



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

Instrument Business Department

SPI Specification

Version : V1.10



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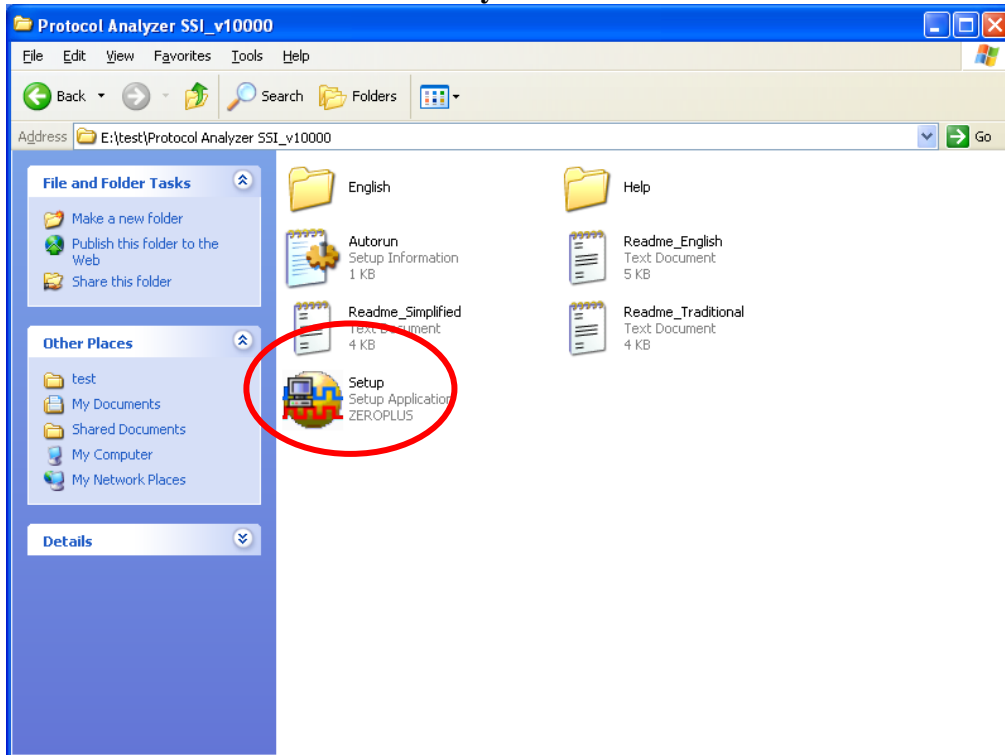
1 Software Installation

Please install the software as the following steps:

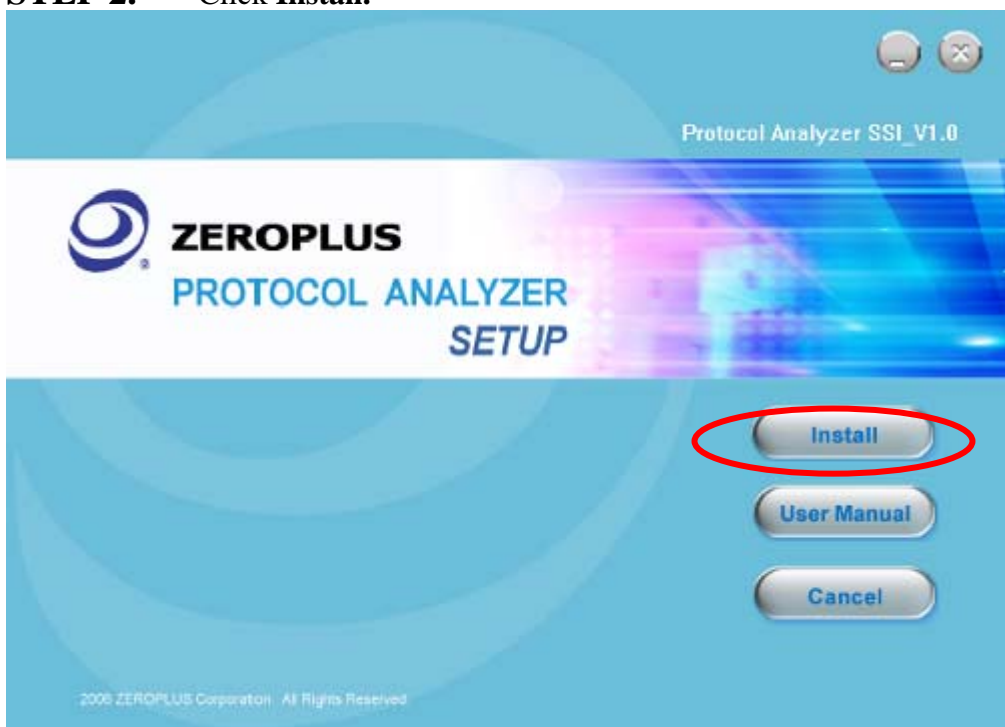
※ Remark: 1. The installation steps for all protocol analyzers are the same; you can complete the installation by following procedures. Following is an example on how to install protocol analyzer SSI.

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

STEP 1. Install Protocol Analyzer Module.

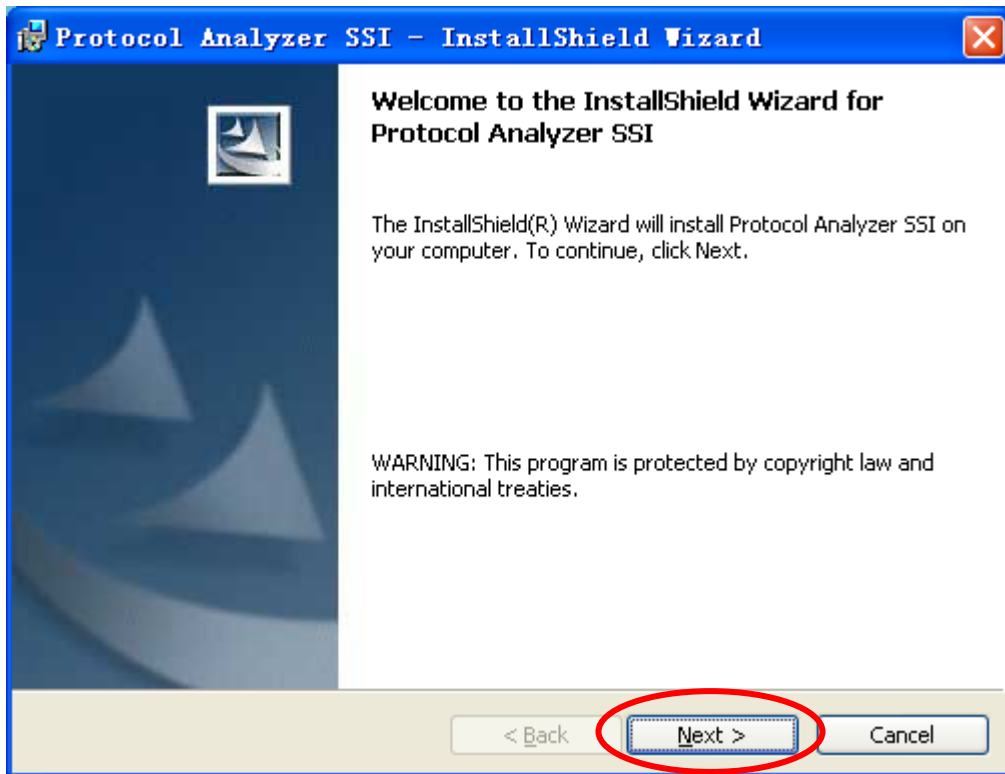


STEP 2. Click Install.

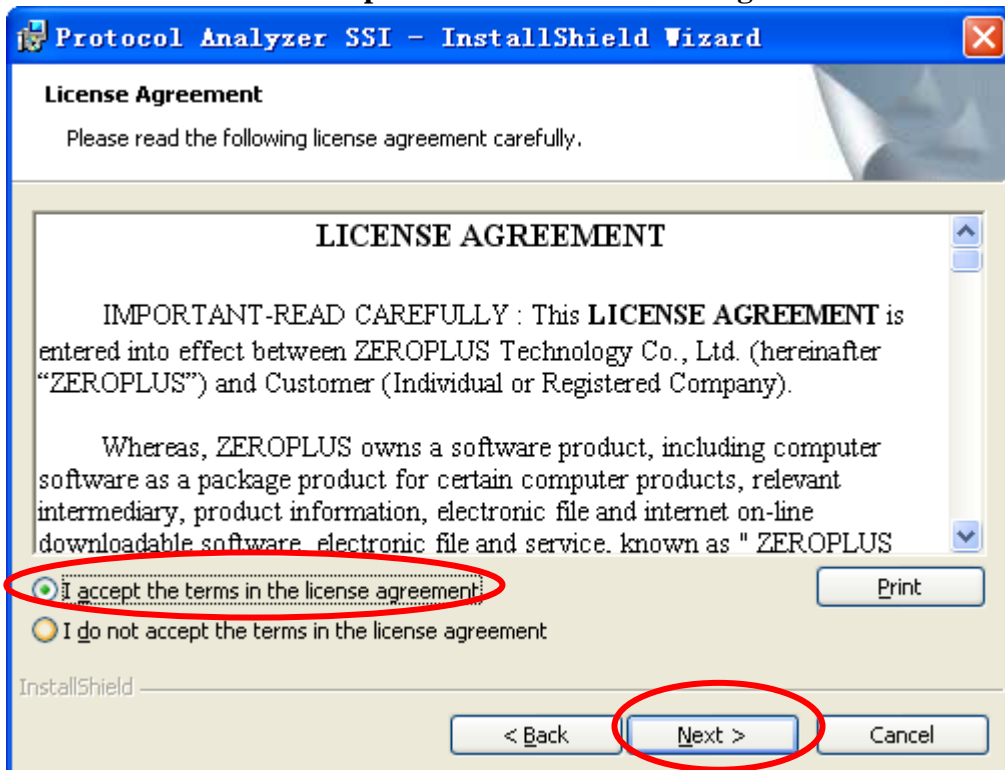




STEP 3. Click Next.



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





STEP 5. Fill in users' information in the below dialog box and click **Next**.

Protocol Analyzer SSI - InstallShield Wizard

Customer Information

Please enter your information.

User Name:
sunshine

Organization:
zeroplus

Install this application for:

Anyone who uses this computer (all users):

Only for me (sunshine)

InstallShield

< Back **Next >** Cancel

STEP 6. First, select **Complete** and then click **Next**.

Protocol Analyzer SSI - InstallShield Wizard

Setup Type

Choose the setup type that best suits your needs.

Please select a setup type.

Complete:
All program features will be installed. (Requires the most disk space.)

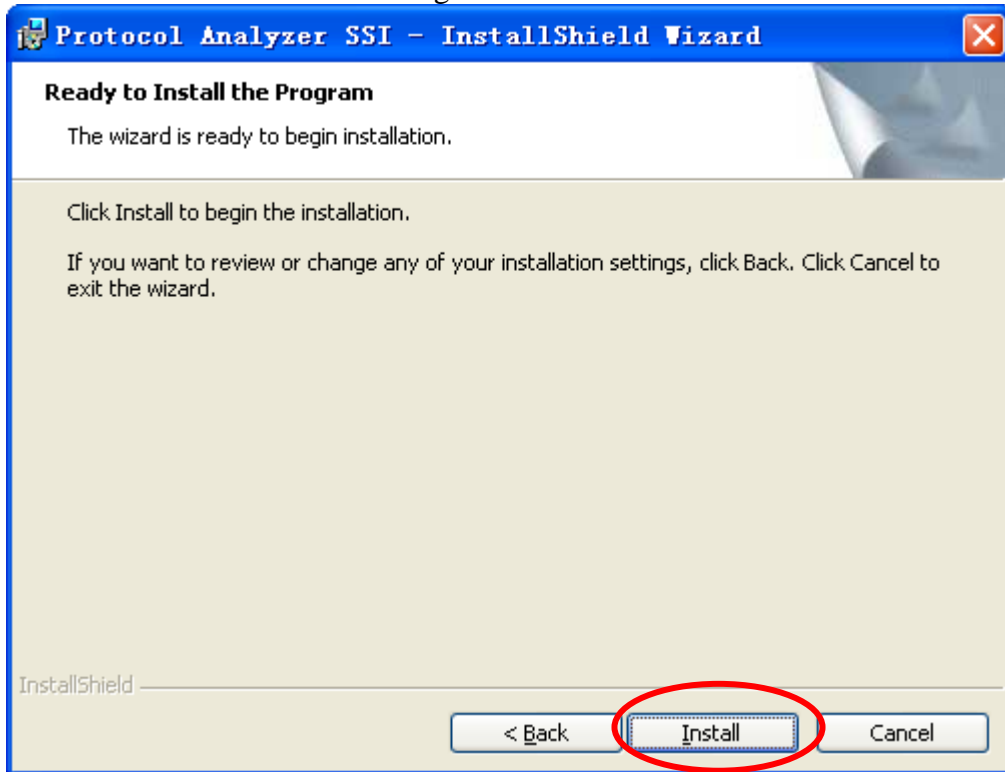
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.

InstallShield

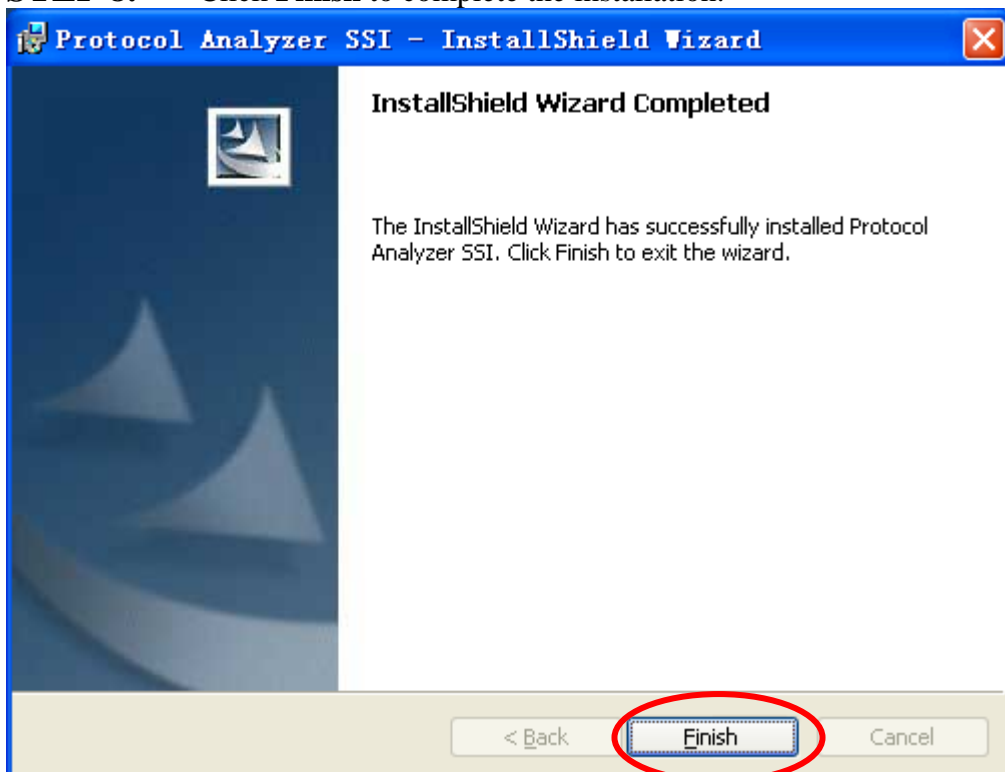
< Back **Next >** Cancel



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



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

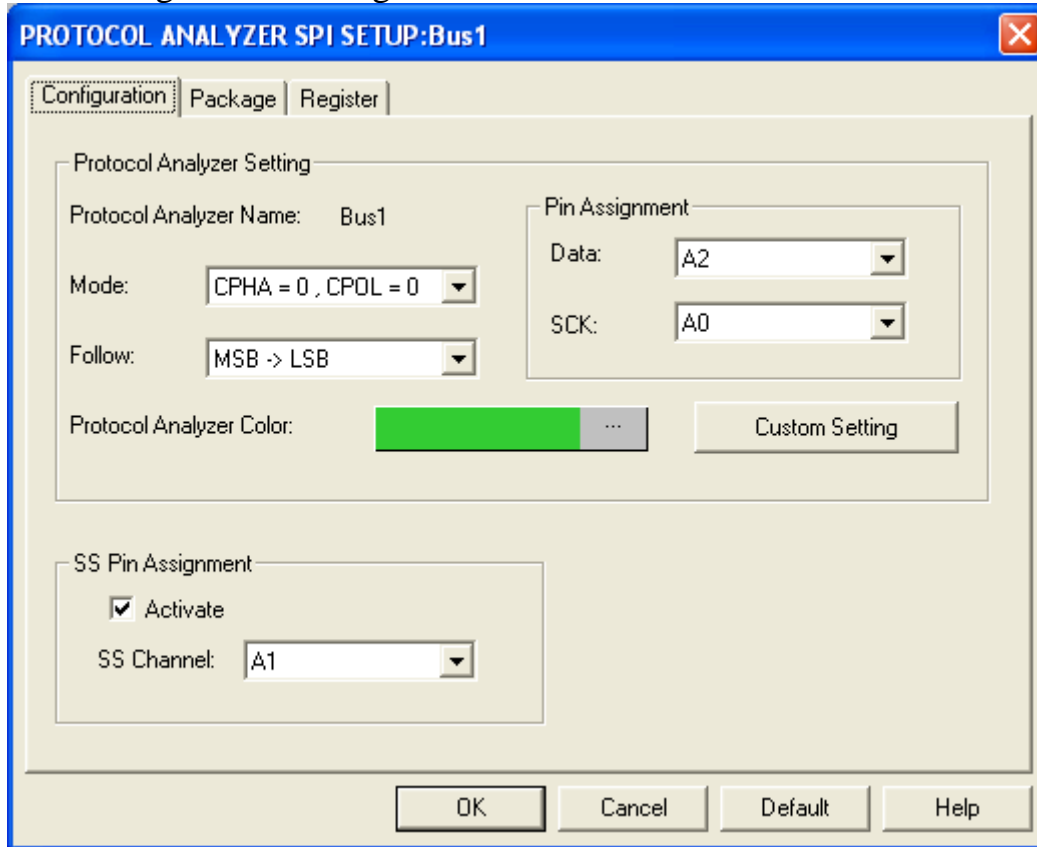




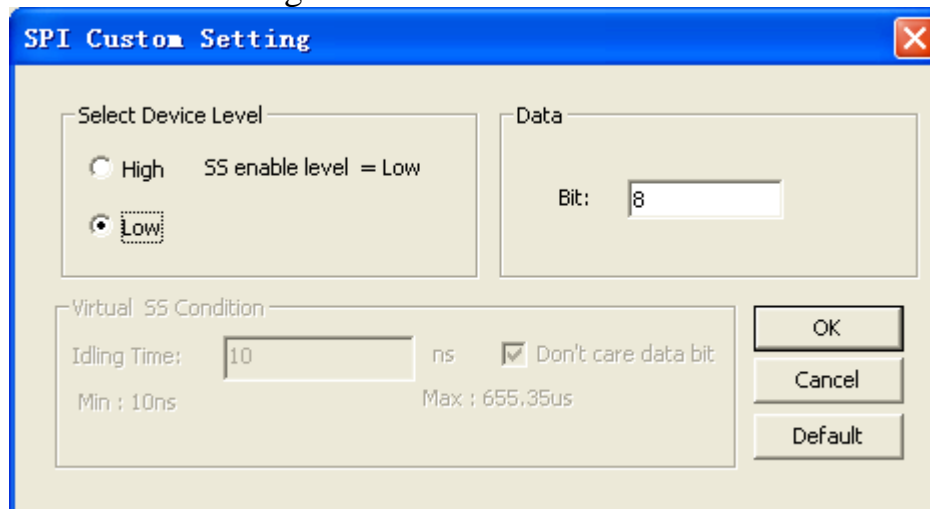
2 User Interface

Please refer to the below images to select options of setting **SPI MODULE**.

SPI Configuration Dialog Box



SPI Custom Setting





Protocol Analyzer Name:

Select the protocol analyzer name that needs to be displayed for SPI presently.

Pin Assignment:

Data channel:

The default is A2.

SCK channel:

The default is A0.

Mode:

There are six modes for selecting, which are **CPHA=0,CPOL=0;CPHA=1,CPOL=1;CPHA=1,CPOL=0;CPHA=0,CPOL=1;SCK RISEING;SCK FALLING.**

Follow:

Set the directions of the data transmission: MSB->LSB, LSB->MSB.

Protocol Analyzer Color:

Set the displayed colors of all sections of the protocol analyzer.

Custom Setting:

Click the button to customize SPI.

SS Pin Assignment:

Select **Activate** to set SS channel.

Select Device Level:

Set the determinant level of SS channel.

Data:

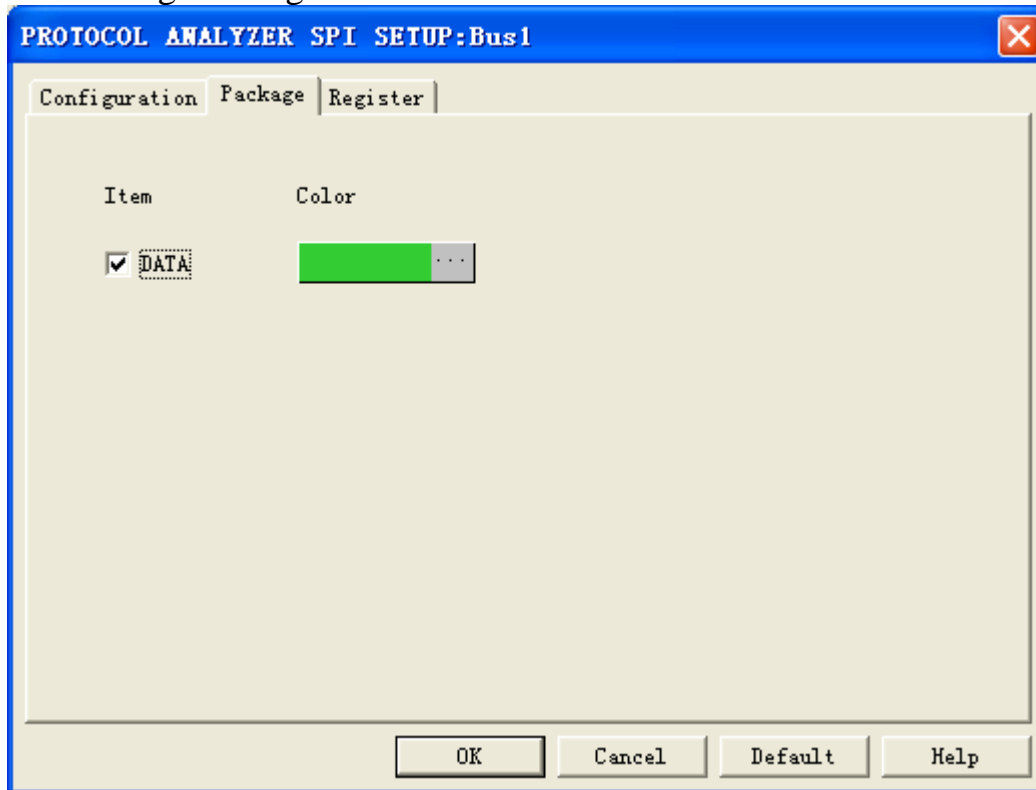
Set the data bit.

Virtual SS Condition:

It can be used to set the virtual SS channel, when the **SS Pin Assignment** is not set as **Activate**.

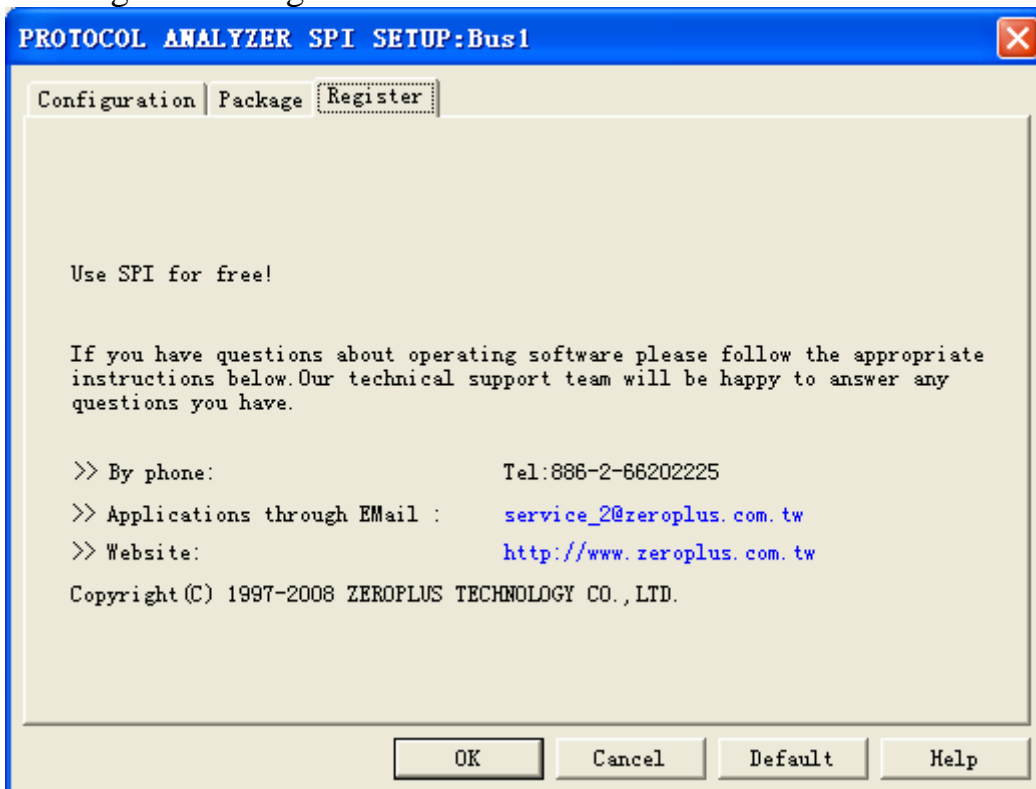


SPI Package Dialog Box



In the package dialog box, users can vary the color of the item.

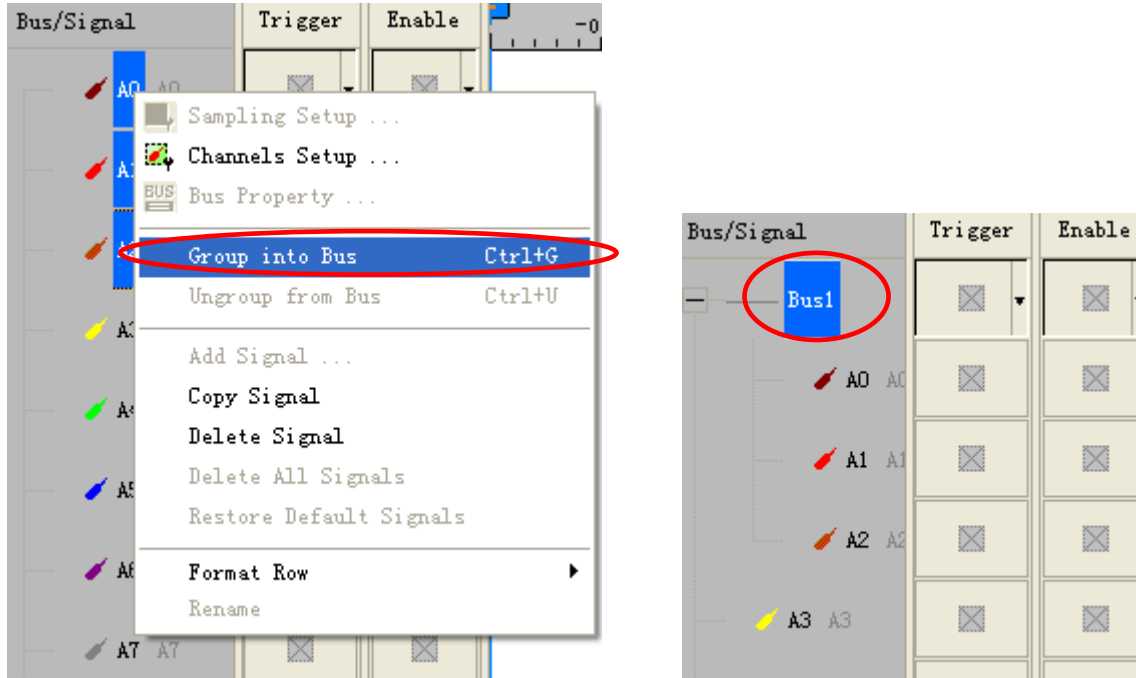
SPI Register Dialog Box



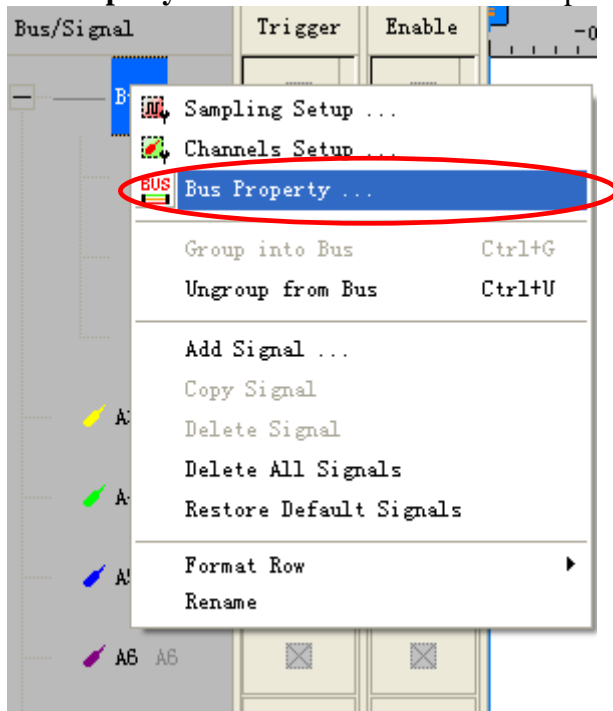
There is ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

3 Operating Instructions

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

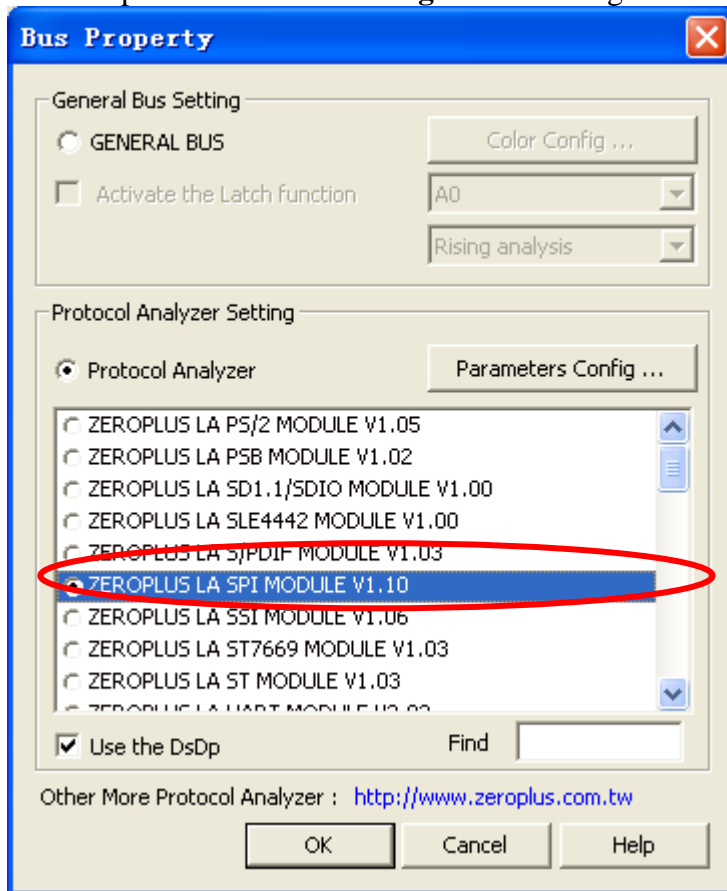


STEP 2. Select **Bus1**, then press **Right key** on the mouse to list menu, then press **Bus Property** or **Bus bar** on the toolbar to open **Bus Property** dialog box.

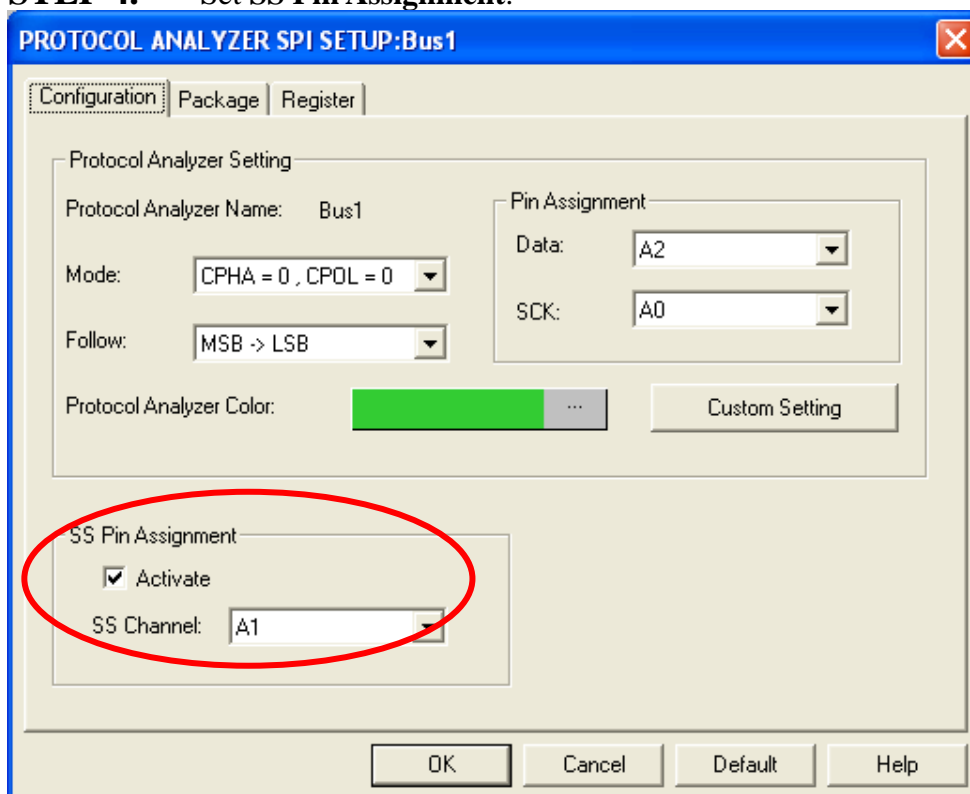




STEP 3. For Protocol Analyzer SPI Parameters Configuration, select Protocol Analyzer, and then choose **ZEROPLUS LA SPI MODULE V1.10**. Next click **Parameters Configuration** to open **Parameters Configuration** dialog box.

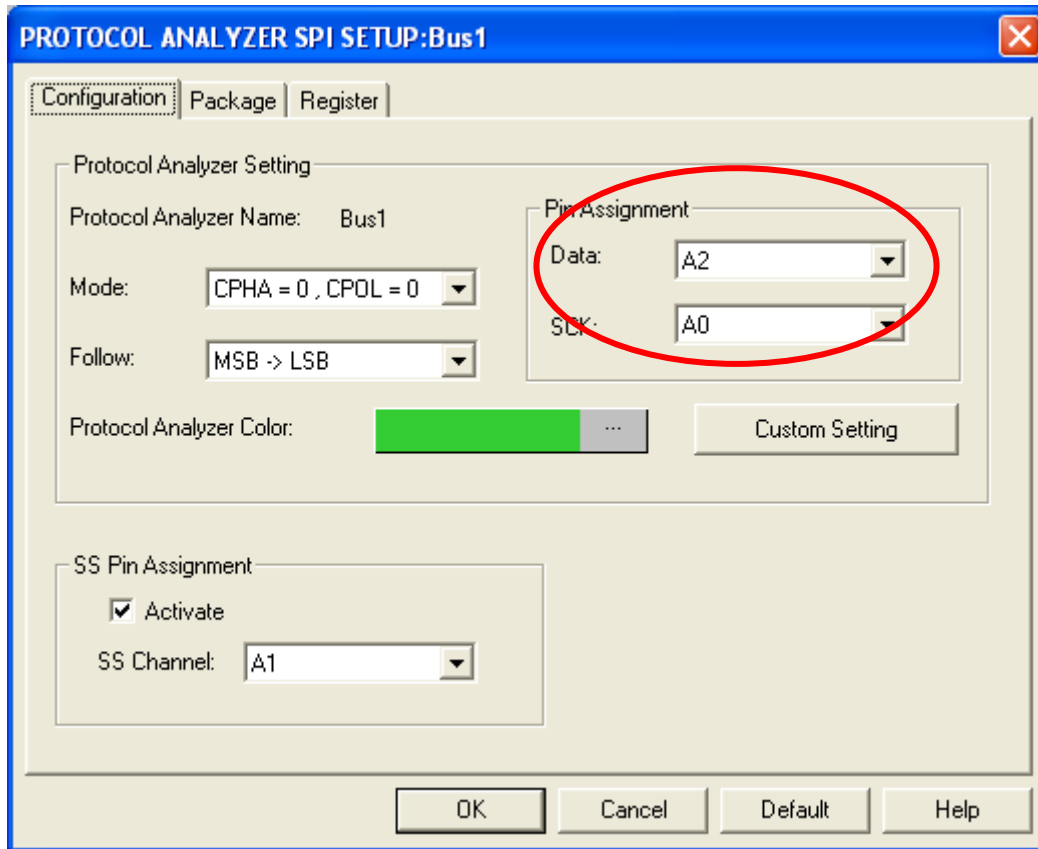


STEP 4. Set SS Pin Assignment.

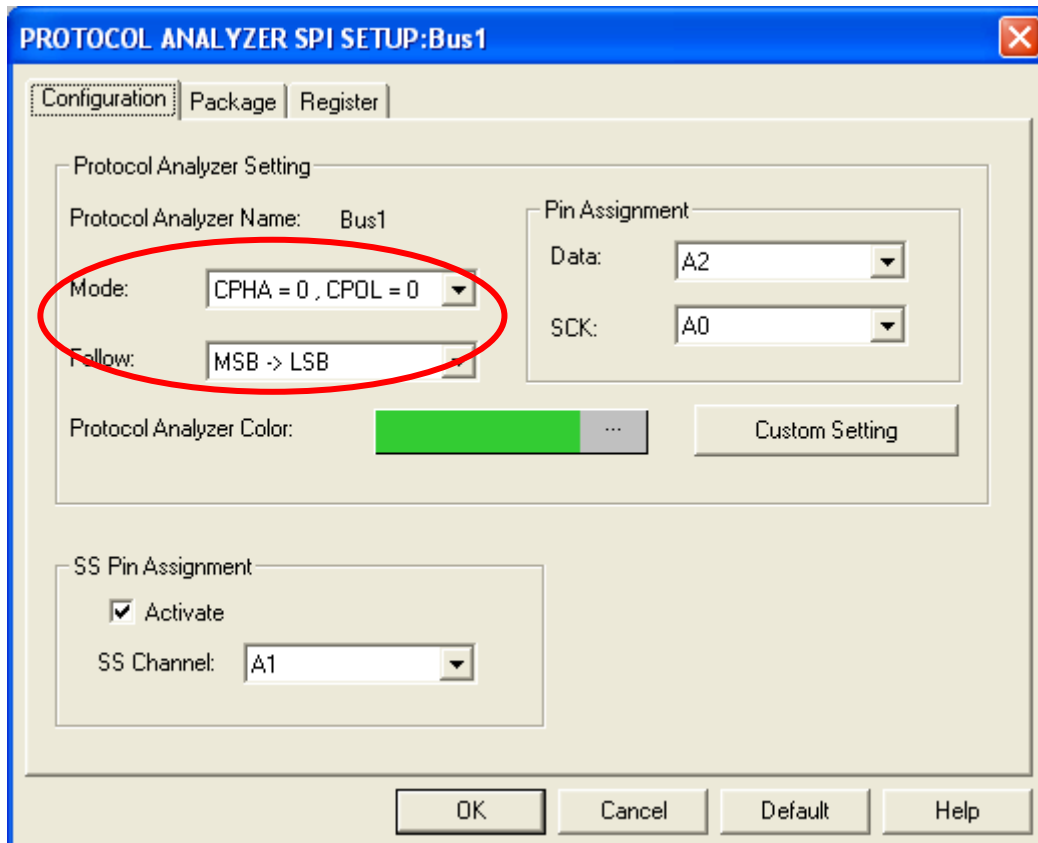




STEP 5. Set Pin Assignment. Select the channels for **Data** and **SCK** from the dropdown menus.

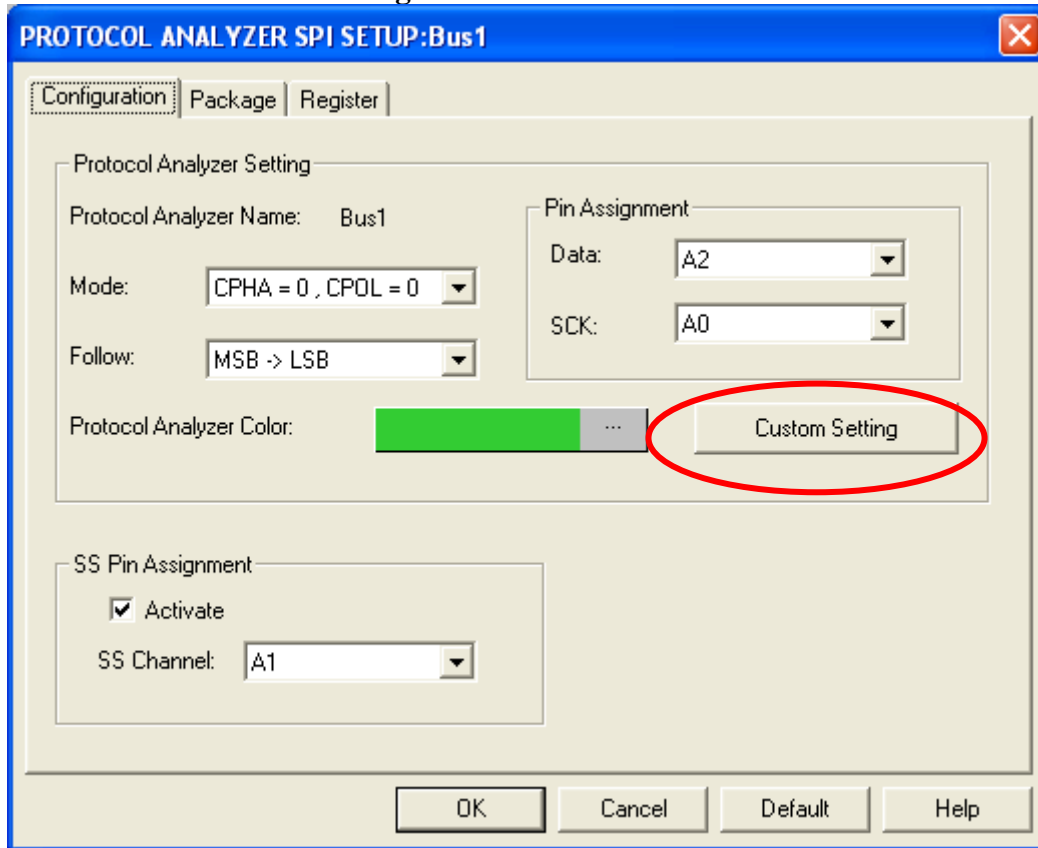


STEP 6. Set the **Mode** and **Follow** of SPI.

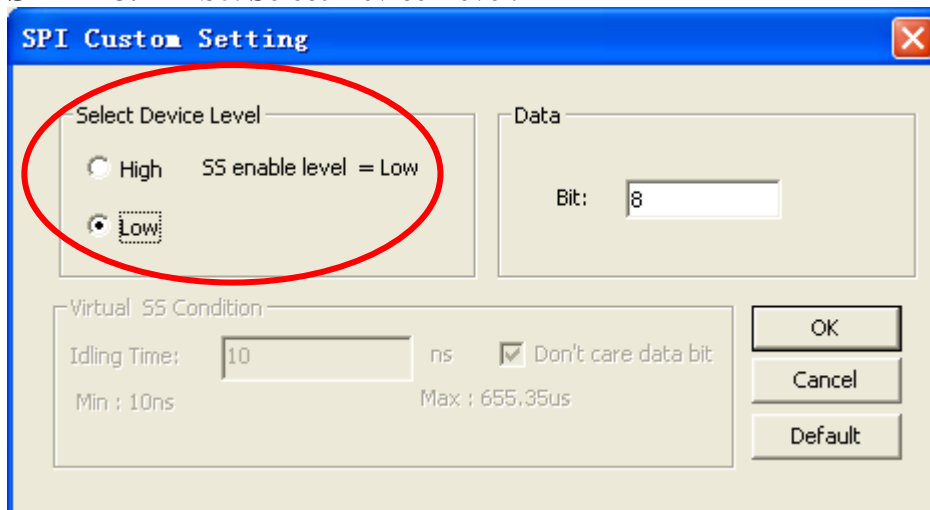




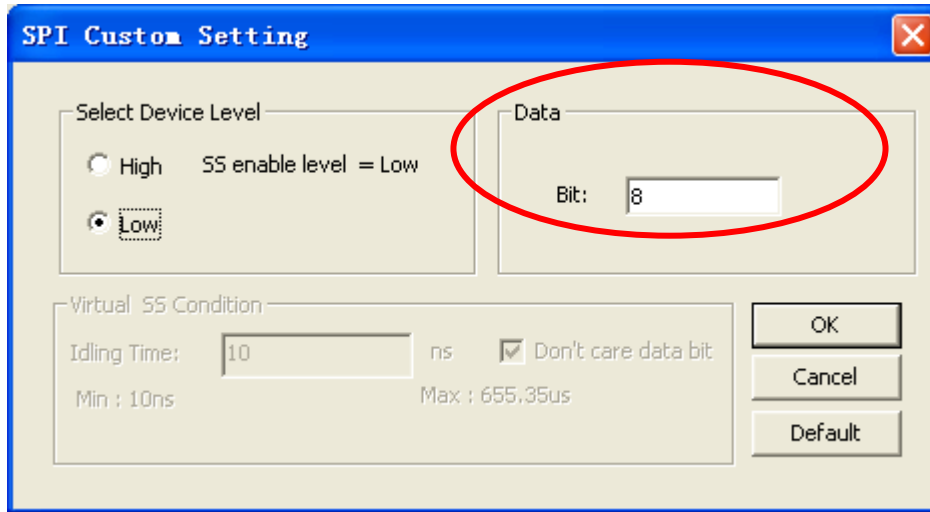
STEP 7. Custom Setting



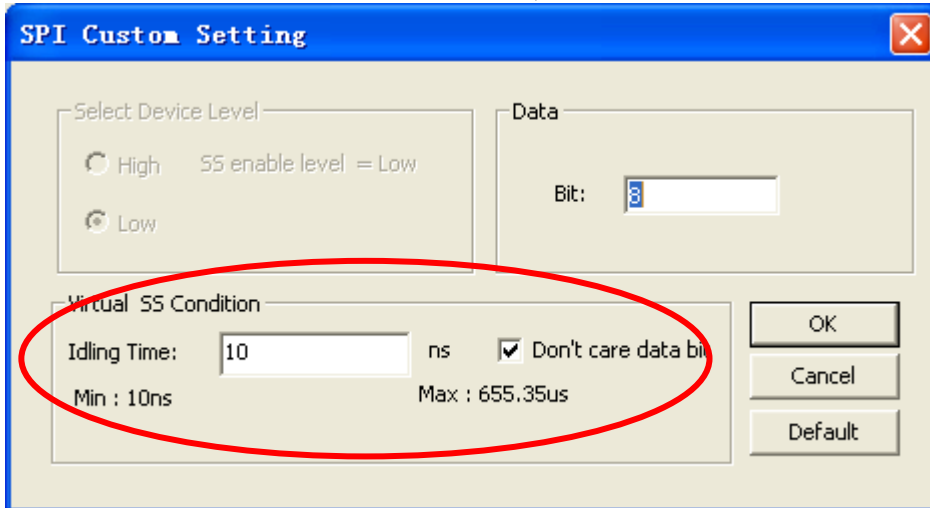
STEP 8. Set Select Device Level.



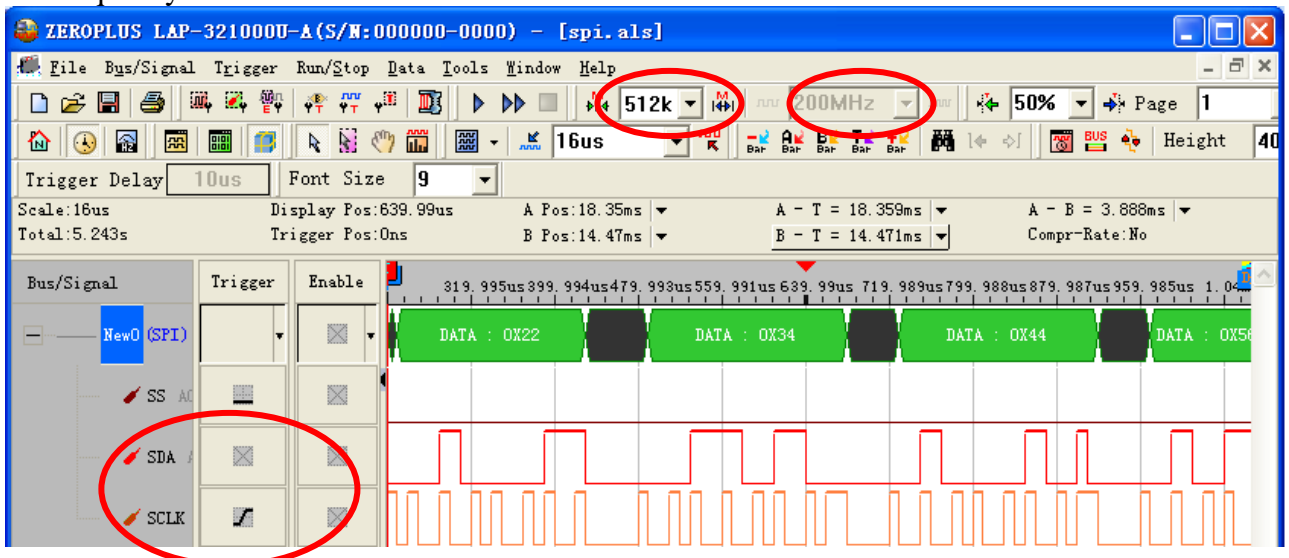
STEP 9. Set Data bit.



STEP 10. Set Virtual SS Condition, if SS channel is not activated.



STEP 11. Following pictures show the completion image of the protocol analyzer decoding .The Trigger condition is Rising Edge; the Memory depth is 512K; the Sampling frequency is 200MHz.





Following picture shows the waveform display with the package list.

