



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

# Instrument Business Department

## AC97 Specification

Version: V1.0



# Content

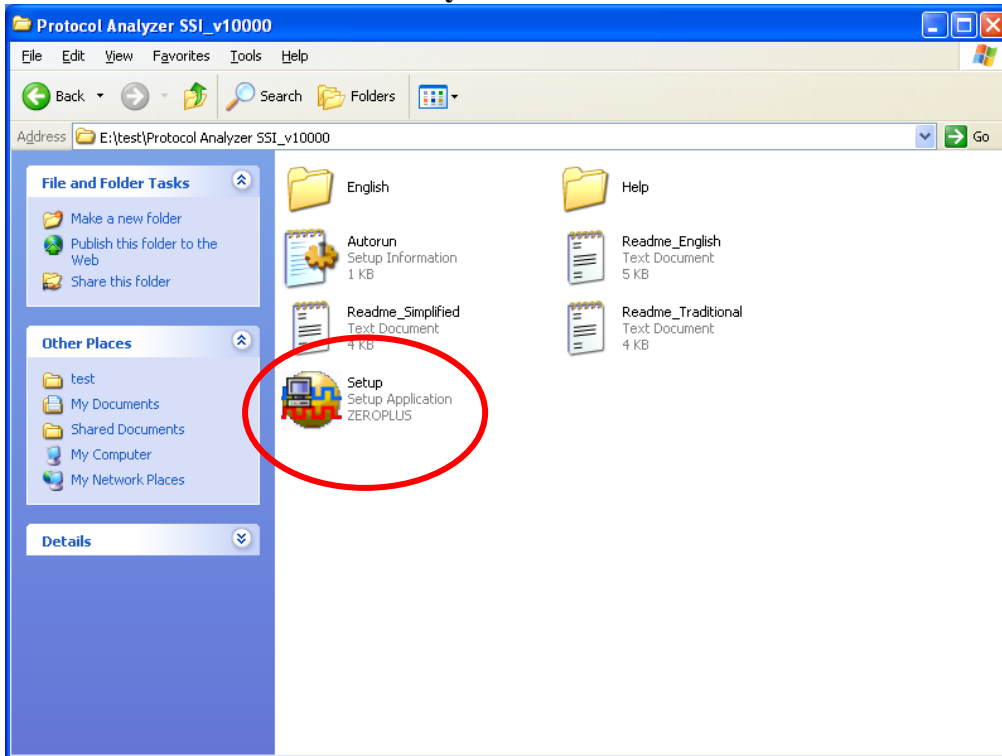
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# 1 Software Installation

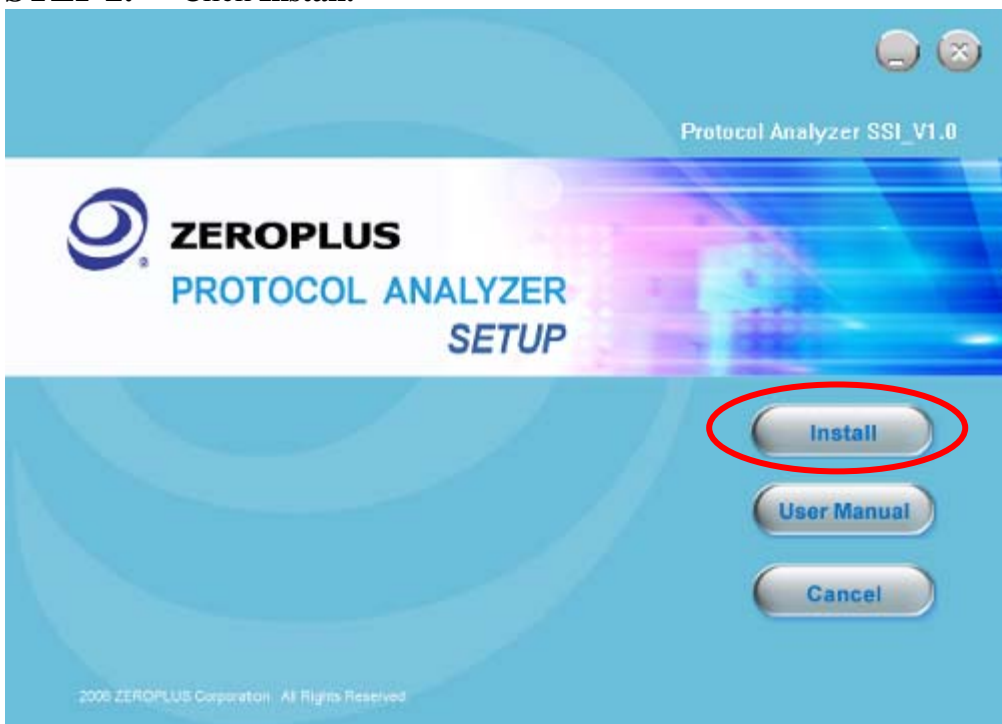
Please install the software as the following steps:

- ※ 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.

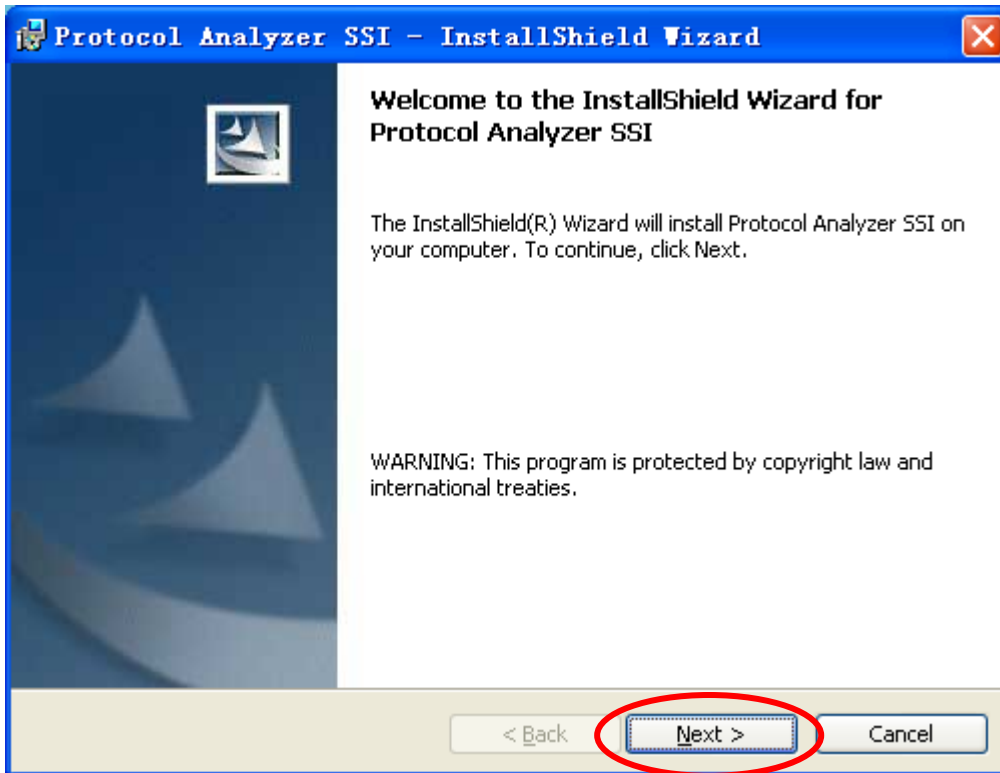


## STEP 2. Click Install.

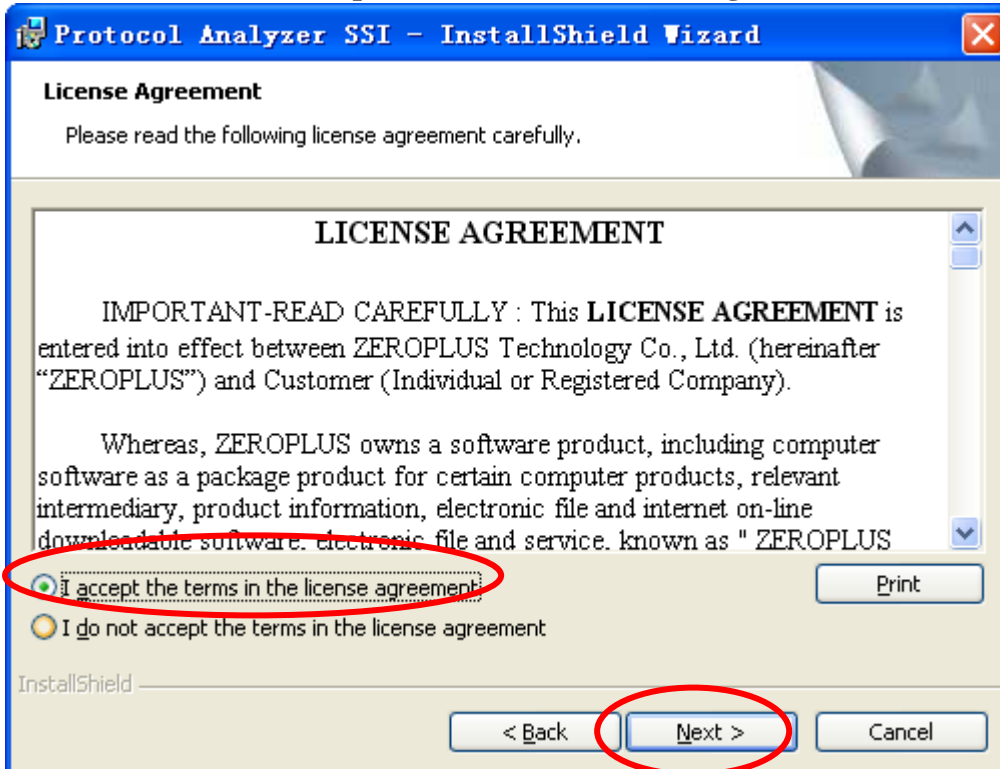




**STEP 3.** Click Next.

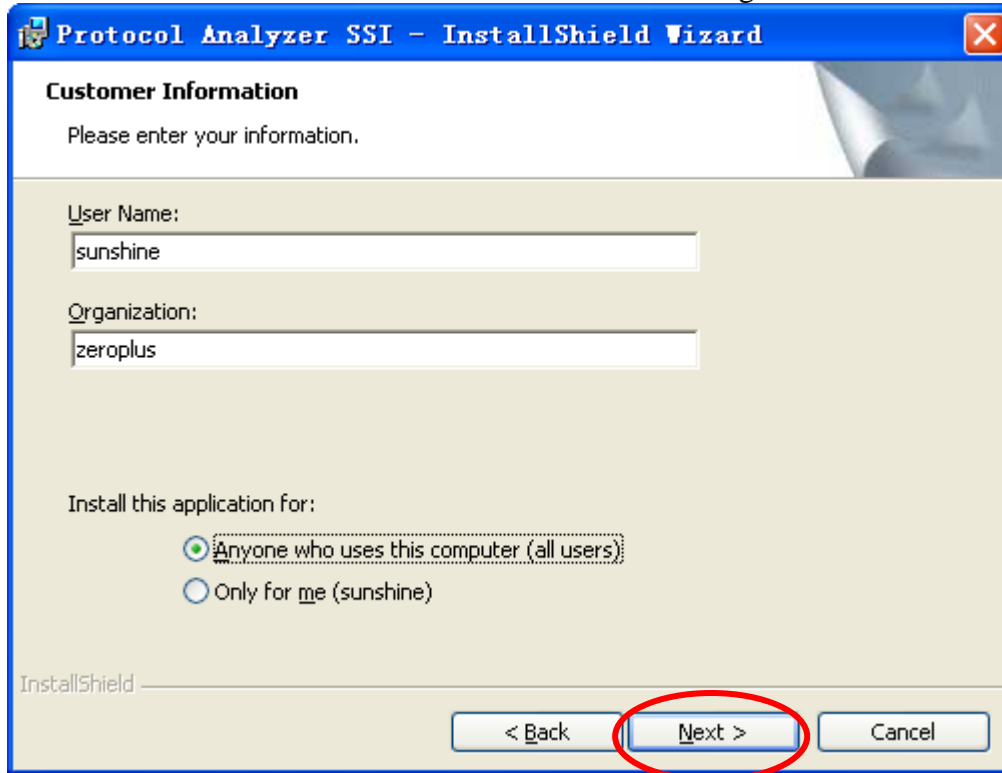


**STEP 4.** Select I accept the terms in the license agreement, and then press Next.

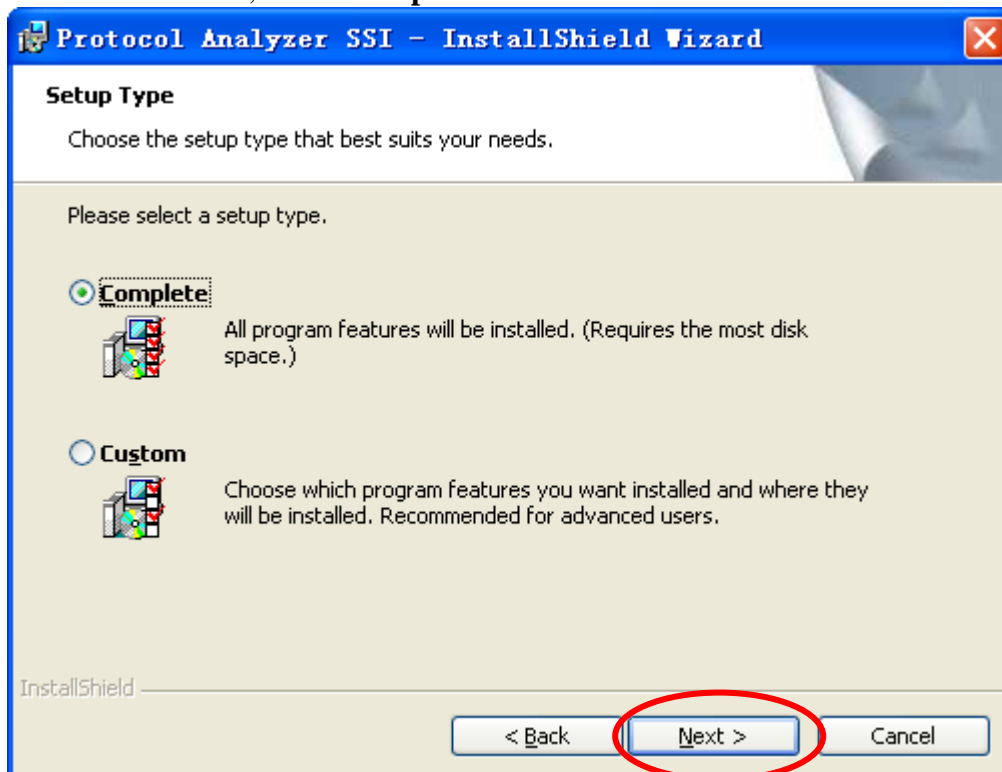




**STEP 5.** Fill in users' information in the below dialog box and click **Next**.

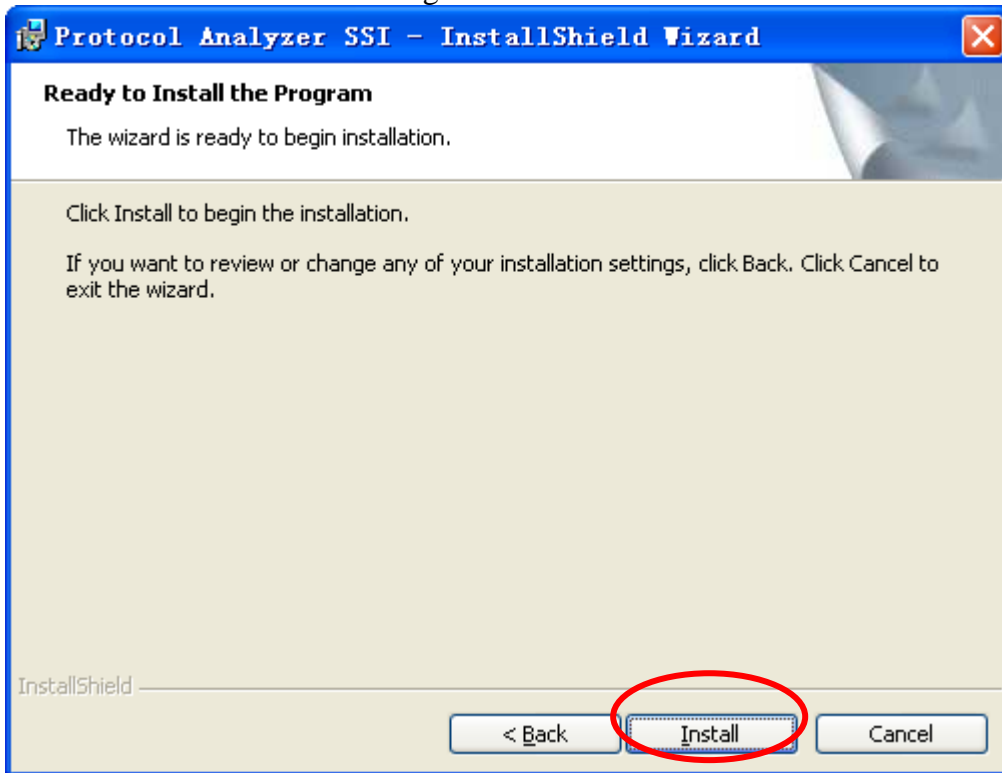


**STEP 6.** First, select **Complete** and then click **Next**.

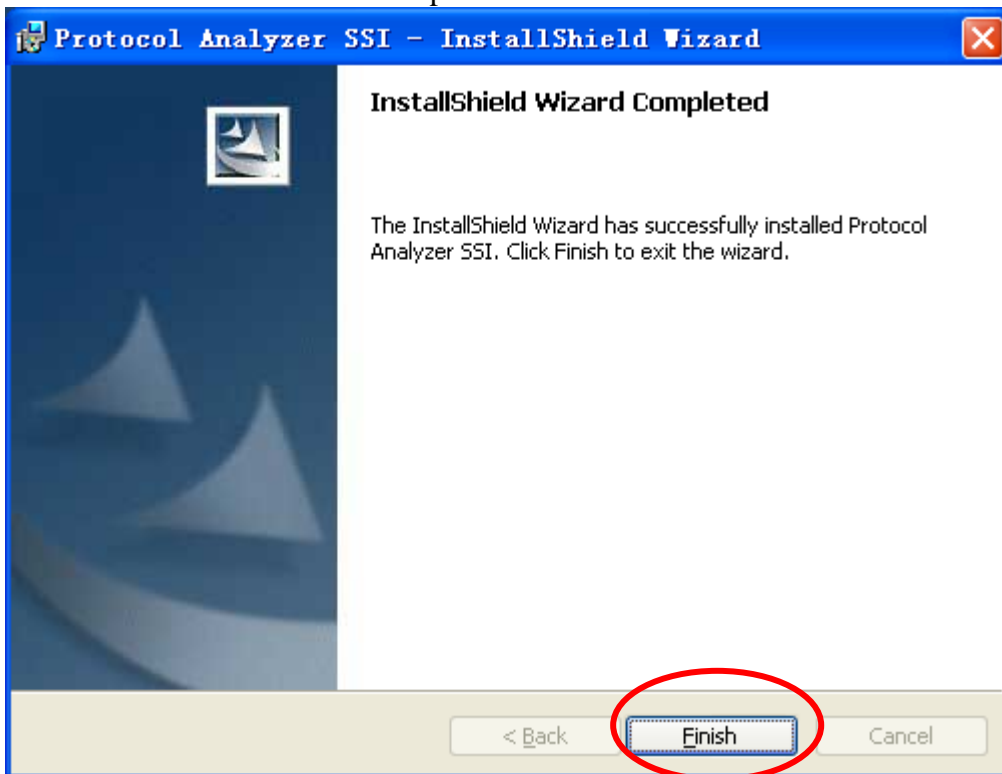




**STEP 7.** Click **Install** to begin the installation.



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

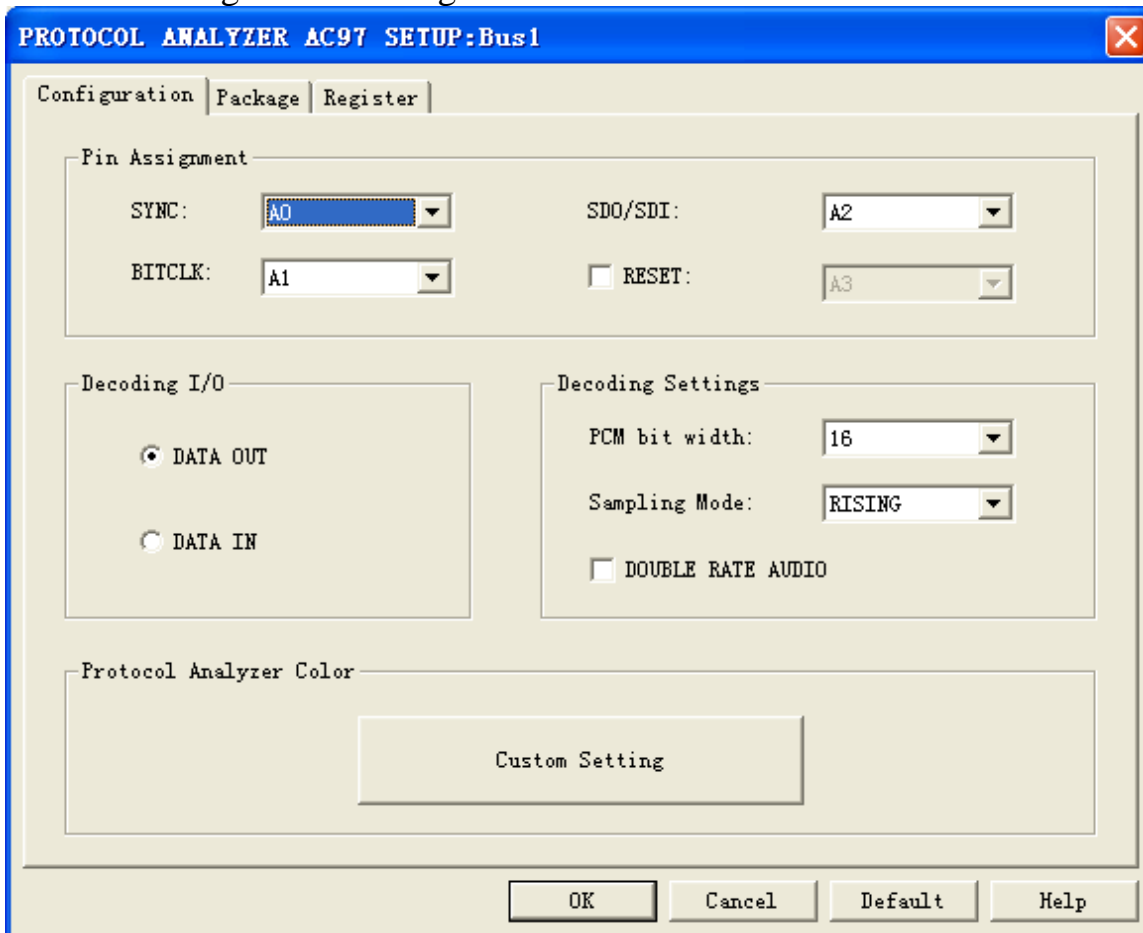




## 2 User Interface

In the configuration dialog box, please refer to the below images to select options of setting **AC97 MODULE**.

### AC97 Configuration Dialog Box



#### Pin Assignment:

The selection of AC97 Protocol Analyzer channels:

1. SYNC: It is the synchronous signal line; the default is A0.
2. BITCLK: It is the clock signal line; the default is A1.
3. SDO/SDI: It is the data transmission line; the default is A2.
4. RESET: It is the reset line; the default is A3.

#### Decoding I/O:

Users can set the **Decoding I/O** as **DATA OUT** or **DATA IN**.

#### Decoding Settings:

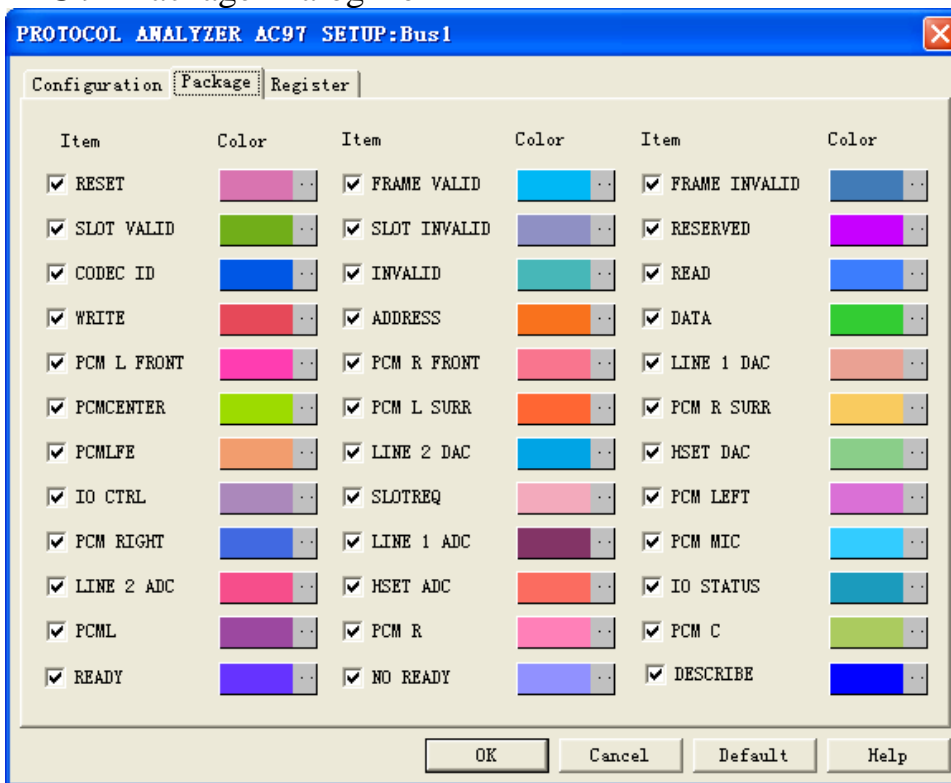
1. .PCM bit width: Users can set the bit width of PCM which are 16bits, 18 bits or 20bits.
2. Sampling Mode: The default is RISING sampling of BITCLK. When the settings is FALLING, the decoding condition is changed into the FALLING sampling.
3. DOUBLE RATE AUDIO: After selecting the decoding, it can decode PCM L, PCM R, PCM C.

#### Protocol Analyzer Color:

Users can click the Custom Setting to set and vary the color of the items according to their requirements.

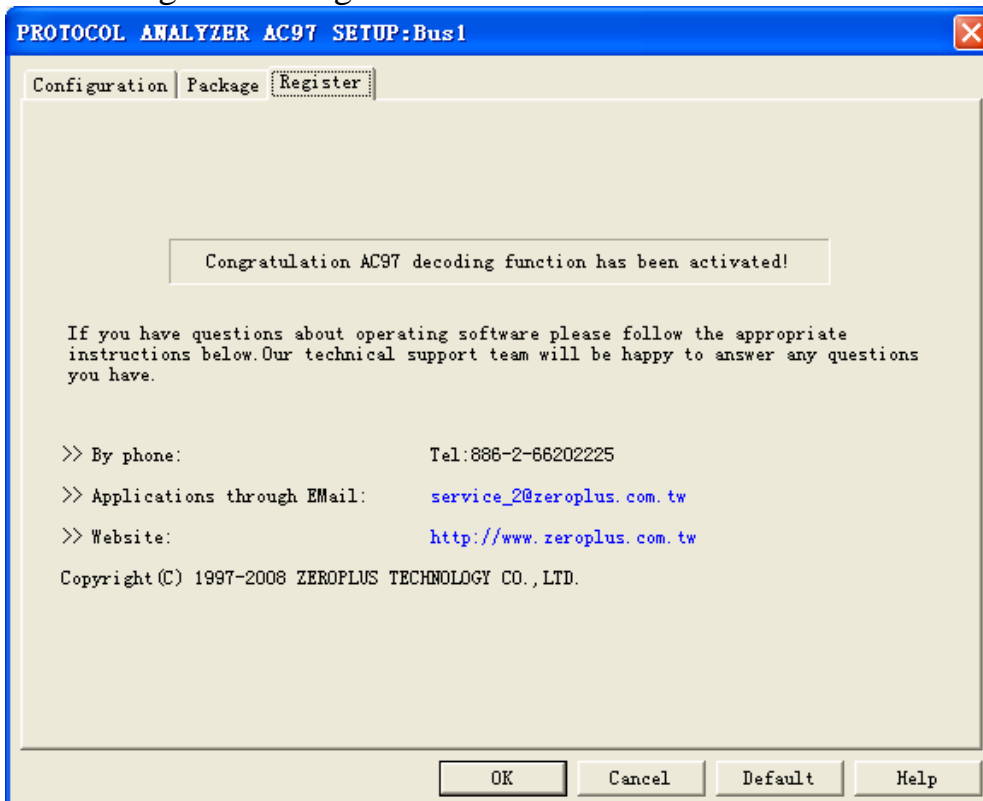


## AC 97 Package Dialog Box



In the package dialog box, users can choose displayed items and set protocol analyzer color according to their requirements.

## AC97 Register Dialog Box

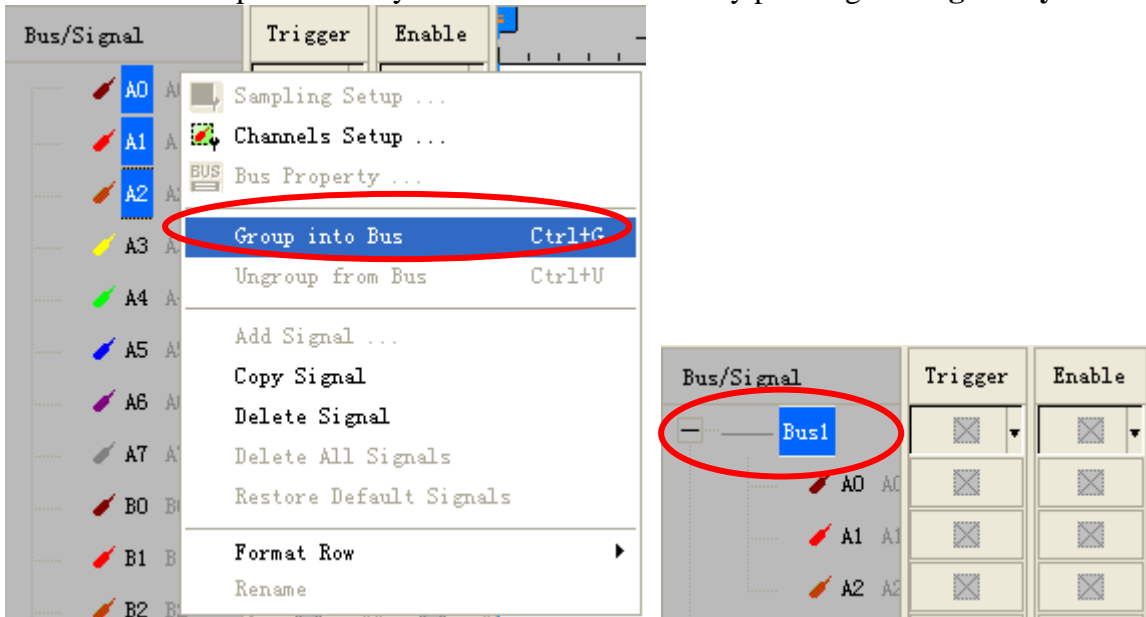


There is written ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

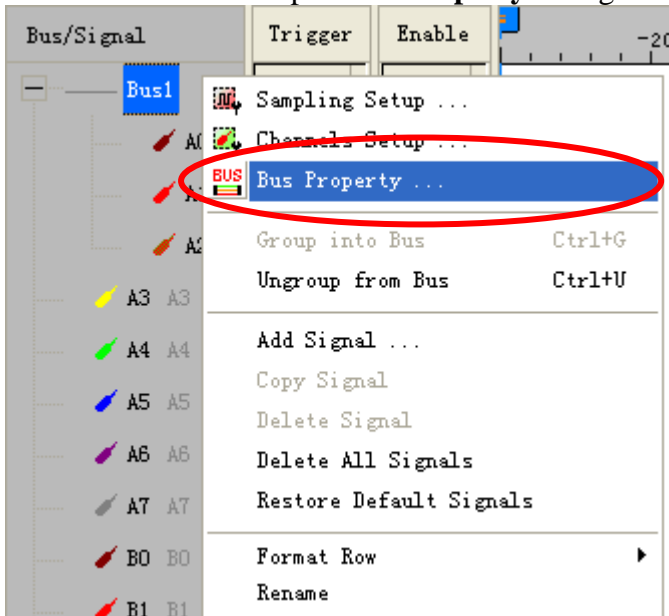


### 3 Operating Instructions

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

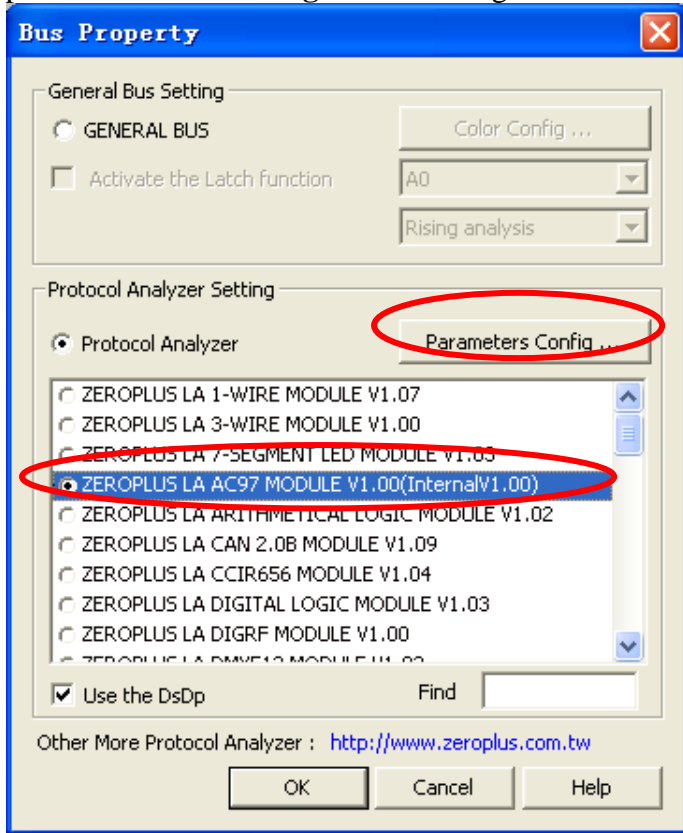


**STEP 2.** Select **Bus1**, then press **Right key** on the mouse to list menu, then press **Bus Property** or **Bus** bar on the toolbar to open **Bus Property** dialog box.

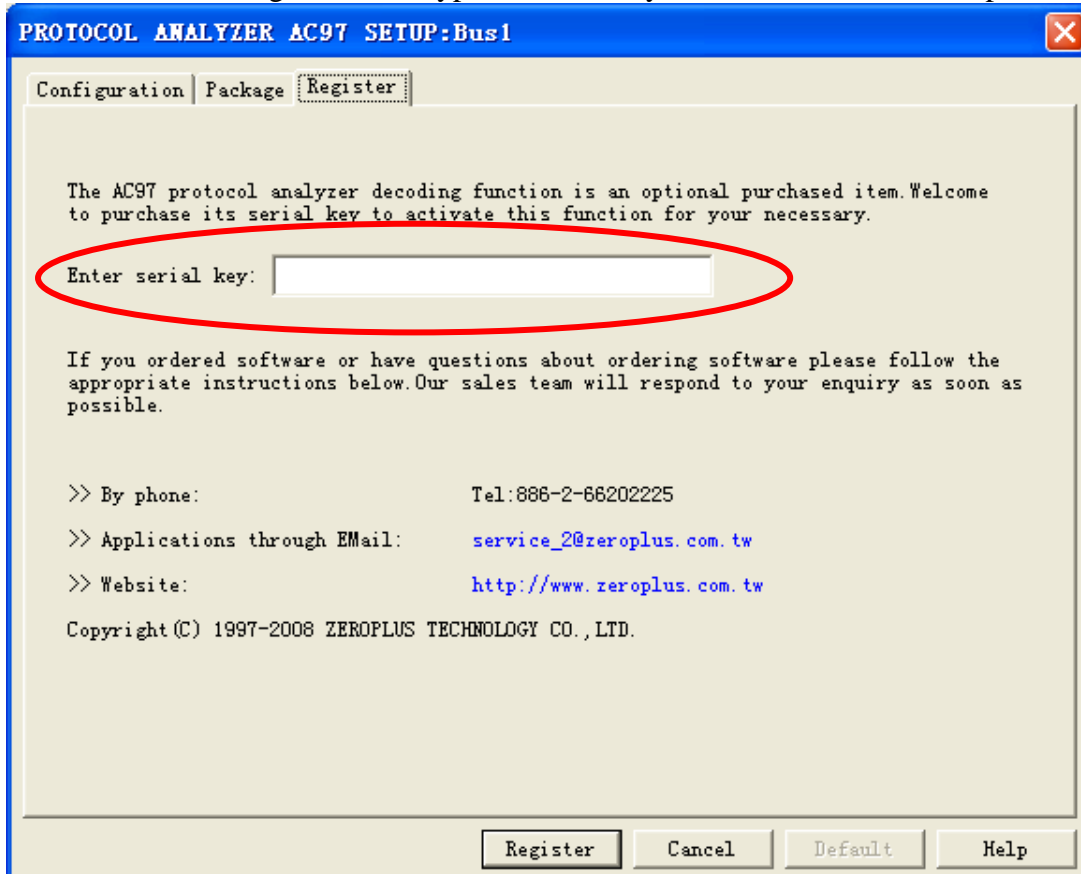




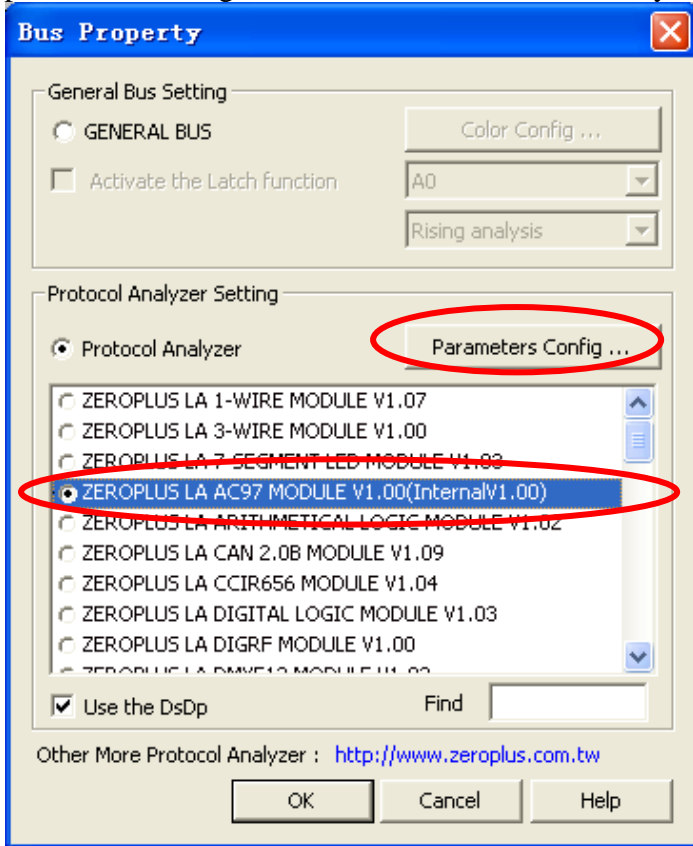
**STEP 3.** For Protocol Analyzer AC97 Parameters Configuration, select Protocol Analyzer, and then select **ZEROPLUS AC97 MODULE V1.00(Internal V1.00)**. Next click **Parameters Configuration** to open **Parameters Configuration** dialog box.



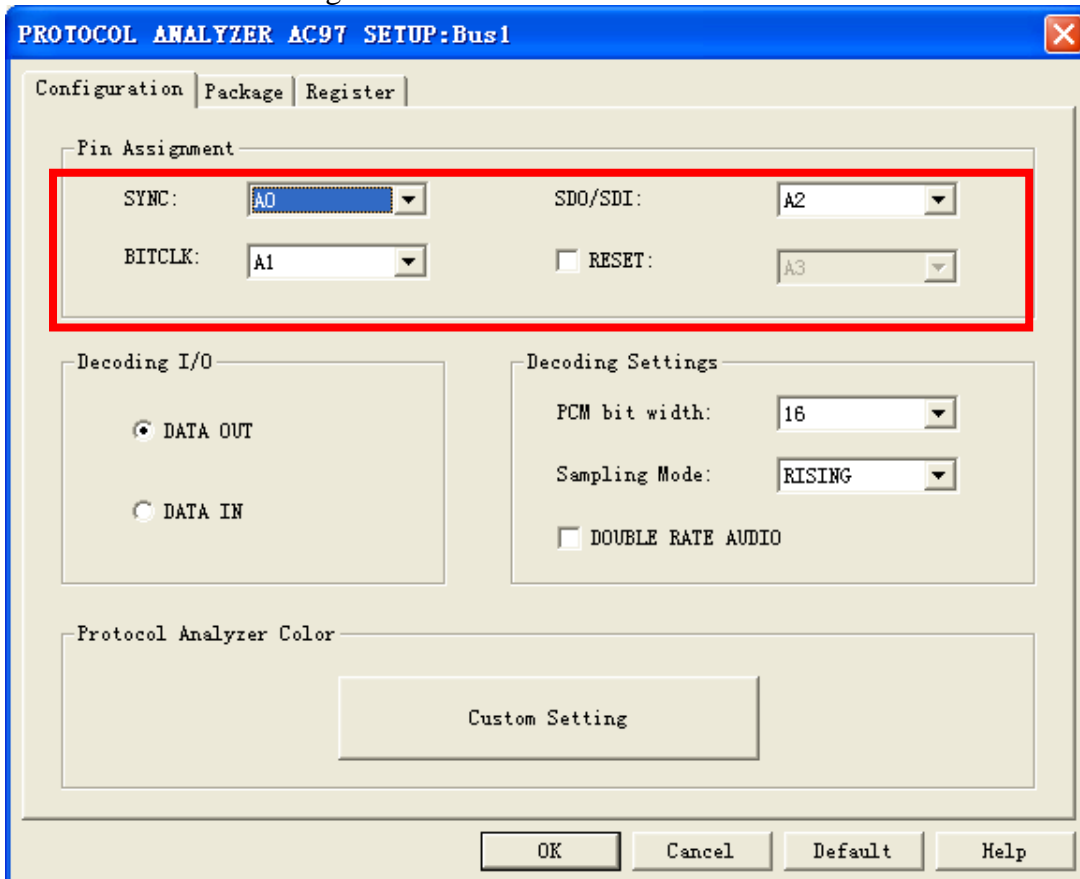
**STEP 4.** Click Register tab to type the serial key number of AC97. Then, press **Register**.



**STEP 5.** After completing **Register**, come back to the **Bus Property** dialog box, and then click the parameters configuration to start the Protocol Analyzer AC97 setup.

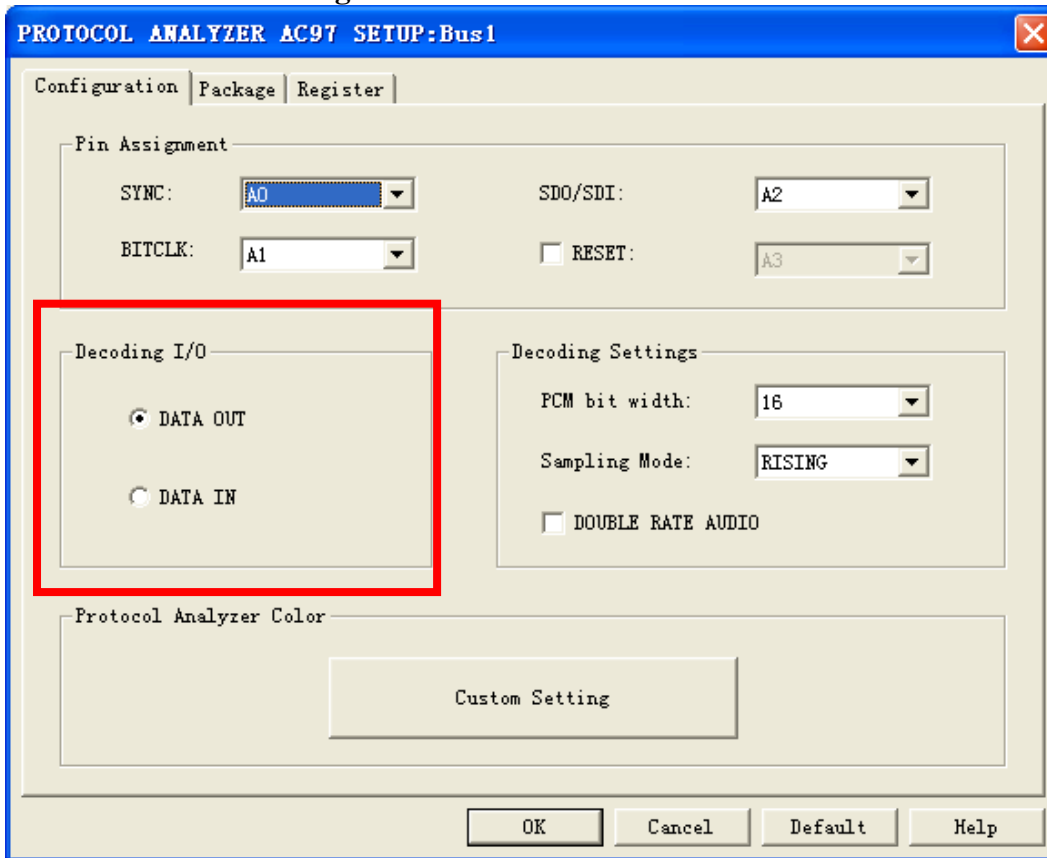


**STEP 6.** Select the signal channels.

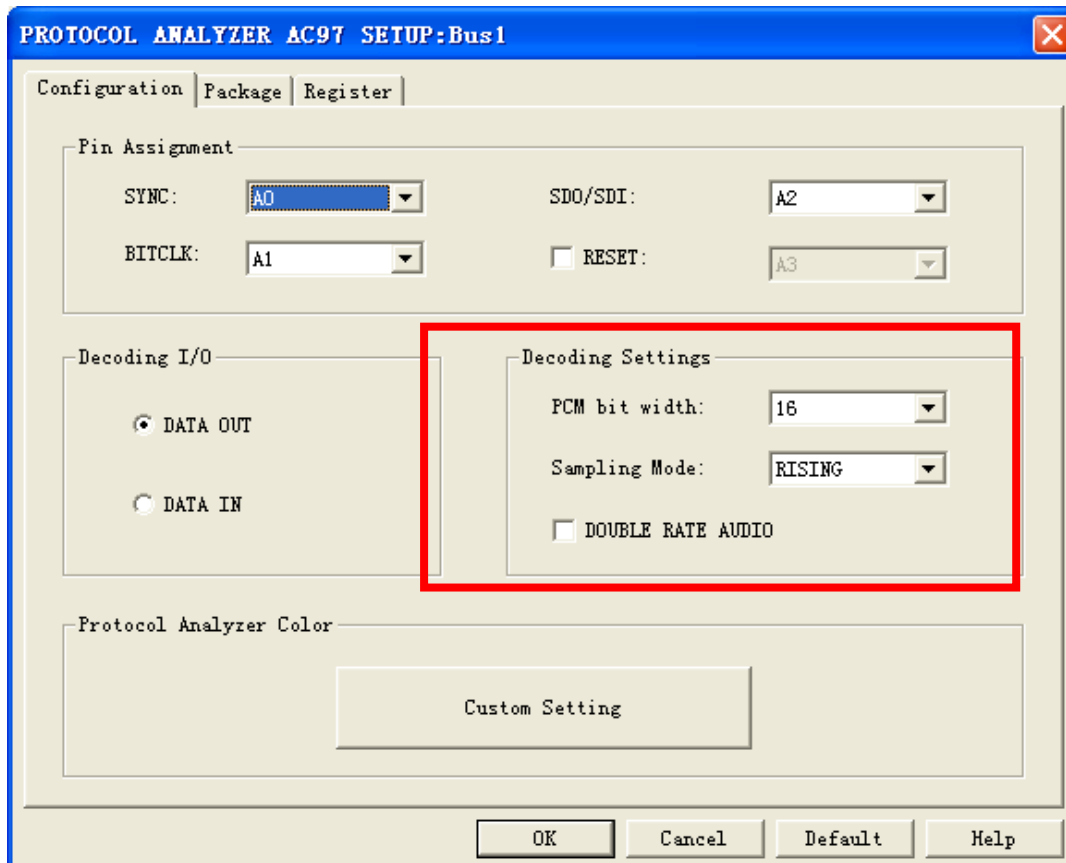




**STEP 7.** Set Decoding I/O as DATA OUT or DATA IN.

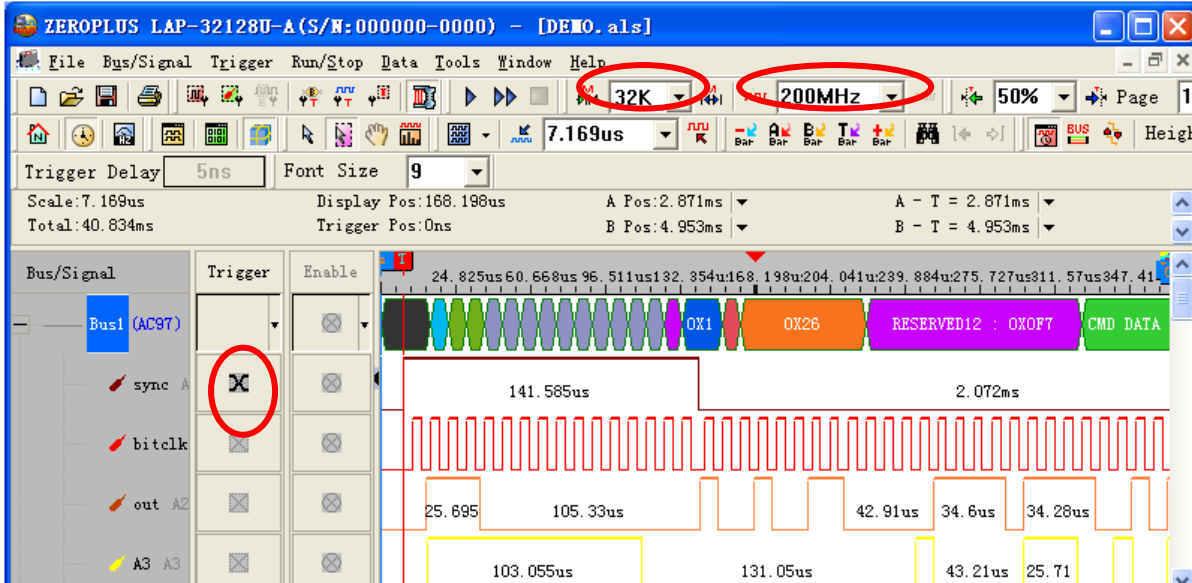


**STEP 8.** Set PCM bit width, Sampling Mode and select whether to start the function of DOUBLE RATE AUDIO or not.



**STEP 9.** Following pictures show the completion of the protocol analyzer decoding and the package list. The Trigger condition is set as Either Edge; the Memory depth is 32K; the Sampling frequency is 200MHZ.

Protocol Analyzer Decoding



Package List

