CAN Bus Module

PER-T248B

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PER-T248 Rev.A Quick Installation Guide 1st Ed. May 25, 2015

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Notice

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

Safety Precautions



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 <u>www.aaeon.com</u> 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 <u>www.aaeon.com</u> 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

	有毒有害物质或元素					
部件名称	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)
印刷电路板 及其电子组件	×	0	0	0	0	0
外部信号 连接器及线材	×	0	0	0	0	0
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。						

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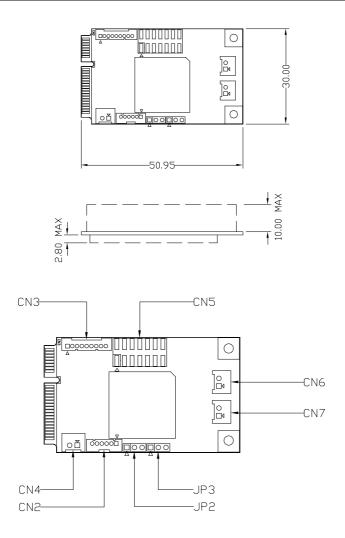
Specifications

•	Form Factor	PCI Express MiniCard
•	CAN Controller	RX630
•	High-Speed CAN	TJA1050
	Transceiver	
•	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	P E R - T 2 4 8 B
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

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Product Layout



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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	CANOL

CANBus CAN1 (CN7)

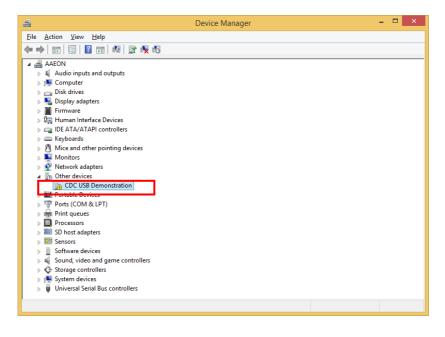
Pin	Signal	Pin	Signal
1	CAN1H	2	CAN1L

CAN Bus Module

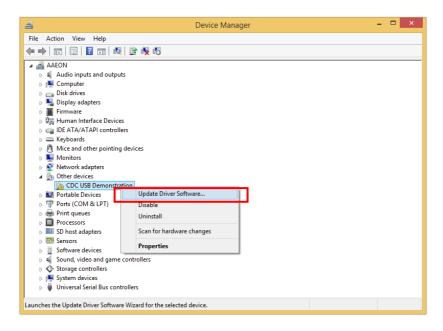
Driver Installation for Windows® 8

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

 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"

		×
€	Update Driver Software - CDC USB Demonstration	
	Browse for driver software on your computer	
	Search for driver software in this location:	
	C:\Users\user\Documents	
	☑ Include subfolders	
	→ Let me pick from a list of device drivers on my computer	
	This list will show installed driver software compatible with the device, and all driver	
	software in the same category as the device.	
	<u>N</u> ext Can	cel
-		

4. Select "Show All Devices" in the list followed by "Next"

	×
Select your device's type from the list below.	
Common hardware types:	
Show All Devices	
Audio inputs and outputs	
Audio/video control devices	
a Batteries	
Biometric devices	
8 Bluetooth	
1 Computer	
🖵 Digital Media Devices	
Disk drives	
Sector Se	
BVD/CD-ROM drives	
	_
<u>N</u> ext Cance	el

5. Select "Have Disk"

G	🔟 Upd	late Driver Software - CDC USB Demonstration	×
	Select	the device driver you want to install for this hardware. Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.	I
	(Retriev	ing a list of all devices)	
		Next Cance	

 Open "aaeon_t248b_cdc" from the disk or the location the drivers are copied to.

4		Locate File			×
Look in:	DER-T248B		*	3 🌶 📂 🛄 -	
(Es	Name	^		Date modified	Туре
Recent places	aaeon_t248k	o_cdc		3/4/2015 2:14 PM	Setup Infc
Desktop					
Libraries					
Market This PC					
() Network	<			_	>
	File <u>n</u> ame:	aaeon_t248b_cdc		¥	<u>O</u> pen
	Files of type:	Setup Information (*.inf)		~	Cancel

7. The driver is now ready to be installed. Click "Next" followed by "Install" to install the drivers.

	×				
📀 💄 Update Driver Software - CDC USB Demonstration					
Select the device driver you want to install for this hardware. Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.					
Show <u>c</u> ompatible hardware Model					
This driver has an Authenticode(tm) signature. <u>Tell me why driver signing is important</u>	<u>H</u> ave Disk				
	<u>N</u> ext Cancel				

•	Windows Security	
Name: AAEON Po	all this device software? orts (COM & LPT) I TECHNOLOGY INC.	
✓ <u>A</u> lways trust software fr INC.".	om "AAEON TECHNOLOGY	Install Do <u>n't Install</u>
You should only install a <u>device software is safe to</u>		you trust. <u>How can I decide which</u>

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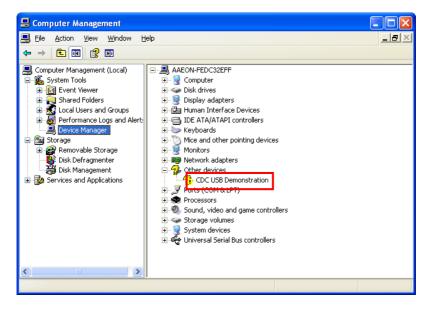
8. If installation is successful, the USB interface will be shown in the device manager.

a	Device Manager	- • ×
Eile Action View Help		
♦ ♦ m m m 4 +	計 🥀 🗗	
AAEON		
Audio inputs and outputs		
D P Computer		
Disk drives		
Display adapters		
Firmware		
D Human Interface Devices		
D Cal IDE ATA/ATAPI controllers		
Keyboards		
Mice and other pointing de	vices	
Monitors		
Network adapters		
Portable Devices		
Ports (COM & LPT)		
T Communications Port (COM1)	
Communications Port (COM2)	
Communications Port (COM3)	
1 Communications Port	COM4)	
T AAEON CANBUS USB In	terface (COM5)	
"Printer Port (LPT1)		
Print queues		
Processors		
SD host adapters		
b Software devices		
Sound, video and game co	ntrollers	
6 C Storage controllers		

Driver Installation for Windows® XP

1. Go to Device Manager -> Other devices -> CDC USB

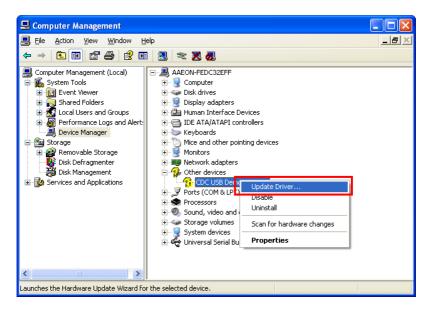
Demonstration



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2. Right click and select "Update Driver ... "

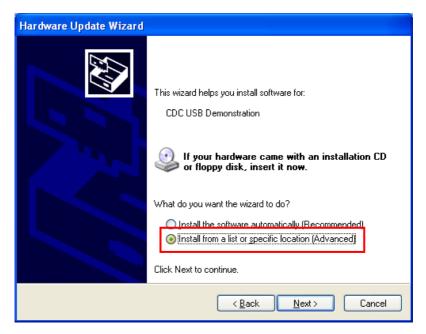


3. Select "Yes, this time only" and next



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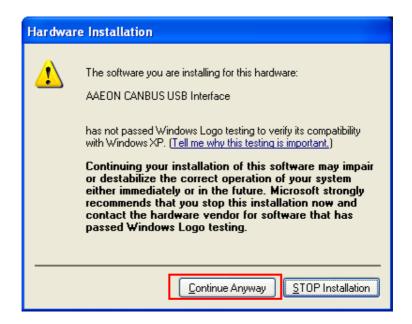
4. Select "Install from a list or specific location (Advanced)



 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).

Hardware Update Wizard				
Please choose your search and installation options.	Ņ			
 Search for the best driver in these locations. Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed. Search removable media (floppy, CD-ROM) Include this location in the search. C:\Program Files\AAEON_CANBUS\driver Don't search. I will choose the driver to install. Choose this option to select the device driver from a list. Windows does not guarantee the driver you choose will be the best match for your hardware. 	ıat			
< <u>B</u> ack <u>N</u> ext > Cancel				

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.

