孕龍科技股份有限公司
Zeroplus Technology Co., Ltd.

# SPECIFICATION

## MODEL: B12009-SD3.0

**PART NO:** _____

**VERSION:** V1.00

| Approver | | Check | Design |
|---|---|---|---|
| GM | PM | | |
| | | | |

| Customer Confirm |
|---|
| |

*Please fax the file to Zeroplus Technology after signing.

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# Content





 

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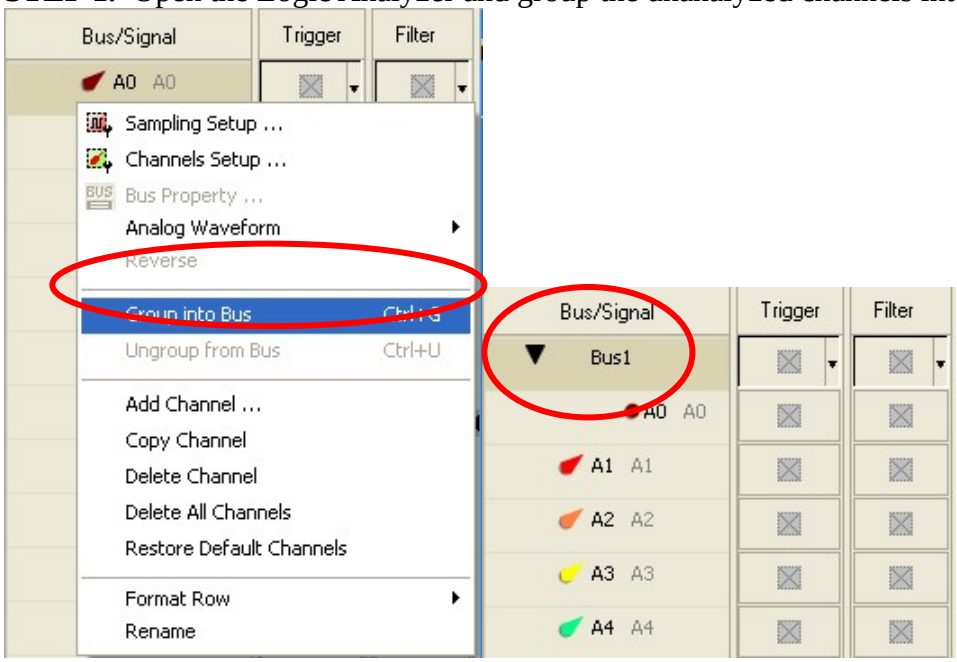
# 1 Software Register

Please register the software as the following steps:

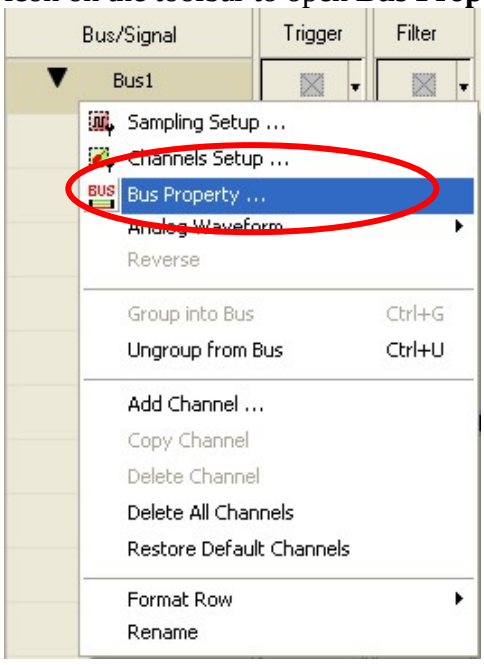
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ Remark2: We won't have additional notice for you, when there is any modification of the module specification. If there is some unconformity caused by the module version upgrade, users should take the module software as the standard.

**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key**.




**STEP 2.** Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.





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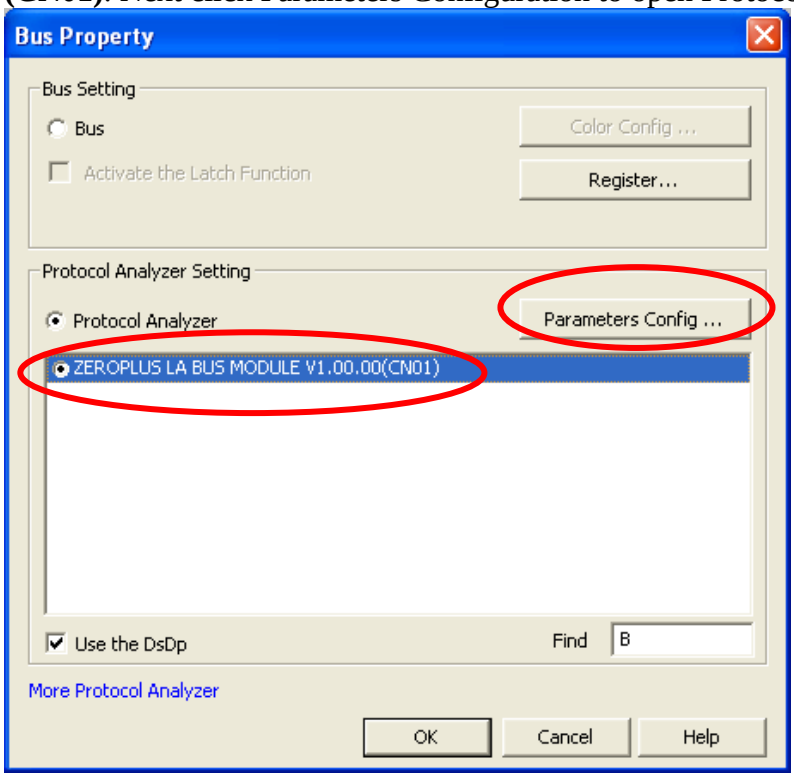
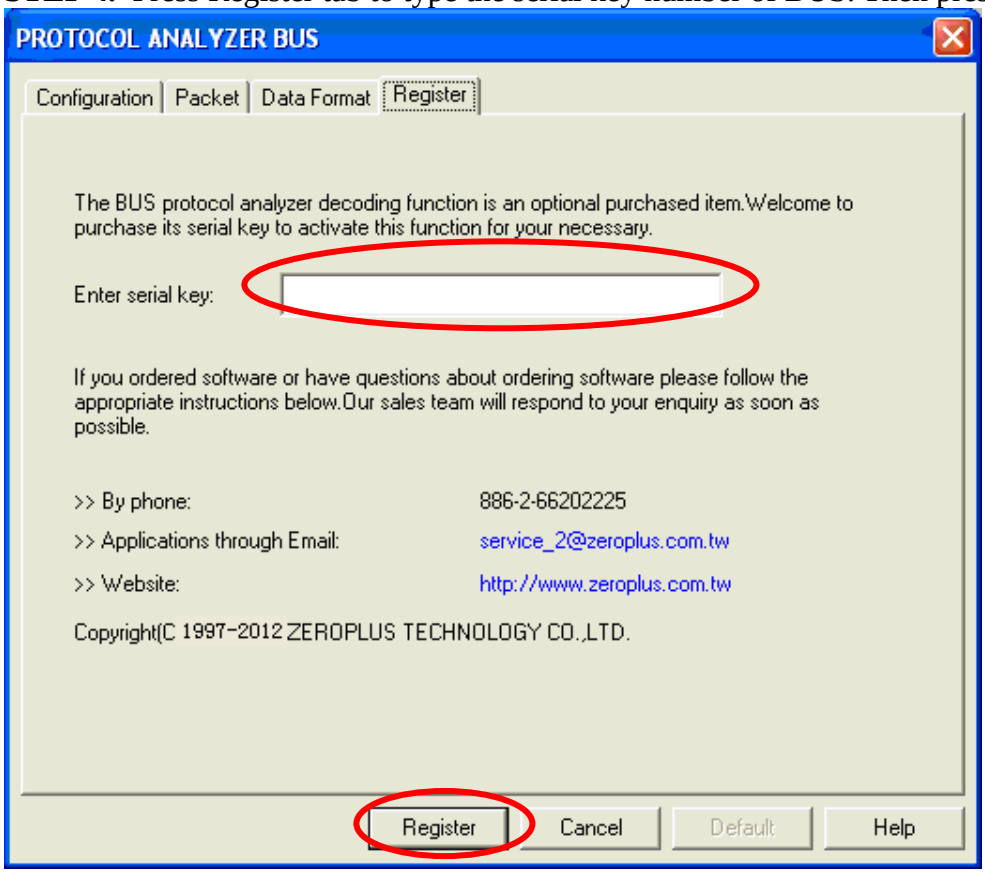
**STEP 3.** Select the Protocol Analyzer, and then choose **ZEROPLUS LA BUS MODULE V1.00.00 (CN01)**. Next click Parameters Configuration to open Protocol Analyzer Bus dialog box.




**STEP 4.** Press Register tab to type the serial key number of BUS. Then press Register.



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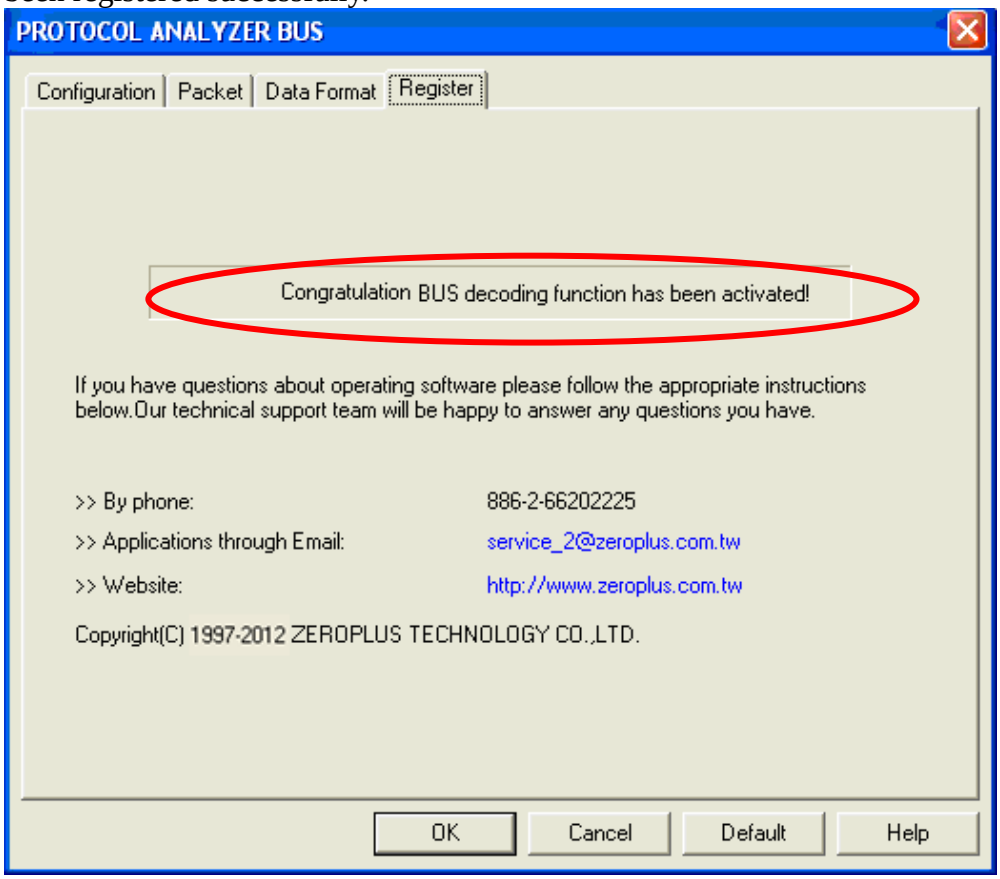
**STEP 5.** After pressing the Register button, following dialog box will appear, it denotes that the BUS has been registered successfully.



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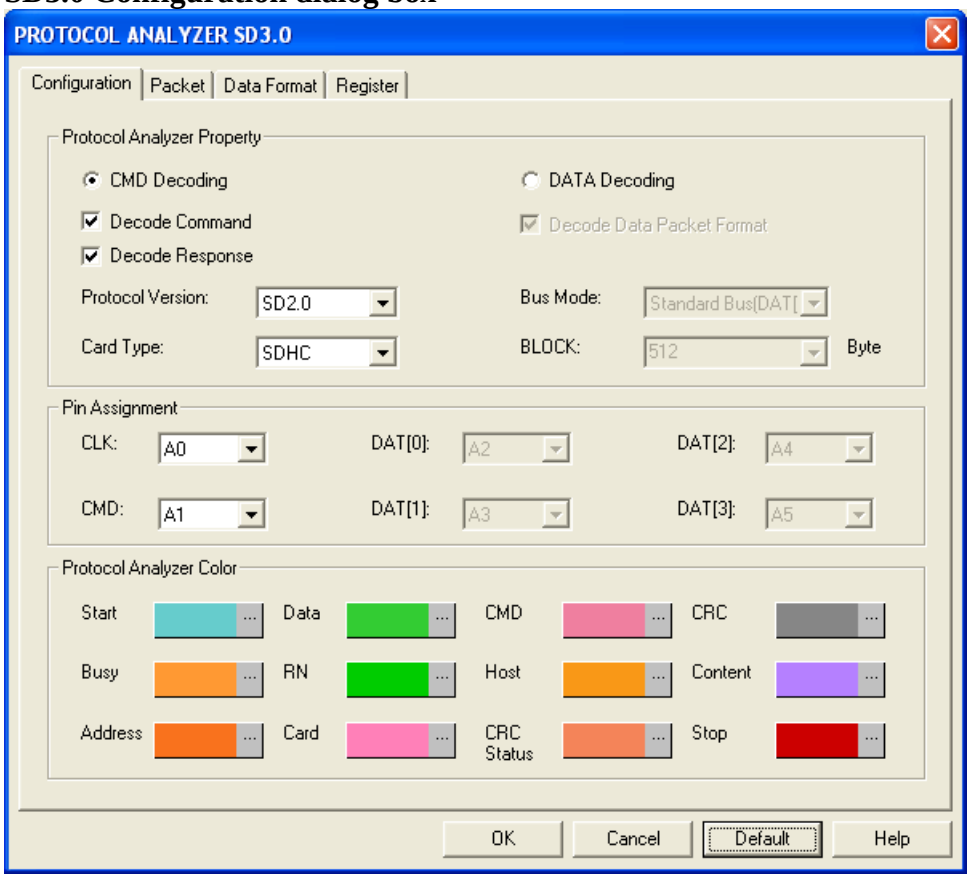
# 2 User Interface

Please refer to the below images to do settings of SD3.0 module.

**SD3.0 Configuration dialog box**




**Protocol Analyzer Property**

Users can select CMD or Data as the decoding format. Selecting CMD Decoding can decode Command and Response; selecting DATA Decoding can decode Data Packet Format.

**Protocol Version**: There are SD1.1/SDIO, SD2.0 and SD3.0 to choose; it is SD2.0 by default.

**Card Type**: There are SDSC, SDHC and SDXC(supported only by SD3.0) to choose; it is SDHC by default.

**Bus Mode**: If the Data Decoding is selected, users can set Standard Bus(DAT[0]), Wide Bus(DAT[3..0]) or DDR50(DAT[3..0])(not supported by SDSC) as the bus mode.

**BLOCK**: It only can be set when Data Decoding and SDSC are selected. Users can set its value between 1 Byte to 32767 Byte or select 512 Byte, 1024 Byte or 2048 Byte from the pulldown menu.

**Pin Assignment**

CLK Line, CMD Line and DAT0-3 Lines.

**Protocol Analyzer Color**

The color can be varied by users.

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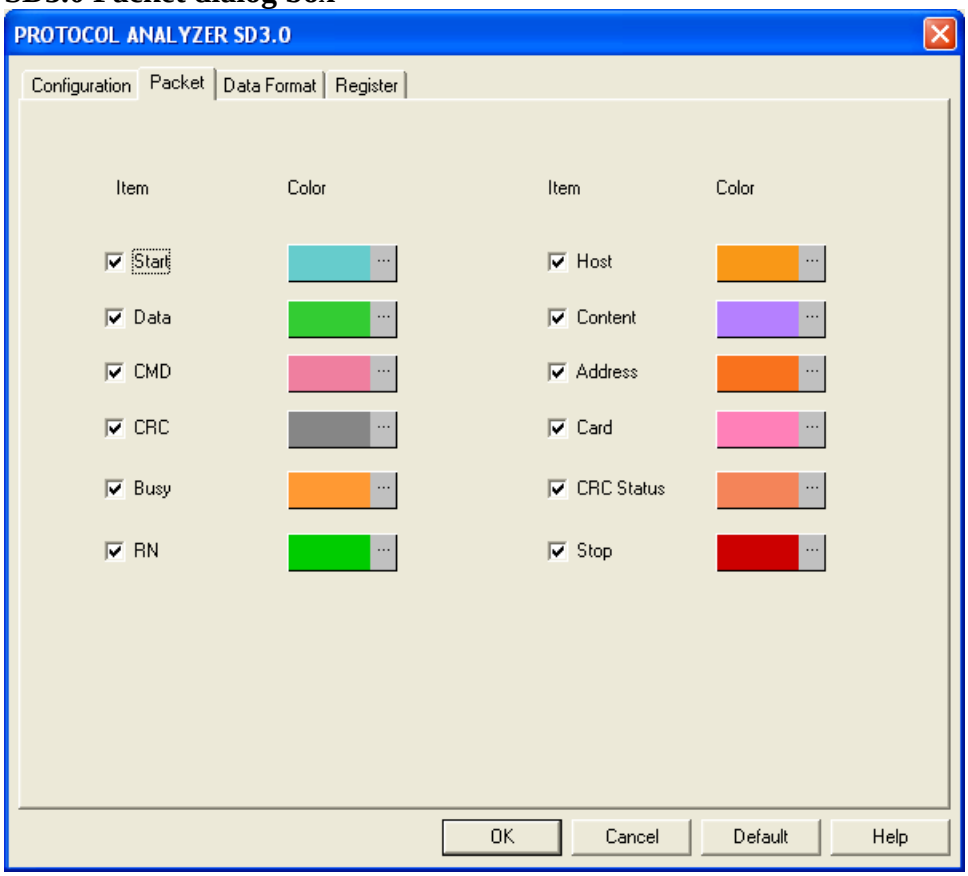
**SD3.0 Packet dialog box**




In the Packet part, users can select the items to be displayed and their colors as their requirements.

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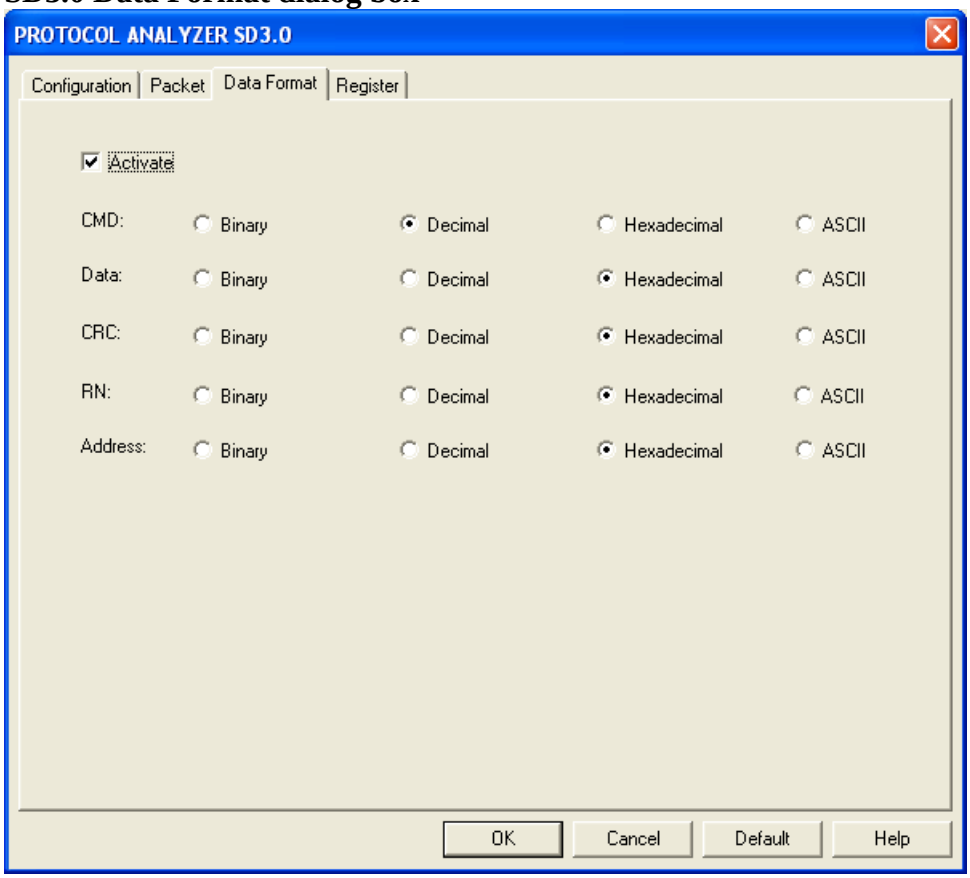
**SD3.0 Data Format dialog box**




Users can set the CMD, Data, CRC, RN and Address as their requirements. When selecting the option Activate, the data format is decided by the settings in the Protocol Analyzer; when not selecting the option Activate, the data format is decided by the settings in the main program.

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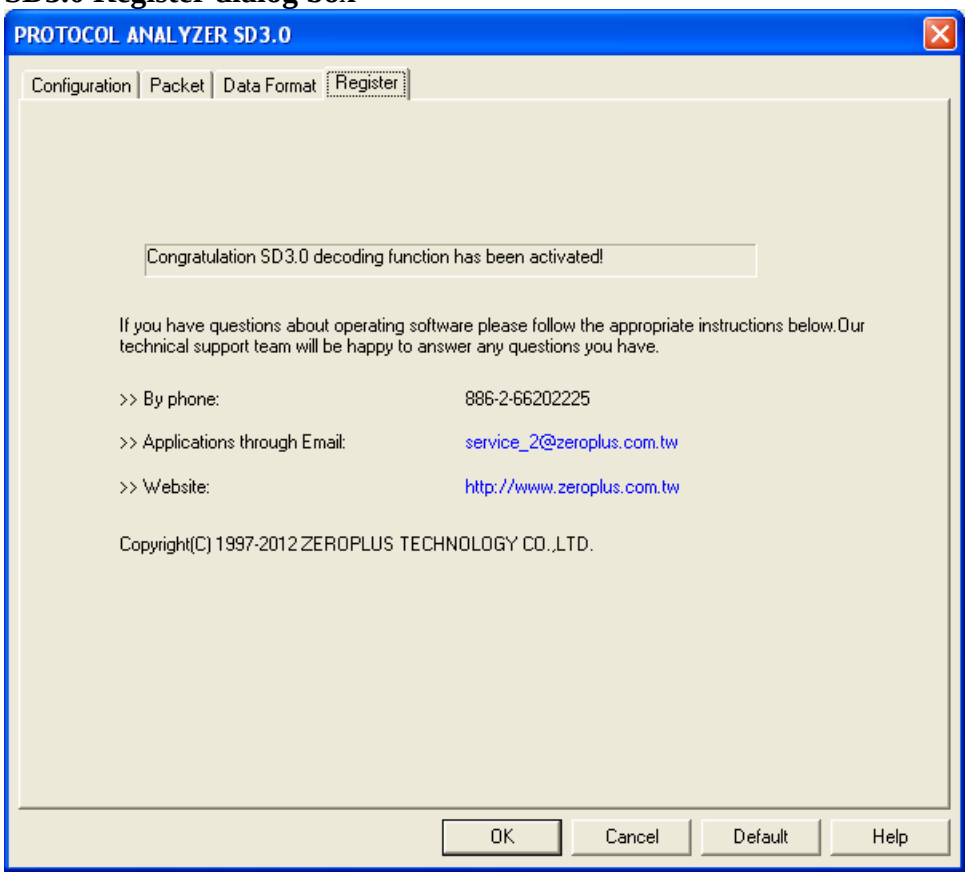
**SD3.0 Register dialog box**




There is Zeroplus company information. If you have questions about software operations, you can contact Zeroplus by Telephone or Email.

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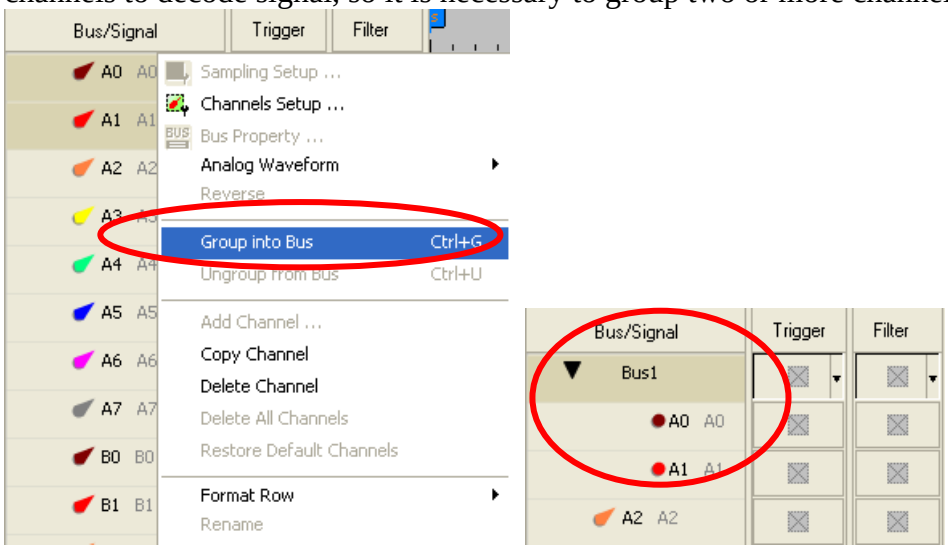
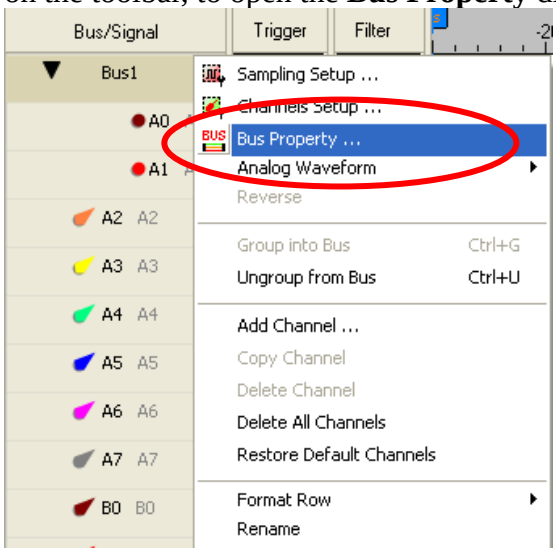
# 3 Operating Instructions

**STEP 1.** Group A0-A1 into **Bus1** by pressing the **Right Key** on the mouse. SD3.0 needs at least two channels to decode signal, so it is necessary to group two or more channels into the Bus.




**STEP 2.** Select **Bus1**, press right key and select **Bus Property** from the popped menu**,** or click the **Bus** icon on the toolbar, to open the **Bus Property** dialog box.





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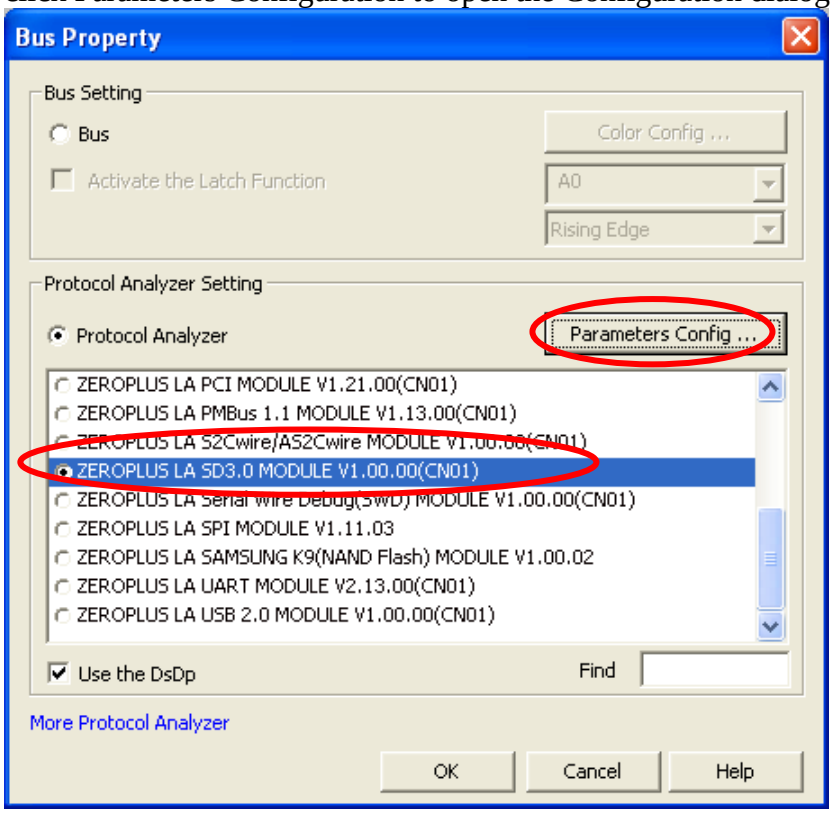
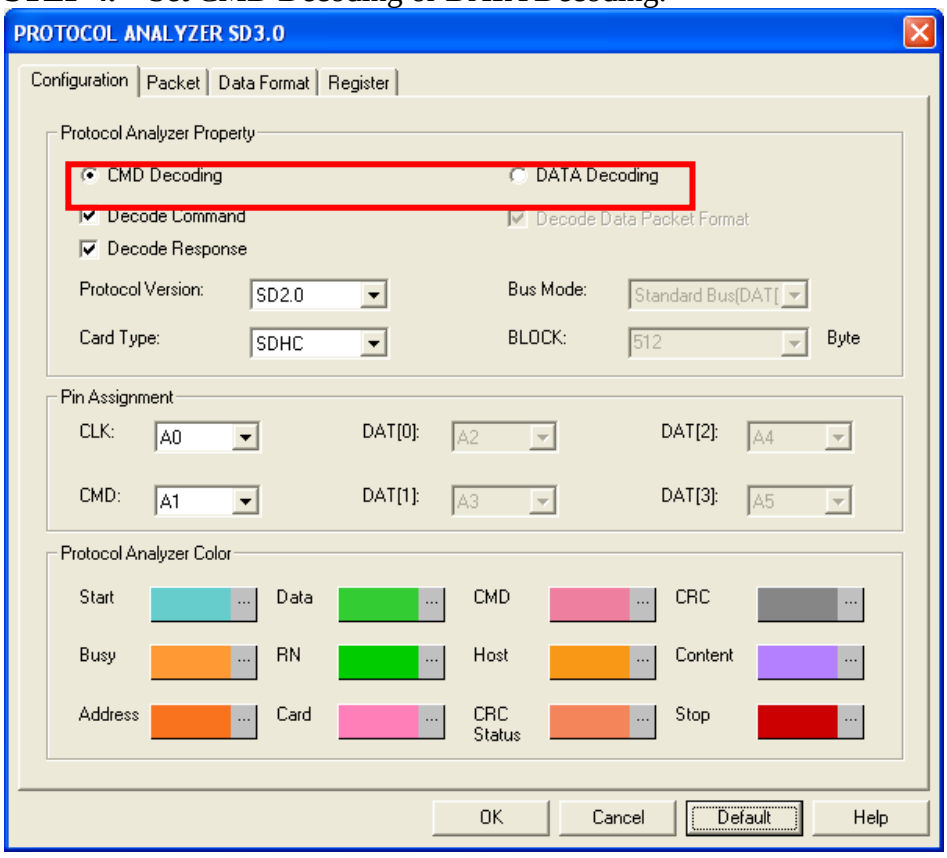
**STEP 3.** Select Protocol Analyzer, and select ZEROPLUS LA SD3.0 MODULE V1.00.00(CN01). Then click Parameters Configuration to open the Configuration dialog box.




**STEP 4.** Set CMD Decoding or DATA Decoding.





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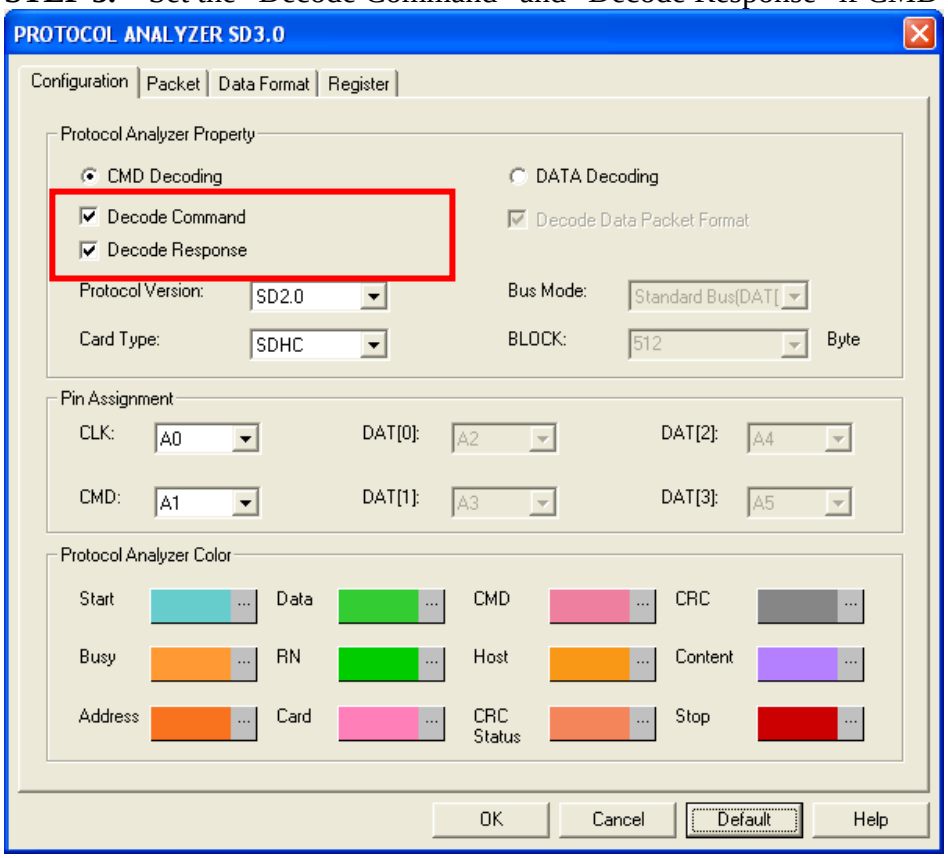
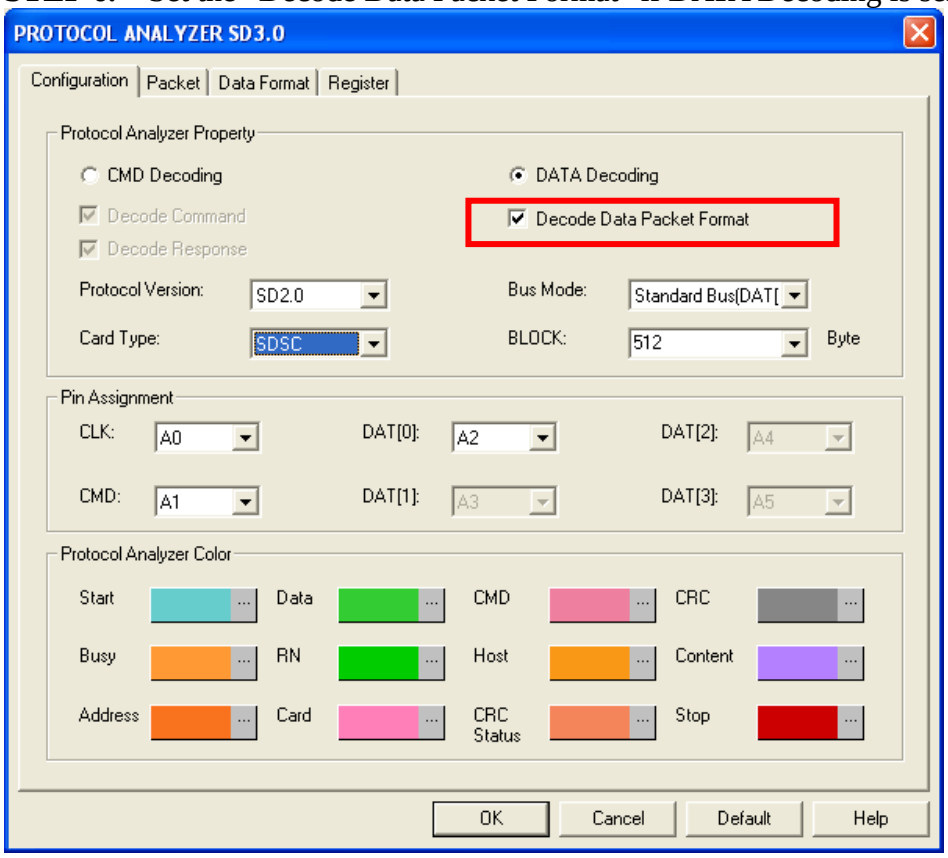
**STEP 5.** Set the “Decode Command” and “Decode Response” if CMD Decoding is selected.




**STEP 6.** Set the “Decode Data Packet Format” if DATA Decoding is selected.





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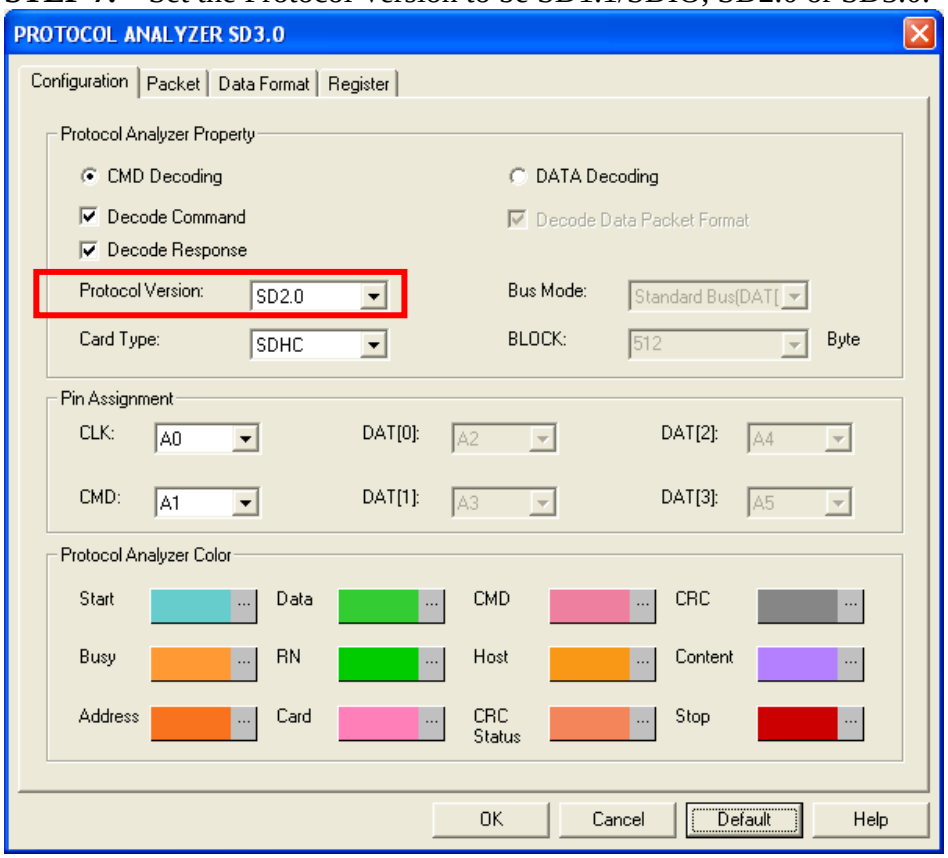
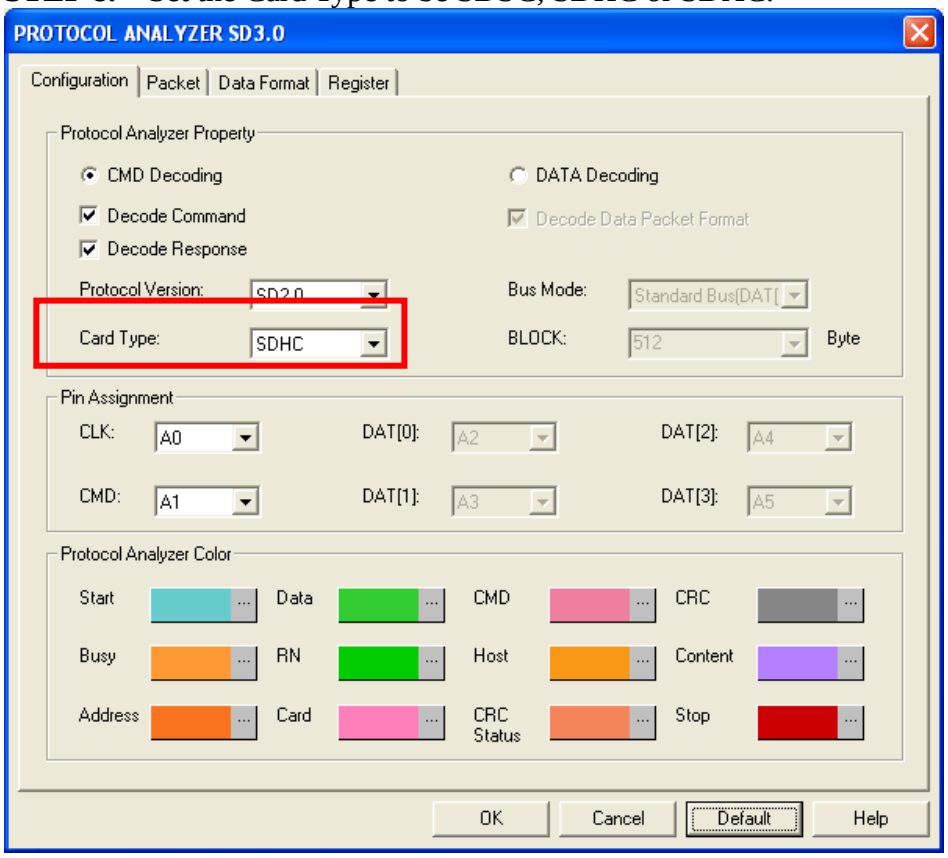
**STEP 7.** Set the Protocol Version to be SD1.1/SDIO, SD2.0 or SD3.0.




**STEP 8.** Set the Card Type to be SDSC, SDHC or SDXC.





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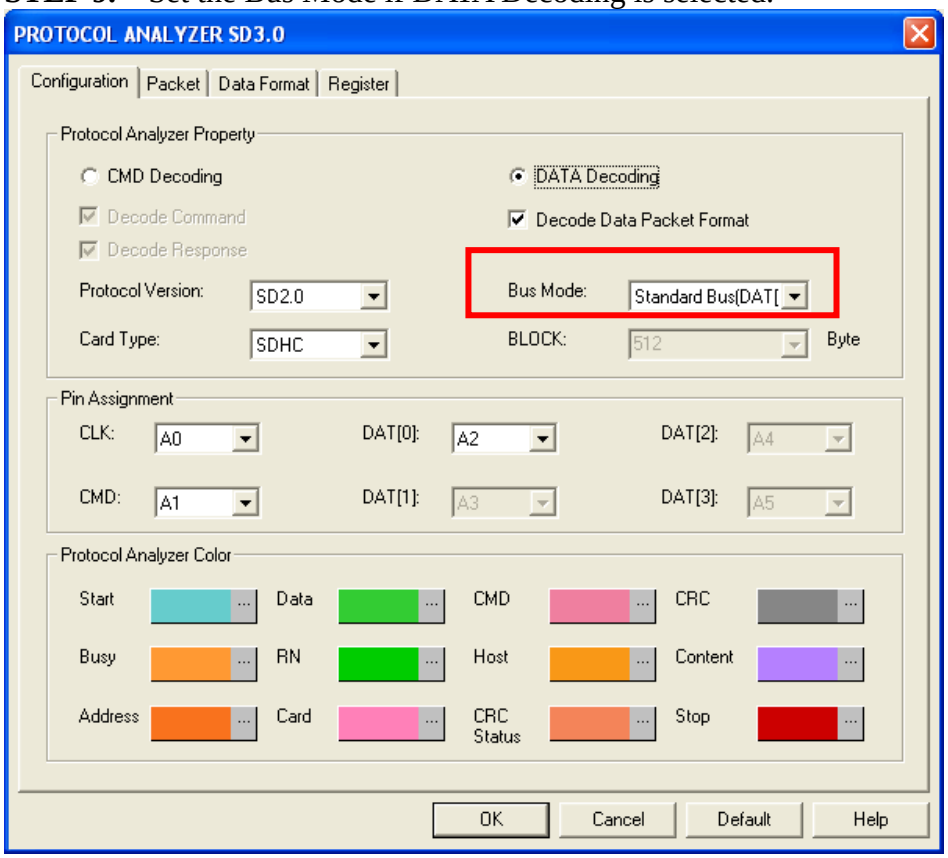
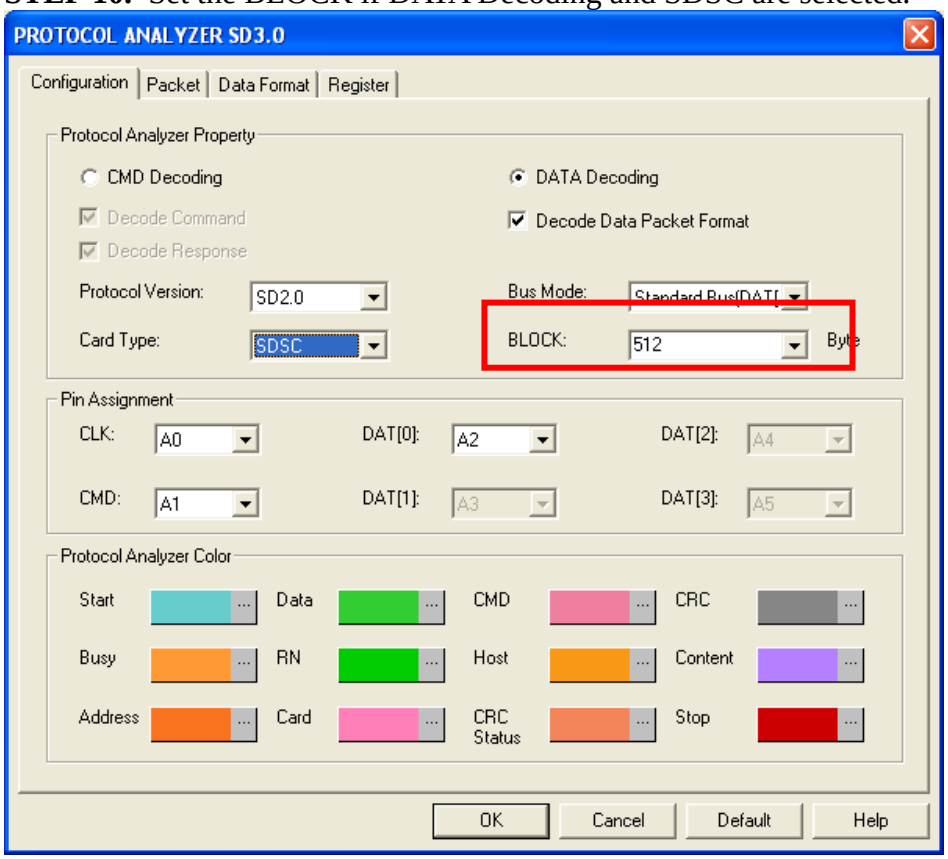
**STEP 9.** Set the Bus Mode if DATA Decoding is selected.




**STEP 10.** Set the BLOCK if DATA Decoding and SDSC are selected.



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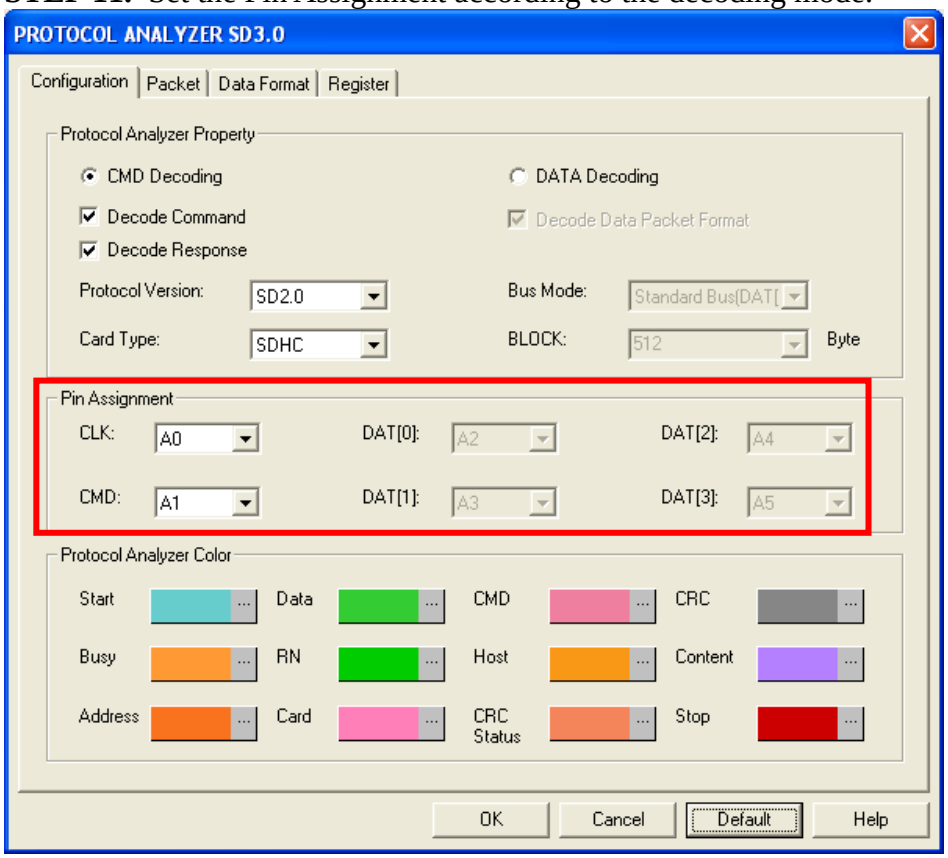
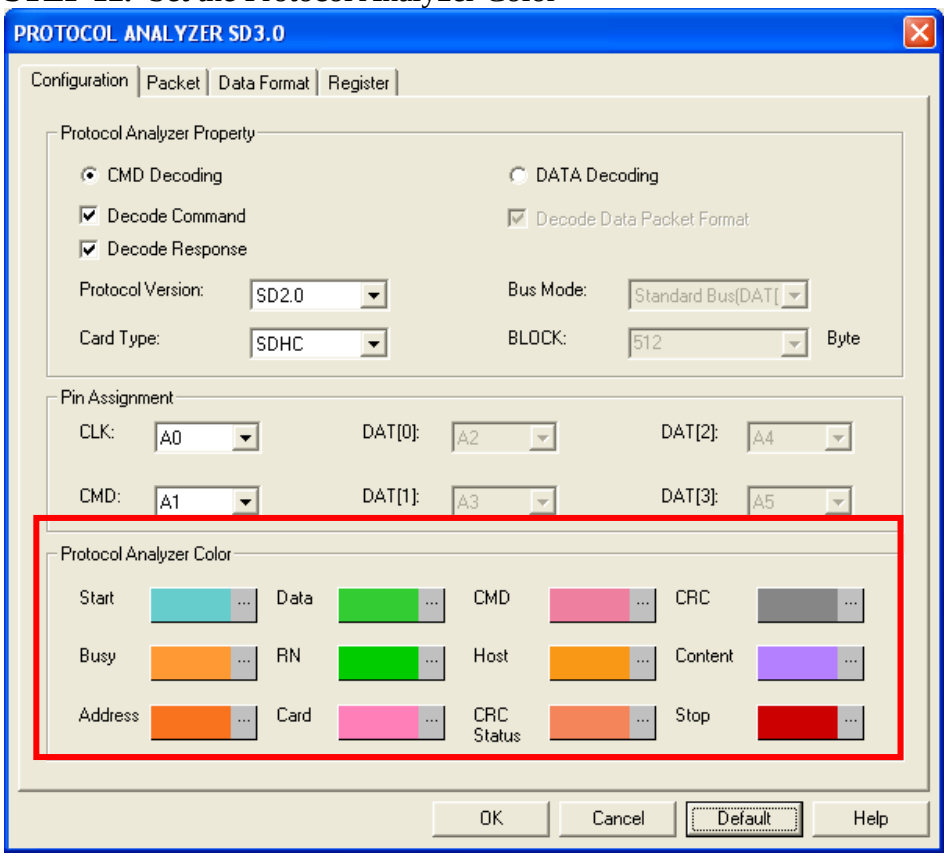
**STEP 11.** Set the Pin Assignment according to the decoding mode.




**STEP 12.** Set the Protocol Analyzer Color



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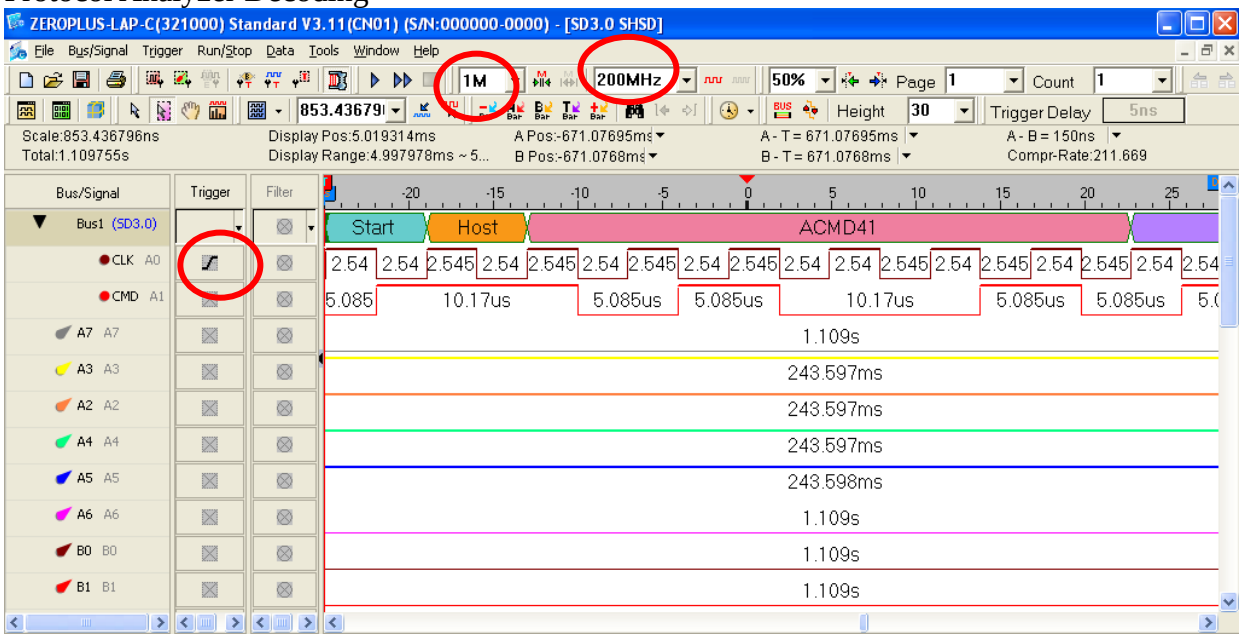
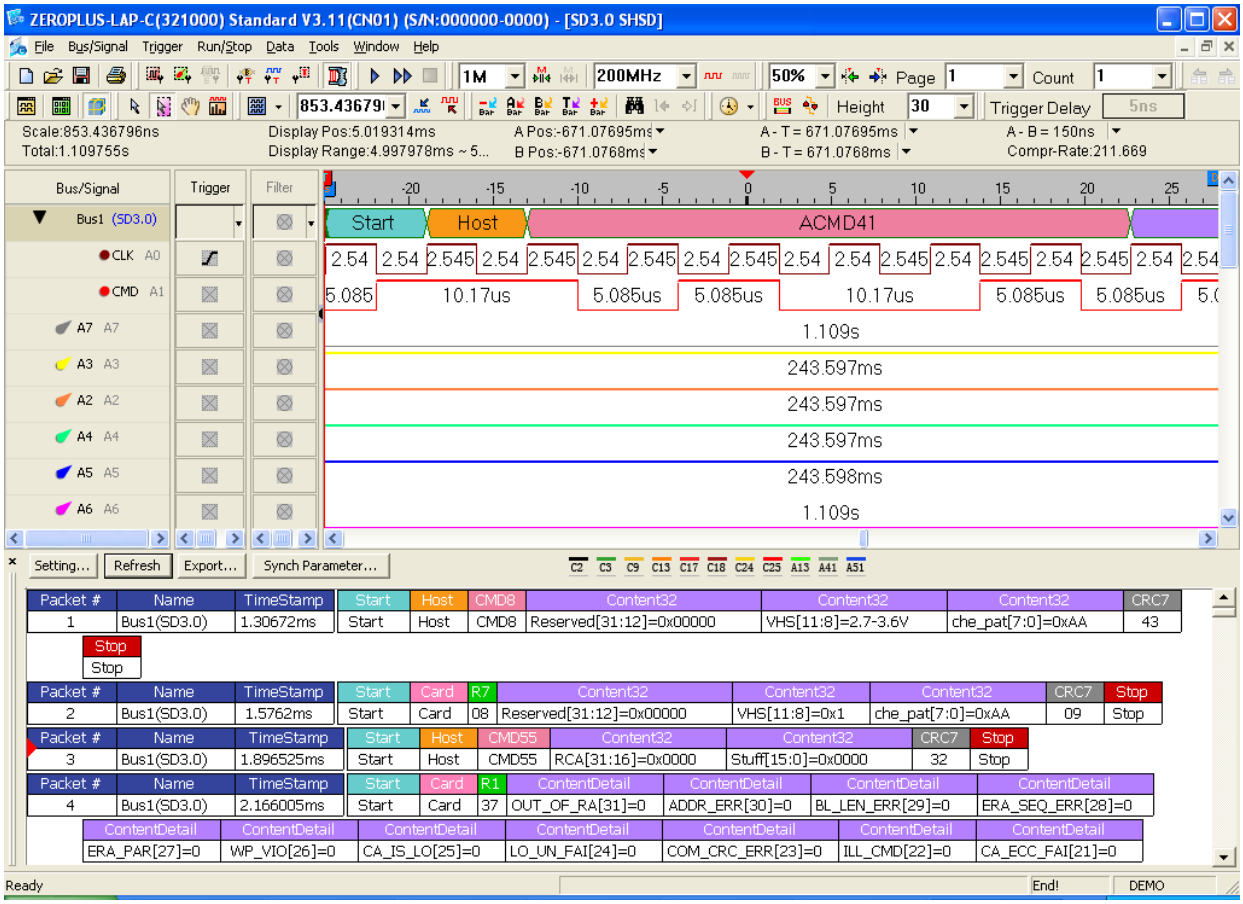
**STEP 13.** Following pictures show the completion of the protocol analyzer decoding and the packet list. The trigger condition is set as Rising Edge, the memory depth is 1M and the sampling frequency is 200MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding




Packet List



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