# *The I-7565 USB/CAN Converter*

Quick Start User Guide

1. Introduction

This manual introduces the user to the methods used to implement the I-7565 module into their applications in a quick and easy way. This will only provide with the basic instructions. For more detailed information, please refer to the I-7565 user manual located on the ICPDAS CD-ROM or download it from the ICPDAS web site:

http://www.icpdas.com/products/Remote_IO/can_bus/i-7565.htm

The goal of this manual is focused on helping users to quickly familiarize themselves with the I-7565 module and the USB/CAN communication converter. Here, we use two I-7565 modules (called the I-7565 A and the I-7565 B) as the example will demonstrate how to use the I-7565 modules. The architecture of this example is depicted below.
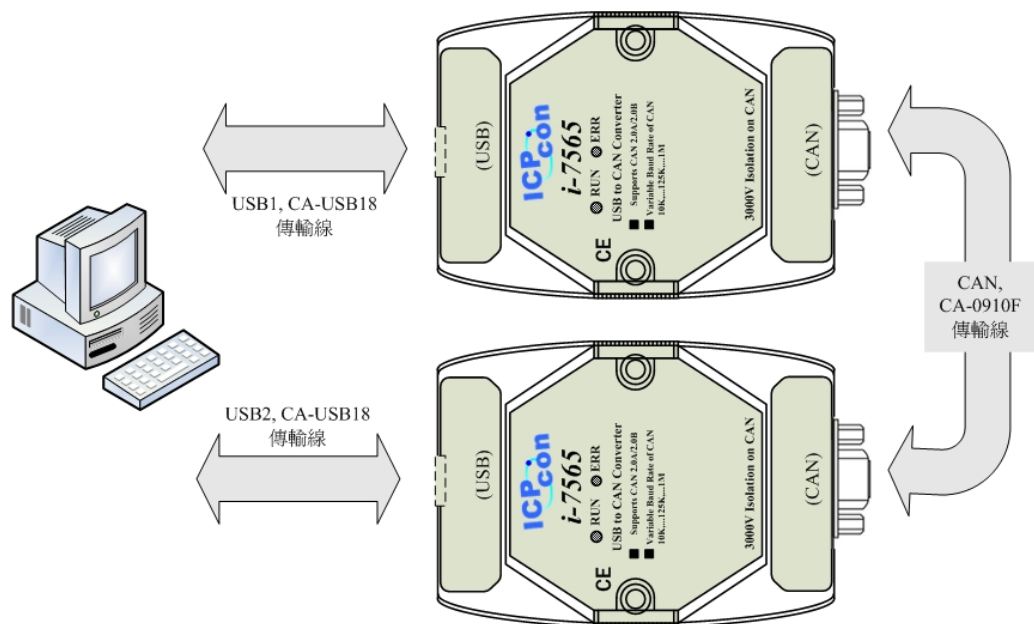
When the I-7565 receives a valid message with the ASCII strings format, it converts this message into a CAN message and transmits it into the CAN network. Based on the same reasoning, when a CAN message is received via the I-7565, the message will be transferred to a message by using the ASCII strings format through the USB port.

2. Hardware Installation

Users need to make a hardware connection between the CAN devices before the application. The details of this are illustrated below:

Step1: Set-up the 120Ω terminator resistor of module A and B.

Before you continue, if you have changed the settings from default then it is necessary to open the cover for each I-7565 and re-configure their JP3 jumpers to enable them again, as shown in below figure. However if the I-7565's still have their default settings then it is not necessary to open and reset them because the default configuration is enabled.
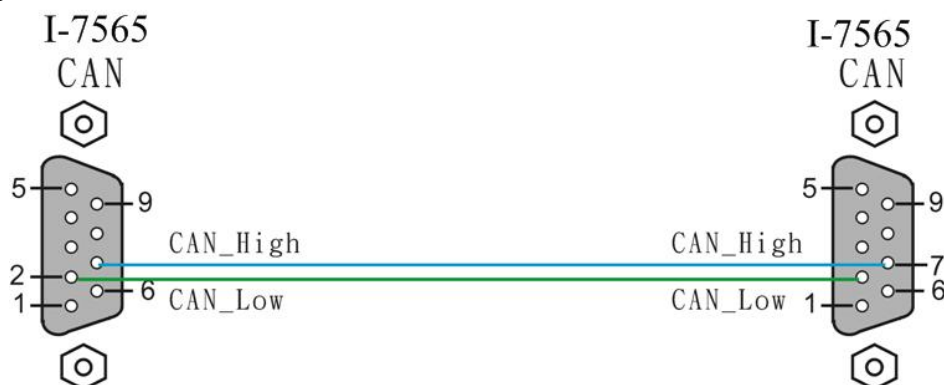

Enable (default), (Activate)
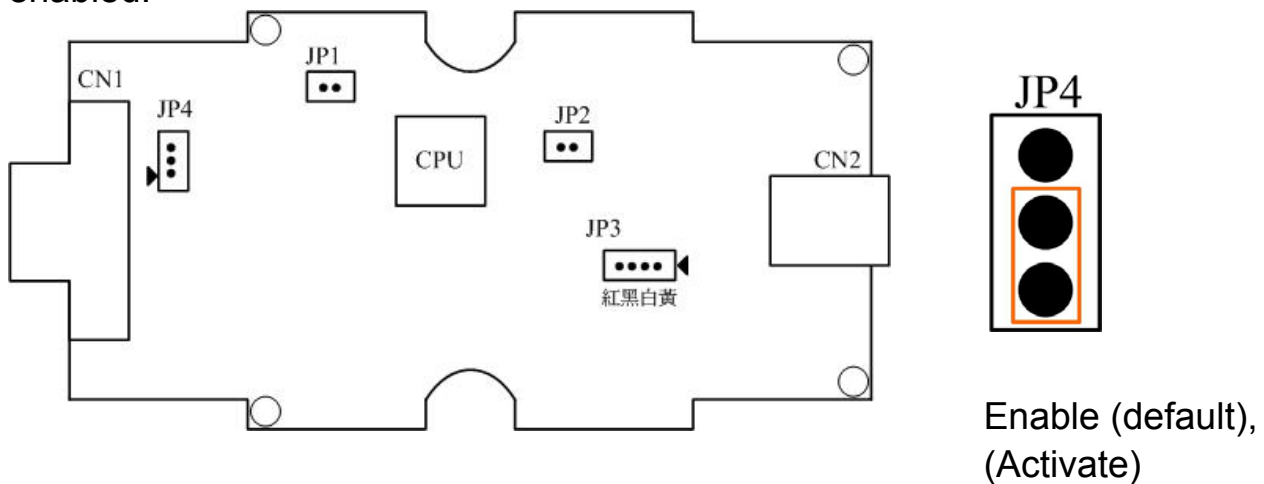
Step2: USB connection

Connect the USB ports of the I-7565 A and I-7565 B to the USB on the PC respectively.

Step4: CAN bus connection

Connect the CAN ports of these two I-7565 modules by using the following structure.
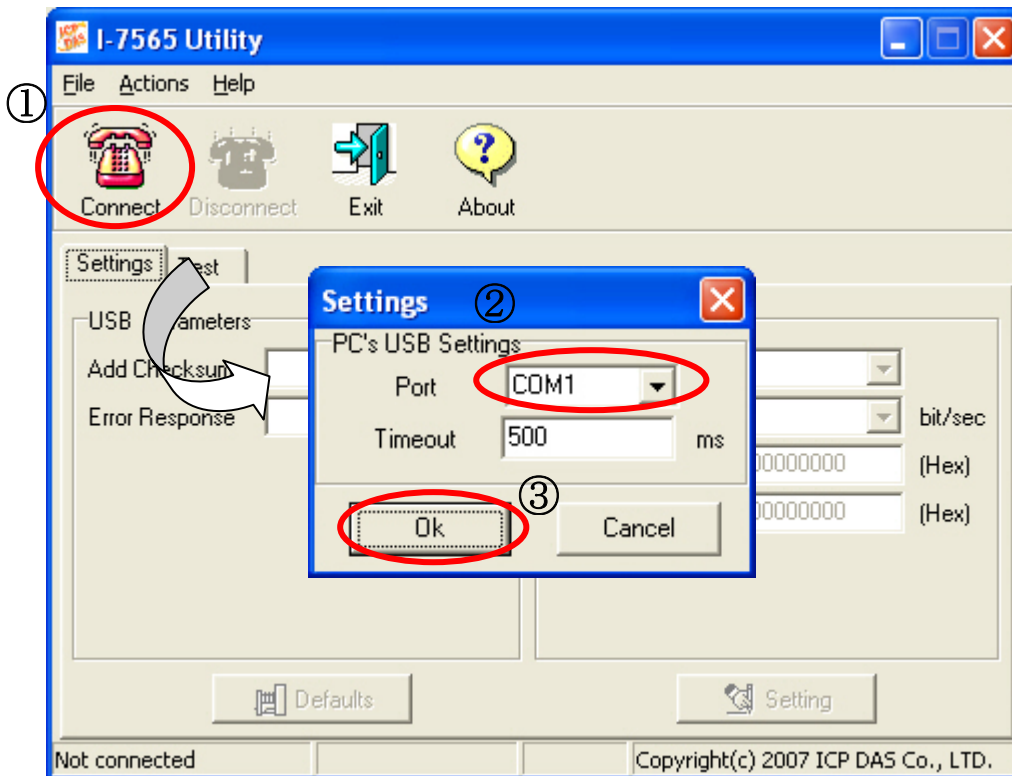
3. The I-7565 Parameters Configuration

Before starting the I-7565 converter tests, users need to configure the USB & CAN parameters via the I-7565 Utility tool. The details of this procedure are shown below.

Step1: Set the Init/Normal switches on the back of the I-7565 A to the "Init" position. Then, connect to the USB port of PC. The ON LED of the I-7565 A will be flash approximately once per second. That means that the I-7565 is in the configuration mode.

Step2: Run the I-7565 Utility. The "I7565.exe" is located in the can_cd\can\converter\i-7565\ folder on the companion CD-ROM or can be downloaded from the web site:

http://ftp.icpdas.com/pub/cd/can_cd/can/converter/i-7565/utility/

Step3: Click the "Connect" icon to select the USB port and Baud rate, which are used to connect with the I-7565 A. The steps are shown in the following figure.

Step4: Click the "Ok" button. If this process is successful, the I-7565 Utility shows the I-7565 A communication information as below.
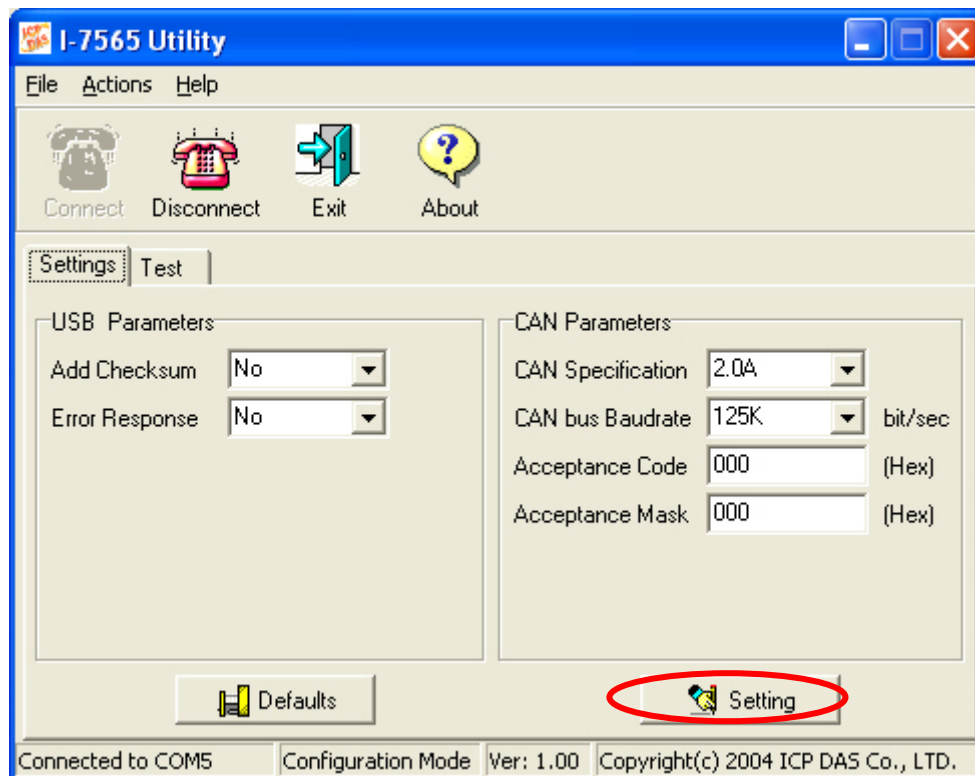
Step5: In order to match the USB parameters on the PC, please configure the USB parameters of the I-7565 A as follows:

Add Checksum : No
Error Response : No

Step6: Set the CAN baud rate of the I-7565 A. Here, this testing uses 125K bps.

Step7: Click the "Setting" button to save these parameters into the EEPROM of the I-7565 A.

Step8: Repeat Steps 1 to 7 to configure the I-7565 B converter with the same parameter settings as the I-7565 A.

4. Testing the I-7565s by using the I-7565 Utility

Step1: Set the Init/Normal switches on the back of the I-7565 A and I-7565 B to the "Normal" position. Then, turn on the DC power. The ON LED of the I-7565 A and B will always be turned on. It means these two I-7565 converters are working in the operation mode.

Step2: Run the I-7565 Utility, I7565.exe, two times. Then duplicate I-7565 windows will be displayed on the screen. One is named as Utility A and the other is called Utility B.

Step3: Select the "Test" tab and click the "Connect" icon on the tool bar of Utility A and Utility B to configure the USB Port1 and the USB Port2 on the PC. The COM1 and COM2 ports on the PC will be used for connecting with the I-7565 A and B converters, respectively.

Step4: After selecting the necessary Com port and baud rate, click the "Ok" button on Utility A and B, respectively. Then, Utility A is shown in the below figure and Utility B will be similar to Utility A.
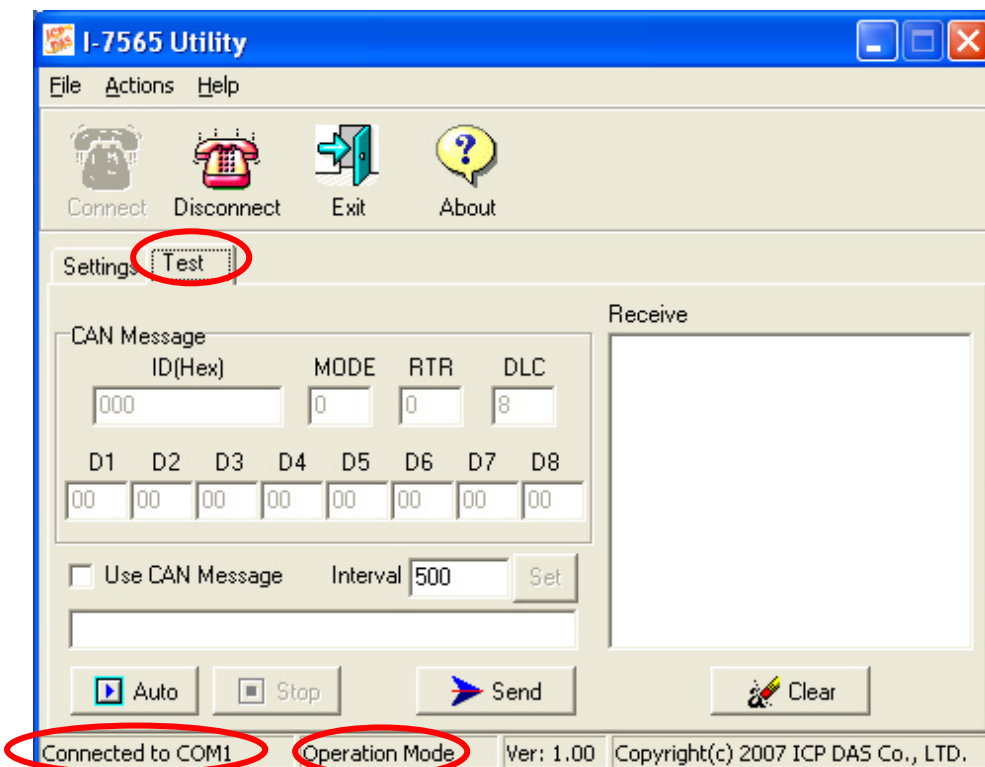

Step5: Check the "Use CAN Message" checkbox and input the value to the "CAN Message" frame on Utility A. Click the "Send" button. Then, the Utility will automatically transfer these CAN messages to

the command string with ASCII 0x0d, and send it out through the PC USB port. After the I-7565 A receives this command. It will transfer the message to the CAN message. So, the I-7565 B will receive the CAN message transmitted from I-7565 A. Then, convert this CAN message to the USB port of PC and send it out to another USB port on the PC. Detailed steps of this are shown in the following figure.

Utility A   Utility B
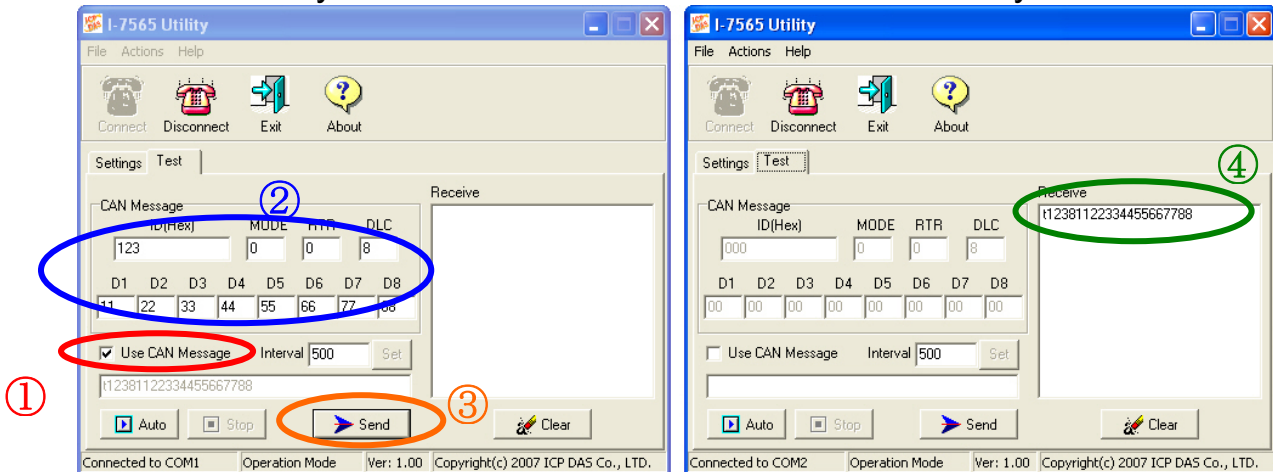
Step6: Similarly, the user can directly type the command string, "t0013AABBCC", into the EditBox on Utility B. Click the "Send" button to send this command to I-7565 B via the PC's USB port. When the user sends the message, Utility B will add the ASCII 0x0d to the end of the command string filed in the EditBox. Then the Utility will convert this message into a CAN message. After that, the I-7565 A will receive a CAN message and convert it into the command string. When the PC's USB port receives the command, the results will be shown on Utility A. The details of this procedure are depicted in the below figure.

Utility A   Utility B