MOXA®

CAN Interface Board
Quick Installation Guide

1. Overview

Moxa's new CAN (Controller Area Network) interface board solutions include boards that support the Universal PCI interface, PCI Express interface, and PC/104-Plus interface. As stand-alone CAN controllers, the CP-602U-I, CP-602E-I, and CB-602I boards are cost-effective solutions. Each active CAN interface board has two independent CAN controllers with a DB9 connector. These CAN interface boards use the NXP SJA1000 and PCA82C251 transceiver, which provide bus arbitration and error detection. In addition, all models support wide temperature and have 2 KV of isolation protection built in, making the boards suitable for harsh industrial environments.

The CAN interface board series includes the following models:

CP-602U-I: 2-port CAN interface Universal PCI board with isolation protection, 0 to 55°C operating temperature.

CP-602U-I-T: 2-port CAN interface Universal PCI board with isolation protection, -40 to 85°C operating temperature.

CP-602E-I: 2-port CAN interface PCI Express board with isolation protection, 0 to 55°C operating temperature.

CP-602E-I-T: 2-port CAN interface PCI Express board with isolation protection, -40 to 85°C operating temperature.

CB-602I: 2-port CAN interface PC/104-Plus module with isolation protection, 0 to 55°C operating temperature.

CB-602I-T: 2-port CAN interface PC/104-Plus module with isolation protection, -40 to 85°C operating temperature.

2. Package Checklist

The following items are included in your CAN interface board package:

- CP-602U-I: Universal PCI Board with standard bracket, or
  CB-602I: PC/104-Plus Module, or
  CP-602E-I: PCI Express Board with standard bracket
- Document & Software CD-ROM
- Quick Installation Guide
- 5-year Warranty Statement

NOTE: Please notify your sales representative if any of the above items are missing or damaged.

P/N: 1802006020011

3. Software Installation Procedure

In this section, basic installation procedures are explained using Windows XP installation to illustrate.

Initial Driver Installation

Step 1: Run **driv_win2k_can_x.x_build_ yymmddhh.exe**, located on the Documentation and Software CD-ROM. Click **Next** to begin installing the driver. (*Note: x.x = version, yy = year, mm = month, dd = day, hh = hour)

Step 2: Click **Next** to install the driver in the indicated folder.

Step 3: Click **Install** to proceed with the installation.

Step 4: Moxa has thoroughly tested the driver for safe Windows operation. Click **Finish** to complete the driver installation.

After the installation is completed, the Moxa CAN interface board windows driver folder will be located in the Start menu. The driver folder includes Examples, Library Programming Guide, Library Reference, and Utility. This content is provided to make it easy for users to develop their own program.

Connecting the Hardware

After installing the driver, power off the PC, plug the Moxa CAN interface board into any empty slot, and then power it on. Windows will automatically detect the board and begin installing the driver. When Windows finishes installing the driver for the board, it will detect the next CAN controller, and will install another driver for the additional CAN controller.

Windows XP, Windows 2003, and Windows Vista (32-bit and 64-bit)

The following instructions are for Windows XP, Windows 2003, and Windows Vista systems.

Step 1: After plugging the CAN interface board into a slot, Windows will automatically detect the new device. The **Found New Hardware** balloon will appear in the bottom right corner of the Windows desktop, but no action is required.

Step 2: After a moment, the Found New Hardware Wizard will open. Select **No, not this time**, and then click **Next**.

Step 3: Select **Install the software automatically (Recommended)**, then click **Next**.

Step 4: Windows will spend a few moments installing the CAN interface driver.

Step 5: The next window indicates that Windows has completed the installation. Click **Finish** to continue with the installation procedure.

Step 6: After Windows has completed installing the Moxa CAN interface board, it will automatically detect the new CAN controller.

Installing the Driver for the CAN controller

After the driver for the CAN interface board has been installed, Windows will automatically detect the new CAN controller.

Step 1: The **Found New Hardware Wizard** window will open to help you install the driver. This window will offer to connect to the Windows update site to search for a driver. Select **No, not at this time** and then click **Next** to continue.

Step 2: Select **Install the software automatically (Recommended)**, and then click **Next** to continue.

Step 3: Windows will spend a few moments installing the CAN controller driver.

Step 4: After all files have been copied to the system, the **Completing the Found New Hardware Wizard** window will open to indicate that it has finished installing the driver. Click **Finish** to proceed with the rest of the installation.

Step 5: Repeat Steps 1 through 4 for each of the remaining controllers.

Step 6: The **Found New Hardware** balloon will reappear to inform you that the hardware was installed successfully.

4. Specifications

Hardware

CAN Controller	NXP SJA1000
CAN Transceiver	PCA82C251
CAN Specification	CAN 2.0 A/B
Signal Support	CAN_H, CAN_L, GND

Board Interface

CP-602U-I:	Universal PCI
CB-602I:	PC/104-Plus bus module
CP602E-I:	PCI Express x 1

Connectors

CP-602U-I/CP-602E-I:	DB9 male
CB-602I:	20-pin box header
Ports	2
Transfer rate	1 Mbps
Termination Resistor	120 ohms (selected by jumper)
Max.Module Support	4 pcs
Optical Isolation	2 KV

Software

Operating Systems	Windows 2000, Windows XP/2003/Vista/2008 (x86 and x64), Windows 7
Library	Visual Basic, C/C++

Physical Characteristics

Dimensions

CP-602U-I:	120 x 80 mm (4.72 x 3.15 in)
CB-602I:	90 x 96 mm (3.54 x 3.78 in)
CP-602E-I:	120 x 80 mm (4.72 x 3.15 in)

Environment Limits

Humidity (Operating)	5 to 95% RH
Operating Temperature	
Standard Models	0 to 55° C (32 to 131° F)
Wide Temp.Models	-40 to 85° C (-40 to 185° F)
Storage Temperature	-40 to 85° C (-40 to 185° F)
Regulatory Approvals	EN61000-3-3, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8, IEC61000-4-11, FCC Part 15 Class B

Power Requirements

Power Consumption

CP-602U-I:	365 mA @ 5 VDC
CB-602I:	380 mA @ 5 VDC
CP-602E-I:	780 mA @ 5 VDC

Warranty

Warranty period	5 years
	Details: See www.moxa.com/warranty

5. Pin Assignments

DB9
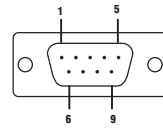
Pin	Signal
2	CAN_L
3	CAN_GND
5	Shield
7	CAN_H

20-pin
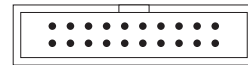
Pin	Signal	Pin	Signal
3	CAN0_L	13	CAN1_L
4	CAN0_H	14	CAN1_H
5	CAN_GND	15	CAN_GND
9	Shield	19	Shield

6. Certification

This product complies with Chinese RoHS (Restriction of Hazardous Substances) regulations for Electronic Information Products.