

The I-7530A RS-232/485/422 to CAN Converter

Quick Start User Guide

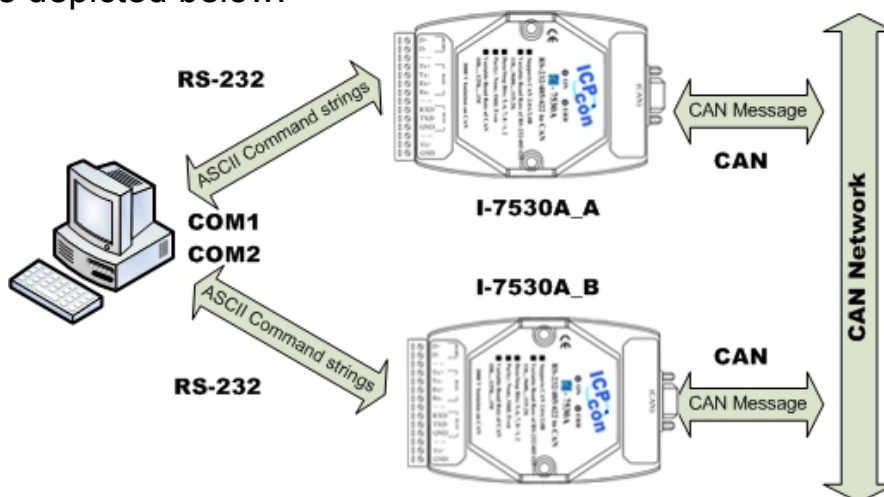
1. Introduction

This manual introduces the user to the methods used to implement the I-7530A 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-7530A user manual located on the ICPDAS CD-ROM or download it from the ICPDAS web site:

[Fieldbus_CD:\CAN\Converter\I-7530A\manual](file:///C:/Fieldbus_CD/CAN/Converter/I-7530A/manual)

http://www.icpdas.com/products/Remote_IO/can_bus/I-7530A.htm

The goal of this manual is focused on helping users to quickly familiarize themselves with the I-7530A module and the RS-232/485/422 to CAN communication converter. Here, we use two I-7530A modules (called the I-7530A_A and the I-7530A_B) as the example will demonstrate how to use the I-7530A modules. The architecture of this example is depicted below.



When the I-7530A receives a valid RS-232/485/422 message with the ASCII strings format, it converts this string 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-7530A, the message will be

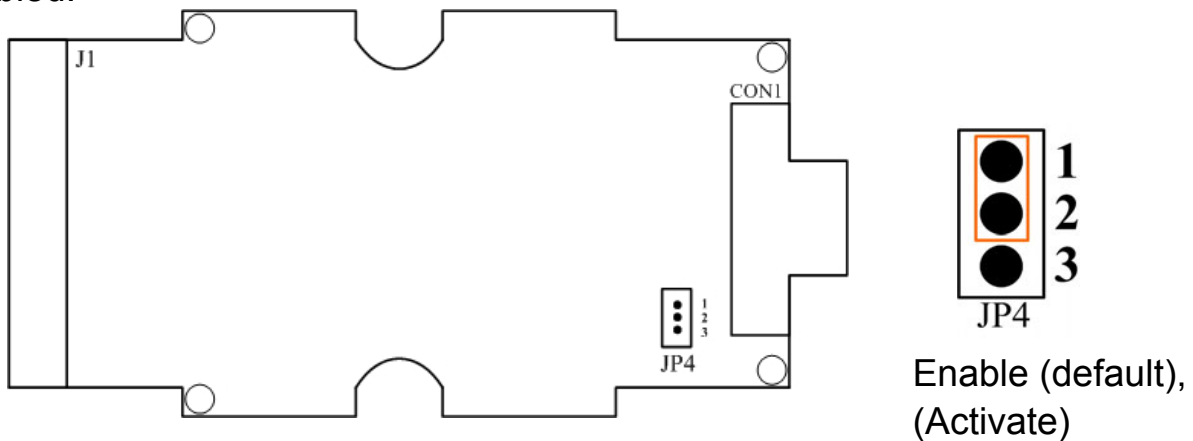
transferred to a RS-232/485/422 message by using the ASCII strings format through the RS-232/485/422 port.

2. Hardware Installation

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

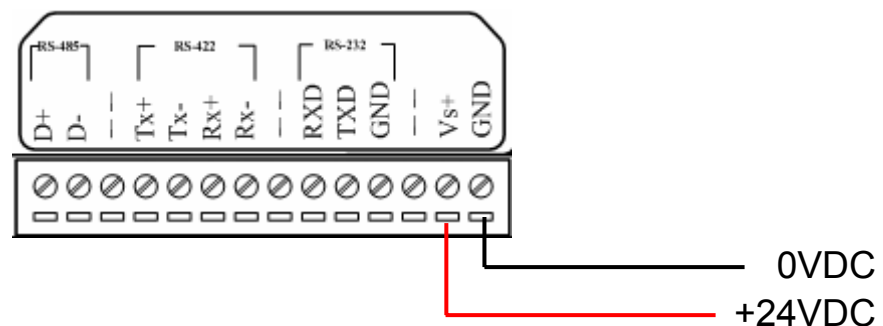
Step1: Set-up the 120Ω terminator resistor of module A and B.

Before you continue, if you have changed the settings from default then it is necessary to open the cover for each I-7530A and re-configure their JP3 jumpers to enable them again, as shown in below figure. However if the I-7530A's still have their default settings then it is not necessary to open and reset them because the default configuration is enabled.



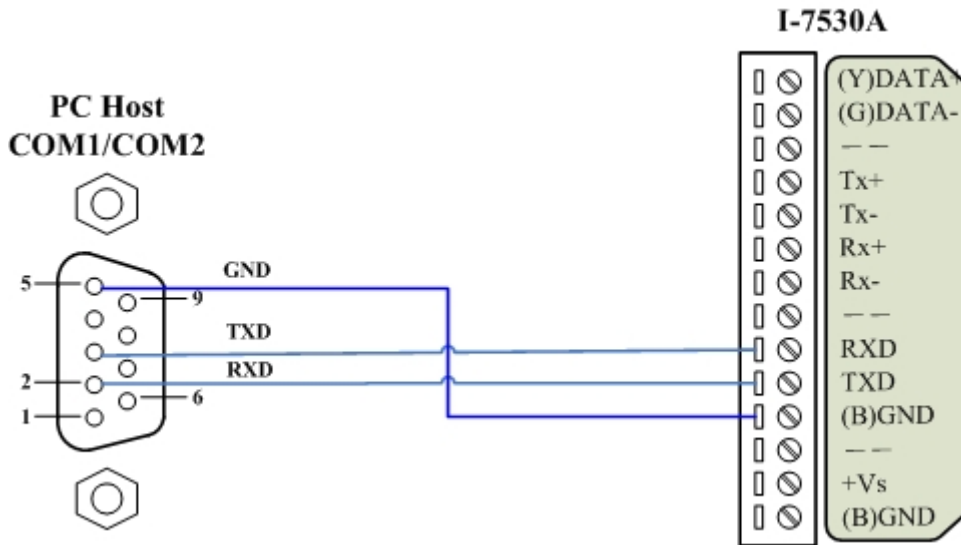
Step2: Power connection for the I-7530A_A and B

Connect the (R)+Vs and (B)GND pins of the I-7530A module to the DC power supply (10~30VDC).



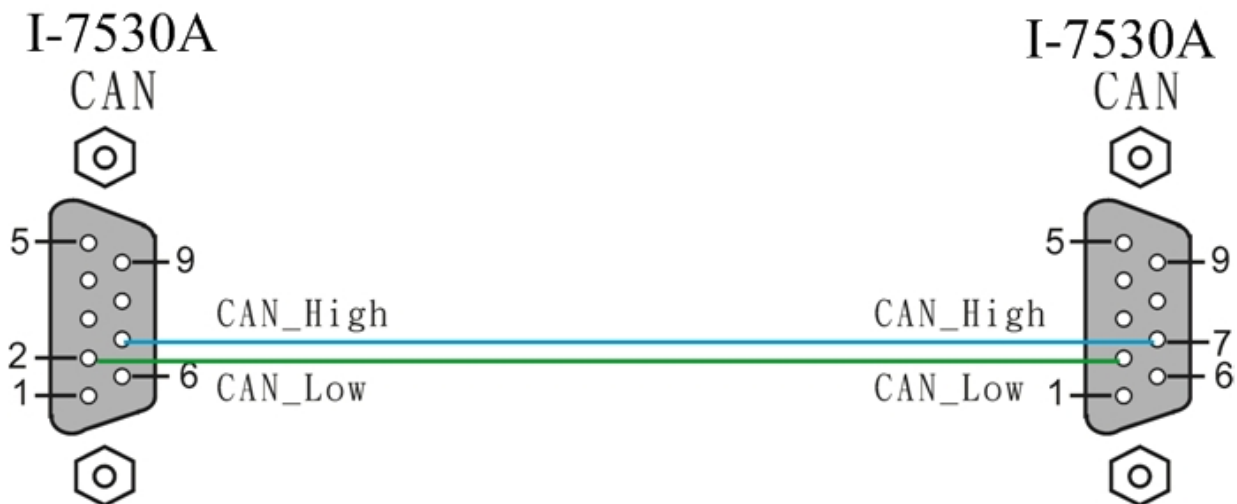
Step3: RS-232 connection

Connect the RS-232 ports of the I-7530A_A and I-7530A_B to the RS-232 COM1 and COM2 on the PC respectively.



Step4: CAN bus connection

Connect the CAN ports of these two I-7530A modules using the following structure.



3. The I-7530A Parameters Configuration

Before starting the I-7530A converter tests, users need to configure the RS-232/485/422 & CAN parameters via the I-7530A Utility tool. The details of this procedure are shown below.

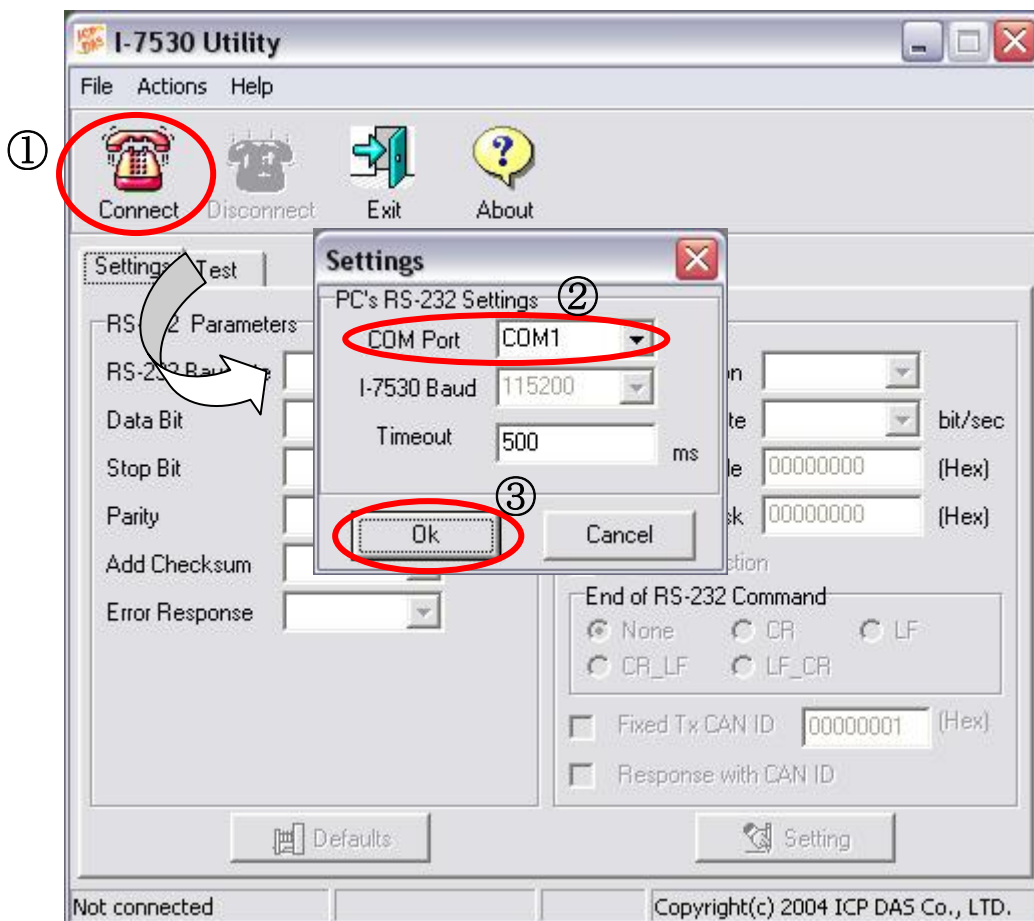
Step1: Turn off the DC power connected with these two I-7530A modules.

Step2: Set the Init/Normal switches on the back of the I-7530A_A to the “Init” position. Then, turn on the DC power. The ON LED of the I-7530A_A will be flash approximately once per second. That means that the I-7530A is in the configuration mode.

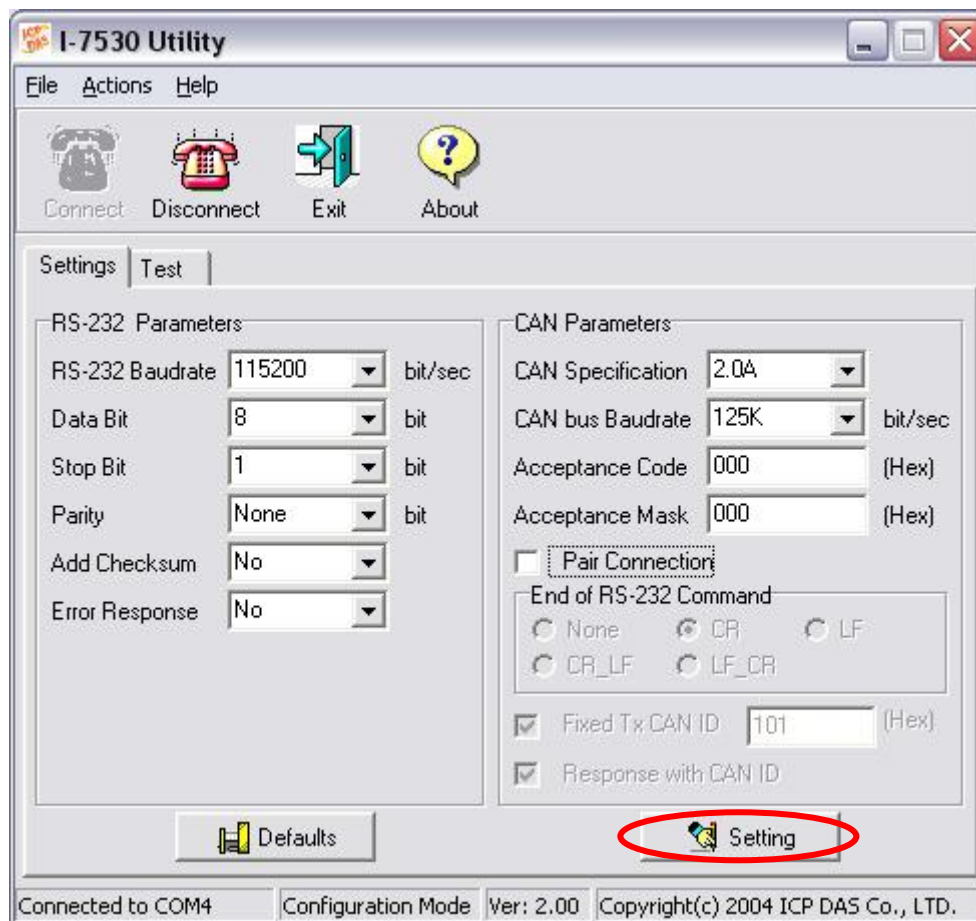
Step3: Run the I-7530 Utility. The “I7530.exe” is located in the fieldbus_cd\can\converter\I-7530A\utility folder on the companion CD-ROM or can be downloaded from the web site:

http://www.icpdas.com/download/can/Gateway_Converter.htm

Step4: Click the “Connect” icon to select the PC COM port and Baud rate, which are used to connect with the I-7530A_A. The default setting of the PC COM port is configured at 115200bps, 8 Data Bits, 1 Stop bit, no parity and no Checksum automatically. The steps are shown in the following figure.



Step5: Click the “OK” button. If this process is successful, the I-7530 Utility shows the I-7530A_A communication information as below.



Step6: In order to match the RS-232 parameters on the PC COM port, please configure the RS-232 parameters of the I-7530A_A as follows:

Baud rate : 115200bps
Data bits : 8
Stop bits : 1
Parity : None
Checksum : No

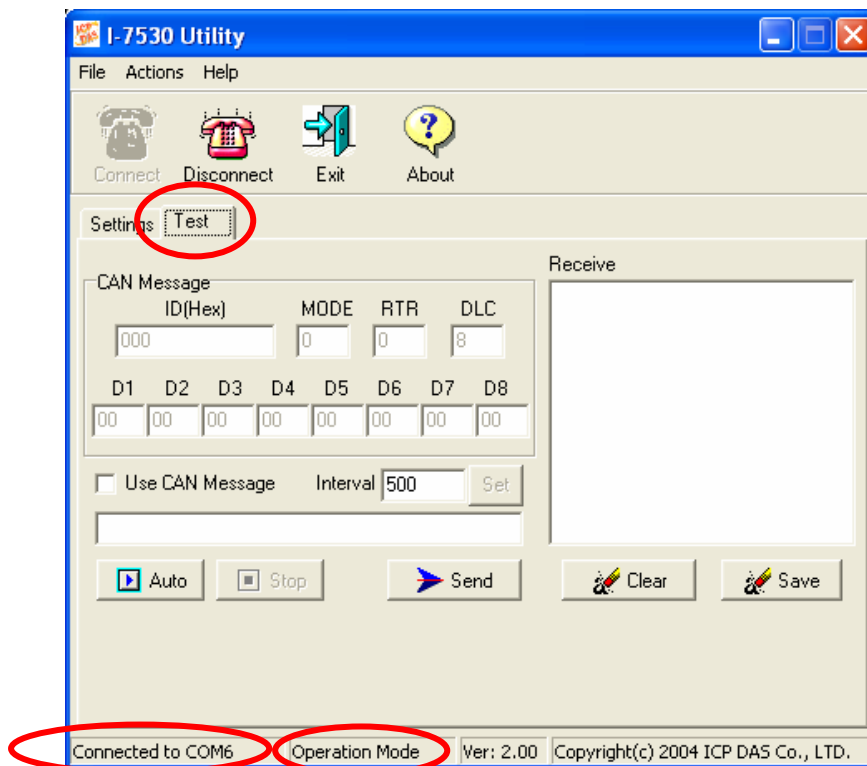
Step7: Set the CAN baud rate of the I-7530A_A. Here, use 125K bps for CAN baud, and uncheck the pair connection (For more information about pair connection, please refer to user manual section 3.4).

Step8: Click the “Setting” button to save these CAN/RS-232 parameters into the EEPROM of the I-7530A_A.

Step9: Repeat Steps 1 to 8 to configure the I-7530A_B converter with the same parameter settings as the I-7530A_A.

4. Testing the I-7530As by using the I-7530A Utility

- Step1: Turn off the DC power connected with these two I-7530A modules.
- Step2: Set the Init/Normal switches on the back of the I-7530A A and I-7530A_B to the “Normal” position. Then, turn on the DC power. The ON LED of the I-7530A_A and B will always be turned on. It means these two I-7530A converters are working in the operation mode.
- Step3: Run the I-7530 Utility, I7530A.exe, two times. Then duplicate I-7530A windows will be displayed on the screen. One is named as Utility A and the other is called Utility B.
- Step4: Select the “Test” tab and click the “Connect” icon on the tool bar of Utility A and Utility B to configure the RS-232 COM1 and the RS-232 COM2 on the PC. The COM1 and COM2 ports on the PC will be used for connecting with the I-7530A_A and B converters, respectively.
- Step5: 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.



- Step8: 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 RS-232 command string with ASCII 0x0d, and send it out through the PC RS-232 COM1 port. After the I-7530A_A receives this command, it will transfer the RS-232 message to the CAN message. So, the I-7530A_B will receive the CAN message transmitted from I-7530A_A. Then, convert this CAN message to the RS-232 message and send it out to the COM2 port on the PC. Detailed steps of this are shown in the following figure.

