

# OpenCAN Protocol



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# I. General

OpenCAN is developed by WECON software engineers; it is based on CAN2.0 standard. OpenCAN is flexible; users could customize the protocol settings. But in PI series, only PI8000 could support OpenCAN, PI3000 cannot support OpenCAN.

## II. Settings

### 2.1 Select OpenCAN protocol

Please click “Project”->”Communication” to open setting window, as FIG 1 shows, click “Setting” and select OpenCAN protocol.

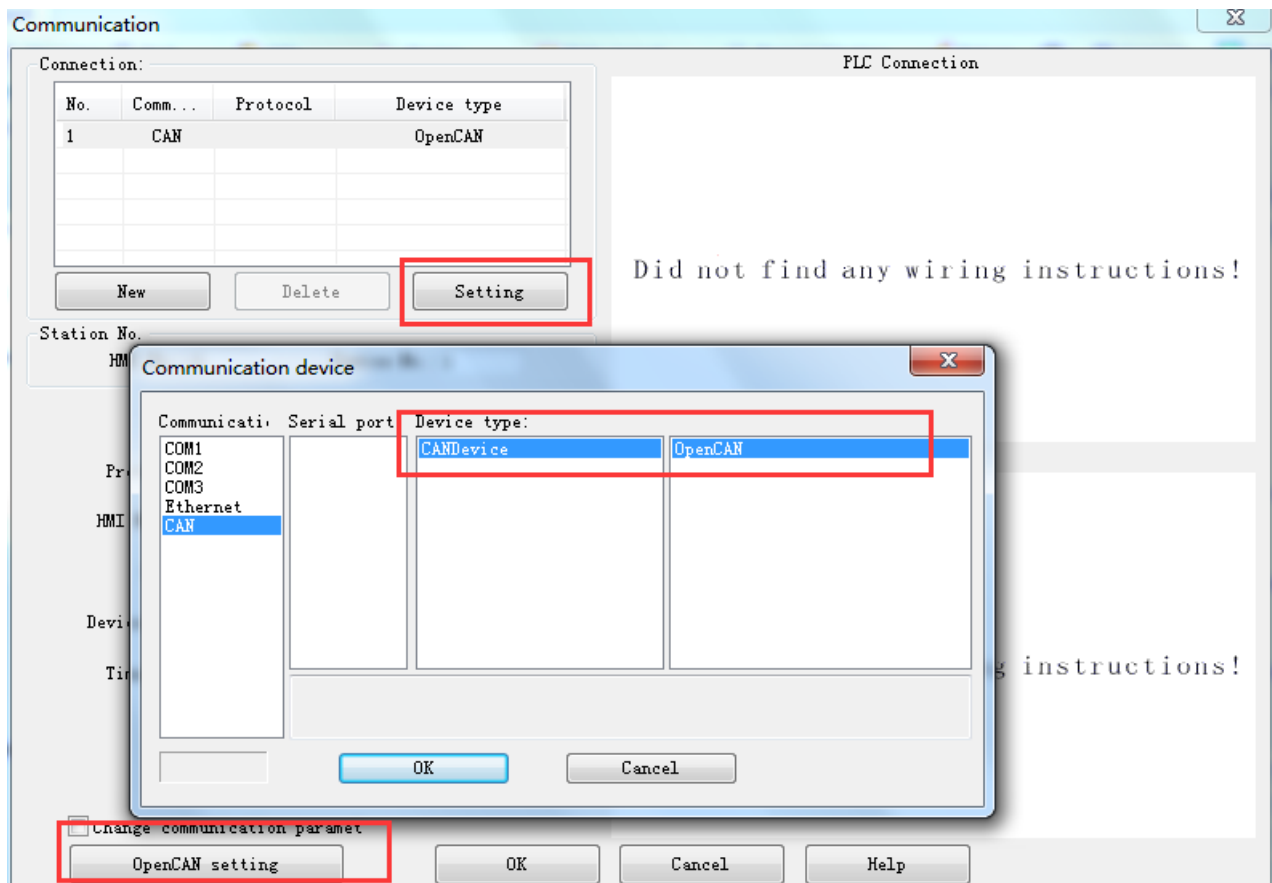


FIG 1

Finishing selecting, please click “OpenCAN setting” button in “Communication” windows to open OpenCAN setting windows as FIG 2 shows

- 1) **Add:** add a frame related to the register address;
- 2) **Frame manager:** it shows the main parameters of each frame;
- 3) **Modify:** modify frame;
- 4) **Delete:** delete the elected frame. If there's no selected frame, it will delete the first frame;
- 5) **Empty:** delete all the frames;
- 6) **Browse:** display “.xml” type configuration file in IE;

7) **OK**: finish the setting for frame and exit.

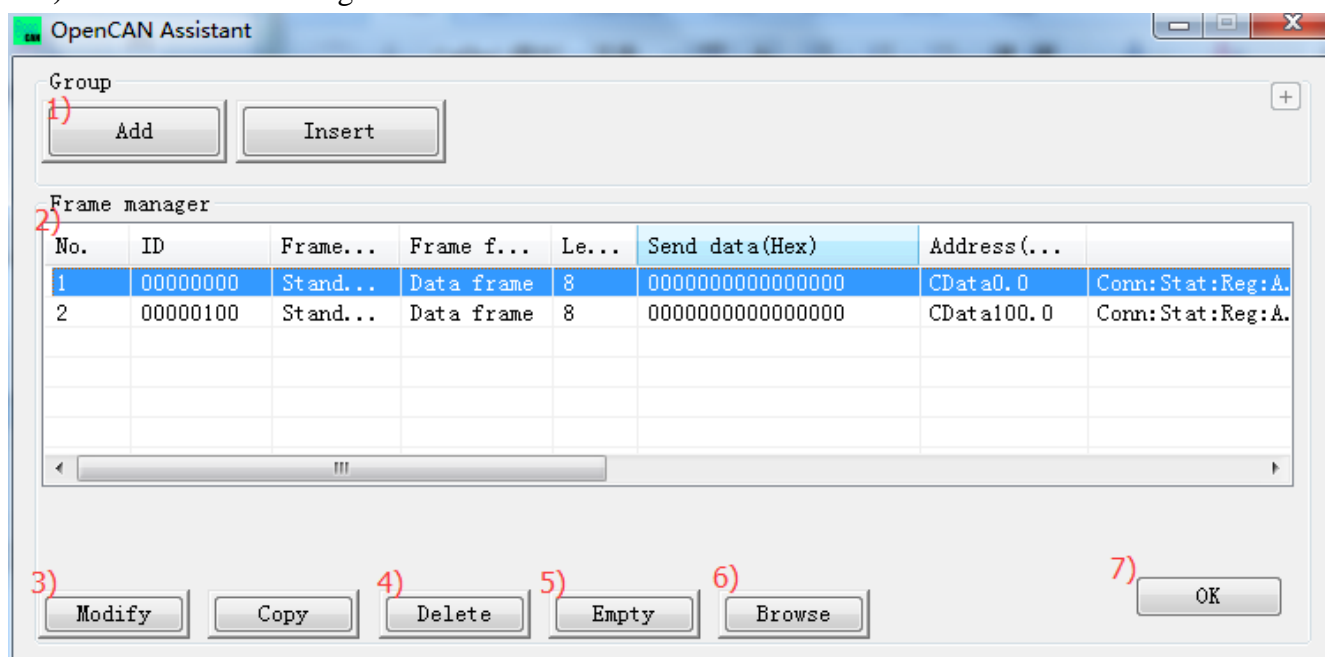


FIG 2

## 2.2 Data access

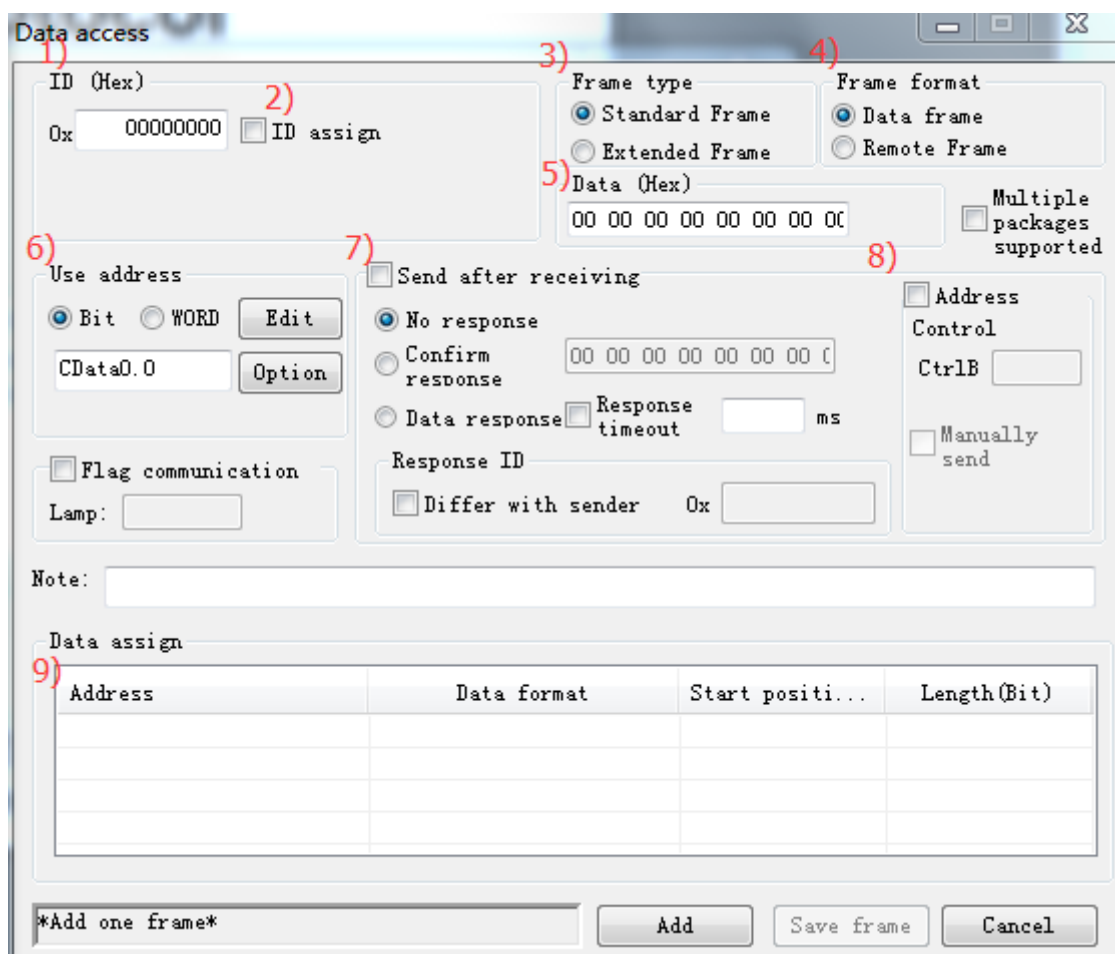
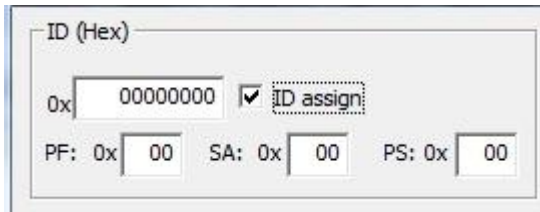


FIG 3

Please click “Add” button to open “Data access” window as FIG 3 shows.

- 1) **ID:** set the ID for a CAN frame. It’s hexadecimal type;
- 2) **ID assign:** divide ID as PF, PS and SA parts;



- 3) **Frame type:** select the frame as standard type or extension type;
- 4) **Frame format:** select the frame as data frame or remote frame;
- 5) **Data:** set the data part of CAN frame. Two-bits stand for a hexadecimal. Divide by space. The most support 8 bytes data according to CAN definition;

6) **Use address:** set the register address related to the CAN frame. The address is corresponding to the register address in the configuration software. The data are distributed to the address sequent. The detailed setting of address, please view 2.3;

7) **Interaction:** HMI send frame and the devices process and respond

**Send after receiving:** HMI will process and respond after receiving command.

**No response:** device receives any information from this HMI

**Confirm response:** The HMI or devices will check the data received then respond to it.

**Data response:** HMI or devices will respond the designated data when receiving the frame.

**Response ID:** The response ID can differ with the sending ID by this setting.

8) **Address:** Send when the designated address value is not 0.

**Ctrlbit:** CtrlBit address range is 0~255, the CAN command will only work when the address value is 1.

**Manually send:** Send once for each time the address is triggered.

9) **Data assign:** it is display the detail assigned information about this frame.

## 2.3 Register address edit interface

When user set address for frame, please click “Option” for detailed settings, the setting window as FIG 4 shows.

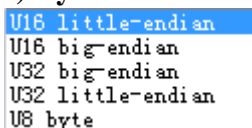
1) **Current address:** display the register type and address set in data access interface

2) **Trigger:** based on the two operations of register read and write.

If select read, the address read the data in device. The read mode is repeat-sending the frame that customer set.

If select write, the address writes the data on the HMI to the device. The mode is HMI will send the frame to device once when the HMI is done a write operation.

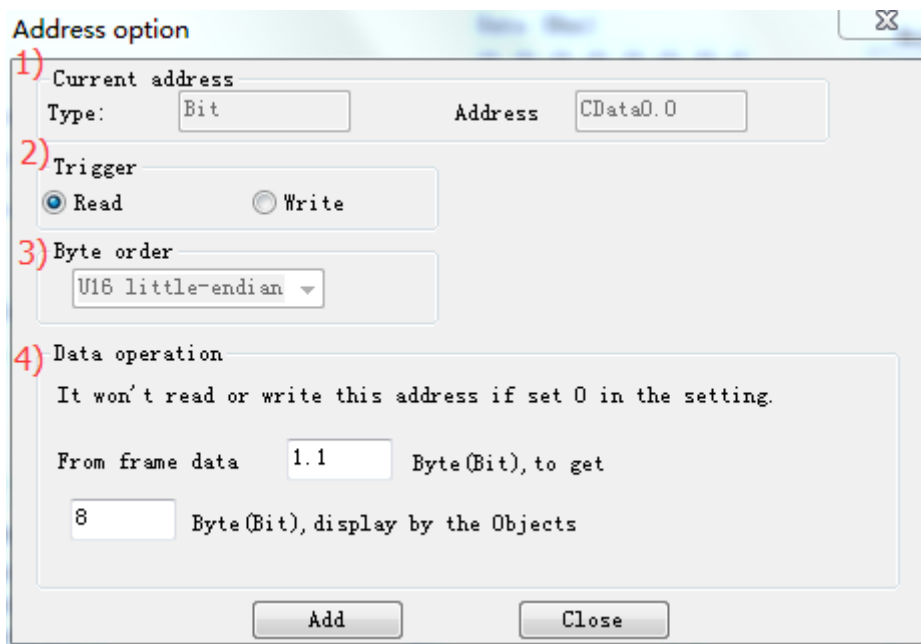
3) **Byte order:** there are four type for word address



4) **Data operation:** set the read and write operation in trigger condition.

If the trigger condition is read-operation, we need to set the position and length of data which current address will get.

If the trigger condition is write-operation, there are two situations.



**Address option**

1) Current address  
Type:  Address:

2) Trigger  
☒ Read ☐ Write

3) Byte order

4) Data operation  
It won't read or write this address if set 0 in the setting.  
From frame data  Byte(Bit), to get  
 Byte(Bit), display by the Objects

FIG 4

### III. Example

In this demo, there are 2 frames, one is for reading from device, its ID is 0, and the other is for writing to device, its ID is 100.



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# OpenCAN Protocol

Read from device, ID:0

Write to device, ID:100

Button 1 Button 2 Button 3 Button 4

Button 5 Button 6 Button 7 Button 8