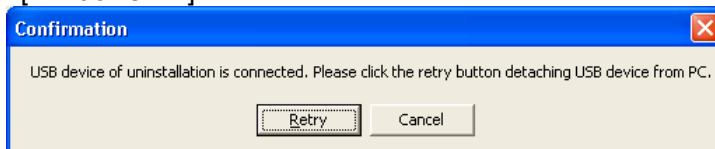
[Windows 8, Windows 8.1]



[Windows 7]

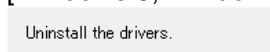


[Windows XP]

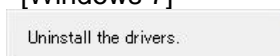


- 6) While uninstallation is progressed, the following message is displayed.

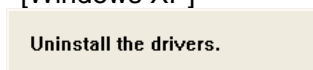
[Windows 8, Windows 8.1]



[Windows 7]

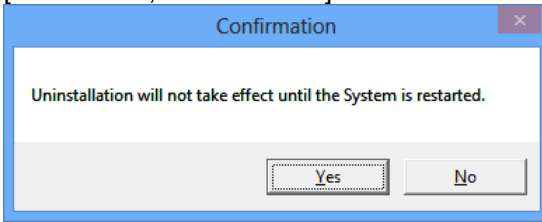


[Windows XP]

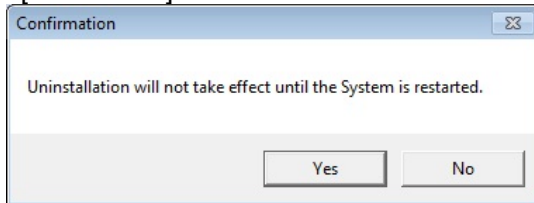


- 7) After uninstallation is finished, the following confirmation dialog come out.
Then click "Yes" and reboot PC.

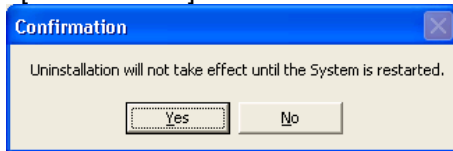
[Windows 8, Windows 8.1]



[Windows 7]



[Windows XP]



3.2 Uninstallation of Serial Cable using IrDA Protocol Driver

Notes:

For Microsoft ActiveSync thought CU.
Windows XP only.

Open device manager and delete the Serial Cable using IrDA Protocol driver.



Active USB-COM Port Driver
Installations Guide

9th Edition, Dec. 2013

DENSO WAVE INCORPORATED

The purpose of this manual is to provide accurate information in the installation and uninstallation of Active USB-COM Port Driver. Please feel free to send your comments regarding any errors or omissions you may have found, or any suggestions you may have for generally improving the manual.

In no event will DENSO WAVE be liable for any direct or indirect damages resulting from the application of the information in this manual.