PCM-3680

2-Port CAN-Bus PC/104 Module with Isolation Protection

User Manual

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This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This kind of cable is available from Advantech. Please contact your local supplier for ordering information.

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

1. To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.
2. Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

Technical Support and Assistance

Step 1. Visit the Advantech web site at **www.advantech.com/support** where you can find the latest information about the product.

Step 2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
- Product name and serial number
- Description of your peripheral attachments
- Description of your software (operating system, version, application software, etc.)
- A complete description of the problem
- The exact wording of any error messages

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any item does not accord with the table, please contact your dealer immediately.

- PCI communication interface card
- Industrial Communication Driver, Utility and PCI communication card user's manual in ICOM CD-ROM

Contents

Chapter 1 Introduction 2
1.1 Description 2
1.1.1 Controller Area Network 2
1.1.2 Optical Isolation Protection 2
1.2 Features 2
1.3 Specifications 3
1.4 Ordering Information 3
Chapter 2 Hardware Installation 6
2.1 Initial Inspection 6
2.2 Jumper Locations & Setting 7
Figure 2.1:PCM-3680 Silk Screen 7
2.2.1 Card Configuration 7
2.2.2 Switch and Jumper Functions 8
Figure 2.2:IRQ Settings 8
2.2.3 Terminator Resistor Setup (JP5/JP6) 9
Table 2.1:PCM-3680 Terminator Resistor Reference 9
Table 2.2:Memory Address Configuration 10
Table 2.3:Memory Area 11
2.3 Card Installation 12
Chapter 3 Driver Installation 14
3.1 Advantech Device Manager Installation 14
Chapter 4 Software Requirements 22
4.1 Introduction 22
4.1.1 Definitions, Acronyms, and Abbreviations 22
4.1.2 Reference 22
4.2 Overall Description 22
4.3 Specific Requirements 23
4.3.1 Device Driver Functionality 23
4.3.2 The CAN Driver Framework 23
Figure 4.1:AdsCan.dll architecture 23
4.3.3 Software Interfaces 24
Table 4.1:Function Table of AdsCAN.dll 24
Chapter 5 Pin Assignments and Wiring 28
5.1 Pin Assignments 28
Figure 5.1:PCM-3680 pin assignments 28
5.2 Wiring 28
Table 5.1:PCM-3680 Pin Wiring and Description 28
Appendix A Register Format 30
A.0.1 CAN Controller Address Allocation 30
A.0.2 Register Descriptions 34

CHAPTER 1

Introduction

This chapter provides a general description of the PCM-3680.

Sections include:

- Description
- Features
- Specifications
- Ordering Information

Chapter 1 Introduction

1.1 Description

PCM-3680 is a special purpose communication card that brings the Control Area Network to your PC. With the built-in CAN controller, the PCM-3680 provides bus arbitration and error detection with automatic transmission repeat function. The onboard CAN controllers are located at different positions in the memory. You can run both CAN controllers at the same time, independently. The PCM-3680 operates at baud rates up to 1 Mbps and can be installed directly into the expansion slot of your PC.

1.1.1 Controller Area Network

CAN is a serial bus system suited for networking "intelligent" I/O devices as well as sensors and actuators within a machine or plant. Characterized by its multi-master protocol, real-time capability, error correction, high noise immunity, and the existence of many different silicon components, the CAN serial bus system, originally developed by Bosch for use in automobiles, is increasingly being used in industrial automation.

1.1.2 Optical Isolation Protection

Onboard optical isolators protect your PC and equipment against damage from ground loops, increasing system reliability in harsh environments.

1.2 Features

- Operates 2 CAN networks simultaneously
- High speed transmission (up to 1Mbps)
- 16 MHz CAN controller frequency
- 4 KB address space, 40 base address adjustable in steps from C800H up to EF00H
- Optical isolation protection of 2500 V_{DC}
- Wide IRQ selection for each port includes: IRQ 3, 4, 5, 6,7, 9, 10, 11, 12, 15
- LED indicates transmit/receive status on each port
- Direct memory mapping enables speedy access

- Supports 32/64-bit WinXP/Vista/Win7, WinCE 5.0/6.0 and Linux

1.3 Specifications

- **Bus Interface:** PC/104 compliant
- **Ports:** 2
- **Protocol:** CAN 2.0 A/B
- **Communication Controller:** SJA-1000
- **CAN Transceiver:** 82C250
- **Signal Support:** CAN_H, CAN_L
- **Memory Address:** From C800H to EF00H
- **IRQ:** 3, 4, 5, 6, 7, 9, 10, 11,12, 15
- **CAN Controller Frequency:** 16 MHz
- **Speed (bps):** Up to 1 Mbps programmable transfer rate
- **Isolation Protection:** 2500 V_{DC}
- **Connector:** 4 x 10 box pin header
- **Power Consumption:** 5 V @ 400 mA(Typical)
- **Dimensions:** 3.6" x 3.8" (90 x 96 mm)
- **Operating Temperature:** -40 ~ 85° C (refer to IEC 68-2-1, 2)
- **Storage Temperature:** -25 ~ 85° C
- **Operating Humidity:** 5 ~ 95% Relative Humidity, non-condensing
- **Shipping Weight:** 0.485 lb (0.22 kg)

1.4 Ordering Information

PCM-3680: 2-port CAN-bus PC/104 Module with Isolation Protection

CHAPTER 2

Hardware Installation

This chapter covers inspection and installation of hardware and drivers.

Sections include:

- Initial inspection
- Jumper locations & setting
- Card installation

Chapter 2 Hardware Installation

2.1 Initial Inspection

You should find the following items inside the shipping package:

- PC/104 communication interface card
- Industrial Communication Driver, Utility and PCI communication card user's manual in ICOM CD-ROM

PCM-3680 was carefully inspected mechanically and electrically before it was shipped. It should be free of marks and scratches and in perfect working order when received.

As you unpack the PCM-3680, check for signs of shipping damage (damaged box, scratches, dents, etc.). If it is damaged or it fails to meet specifications, notify our service department or your local sales representative immediately. Also notify the carrier. Retain the shipping carton and packing material for inspection by the carrier. After inspection we will make arrangements to repair or replace the unit.

When you handle the PCM-3680, remove it from its protective packaging by grasping the rear metal panel. Keep the anti-vibration packing. Whenever you remove the card from the PC, store it in this package for protection.

Warning! *Discharge your body's static electric charge by touching the back of the grounded chassis of the system unit (metal) before handling the board. You should avoid contact with materials that hold a static charge such as plastic, vinyl and Styrofoam. Handle the board only by its edges to avoid static damage to its integrated circuits. Avoid touching the exposed circuit connectors. We also recommend that you use a grounded wrist strap and place the card on a static dissipative mat whenever you work with it.*

2.2 Jumper Locations & Setting

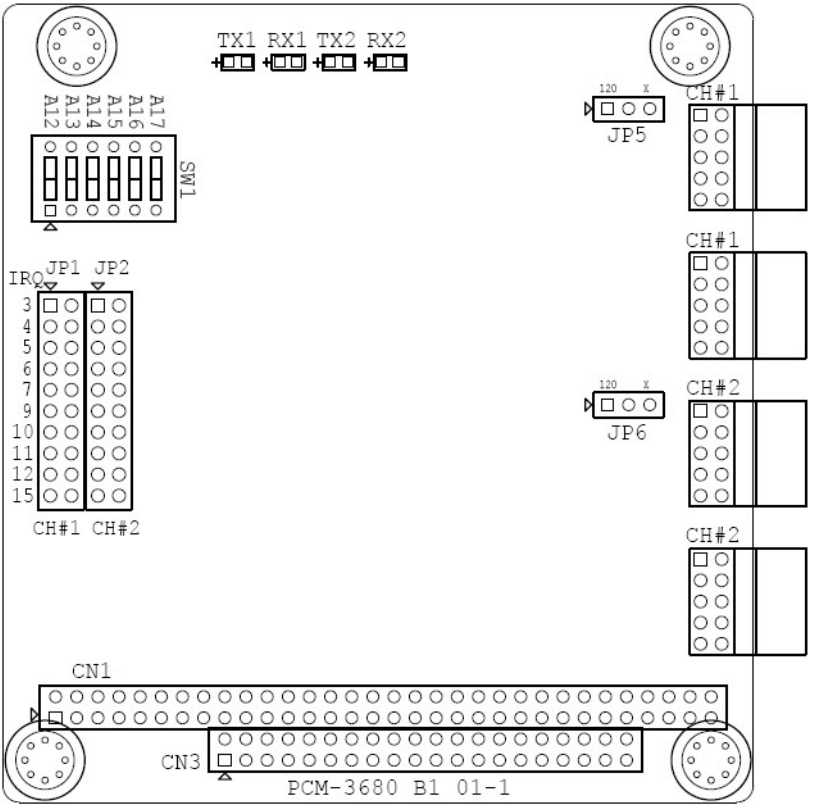


Figure 2.1: PCM-3680 Silk Screen

2.2.1 Card Configuration

The PCM-3680 has two ports, each with one jumper. The jumpers set the IRQ for the ports, which can be configured separately. A DIP switch sets the memory base address for each port. The following chart shows the function of the jumper and the switch (see the previous page for jumper and switch locations).

2.2.2 Switch and Jumper Functions

IRQ Setup:

JP1 Port 1

JP2 Port 2

Terminator Resistor Reference:

JP5 Port 1

JP6 Port 2

Memory base address:

SW1 Port 1, Port 2

Default Settings

• Port 1 is set for COM1 (IRQ=12, Memory address = DA00:0000).

• Port 2 is set for COM2 (IRQ=15, Memory address = DA00:0200).

If you need to change these settings, see the following sections. Otherwise, you can simply install the card.

Note that you will need to disable your CPU card's onboard COM ports, if any, or set them to alternate addresses/IRQs.

Jumpers and Switches

Jumpers JP1 and JP2 set the interrupts for Port 1 and Port 2, respectively. You can choose any IRQ from 3 to 15, except 8, 13 and 14. When you choose IRQs, make sure they are not used for other cards in the system. The following figures show the card's default settings.

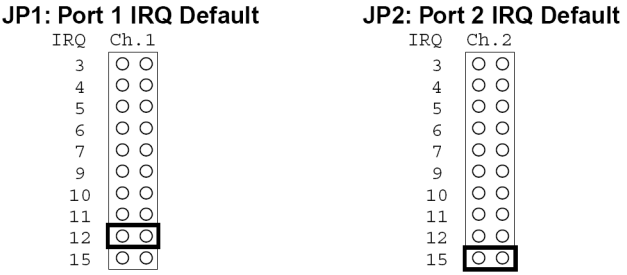


Figure 2.2: IRQ Settings

2.2.3 Terminator Resistor Setup (JP5/JP6)

You can set the terminator resistor if necessary to match impedance. Each port has a separate resistor.

Table 2.1: PCM-3680 Terminator Resistor Reference

Status	Value of Terminator Resistor (Ω)
Open mode	0
Close mode	120

Note: It is suggested to set the terminator resistor to 120 Ω to maintain a satisfactory baud rate performance.

Memory Base Address (SW1)

The memory base address for the PCM-3680, which requires 4 KB of address space, is made up of the memory segment and its associated offset. The address for the memory segment is set through SW1, a six-position DIP switch. You can choose any base address from C800 to EF00. The following table shows the DIP switch settings and the corresponding base addresses.

Table 2.2: Memory Address Configuration						
Address/ DIP Switch	**A12**	**A13**	**A14**	**A15**	**A16**	**A17**
C800H	on	on	on	off	on	on
C900H	off	on	on	off	on	on
CA00H	on	off	on	off	on	on
CB00H	off	off	on	off	on	on
CC00H	on	on	off	off	on	on
CD00H	off	on	off	off	on	on
CE00H	on	off	off	off	on	on
CF00H	off	off	off	off	on	on
D000H	on	on	on	on	off	on
D100H	off	on	on	on	off	on
D200H	on	off	on	on	off	on
D300H	off	off	on	on	off	on
D400H	on	on	off	on	off	on
D500H	off	on	off	on	off	on
D600H	on	off	off	on	off	on
D700H	off	off	off	on	off	on
D800H	on	on	on	off	off	on
D900H	off	on	on	off	off	on
DA00H	on	off	on	off	off	on
DB00H	off	off	on	off	off	on
DC00H	on	on	off	off	off	on
DD00H	off	on	off	off	off	on
DE00H	on	off	off	off	off	on
DF00H	off	off	off	off	off	on
E000H	on	on	on	on	on	off
E100H	of	on	on	on	on	off
E200H	on	off	on	on	on	off
E300H	off	off	on	on	on	off
E400H	on	on	off	on	on	off
E500H	off	on	off	on	on	off
E600H	on	off	off	on	on	off

Table 2.2: Memory Address Configuration						
E700H	off	off	off	on	on	off
E800H	on	on	on	off	on	off
E900H	off	on	on	off	on	off
EA00H	on	off	on	off	on	off
EB00H	off	off	on	off	on	off
EC00H	on	on	off	off	on	off
ED00H	off	on	off	off	on	off
EE00H	on	off	off	off	on	off
EF00H	off	off	off	off	on	off

Memory Area

Once the memory segment for the base address is selected, the offset will be automatically assigned for Port 1, Port 2, and hardware reset. The following table shows the base addresses of the CAN controllers.

Table 2.3: Memory Area	
Base address (hex)	**CAN Controller**
base:0000h - base:00FFh	Basic- Port 1
base:0100h - base:01FFh	HW reset Basic - Port 1
base:0200h - base:02FFh	Basic- Port 2
base:0300h - base:03FFh	HW reset Basic - Port 2
base:0400h - base:0FFFh	Not used

2.3 Card Installation

Note: Make sure you have installed the driver before installing the card. We strongly recommend that you install the software driver before installing the hardware into your system, since this will guarantee a smooth and trouble-free installation process.

Warning!

Turn off your PC's power supply whenever you install or remove the PC/104 communication card or its cables. Static electricity can easily damage computer equipment. Ground yourself by touching the chassis of the computer (metal) before you touch any boards.

1. Turn off the computer.
2. Turn the power off to any peripheral devices (such as printers and monitors).
3. Disconnect the power cord and any other cables from the back of the computer.
4. Turn the PC if necessary to gain access to the cables.
5. Remove the PC's cover (refer to your user's guide if necessary).
6. Locate the expansion slots or passive back-plane (at the rear of the PC) and choose any unused slot.
7. Remove the screw that secures the expansion slot cover to the PC (save the screw to secure the interface card retaining bracket).
8. Remove the anti-vibration card clamp if supplied.
9. Carefully grasp the upper edge of the PC/104 communication card.
10. Align the hole in the retaining bracket with the hole on top of the expansion slot.
11. Align the gold striped edge connector with the expansion slot socket.
12. Press the board firmly into the socket.
13. Replace the screw in the expansion slot's retaining bracket.
14. Replace anti-vibration cardholder.
15. Replace the PC's cover. Connect the cables you removed in step 3.
16. Turn the computer power on.The board is now installed in the computer. See Chapter 5 for information on cabling.

CHAPTER 3

Driver and Advantech Device Manager Installation

This chapter shows how to install the driver and Advantech Device Manager.

Sections include:

- Driver Installation

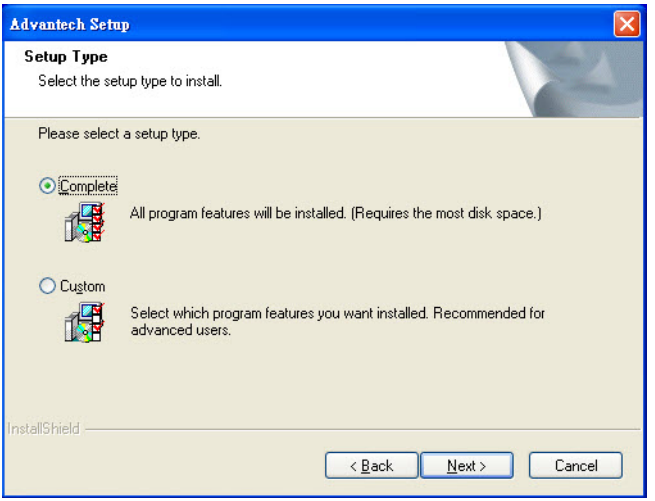
Chapter 3 Driver Installation

3.1 Advantech Device Manager Installation

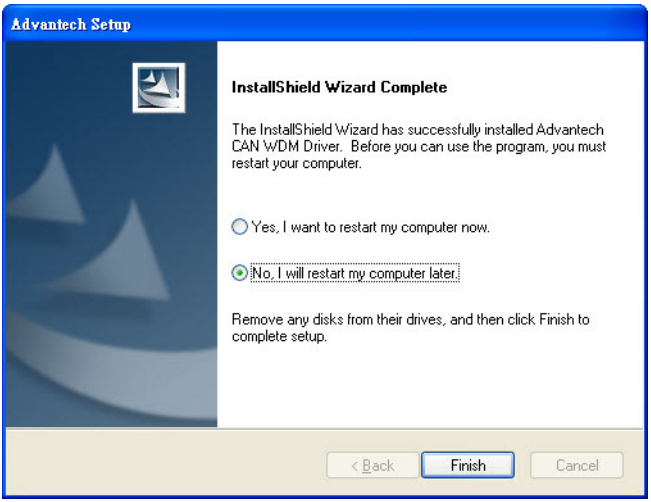
Advantech provides WDM CAN driver that allows you to configure your hardware and store the settings in your Windows registry. You must install the WDM CAN driver if you want to add and manage Advantech CAN cards.

Please follow the steps below to install Advantech CAN WDM Driver.

1. Select **Complete** and then **Next** to continue the installation.

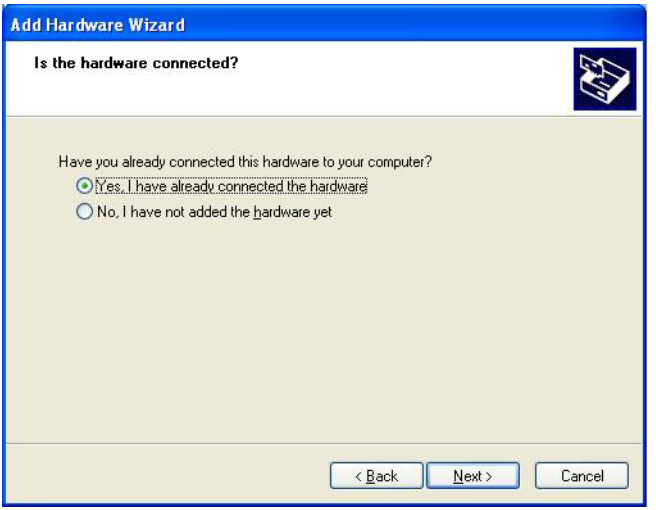


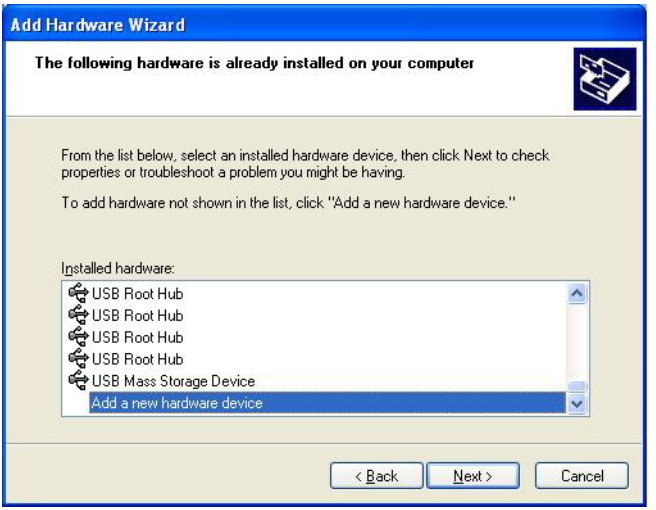
2. After a while, the installation will be complete.

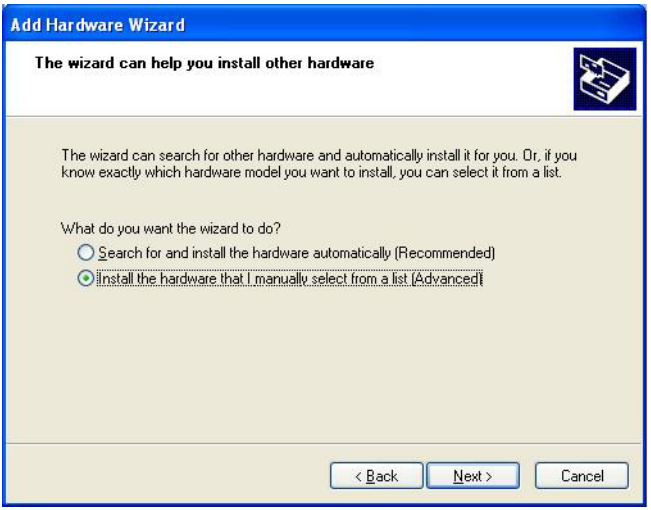


3. After the installation of the driver, start the "Add Hardware Wizard" to add the hardware device.

4. Then follow the steps as shown in the figures below.



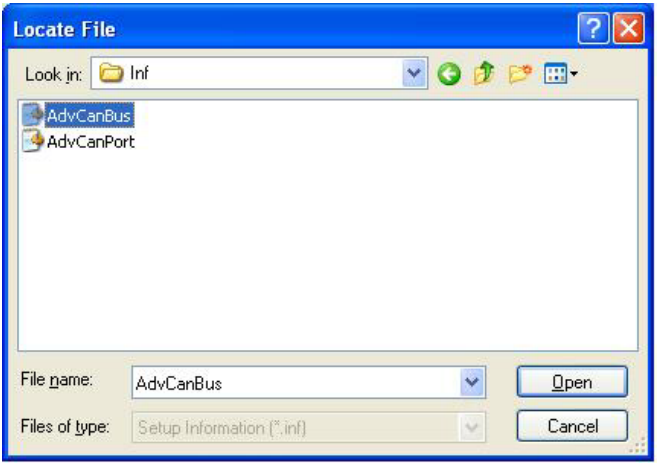



Add Hardware Wizard
The wizard can help you install other hardware
The wizard can search for other hardware and automatically install it for you. Or, if you know exactly which hardware model you want to install, you can select it from a list.
What do you want the wizard to do?
Search for and install the hardware automatically (Recommended)
Install the hardware that I manually select from a list (Advanced)
< Back
Next >
Cancel

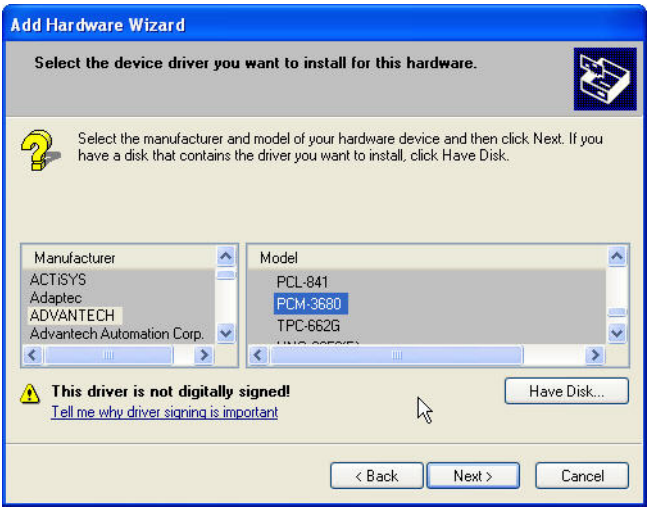
Add Hardware Wizard
From the list below, select the type of hardware you are installing
If you do not see the hardware category you want, click Show All Devices.
Common hardware types:
Show All Devices
Advantech Motion Cards
Advantech Motion Control cards
Display adapters
IDE ATA/ATAPI controllers
IEEE 1394 Bus host controllers
Imaging devices
Infrared devices
< Back
Next >
Cancel

5. Select the device driver:

6. Select the AdvCanBus file:

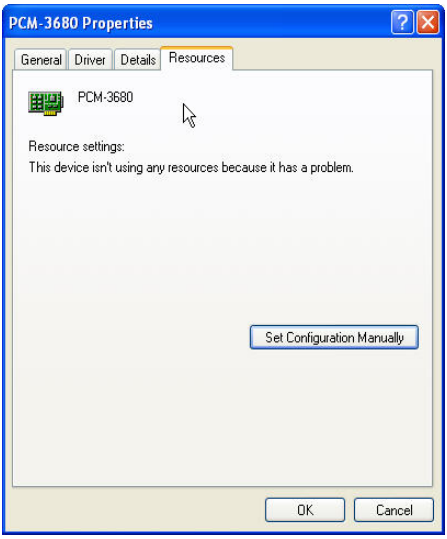


7. Select PCM-3680:

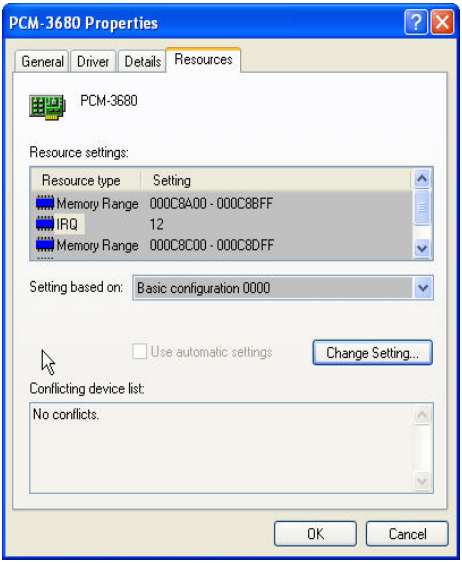


Configuration

Before you start to use PCM-3680, you must configure the CAN resource. You can refer to the below figures to set the Memory Address and IRQ.



Set the Memory Address and IRQ that is not occupied by other add-on devices.



CHAPTER 4

Software Requirements

This chapter has information on the software of PCM-3680.

Sections include:

- Introduction
- Overall Description
- Specific Requirements

Chapter 4 Software Requirements

4.1 Introduction

PCM-3680 is Isolated Dual-port CAN communication cards which provides two isolated CAN ports for communication applications in difficult environments. The chip on the CAN cards is SJA1000. The SJA1000 is a single chip solution for PC-based CAN port and parallel expansion add-in cards.

This chapter outlines the CAN card's windows DLL driver software requirement specifications. Including functionality, performance, and user interface requirements. It applies to programming the CAN cards Windows unified DLL driver, including the driver for PCM-3680.

4.1.1 Definitions, Acronyms, and Abbreviations

SRS = Software Requirements Specification

PPI = Programmable Peripheral Interface

GUI = Graphics User Interface

4.1.2 Reference

Please see "SJA1000.pdf" on your CD-ROM for further information on the SJA1000 chip.

4.2 Overall Description

In order to unify the driver interface of Advantech's CAN series of products, a new DLL file named AdsCAN.dll has been defined. This makes it possible to change the CAN card from PCM-3680 to PCL-841 without recompiling applications.

AdsCAN.dll should decide which driver to call depending on the different CAN cards.

4.3 Specific Requirements

4.3.1 Device Driver Functionality

The AdsCAN.dll driver needs to decide which driver should be called depending on different hardware.

The AdsCAN.dll driver should properly translate the function parameters to a lower layer driver.

4.3.2 The CAN Driver Framework

All user-mode functionality is implemented through Win32 communication API Functions.

The AdsCan.dll unified driver interface for all CAN cards is shown in figure 4.1.

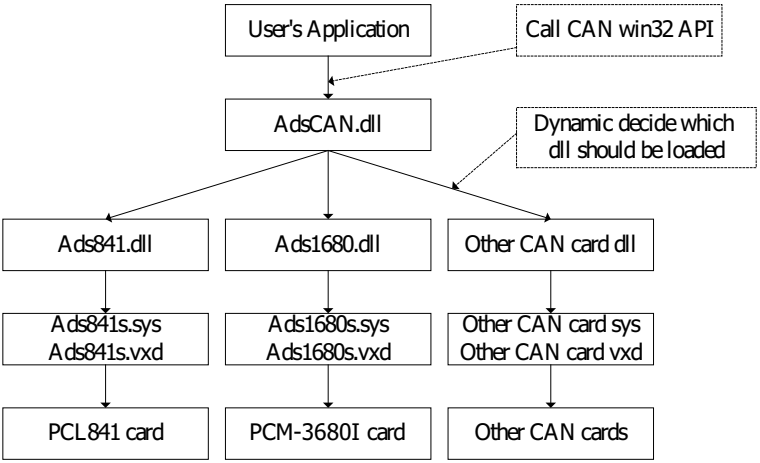


Figure 4.1: AdsCan.dll architecture

With the new driver architecture, you don't need to recompile your CAN applications when you switch one CAN card with another.

4.3.3 Software Interfaces

AdsCAN.dll should follow the CAN software-programming interface, so that users can use Advantech's driver software in the same way.

You can access the CAN functionality via the AdsCAN.dll Library as shown in the following table. For detailed function library definitions and descriptions please see the file 'can.chm' on the CD-ROM.
Path in CD-ROM: Documents\Software Manuals\CAN

Table 4.1: Function Table of AdsCAN.dll

Function	Syntax (in C)	Description
1	CANCheckEvent()	Check event status from kernel-mode and clear event.
2	CANEnableEvent()	Enables or disables the event mechanism
3	CANEnableMessaging()	Select the data transmit interrupt
4	CANEnableRxInt()	Enable the receive interrupt
5	CANGetArbitrationLostCatchMsgEx()	Get arbitrate lost catch information
6	CANGetBaudRate()	Get the card current baud rate
7	CANGetControllerErrorCodeEx()	Get Controller error code
8	CANGetErrorMessage()	Get error message
9	CANGetEventName()	Queries and gets CAN port's event name
10	CANGetProtocolType()	Get the card current protocol type
11	CANHwReset()	Reset the hardware
12	CANInit()	Controls CAN port settings
13	CANInpb()	Inputs a byte data from the specified address on CAN card
14	CANOutpb()	Outputs a byte data to the specified address on CAN card
15	CANPortClose()	Releases settings, close port
16	CANPortOpen()	Open the CAN port
17	CANQueryID()	Query the message ID
18	CANQueryMsg ()	Reads data from the card

Table 4.1: Function Table of AdsCAN.dll		
19	CANReadFile()	Reads data
20	CANReset()	Resets CAN port
21	CANSendMsg()	Sends message
22	CANSetAcp()	Set the card 2.0 A protocol acceptance code
23	CANSetAcpEx()	Set 2.0B protocol accept code
24	CANSetBaud()	Set card baud rate
25	CANSetBufferPtr()	Set the data receive buffer
26	CANSetCountPtr()	Set the counter of receive buffer
27	CANSetIntrMaskEx()	Set 2.0B protocol interrupt mask
28	CANSetNormal()	Sets CAN card to normal mode
29	CANSetOutCtrl()	Set the card out control register
30	CANSetProtocolType()	Set the card current protocol type
31	CANWaitForFIFOEvent()	Wait for the FIFO buffer event.
32	CANWaitForID()	Wait For the message ID
33	CANWaitForMsg()	Queries and gets message from CAN bus.
34	CANWakeUpEx()	Set Can controller into sleep mode
35	CANWriteFile()	Send message

CHAPTER 5

Pin Assignments and Wiring

This chapter covers the pin assignment for the CAN connector, and the wiring of the two transmission wires.

Sections include:

- Pin Assignments
- Wiring

Chapter 5 Pin Assignments and Wiring

5.1 Pin Assignments

Figure 5.1 shows the pin assignment for the card's boxheader connectors

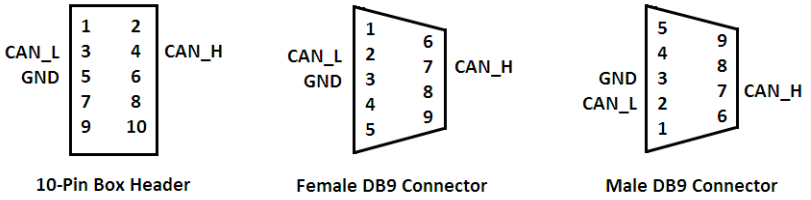
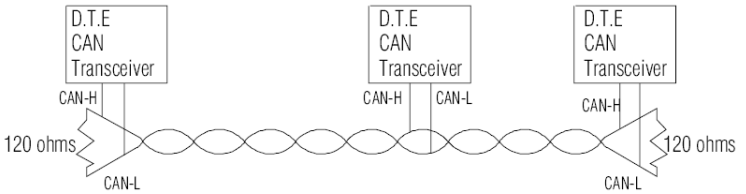


Figure 5.1: PCM-3680 pin assignments

5.2 Wiring

The CAN standard supports half–duplex communication. This means that just two wires are used to transmit and receive data.



Wiring topograhpy

Table 5.1: PCM-3680 Pin Wiring and Description			
PCM-3680(Boxheader)		**Terminal(DB-9)**	
Pin	**Signal**	**Pin**	**Signal**
3	CAN_L	2	CAN_L
4	CAN_H	3	GND
5	GND	7	CAN_H

APPENDIX A

Register Format

Appendix A Register Format

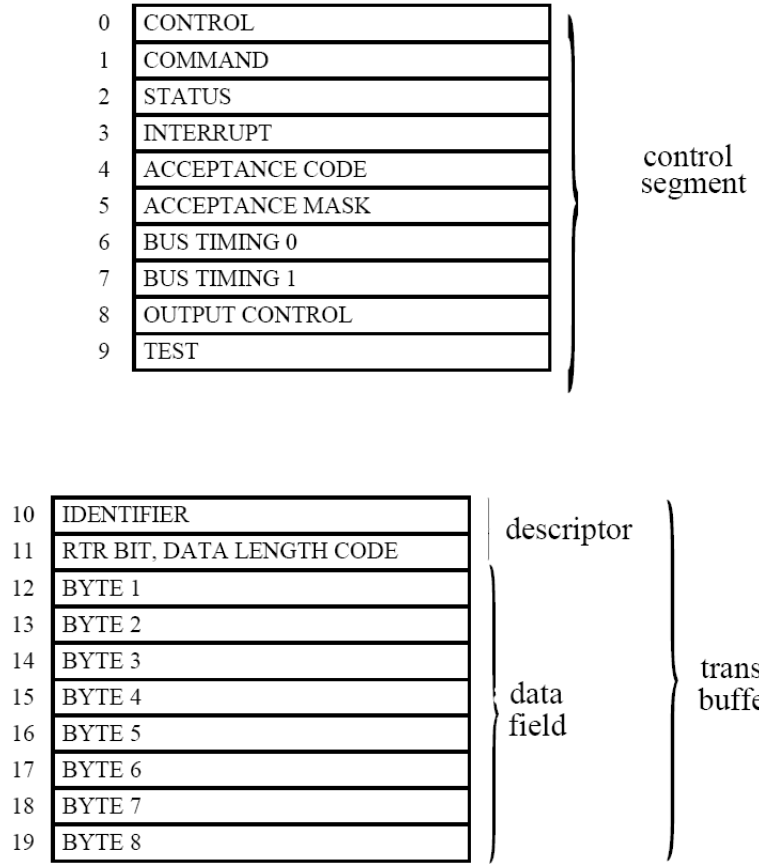
This appendix gives a brief description of the CAN controller registers. For more detailed information, please refer to the Stand-alone CAN-controller Data Book from Philips Semiconductors Microcontroller Products.

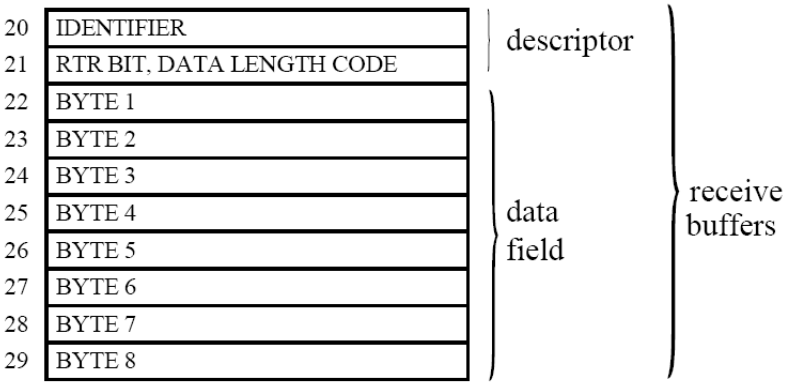
A.0.1 CAN Controller Address Allocation

Philips PCX82C200 CAN Controller

ADDRESS

Register address map




20
21
22
23
24
25
26
27
28
29
IDENTIFIER
RTR BIT, DATA LENGTH CODE
BYTE 1
BYTE 2
BYTE 3
BYTE 4
BYTE 5
BYTE 6
BYTE 7
BYTE 8
descriptor
data field
receive buffers

#	TITLE	ADDRESS	7	6	5	4	3	2	1	0
Control Segment										
1	Control Register	0	Test Mode	Sync	Reserved	Overrun Interrupt Enable	Error Interrupt Enable	Transmit Interrupt Enable	Receive Interrupt Enable	Reset Request
2	Command Register	1	Reserved	Reserved	Reserved	Go to Sleep	Clear Overrun Status	Release Receive Buffer	Abort Transmission	Transmission Request
3	Status Register	2	Bus Status	Error Status	Transmit Status	Receive Status	Transmission Complete Status	Transmit Buffer Access	Data Overrun	Receive Buffer Status
4	Interrupt Register	3	Reserved	Reserved	Reserved	Wake-Up Interrupt	Overrun Interrupt	Error Interrupt	Transmit Interrupt	Receive Interrupt
5	Acceptance Code Register	4	AC.7	AC.6	AC.5	AC.4	AC.3	AC.2	AC.1	AC.0
6	Acceptance Mask Register	5	AM.7	AM.6	AM.5	AM.4	AM.3	AM.2	AM.1	AM.0

7	Bus Timing Register 0	6	SJW.1	SJW.0	BRP.5	BRP.4	BRP.3	BRP.2	BRP.1	BRP.0
8	Bus Timing Register 1	7	SAM	TSEG2.2	TSEG2.1	TSEG2.0	TSEG1.3	TSEG1.2	TSEG1.1	TSEG1.0
9	Output Control Register	8	OCTP1	OCTN1	OCPOL1	OCTP0	OCTN0	OCPOL0	OCMODE1	OCMODE0
10	Test Register (note 1)	9	Reserved	Reserved	Map Internal Register	Connect RX Buffer 0 CPU	Connect TX Buffer CPU	Access Internal Bus	Normal RAM Conncet	Float Output Driver
Transmit Buffer										
11	Identifier	10	ID.10	ID.9	ID.8	ID.7	ID.6	ID.5	ID.4	ID.3
	RTR, Data Length Code	11	ID.2	ID.1	ID.0	RTR	DLC.3	DLC.2	DLC.1	DLC.0
	Bytes 1-8	12-19	Data	Data	Data	Data	Data	Data	Data	Data
Receive Buffer 0/1										
12	Identifier	20	ID.10	ID.9	ID.8	ID.7	ID.6	ID.5	ID.4	ID.3
	RTR, Data Length Code	21	ID.2	ID.1	ID.0	RTR	DLC.3	DLC.2	DLC.1	DLC.0
	Bytes 1-8	22-29	Data	Data	Data	Data	Data	Data	Data	Data

A.0.2 Register Descriptions

Control Register (CR)

The Control Register is used to change the behavior of the PCX82C200. Control bits may be set or reset by the attached microcontroller, which uses the Control Register as a read/write memory.

Command Register (CMR)

A command bit initiates an action within the transfer layer of the PCX82C200. If a read access is performed to this address, the byte 11111111 (binary) is returned.

Status Register (SR)

The Status Register reflects the status of the PCX82C200 bus controller. The Status Register appears to the microcontroller as a read-only memory.

Interrupt Register (IR)

The Interrupt Register allows identification of an interrupt source. When one or more of this register's bits are set, the INT pin is activated. All bits are reset by the PCX82C200 after this register is read by the microcontroller. This register appears to the microcontoller as a read-only memory.

Acceptance Code Register (ACR)

The Acceptance Code Register is part of the acceptance filter of the PCX82C200. This register can be accessed (read/write) if the Reset Request bit is set HIGH (present). When a message which passes the acceptance test is received and if there is an empty Receive Buffer, then the respective Descriptor and Data Field are sequentially stored in this empty buffer. In the case that there is no empty Receive Buffer, the Data Overrun bit is set HIGH (overrun).

Acceptance Mask Register (AMR)

The Acceptance Mask Register is part of the acceptance filter of the PCX82C200. This register can be accessed (read/write) if the Reset Request bit is set HIGH (present). The Acceptance Mask Register classifies the corresponding bits of the acceptance code as “relevant” or “don't care” for acceptance filtering.

Bus Timing Register 0 (BTR0)

The Bus Timing Register 0 defines the values of the Baud Rate Prescaler (BRP) and the Synchronization Jump Width (SJW). This register can be accessed (read/write) if the Reset Request bit is set HIGH (present).

Bus Timing Register 1 (BTR1)

The Bus Timing Register 1 defines the length of the bit period, the location of the sample point, and the number of samples to be taken at each sample point. This register can be accessed (read/write) if the Reset Request bit is set HIGH (present).

Output Control Register (OCR)

The Output Control Register allows, under software control, the setup of different driver configurations. This register may be accessed (read/write) if the Reset Request bit is set HIGH (present).

Test Register (TR)

The Test Register is used only for production testing.

Transmit Buffer

The Transmit Buffer stores a message from the microcontroller to be transmitted by the PCX82C200. It is subdivided into the Descriptor and Data Field. The Transmit Buffer can be written to and read from by the microcontroller.

Receive Buffer

The layout of the Receive Buffer and the individual bytes correspond to the definitions given for the Transmit Buffer layout, except that the addresses start at 20 instead of 10.