

I-7565-CPM

Quick Start User Guide

1. Introduction

This Quick Start User Guide introduces users how to implement the I-7565-CPM module to their applications quickly. It helps you to familiarize yourself with the I-7565-CPM hardware configuration and utility operation. Therefore, it is only provided with the basic instructions. For more detail, please refer to the I-7565-CPM user manual in the product CD. Also, users can download the manual from the ICPDAS website.

CD path: `\CANopen\master\I-7565-CPM\user_manual`

Website: http://www.icpdas.com/root/product/solutions/industrial_communication/field_bus/canopen/master/i-7565-cpm.html

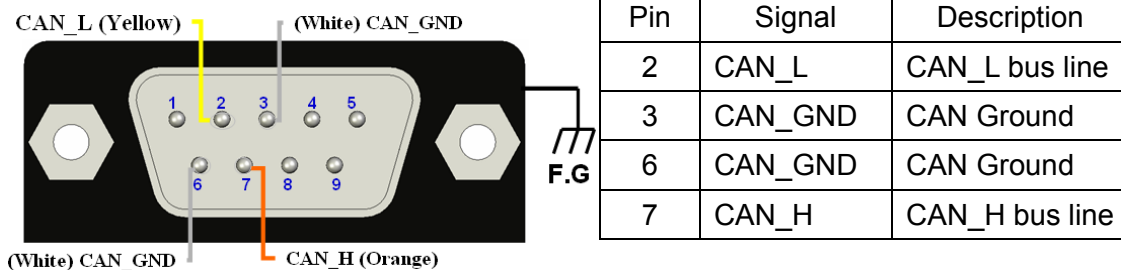
2. Hardware Structure



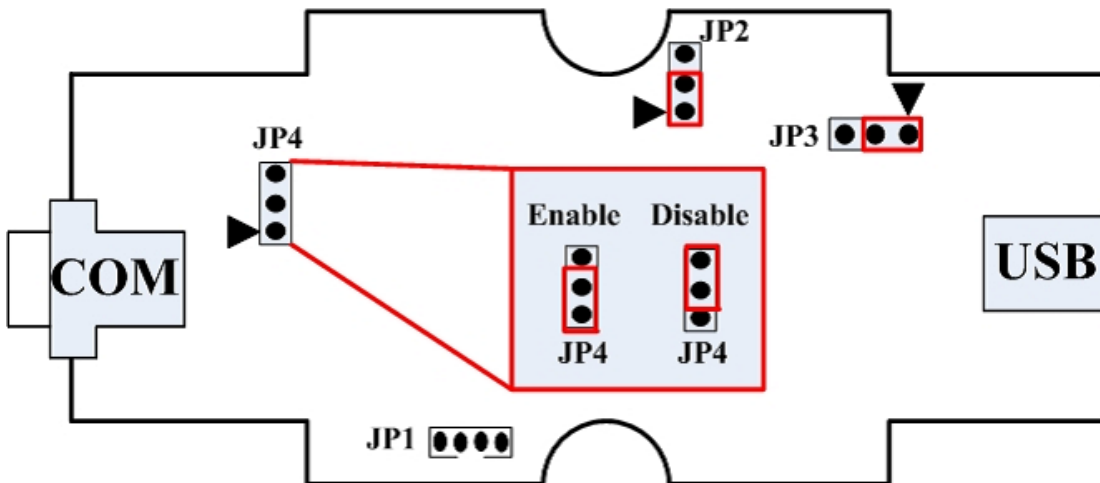
● **LED Indicator**

LED	Color	Description
PWR	Red	If the power is given normally, the PWR LED will be turned on always. This LED is off, please check the power supply or contact to your distributor
ACT	Orange	If the master is configured normally, the ACT LED will be turned on always. If not, please check the function “InitMaster” at your program.
Tx/Rx	Green	Each I-7565-CPM provides Tx/Rx LED to check the situations of the CAN messages transmission and reception. If the I-7565-CPM is transmitting or receiving a CAN message, the Tx/Rx LED will blink. If the bus loading of the I-7565-CPM is heavy, the Tx/Rx LED will be always turned on.
ERR	Red	The ERR LED indicates the error status of the CAN physical layer and indicates the errors due to missing any CAN message.

● **CAN Port Pin Assignment**



● **120Ω Terminator Resistor**



3. Install I-7565-CPM USB Driver

The USB driver of I-7565-CPM can be found at the product CD or download from the ICP DAS website. Double click the USB driver file to auto-install it.

CD path: \CANopen\master\I-7565-CPM\driver\

Website:

http://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/canopen/master/i-7565-cpm/driver/

4. Getting Start with CPMUtility

Before following the steps below, users need to prepare some hardware, an I-7565-CPM and a CANopen slave device.

Step 1: Set the JP4 of the I-7565-CPM to the enable position. Generally, the both ends of CAN bus (line topology) need 2 terminator resistances. Each of them is 120Ω.

Step 2: Connect the I-7565-CPM USB port to PC and connect the I-7565-CPM CAN port with the CANopen slave device as following figure. Then power on these hardware.



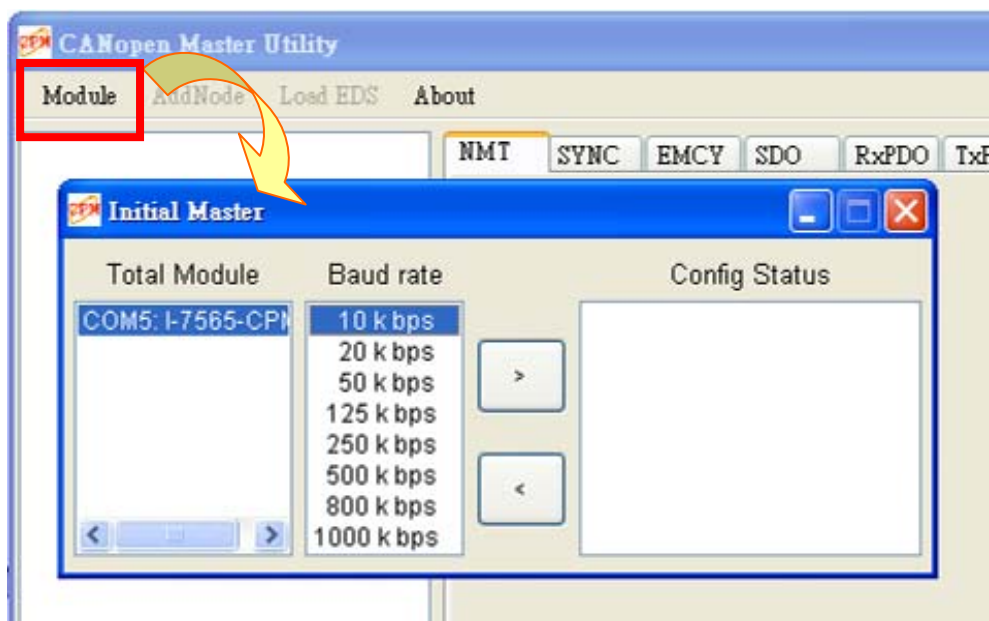
Step 3: Download the CPMUtility.exe and execute it. The paths for CPMUtility.exe and CPMUtility manual are as follows:

CD path: \CANopen\master\I-7565-CPM\utility\

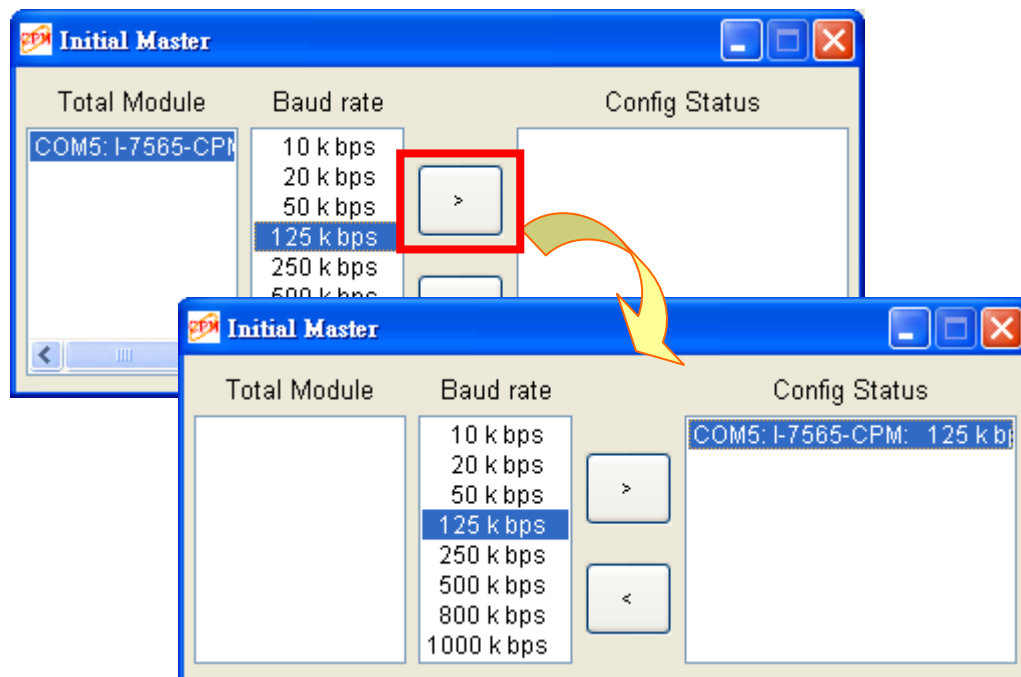
Website:

http://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/canopen/master/i-7565-cpm/utility/

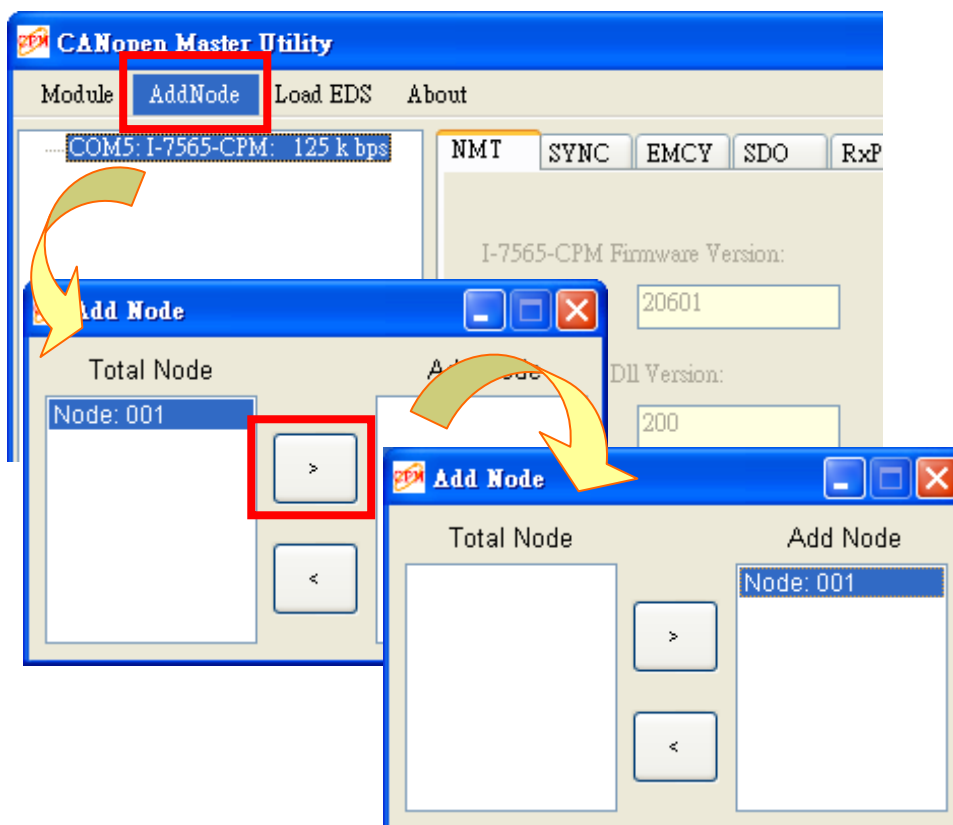
Step 4: After executing the CPMUtility, users need to click the "Module" item on the toolbar. Then the utility will show all the CANopen master devices that the utility has supported now on the host device.



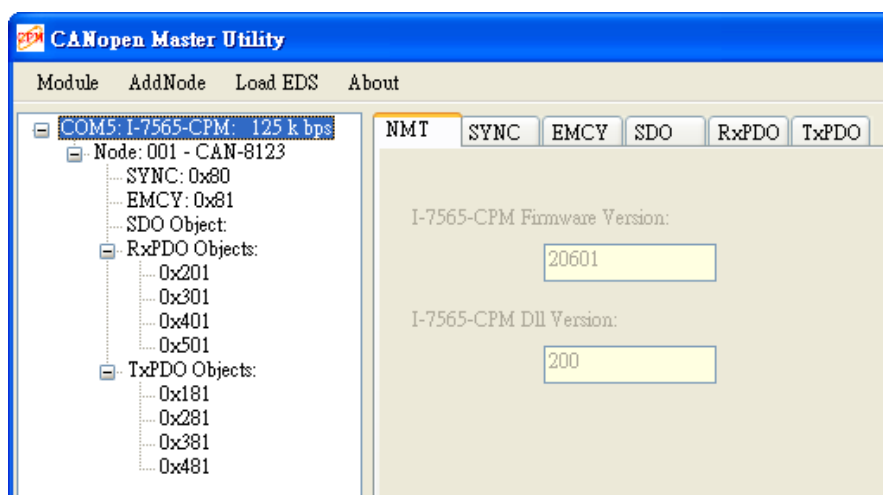
Step 5: Users can select the CANopen master and baud rate that want to be activated and click the ">" button. Then the CANopen master device will be initialized with the communication baud rate and list on the "Config Status" list.



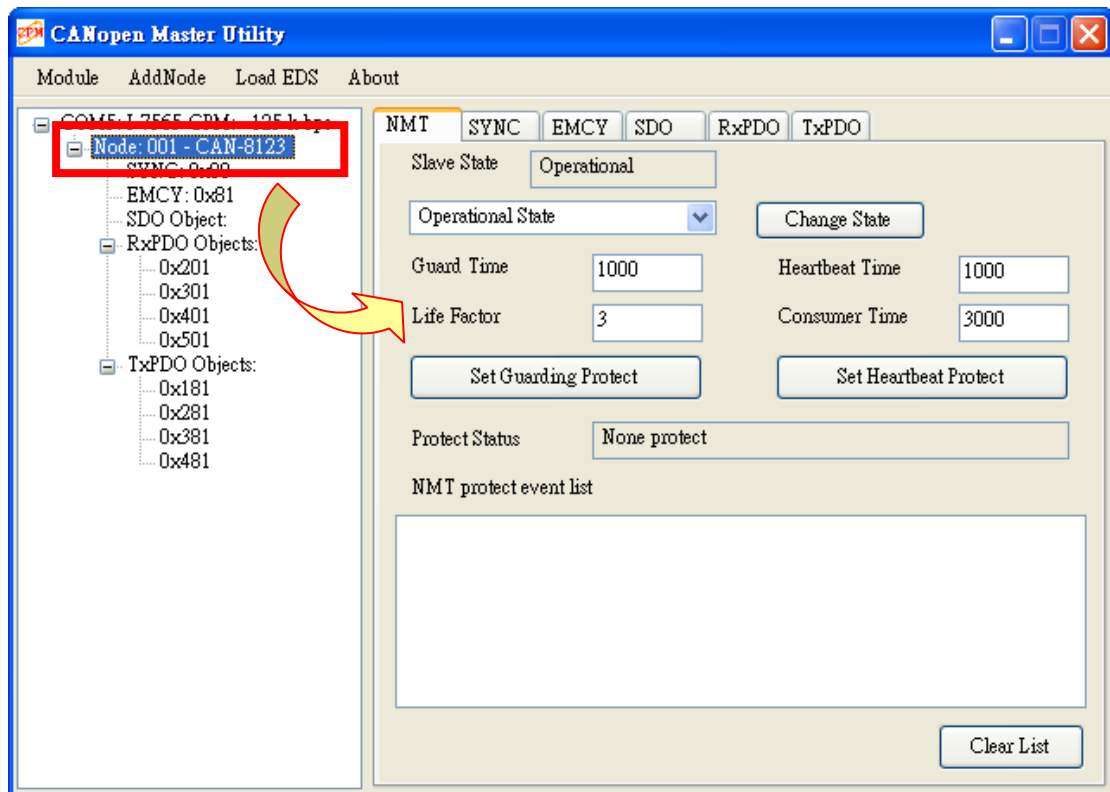
Step 6: After initializing the CANopen master device, users can click “Add Node” item to add CANopen slaves to the master. When users use “Add Node”, the master will scan its CANopen network first and list all the slaves at “Total Node” list on the network. Then users can select which slaves want to use and click “>” to add.



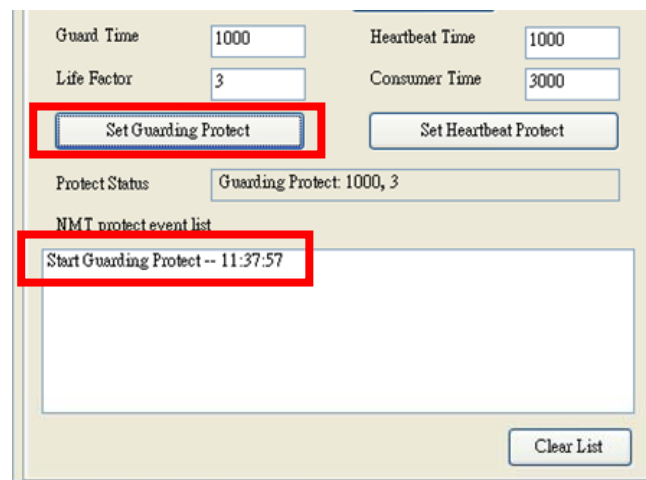
Step 7: The following picture is the main form after adding slaves. In this example, there are one slave shown on the tree view list. There are 7 parts, Master, Node, SYNC, EMCY, SDO, RxPDO, and TxPDO below.



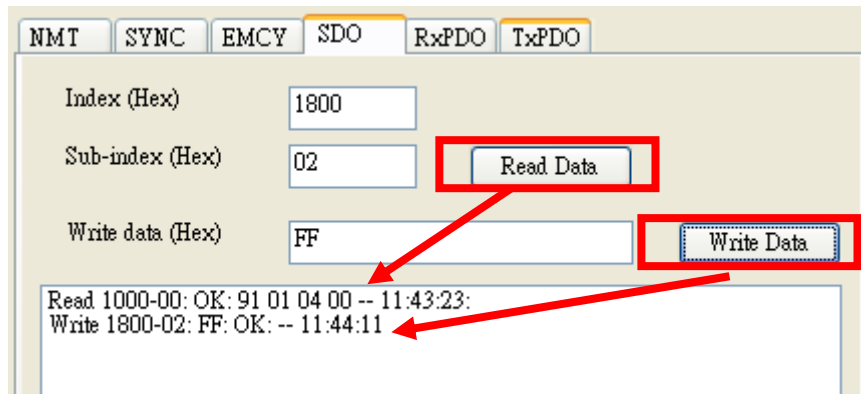
Step 8: Selecting the Node item such as “Node: 001 ...” in the tree list, the right dialog will show the NMT service tab of the slave node.



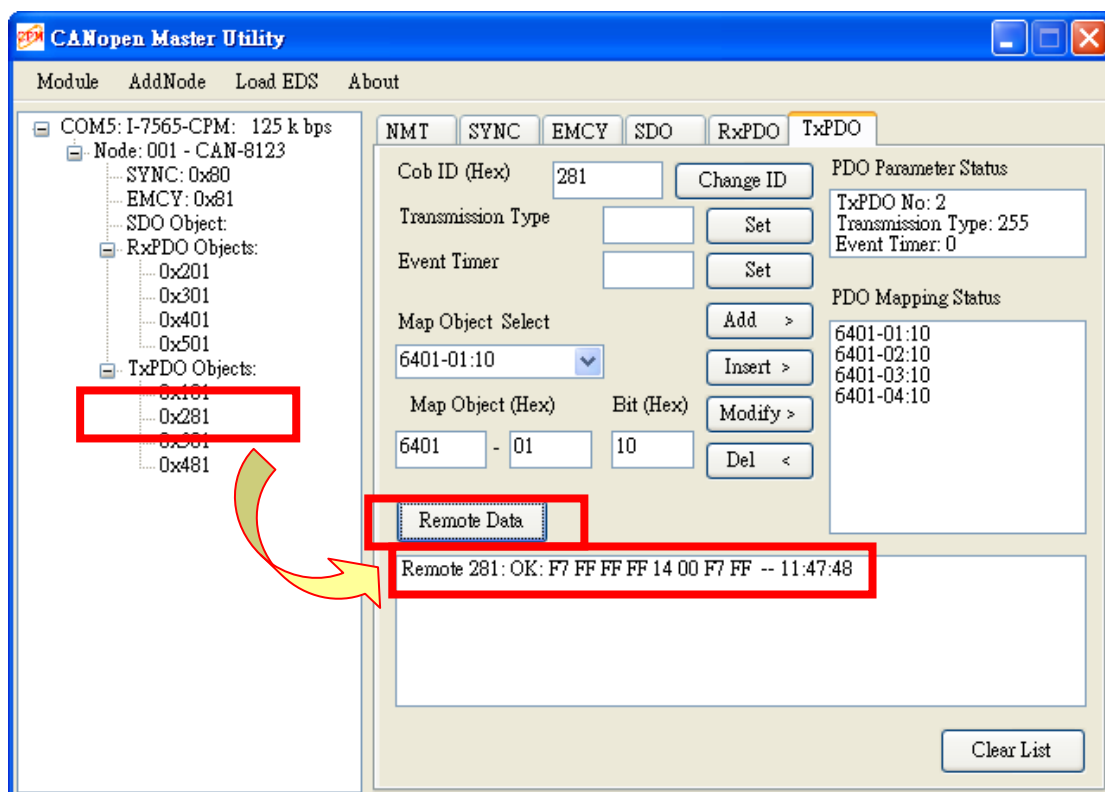
Step 9: The NMT service tab provides two NMT Error Control protocol, Node Guarding and Heartbeat. Users can click “Set Guarding Protect” button to start Node Guarding protect or click “Set Heartbeat Protect” to start Heartbeat protect. If one of these two protect mechanisms has been used, the protect status will show in the “Protect Status” text box. And if the Node Guarding Event or Heartbeat Event has occurred, the event will store in the “NMT protect event list” list.



Step 10: The SDO Communication page has two functions, “Read Data” and “Write Data”. After editing the “Index” and “Sub-index” text box, users can click “Read Data” to read the object data with the index and sub-index object address, or click “Write Data” to write the data of the “Write data” text box to the object.



Step 11: If you want to get the PDO data of TxPDO 0x281, select the 0x281 item and then click “Remote Data” button to get the data.



5. For Updating Firmware

Sometimes the user needs to update the I-7565-CPM firmware to newer version. FirmwareUpdate.exe is a utility tool and is useful for this purpose. It can be found in product CD or on website.

CD path: `\CANopen\master\I-7565-CPM\firmware\`

Website:

http://ftp.icpdas.com.tw/pub/cd/fieldbus_cd/canopen/master/i-7565-cpm/firmware/

The following steps show how to update I-7565-CPM firmware with the FirmwareUpdate.exe.

Step1: Switch the switch behind the I-7565-CPM to “Init” and then connect the USB port to PC. Now the three LED, ACT, Rx/Tx, and ERR, will take turns flashing.

Step2: Run the FirmwareUpdate.exe. Select correct virtual Com port of the I-7565-CPM and the new firmware. Then, click the button “Start Download”.

