



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

SPECIFICATION

MODEL: SD2.0/SDIO Specification

PART NO : B09006

VERSION : V1.60

Approver		Check	Design
GM	PM		

Customer Confirm

* Please fax the file to
ZeroPlus Technology after
signing .

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Content

1. Software Installation.....	3
2. User Interface	7
3. Operating Instructions	9

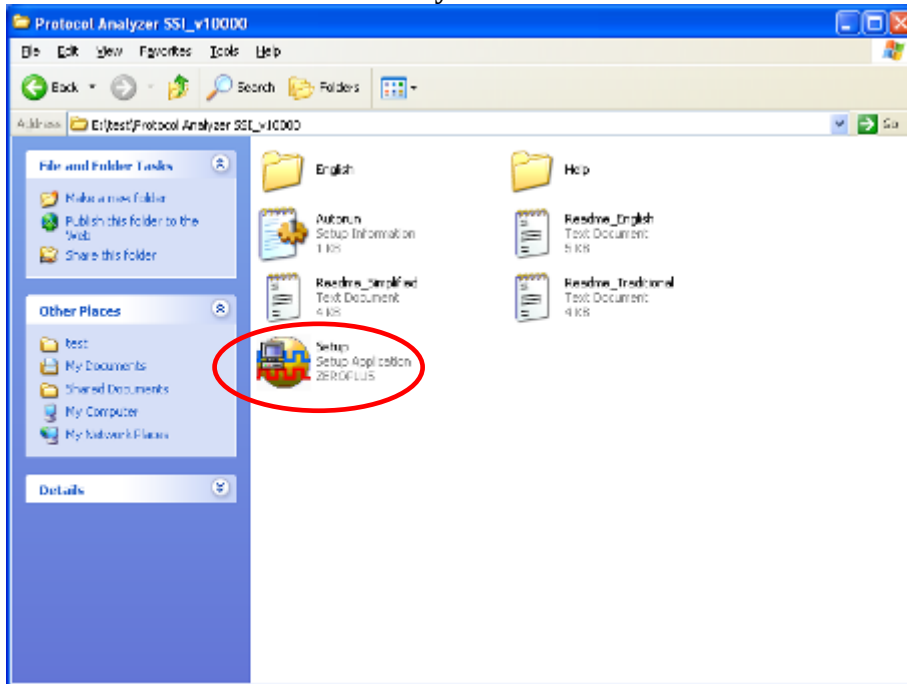
1. Software Installation

Please follow below steps to install the software:

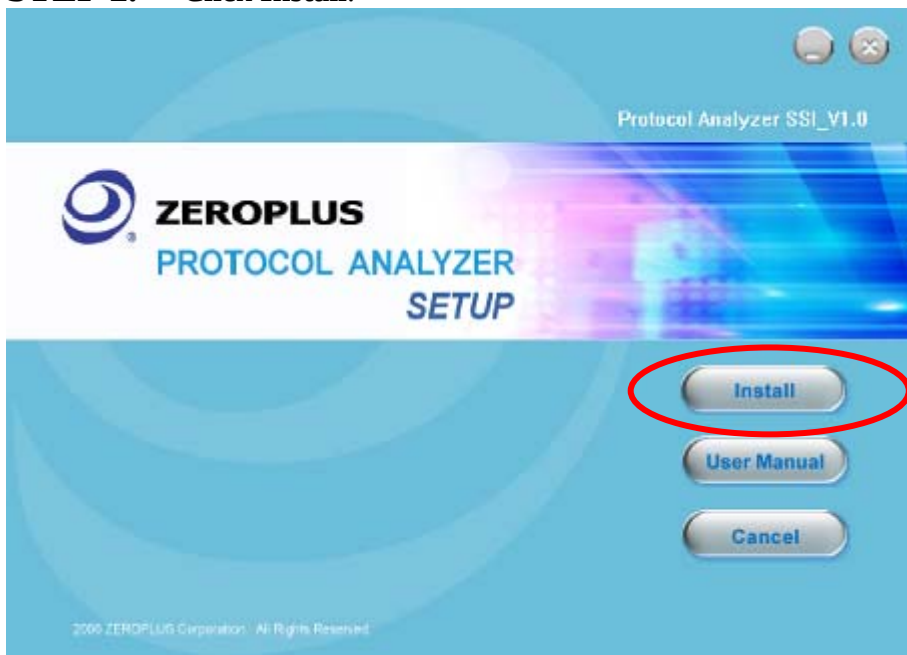
※ Remark: 1. The installation steps for all protocol analyzers are the same; you can complete the installation as following procedures. The following is an example to install protocol analyzer SSI.

※ Remark: 2. We won't have additional notice for you, when there is any modification of the module specification. If there is unconformity caused by the module version upgrade, users should refer to the module software as the standard.

STEP 1. Install Protocol Analyzer Module.

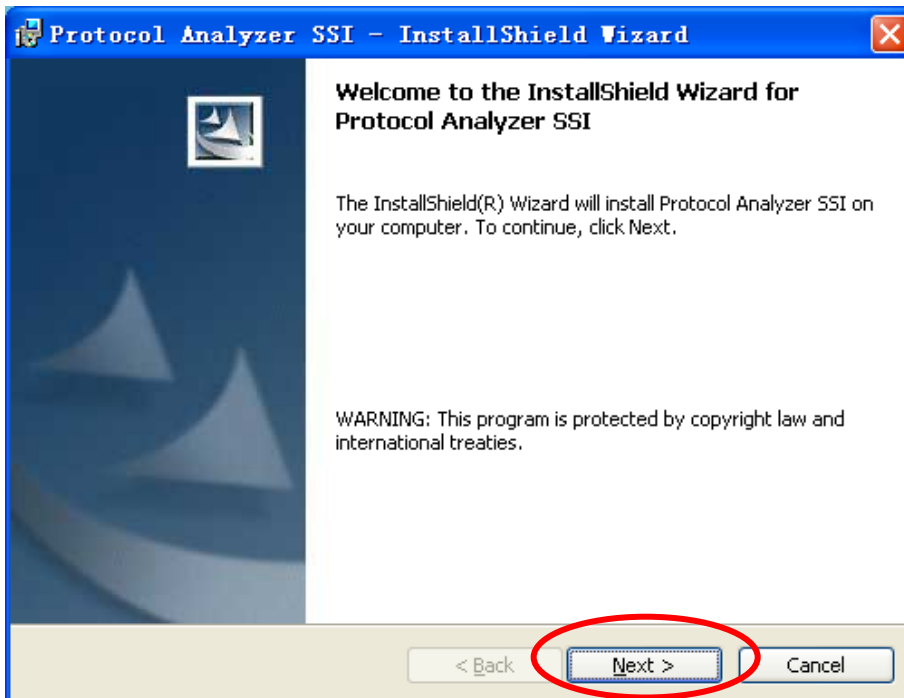


STEP 2. Click **Install**.

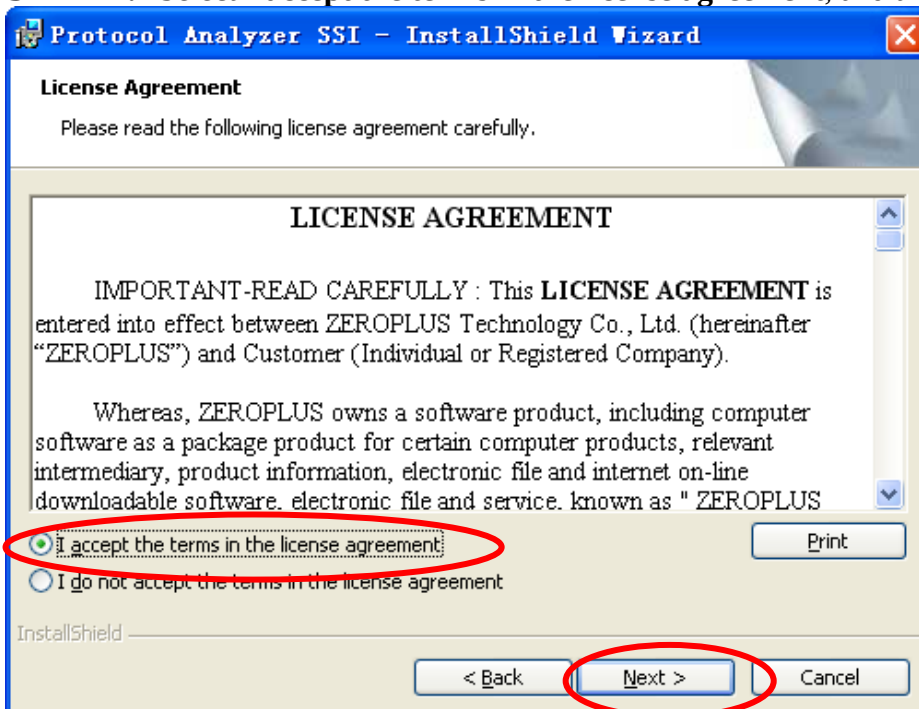




STEP 3. Click Next.



STEP 4. Select I accept the terms in the license agreement, and then click Next.





STEP 5. Fill in users' information, and then click **Next**.

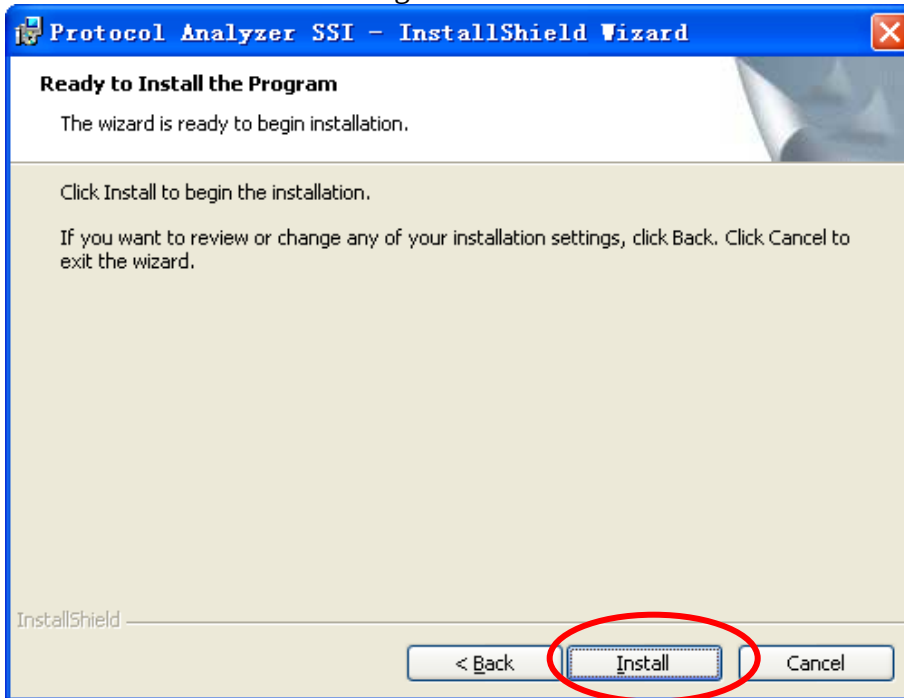
The screenshot shows the 'Customer Information' screen of the 'Protocol Analyzer SSI - InstallShield Wizard'. The title bar is blue with the text 'Protocol Analyzer SSI - InstallShield Wizard' and a close button. The main area has a light beige background. At the top, it says 'Customer Information' and 'Please enter your information.' Below this, there are two text input fields: 'User Name:' with the text 'sunshine' and 'Organization:' with the text 'zeroplus'. Further down, it says 'Install this application for:' followed by two radio button options: 'Anyone who uses this computer (all users)' (which is selected) and 'Only for me (sunshine)'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled in red. The 'InstallShield' logo is visible in the bottom left corner.

STEP 6. Select **Complete** option, and then click **Next**.

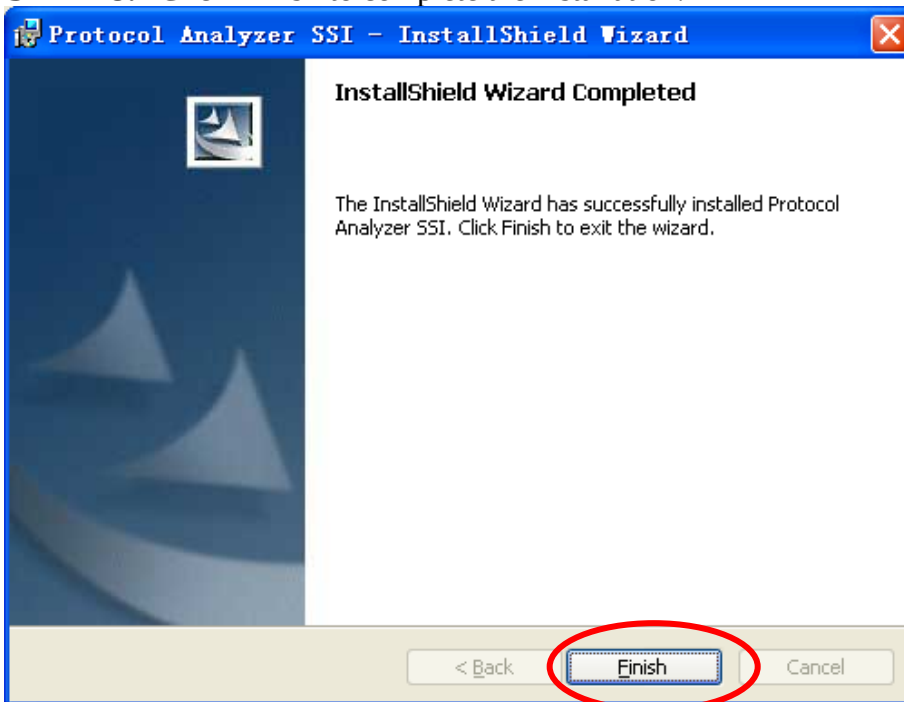
The screenshot shows the 'Setup Type' screen of the 'Protocol Analyzer SSI - InstallShield Wizard'. The title bar is blue with the text 'Protocol Analyzer SSI - InstallShield Wizard' and a close button. The main area has a light beige background. At the top, it says 'Setup Type' and 'Choose the setup type that best suits your needs.' Below this, it says 'Please select a setup type.' There are two radio button options: 'Complete' (which is selected) and 'Custom'. Each option has a small icon of a computer tower. The 'Complete' option has the text 'All program features will be installed. (Requires the most disk space.)' and the 'Custom' option has the text 'Choose which program features you want installed and where they will be installed. Recommended for advanced users.' At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'. The 'Next >' button is circled in red. The 'InstallShield' logo is visible in the bottom left corner.



STEP 7. Click **Install** to begin the installation.



STEP 8. Click **Finish** to complete the installation.

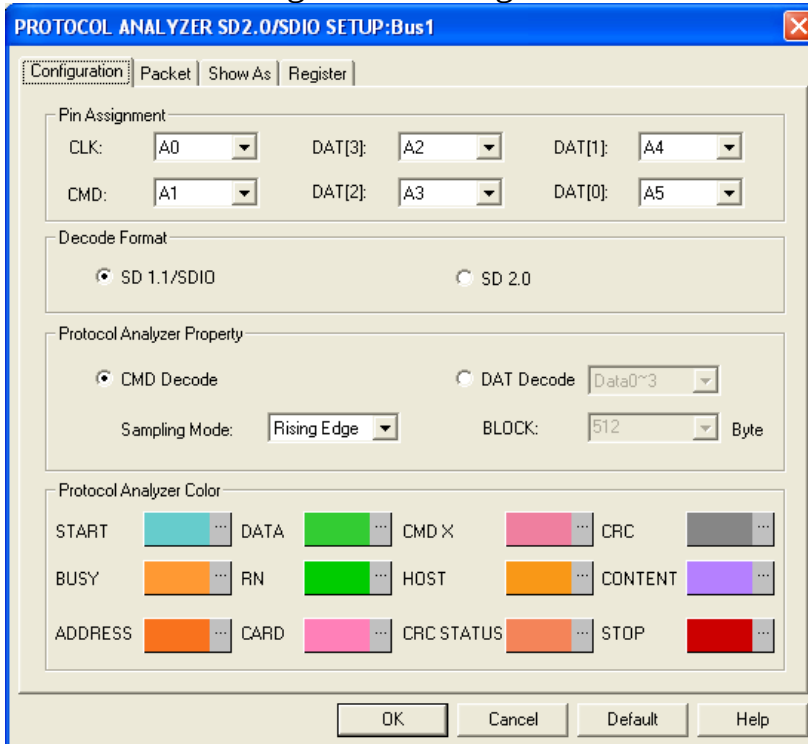




2. User Interface

Please refer to the below images to select options of setting **SD2.0/SDIO MODULE**.

SD2.0/SDIO Configuration dialog box



SD2.0/SDIO Pin Assignment:

The channels of CLK, CMD and DAT [0]-[3] can be chosen by clicking the list.

Decode Format:

There are two modes (SD 1.1/SDIO and SD 2.0) for selecting.

Protocol Analyzer Property:

CMD Decode: Decode Command and Response only.

DAT Decode: Decode transmitted data only. Two options can be chosen, Data0 or Data0~3.

BLOCK:

Users can vary the block size on SD2.0/SDIO card. The options are 512 Byte, 1024 Byte, and 2048 Byte. And the block size can be typed directly in the range of 1Byte to 32767 Byte.

Sampling Mode:

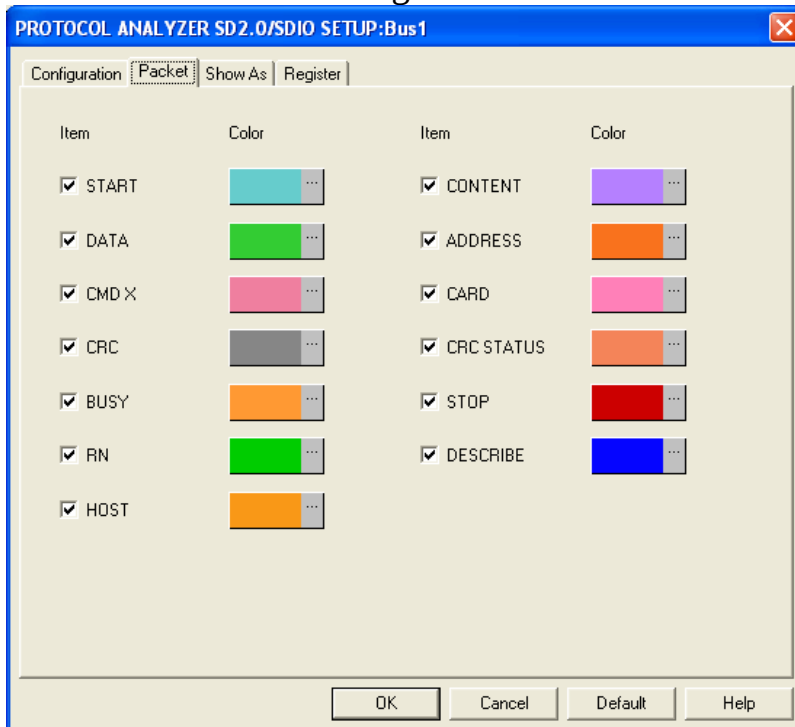
Users can set CLK sampling mode as the Rising Edge or Falling Edge.

Protocol Analyzer Color:

The protocol analyzer color can be varied by users.

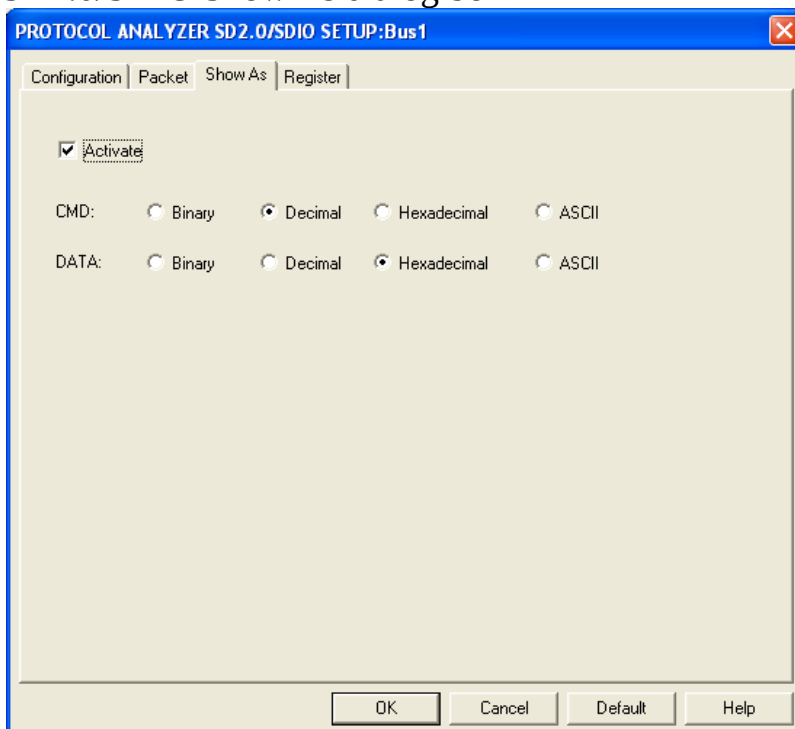


SD2.0/SDIO Packet dialog box



In the packet dialog box, users can vary the color of items.

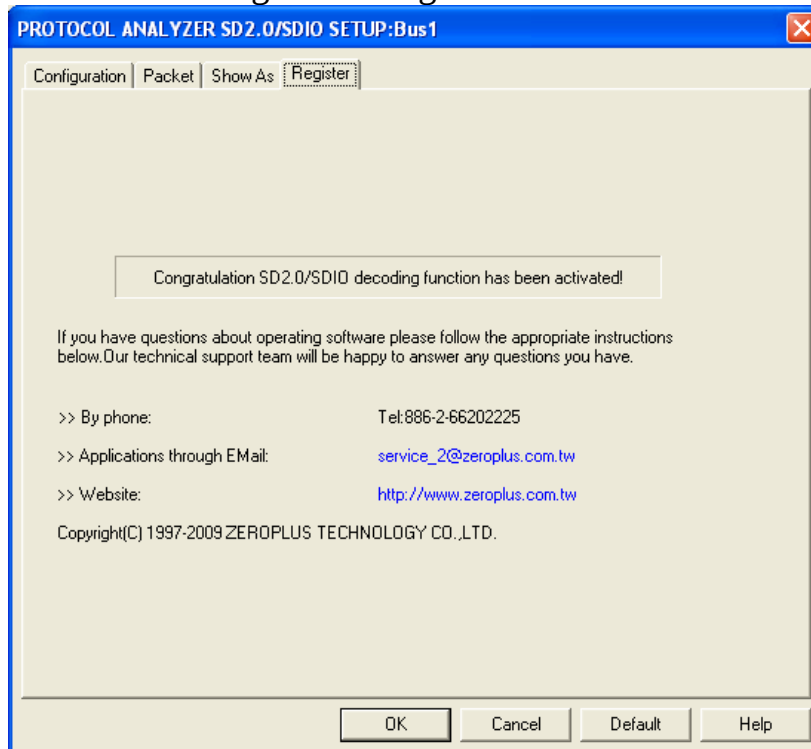
SD2.0/SDIO Show As dialog box



Click the option, **Activate**, to activate the Show As function. The default is Decimal for the CMD and the default of DATA is Hexadecimal; users also can customize the data format as their requirements. The data format of the CMD and DATA in the Waveform Area and the Packet List can be controlled by the Module. The default is non-activated, then the data format can be controlled by the Software.



SD2.0/SDIO Register dialog box

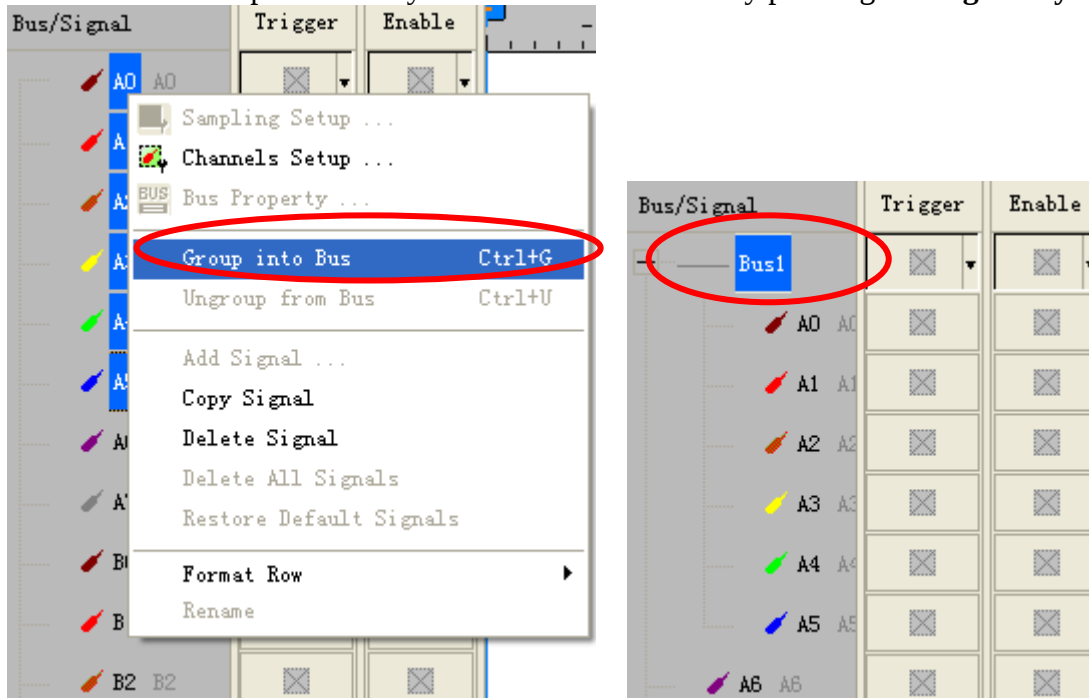


There is ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

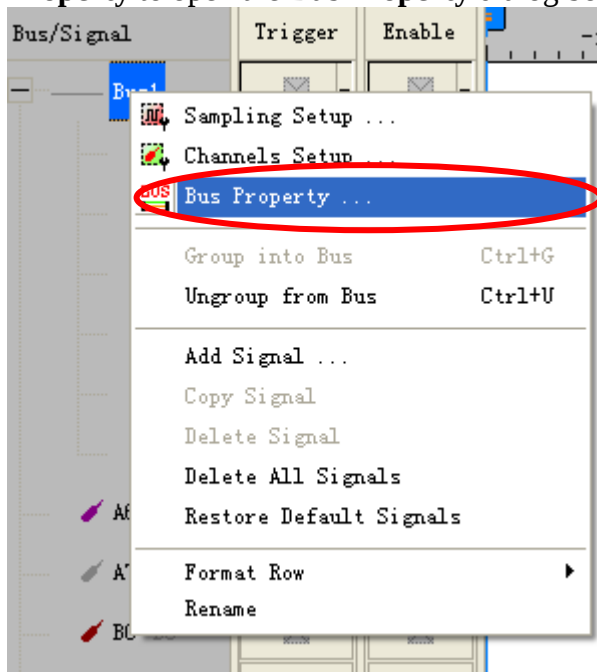


3. Operating Instructions

STEP 1. Group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.

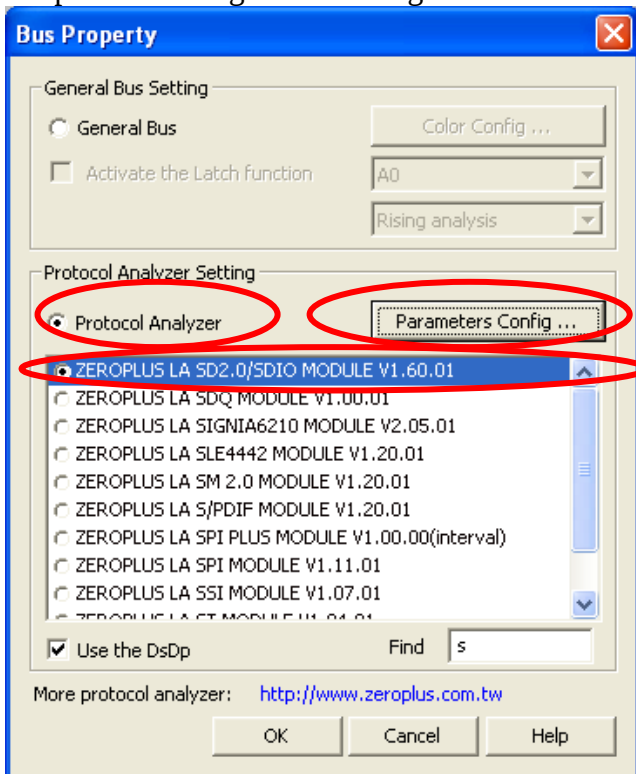


STEP 2. Select **Bus1**, then, press the **Right Key** on the mouse to list the menu, then click **Bus Property** to open the **Bus Property** dialog box.

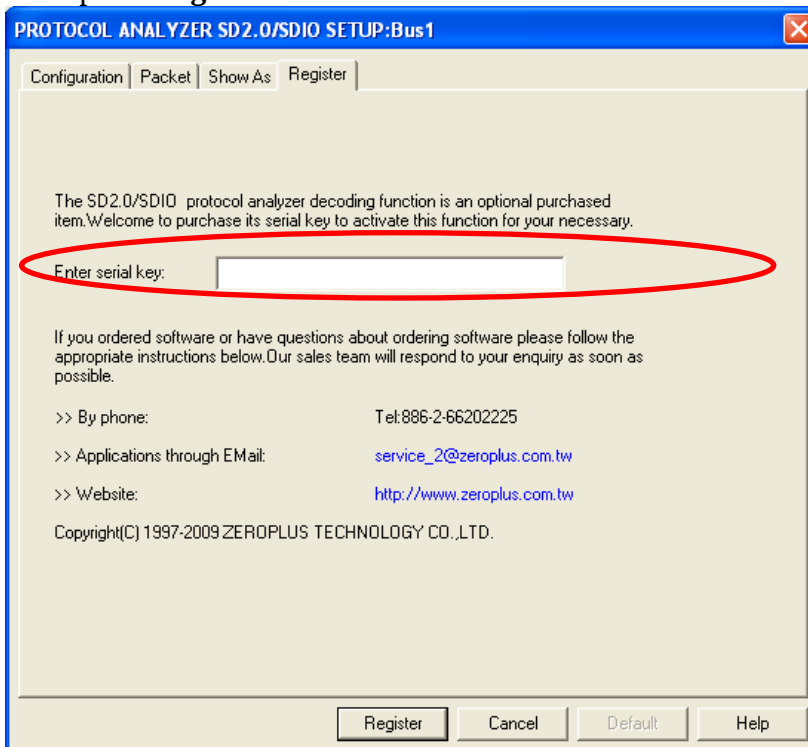




STEP 3. For Protocol Analyzer Parameters Configuration, select Protocol Analyzer, then choose **ZEROPLUS LA SD2.0/SDIO MODULE V1.60.01**. Next click **Parameters Configuration** to open the Configuration dialog box.

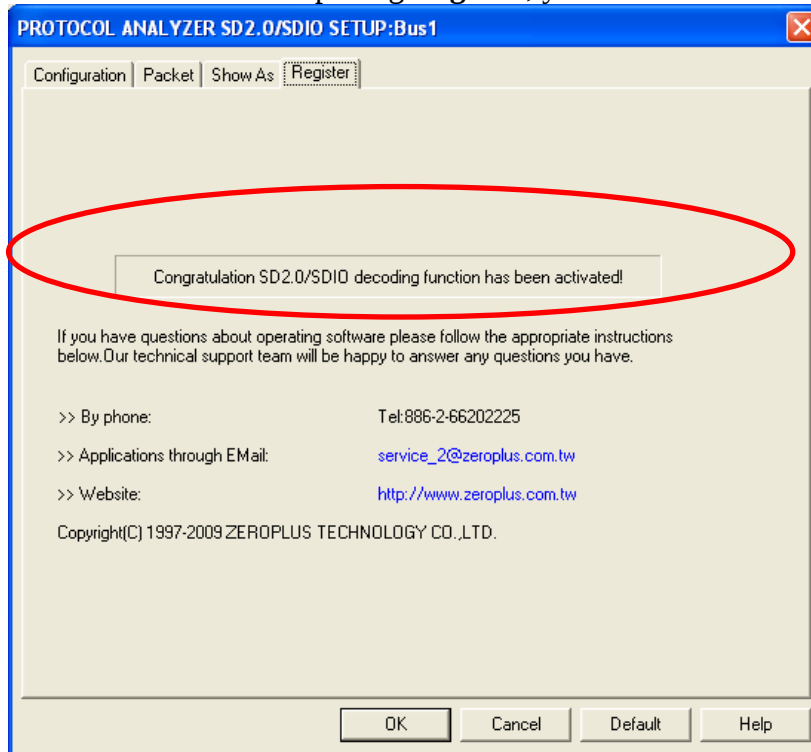


STEP 4. Press Register tab to type the serial key number of SD2.0/SDIO Module. Then press **Register**.

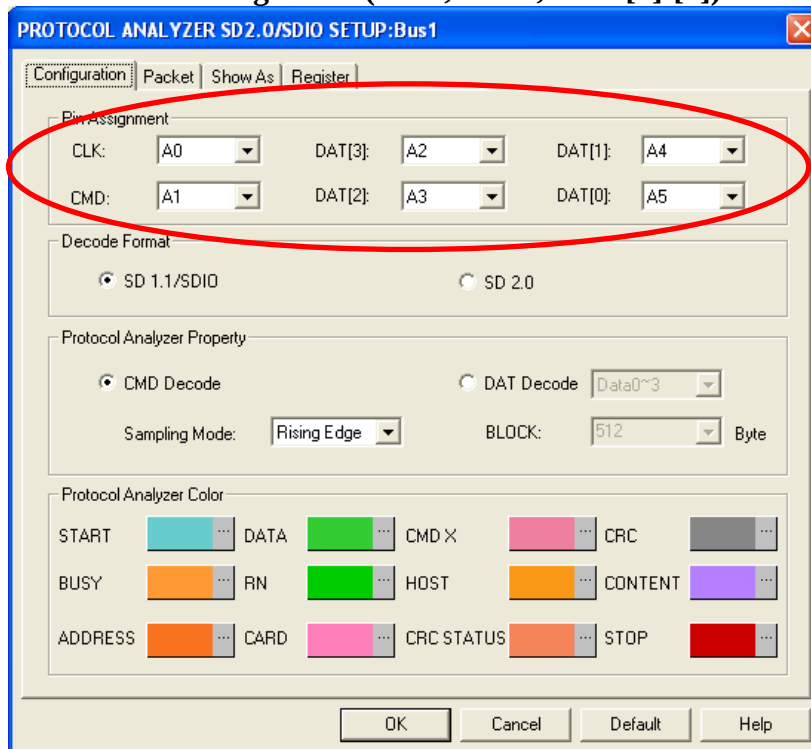




STEP 5. After completing **Register**, you will see below dialog box.



STEP 6. After pressing **OK** on **Register** dialog box, turn to **Bus Property** dialog box. Click **Parameters Configuration** to set up the parameter of Protocol Analyzer SD2.0/SDIO. Next, set **SD 2.0/SDIO Pin Assignment (CLK, CMD, DAT [0]-[3])** in the **Configuration** dialog box.





STEP 7. Set the **Decode Format** (SD 1.1/SDIO and SD 2.0).

PROTOCOL ANALYZER SD2.0/SDIO SETUP:Bus1

Configuration | Packet | Show As | Register

Pin Assignment
CLK: A0 DAT[3]: A2 DAT[1]: A4
CMD: A1 DAT[2]: A3 DAT[0]: A5

Decode Format
☒ SD 1.1/SDIO ☐ SD 2.0

Protocol Analyzer Property
☒ CMD Decode ☐ DAT Decode Data0~3
Sampling Mode: Rising Edge BLOCK: 512 Byte

Protocol Analyzer Color
START DATA CMD X CRC
BUSY RN HOST CONTENT
ADDRESS CARD CRC STATUS STOP

OK Cancel Default Help

STEP 8. Set **CMD Decode** or **DAT Decode**, **BLOCK** Size and **CLK Sampling Mode** (There are Rising Edge and Falling Edge).

PROTOCOL ANALYZER SD2.0/SDIO SETUP:Bus1

Configuration | Packet | Show As | Register

Pin Assignment
CLK: A0 DAT[3]: A2 DAT[1]: A4
CMD: A1 DAT[2]: A3 DAT[0]: A5

Decode Format
☒ SD 1.1/SDIO ☐ SD 2.0

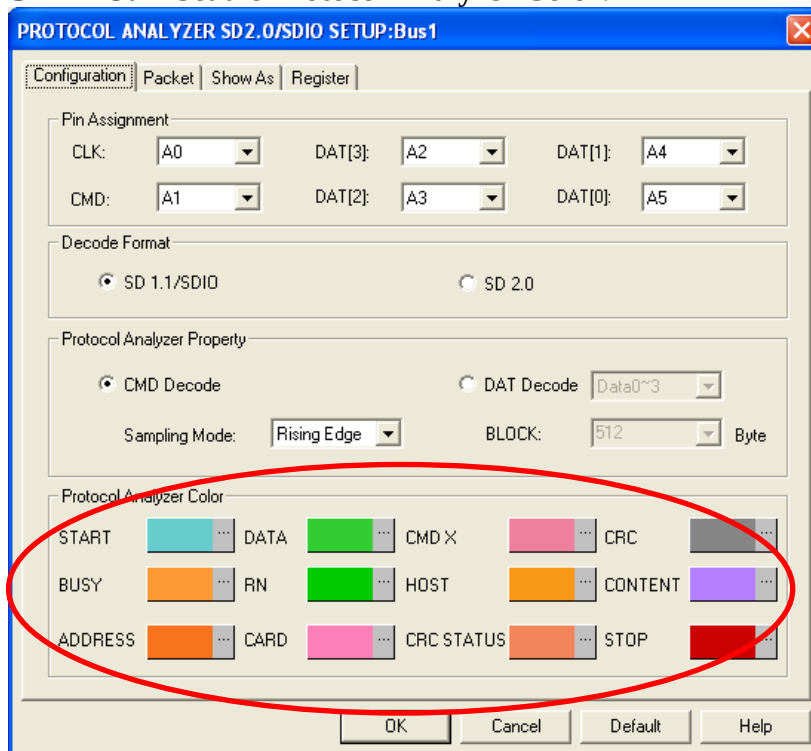
Protocol Analyzer Property
☒ CMD Decode ☐ DAT Decode Data0~3
Sampling Mode: Rising Edge BLOCK: 512 Byte

Protocol Analyzer Color
START DATA CMD X CRC
BUSY RN HOST CONTENT
ADDRESS CARD CRC STATUS STOP

OK Cancel Default Help

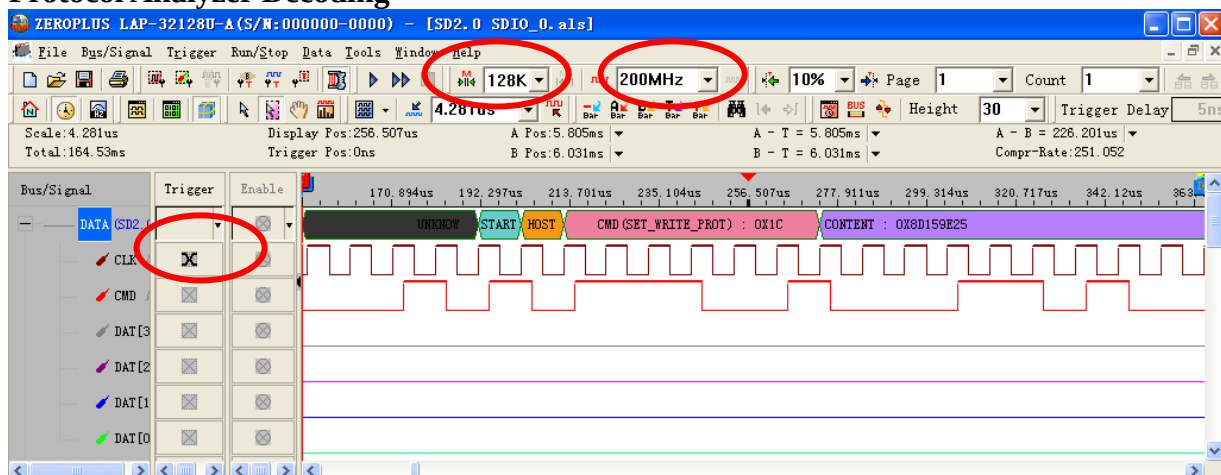


STEP 9. Set the Protocol Analyzer Color.



STEP 10. Following pictures show the completion of the protocol analyzer decoding and the packet list. The trigger condition is set as Either Edge; the memory depth is 128K; the sampling frequency is 200MHz.

Protocol Analyzer Decoding





Packet List

