



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

Instrument Business Department

3-WIRE Specification

Version:V1.00



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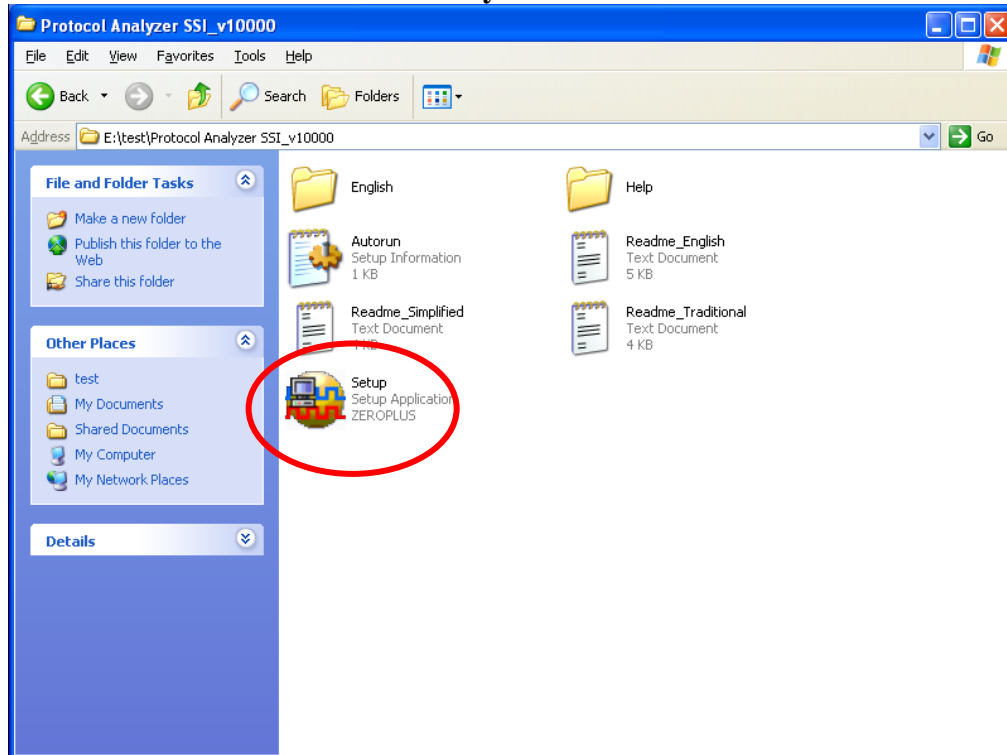


1 Software Installation

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. 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 some unconformity caused by the module version upgrade, users should refer to the module software as the standard.

STEP 1. Install Protocol Analyzer Module

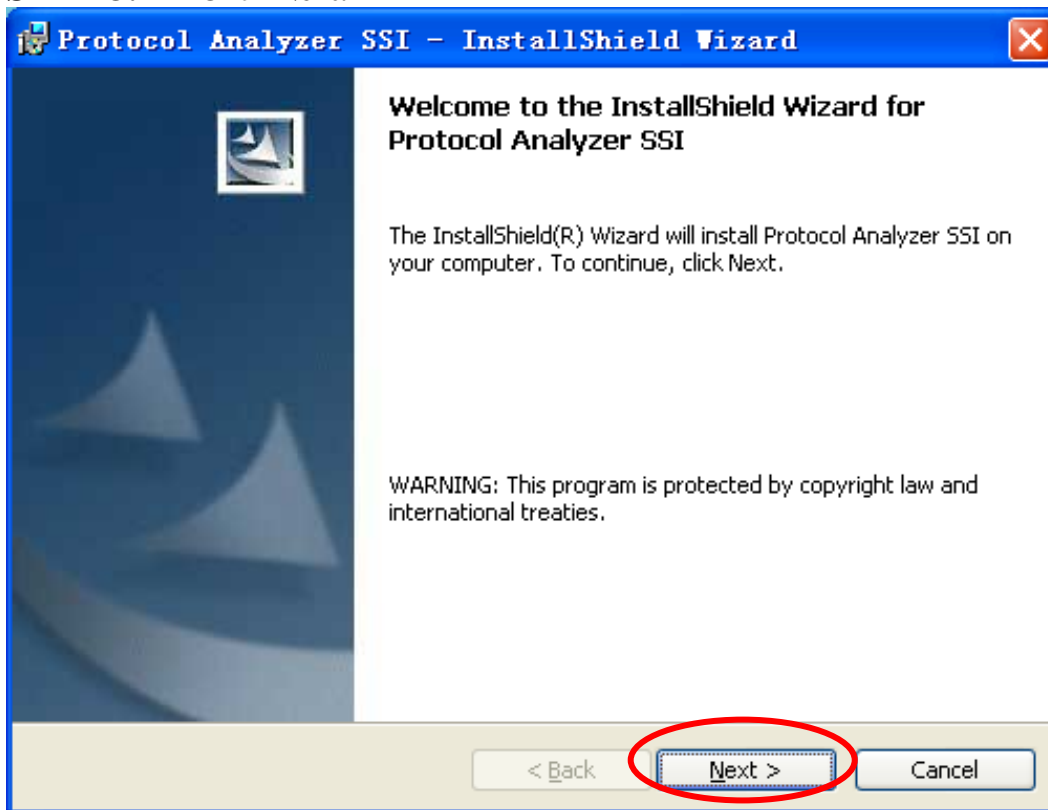


STEP 2. Click Install.

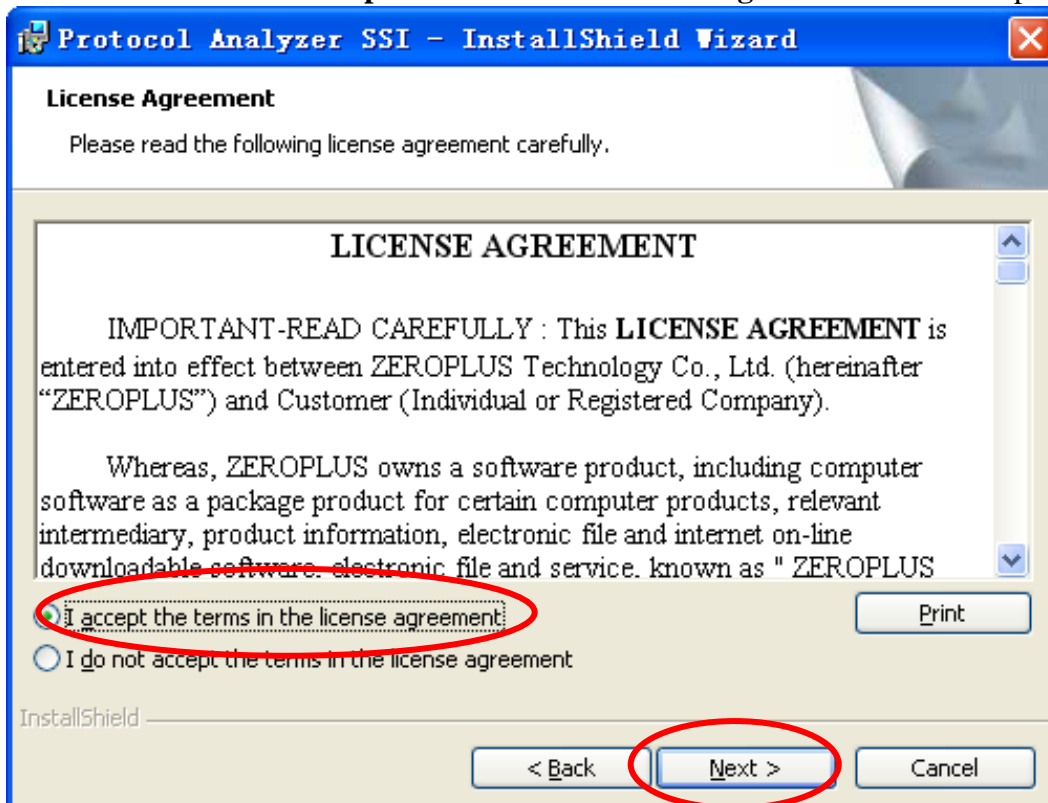




STEP 3. Click Next.



STEP 4. Select **I accept the terms in the license agreement**, and then 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 (微软用户)

InstallShield

< Back **Next >** Cancel

STEP 6. At 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.)

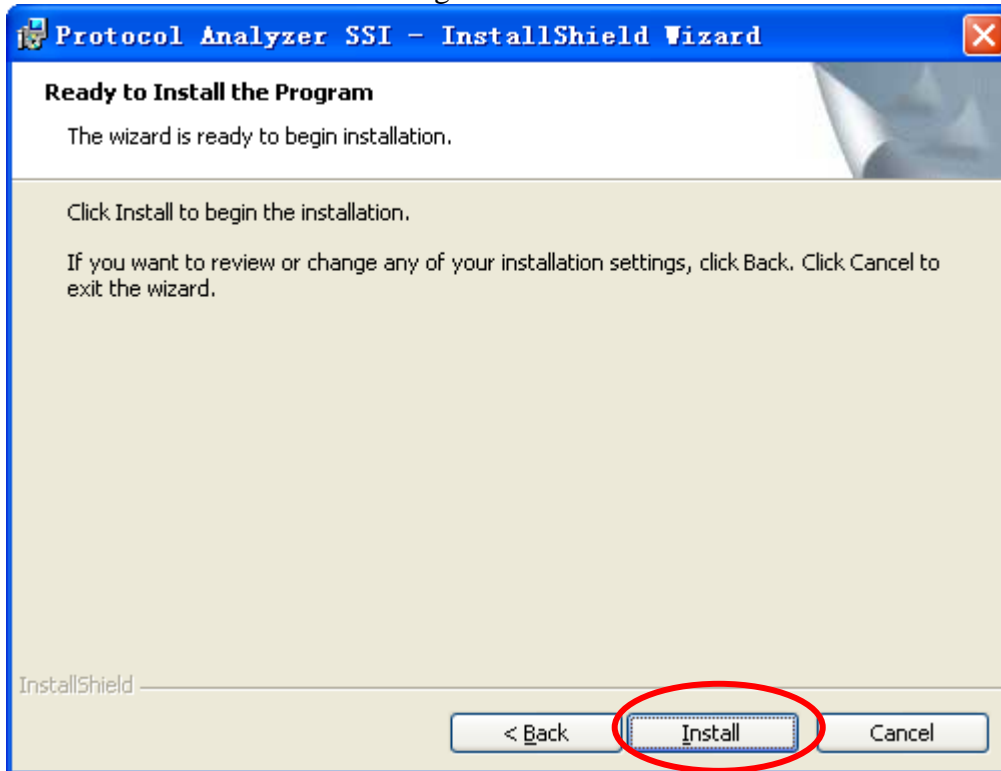
Custom
Choose which program features you want installed and where they will be installed. Recommended for advanced users.

InstallShield

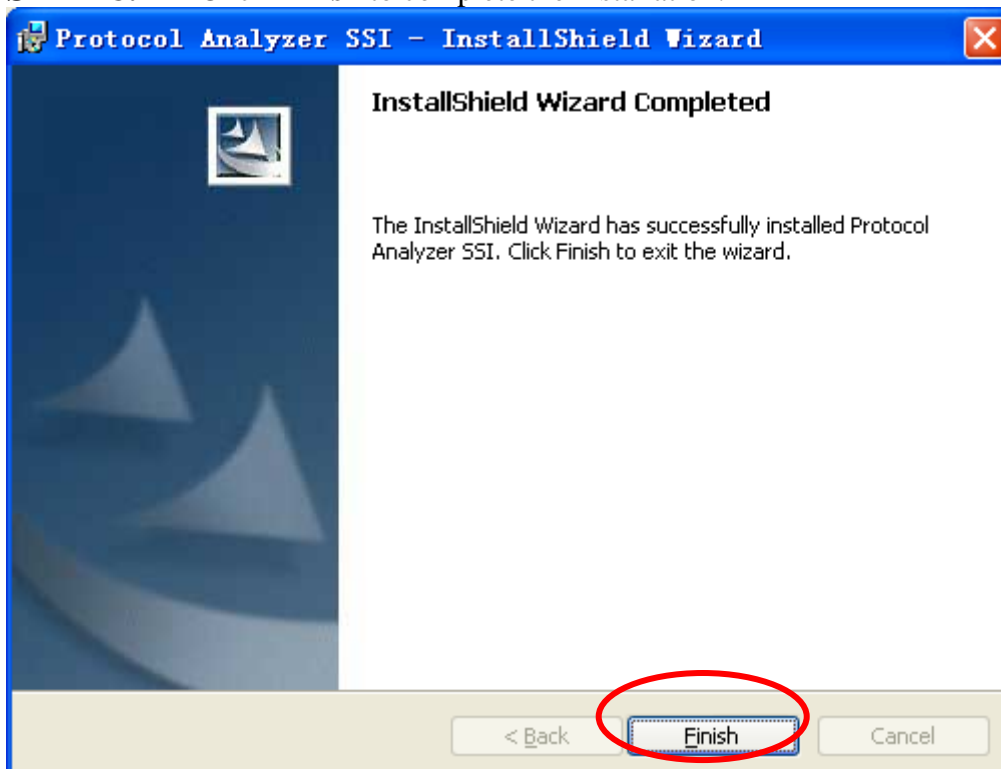
< Back **Next >** Cancel



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



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

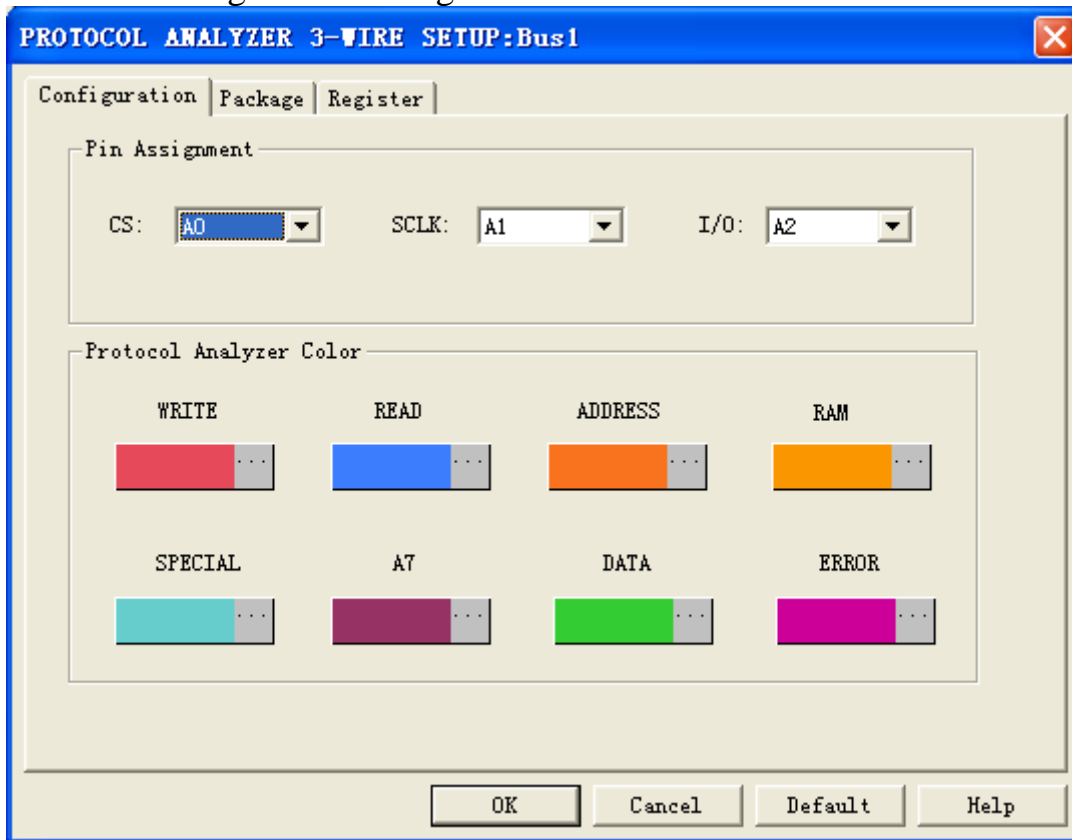




2 User Interface

Please refer to the below images to select options of setting **3-WIRE MODULE**.

3-WIRE Configuration dialog box



Pin Assignment:

Channel selection of Protocol Analyzer 3-WIRE

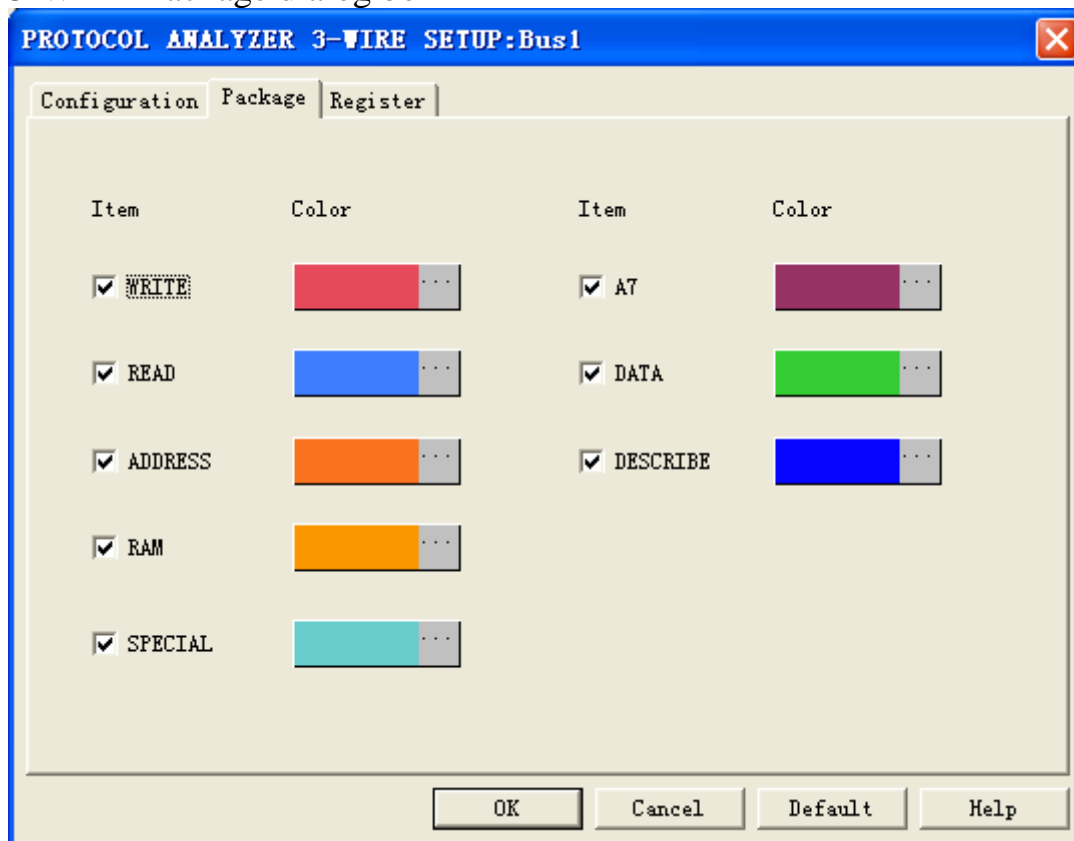
1. CS is the chip selection signal line, and its default is A0.
2. SCLK is the clock signal line, and its default is A1.
3. I/O is the data transmission line, and its default is A2.

Protocol Analyzer Color:

The protocol analyzer color can be varied by users.

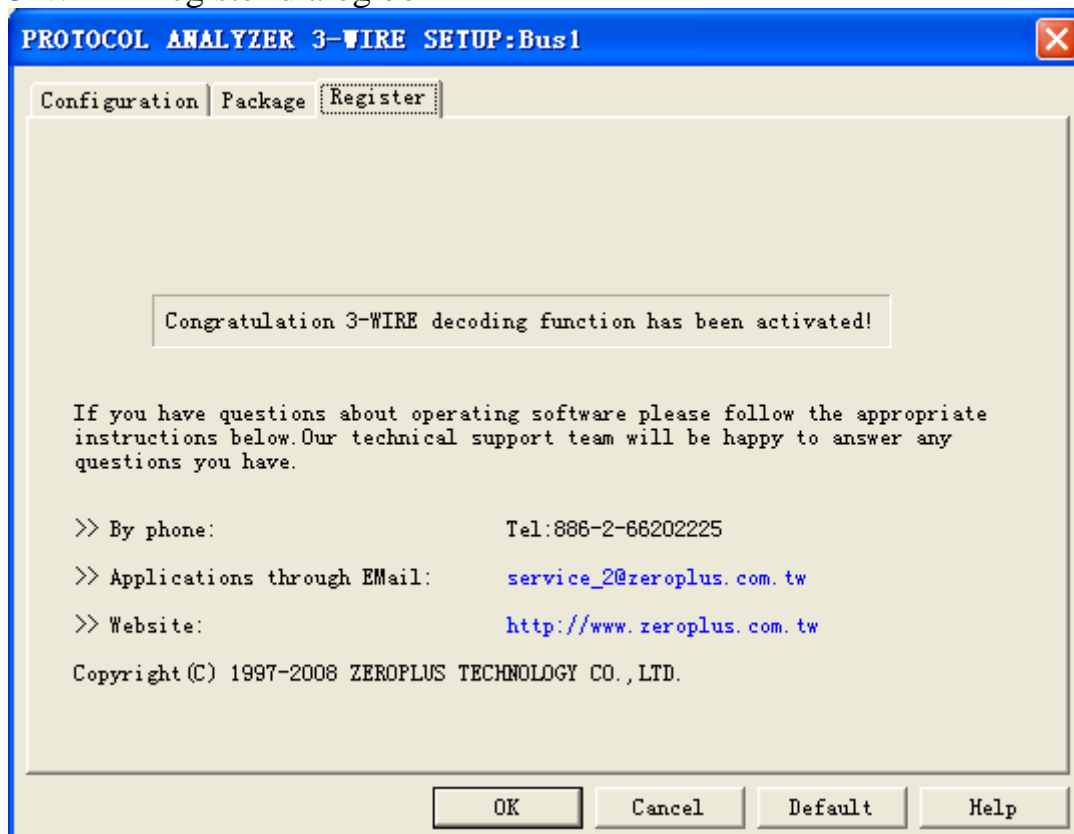


3-WIRE Package dialog box



In the package part, users can vary the displaying items and the package color.

3-WIRE Register dialog box

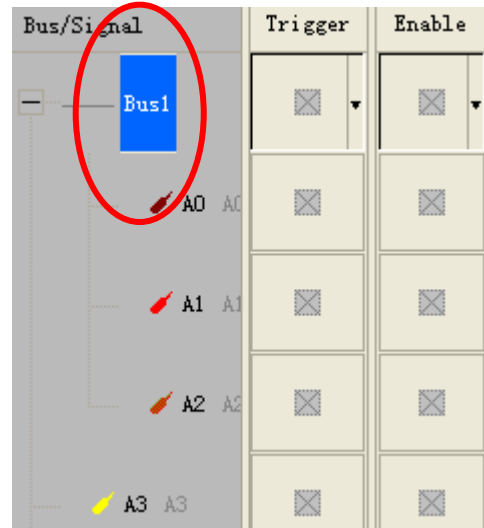
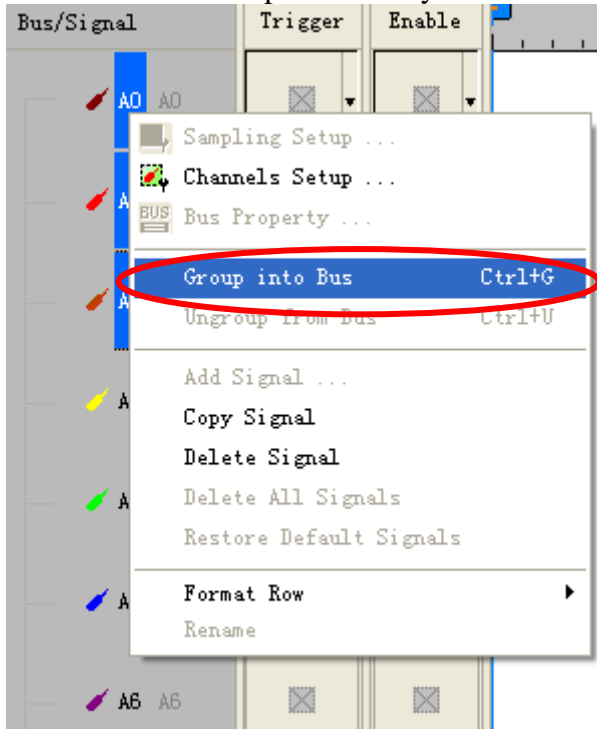


There is ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

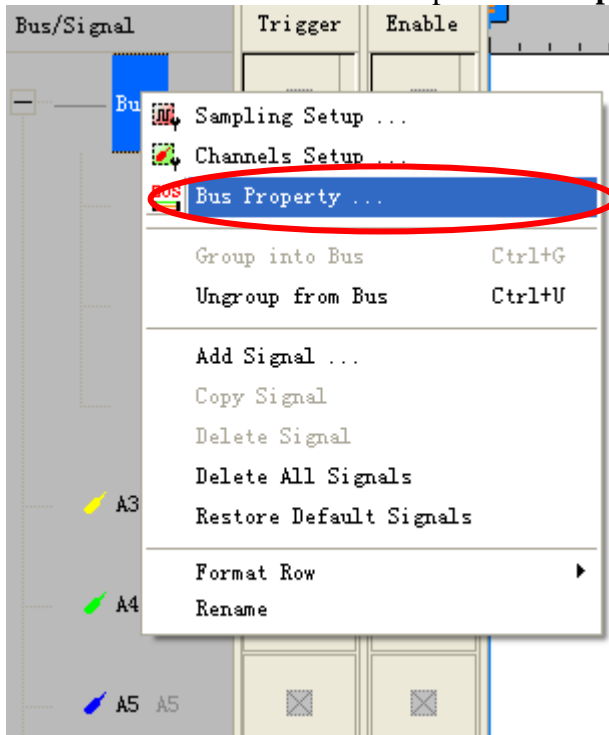


3 Operating Instructions

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

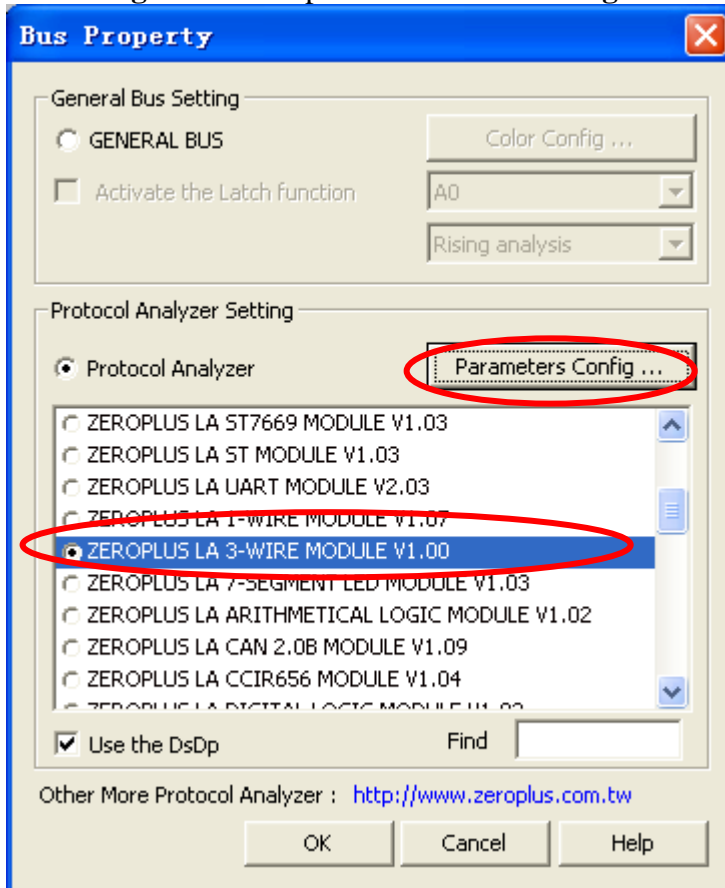


STEP 2. Select **Bus1**, then press **Right key** on the mouse to list menu, then press **Bus Property** or **Bus bar** on the toolbar to open **Bus Property** dialog box.

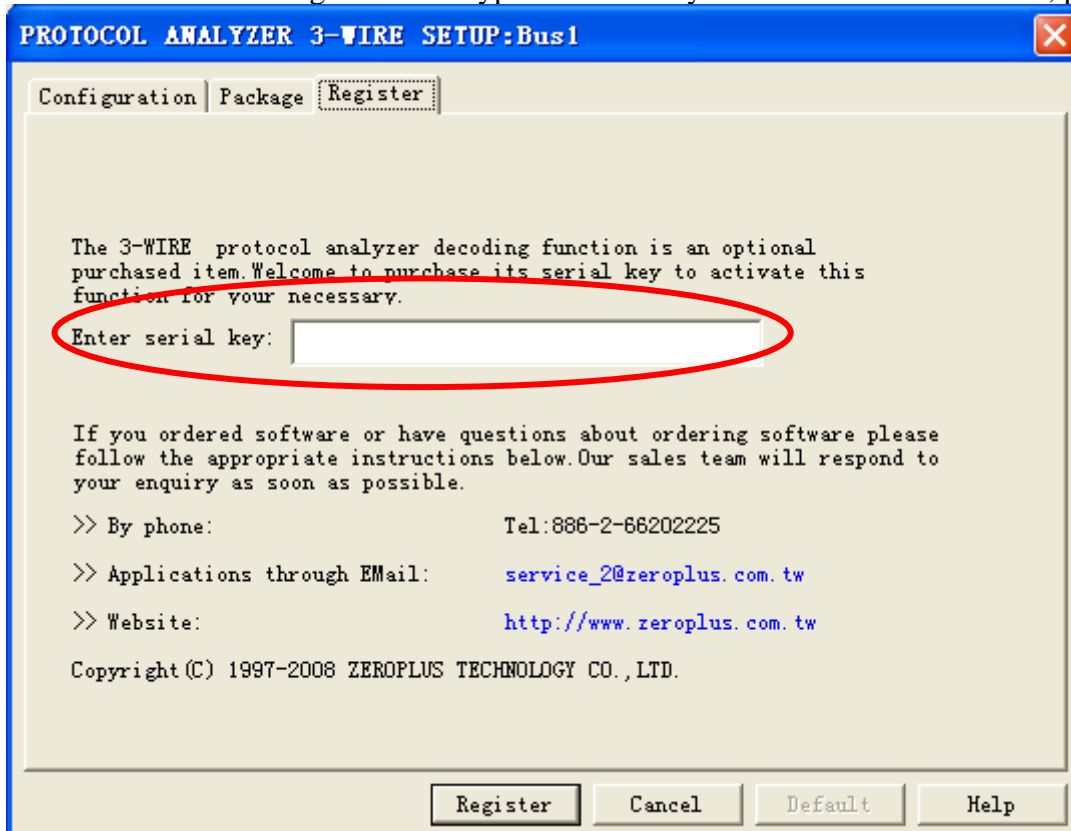




STEP 3. For Protocol Analyzer 3-WIRE Parameters Configuration, select Protocol Analyzer, and then choose **ZEROPLUS LA 3-WIRE MODULE V1.00**, next click **Parameters Configuration** to open **Parameters Configuration** dialog box.

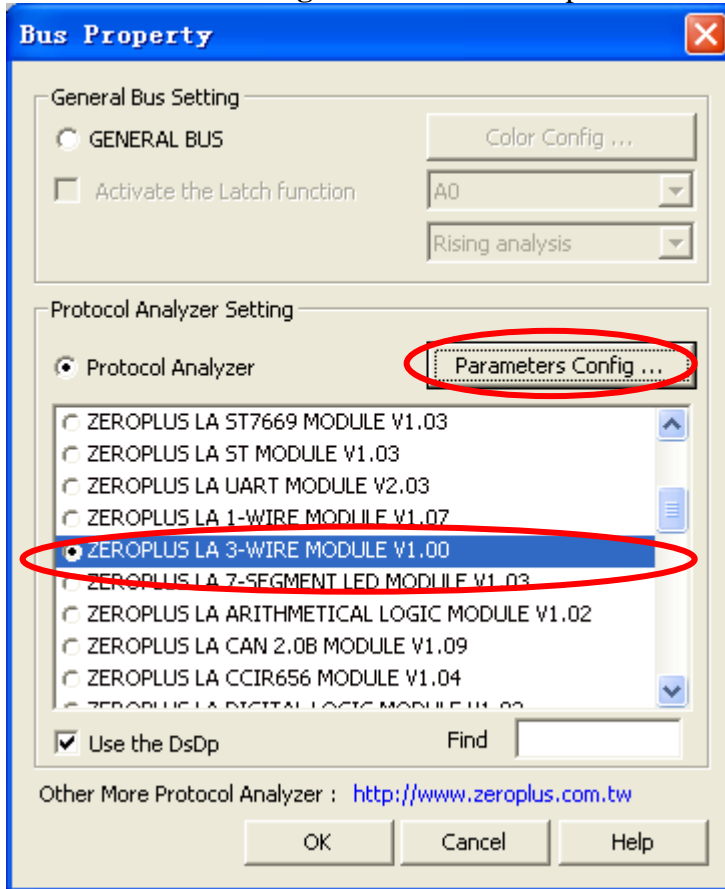


STEP 4. Press Register tab to type the serial key number of **3-WIRE**. Then, press **Register**.

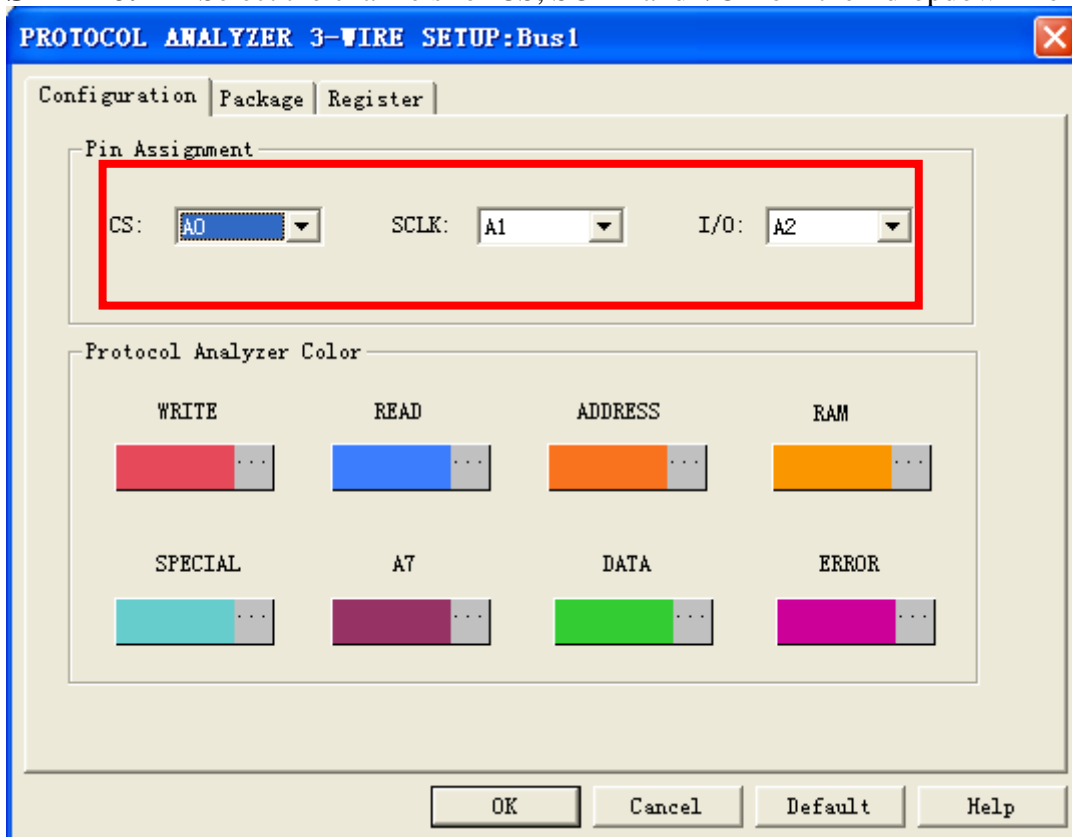




STEP 5. After completing **Register**, come back to the **Bus Property** dialog box, and then click **Parameters Configuration** to start the protocol analyzer 3-WIRE setup.

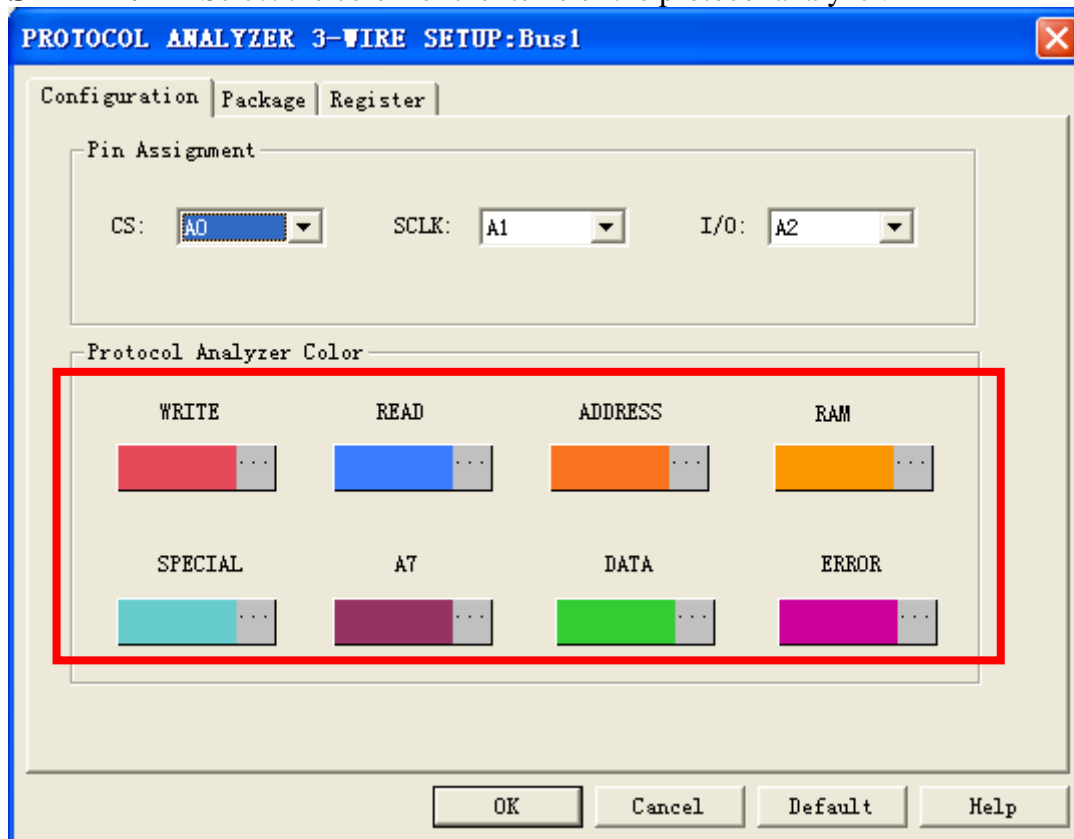


STEP 6. Select the channels for CS, SCLK and I/O from their dropdown menus.



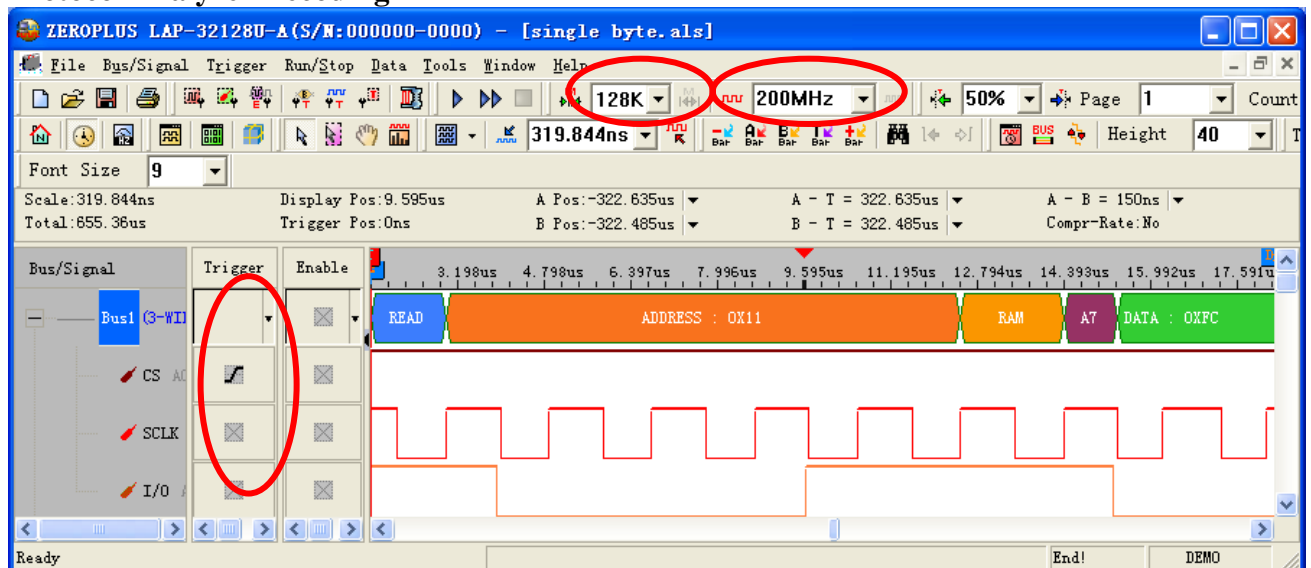


STEP 7. Select the color for the items of the protocol analyzer.



STEP 8. Following pictures show the completion of the protocol analyzer decoding and the package list. The Trigger condition is set as Rising Edge; the Memory depth is 128K; the Sampling frequency is 200MHz.

Protocol Analyzer Decoding





Package List

The screenshot shows a logic analyzer window titled "ZEROPLUS LAP-32128U-A(S/N:000000-0000) - [single byte.als]". The interface includes a menu bar, a toolbar with various analysis tools, and a main display area showing a bus signal trace. The trace shows a sequence of operations: a read operation at address 0X11 from RAM with data 0XFC, followed by a write operation at address 0X15 to RAM with data 0X36, another read operation at address 0X1C from RAM with data 0XAA, and a final write operation at address 0X0B to a SPECIAL register with data 0X92. The package list table below the trace provides a detailed view of these operations.

Package #	Name	TimeStamp	READ	ADDRESS	RAM	A7	DATA
1	Bus1(3-WIRE)	1.1us	READ	0X11	RAM	A7	0XFC
2	Bus1(3-WIRE)	32.6us	WRITE	0X15	RAM	A7	0X36
3	Bus1(3-WIRE)	64.095us	READ	0X1C	RAM	A7	0XAA
4	Bus1(3-WIRE)	95.595us	WRITE	0X0B	SPECIAL	A7	0X92