PER-T248B

CAN Bus Module

PER-T248 Rev.A Quick Installation Guide 1st Ed.

May 25, 2015

Notice

This guide is designed for users to setup the system in the shortest possible time.

Safety Precautions

Warning!   *Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.*

Caution!   *Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis*

A Message to Our Customer

First of all, thank you for purchasing the PER-T248 CAN Bus Module. This Quick Installation Guide will help you in the process of the installation of this product. You may also visit the AAEON website at www.aaeon.com for the latest version.

AAEON Customer Satisfaction

All AAEON products are designed with the highest standards to ensure the most reliable performance in most typical industrial environments. Regardless of laboratory- or factory-related solutions, you can be assured that every AAEON purchase will deliver the reliability and stability you need.

Your satisfaction is our primary concern. To ensure you get the full benefits of our services, please follow the instructions in the next section.

Technical Support

We require that you receive the maximum performance and satisfaction from your products. If you run into any technical difficulties, you can refer to your product documentation as well as the FAQ page (under Support and Service) on our website. We strongly suggest that you review these resources before contacting customer service.

If you still cannot find the answer, please gather all your questions and have the product on hand before giving a call to your dealer. All AAEON dealers are well-trained and ready to provide you as much support as you need to get the most out of your product.

Based on experience, most problems are minor and can be easily tackled over the phone. In addition, technical support is available from AAEON engineers via e-mail. Please contact your AAEON dealer or visit our website at www.aaeon.com to get the e-mail address you can use to ask for technical help.

Ordering Information

- PER-T248B CAN Bus Module

Packing List

- PER-T248B CAN Bus Module
- Utility CD for QIG (in PDF format) and Driver

China RoHS Requirements

产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	✕	○	○	○	○	○
外部信号 连接器及线材	✕	○	○	○	○	○

O：表示该有毒有害物质在该部件所有均质材料中的含量均在
　　SJ/T 11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
　　SJ/T 11363-2006 标准规定的限量要求。

备注：此产品所标示之环保使用期限，系指在一般正常使用状况下。

Contents

CAN Bus Module	PER-T248B

Specifications

●	Form Factor	PCI Express MiniCard
●	CAN Controller	RX630
●	High-Speed CAN Transceiver	TJA1050
●	Interface	Mini-PCI Express (USB signal) x 1
		USB (Wafer) x 1
		RS-232 (Wafer) x 1
●	CAN Function	Support dual port CAN
		Support CAN 2.0A/B
		Implements ISO-11898 Standard Physical Layer
		Supports 1 Mb/s operation (125 Kbps default)
		Receive buffers, masks, filters, and data byte filtering
		Supports Single-shot transmission
		100mA active current (typical); 60mA standby current (typical)
●	Transfer Rates	125Kbps, 500Kbps, 1Mbps
●	CAN Baud Rate	5Kbps ~ 1Mbps

CAN Bus Module	PER-T248B

- Protections — 120 Ohm line termination IEC 61000-4-2 (ESD) ± 15KV (air/contact) Support Isolation 2Kv
- Software — API and SDK for Windows® Utility tools for Windows®
- Firmware Update — Via USB connector
- Power — +3.3V via Mini-PCIe +5V via USB
- Dimensions (L x W) — Refer to MiniCard
- Operating Temperature — -4°F ~ 158°F (-20°C ~ 70°C)
- Storage Temperature — -40°F ~ 185°F (-40°C ~ 85°C)
- Storage Humidity — 5 ~ 95%, non-condensing
- Vibration — 1 Grms / 5 ~ 500Hz/ operation
- Shock — 20G peak acceleration (11 msec. duration)
- EMC — CE/FCC Class A PreScan
- OS — Windows® 8.1 32/64-bit, Windows® 7 32/64-bit, Windows® XP Linux Ubuntu 12.04 or above Linux Fedora Core 14/ Kernel 2.6.35x or above

Product Layout
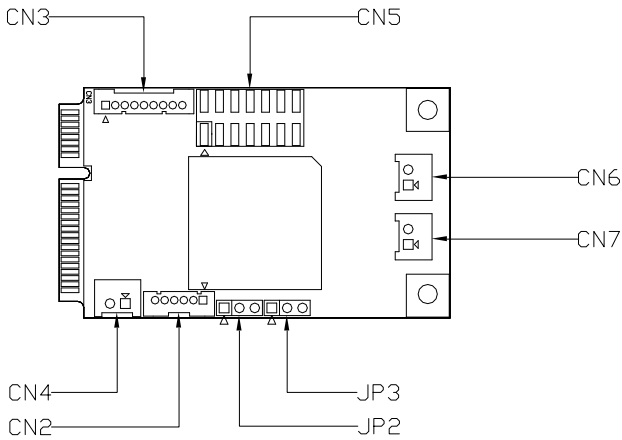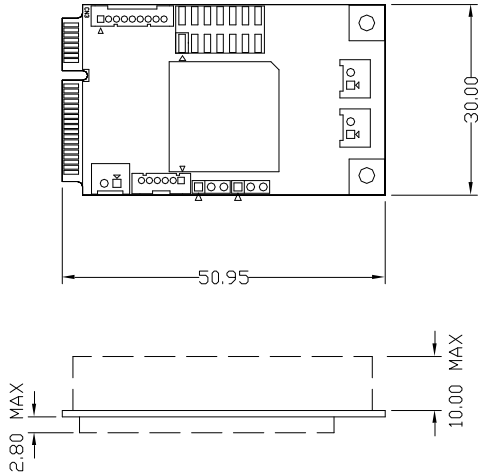
Jumper Settings

The board has a number of jumpers that allow you to configure your system to suit your application.

Flash mode (JP2)

JP2	Function
1-2	Normal mode
2-3	Flash mode

USB/UART Select (JP3)

JP3	Function
1-2	USB mode
2-3	UART mode

Connector Settings

UART Connector (CN3)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI	10	(NC)

5V External Power for USB/UART (CN4)

Pin	Signal	Pin	Signal
1	+V5S	2	GND

USB Connector (CON2)

Pin	Signal	Pin	Signal
1	WAFER_5V	2	USB_DN
3	USB_DP	4	GND
5		6	

CANBus CAN0 (CN6)

Pin	Signal	Pin	Signal
1	CAN0H	2	CAN0L

CANBus CAN1 (CN7)

Pin	Signal	Pin	Signal
1	CAN1H	2	CAN1L

Driver Installation for Windows® 8

If you are using the USB interface, please install drivers before using the PER-T248B Utility

1. Go to Device Manager -> Other devices -> CDC USB Demonstration
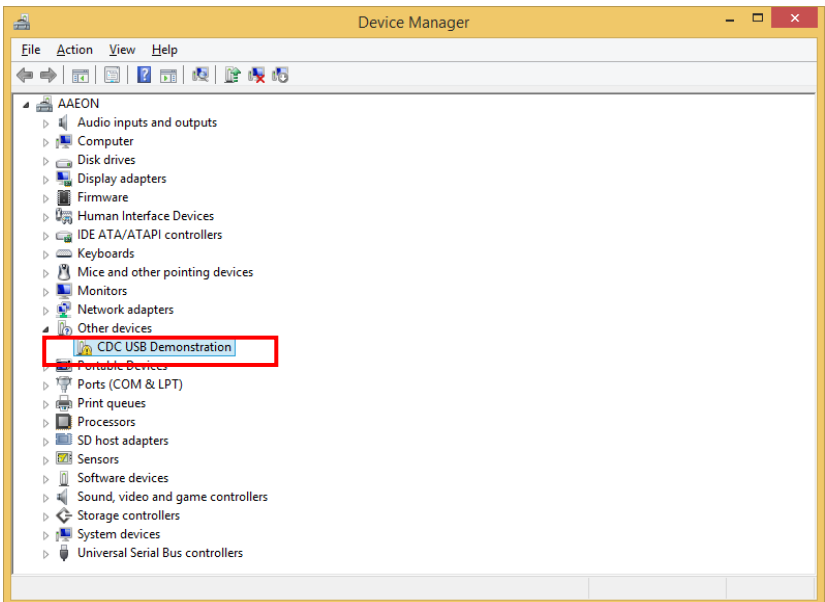
2. Right click and select "Update Driver Software"
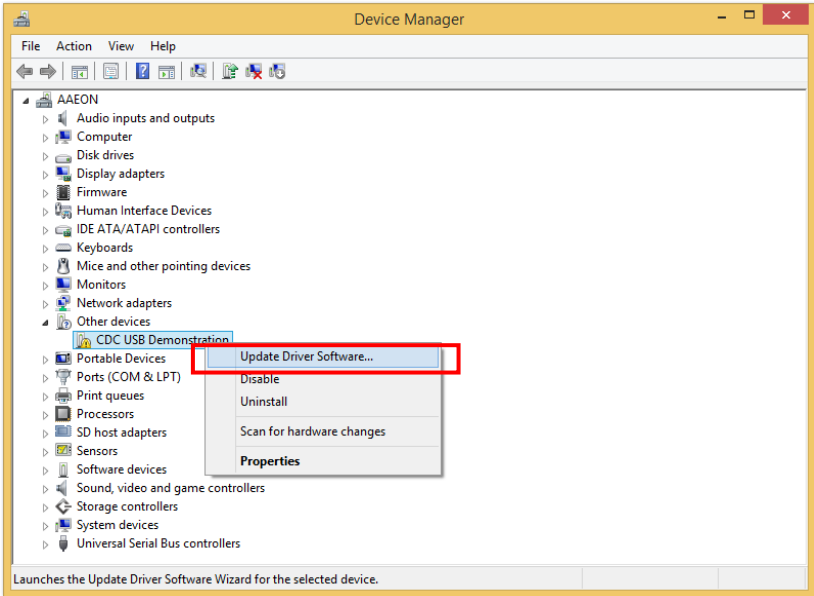
3. Select "Let me pick from a list of device drivers on my computer"
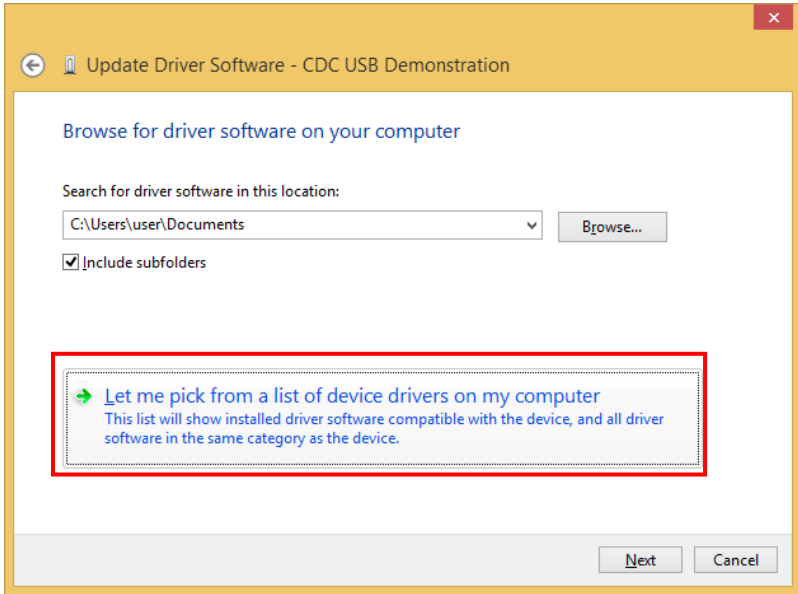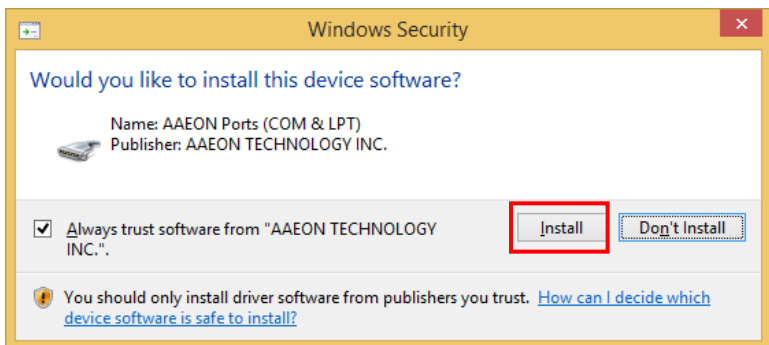
4. Select "Show All Devices" in the list followed by "Next"
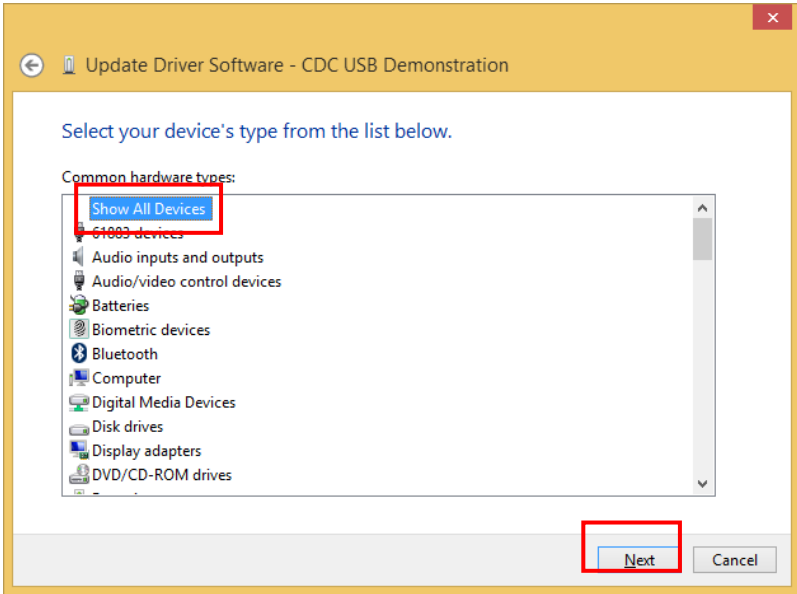
5. Select "Have Disk"
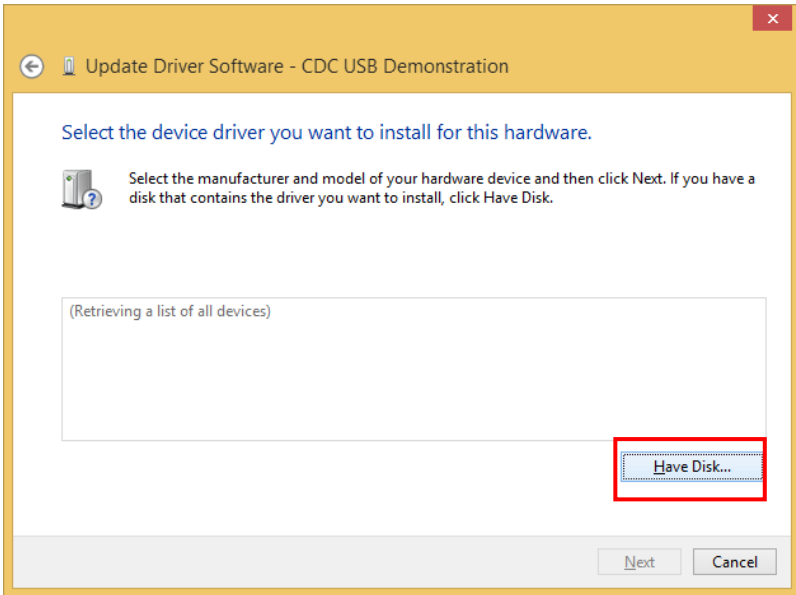
6. Open "aaeon_t248b_cdc" from the disk or the location the
   drivers are copied to.
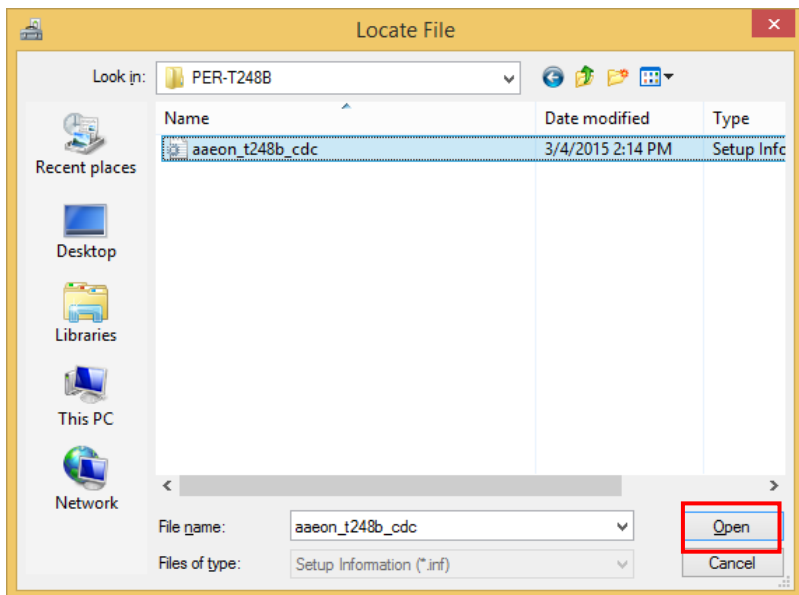
7.   The driver is now ready to be installed. Click "Next" followed by "Install" to install the drivers.
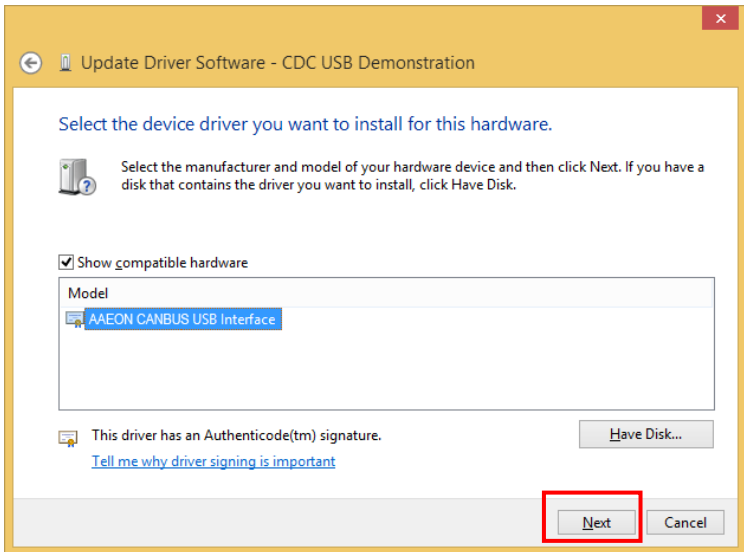
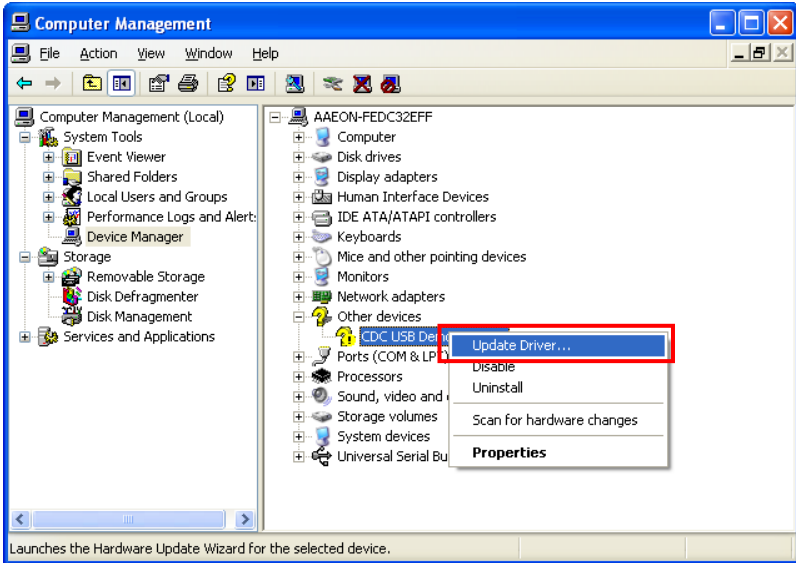8. If installation is successful, the USB interface will be shown in the device manager.
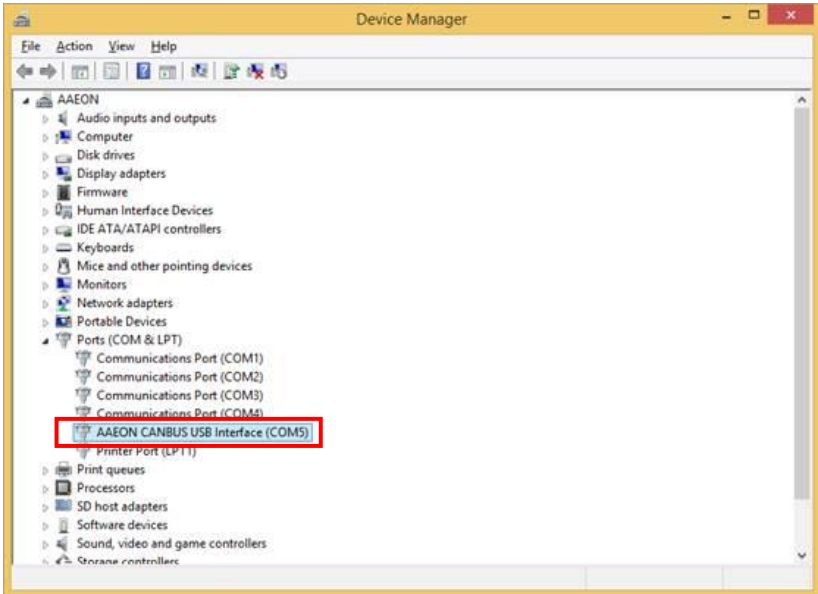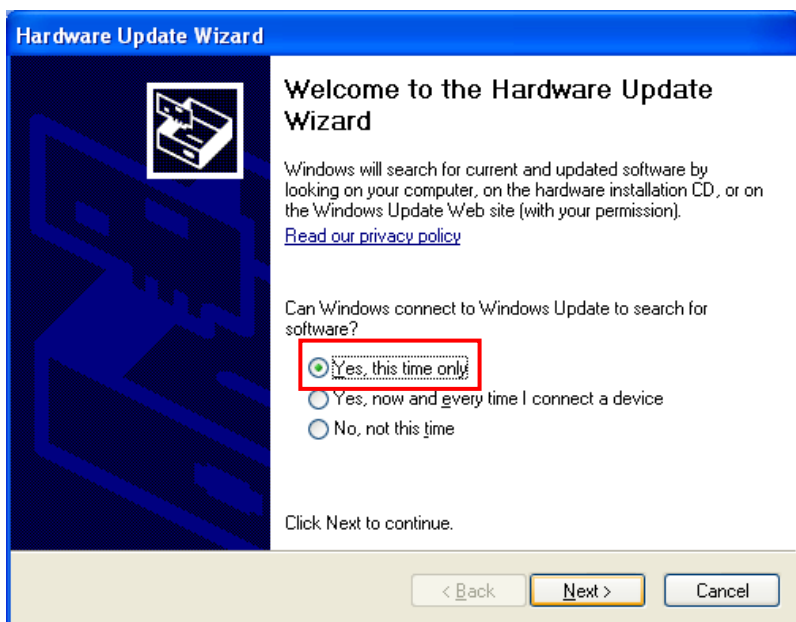
Driver Installation for Windows® XP

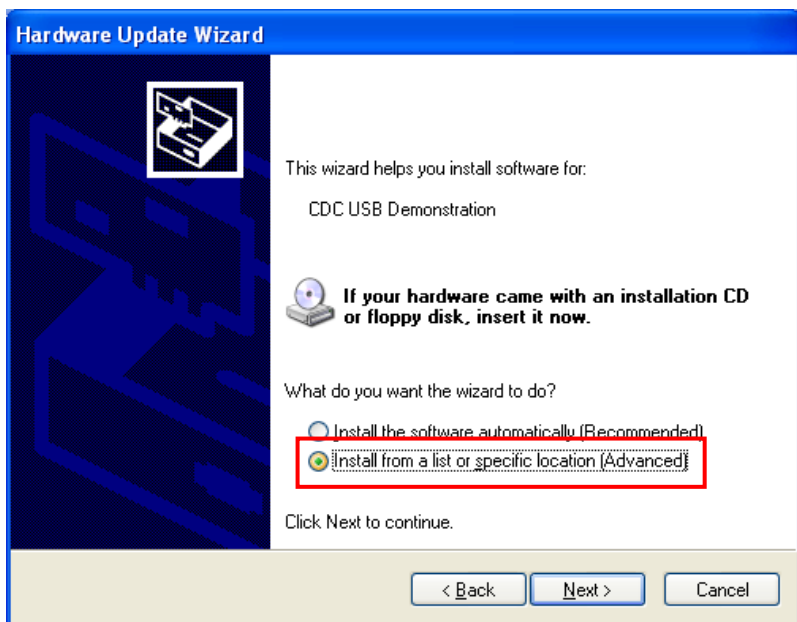1. Go to Device Manager -> Other devices -> CDC USB
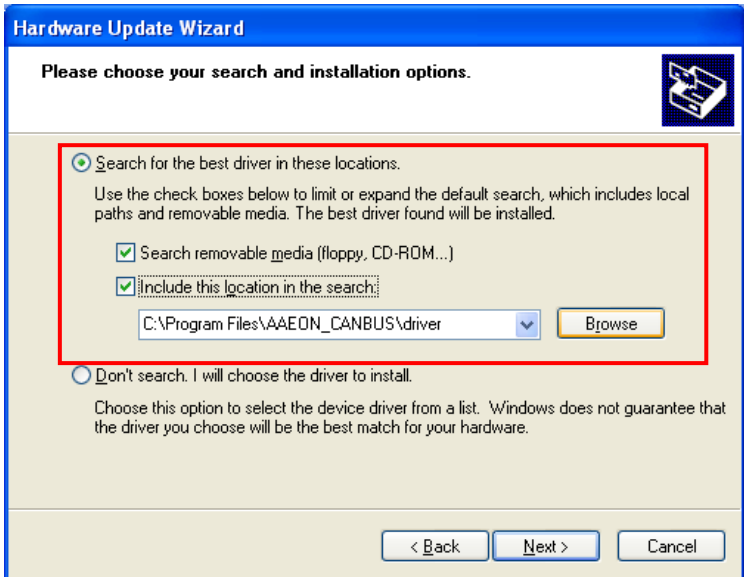   Demonstration
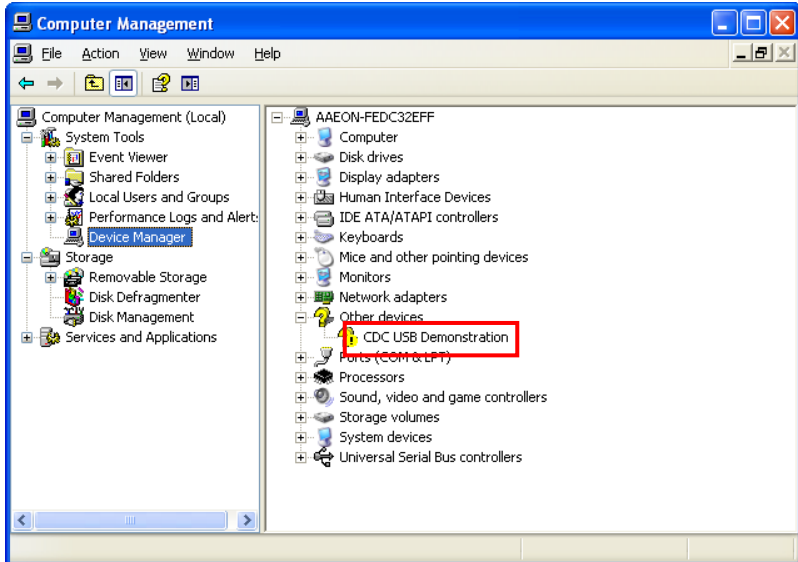
2. Right click and select "Update Driver…"
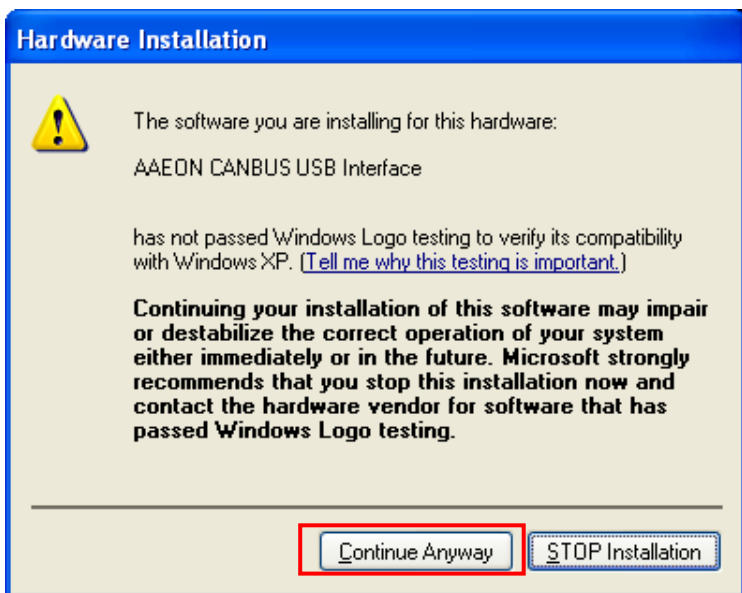
3. Select "Yes, this time only" and next

4. Select "Install from a list or specific location (Advanced)

5. Check "Search removable media (floppy, CD-ROM…)" (If the drivers are copied from the disk to other locations, check "Include this location in the search" as well and browse to that location).

6. After the search, click "Continue Anyway" to begin installation.

7. If installation is successful, the USB interface will be shown in
    the device manager.