



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

# SPECIFICATION

**MODEL: B08028-LAP-LPC-M**

**PART NO :** \_\_\_\_\_

**VERSION :** V1.08

Approver		Check	Design
GM	PM		

Customer Confirm

\* Please fax the file to  
Zeroplus Technology after  
signing .

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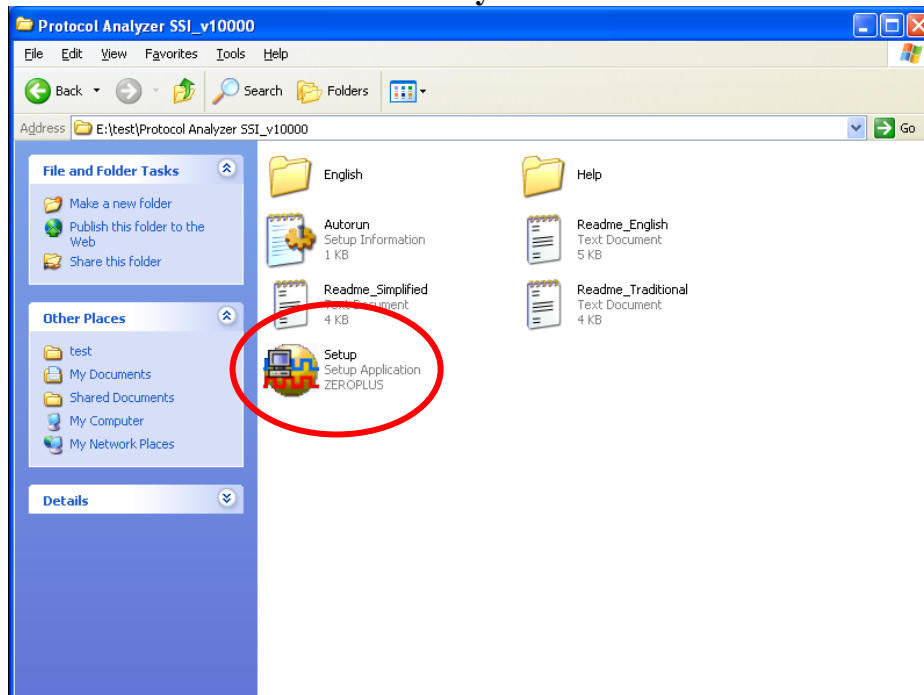
# 1 Software Installation

Please install the software as the following steps:

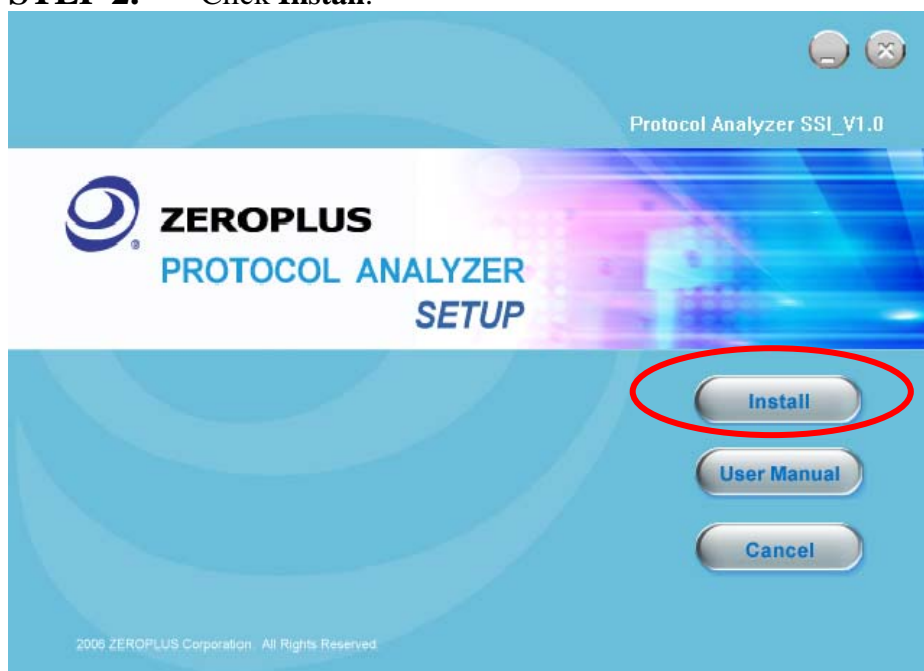
※ Remark: 1. The installation steps for all protocol analyzers are the same; you can complete the installation by following procedures. Following is an example on how to install protocol analyzer SSI.

※ 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.

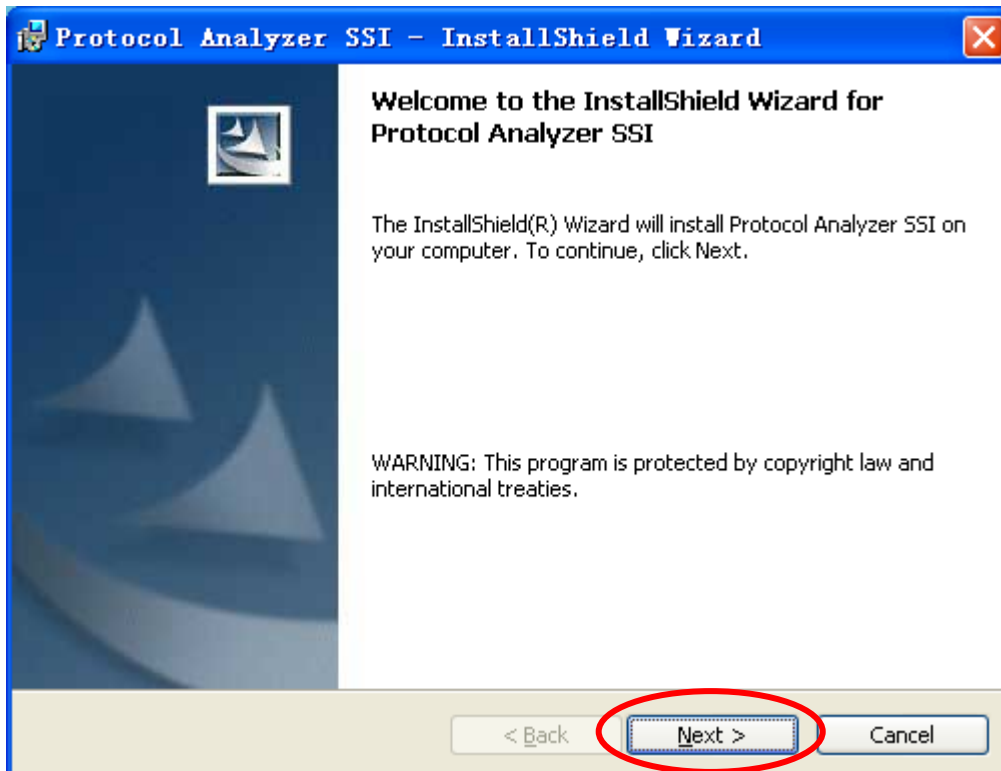


## STEP 2. Click **Install**.

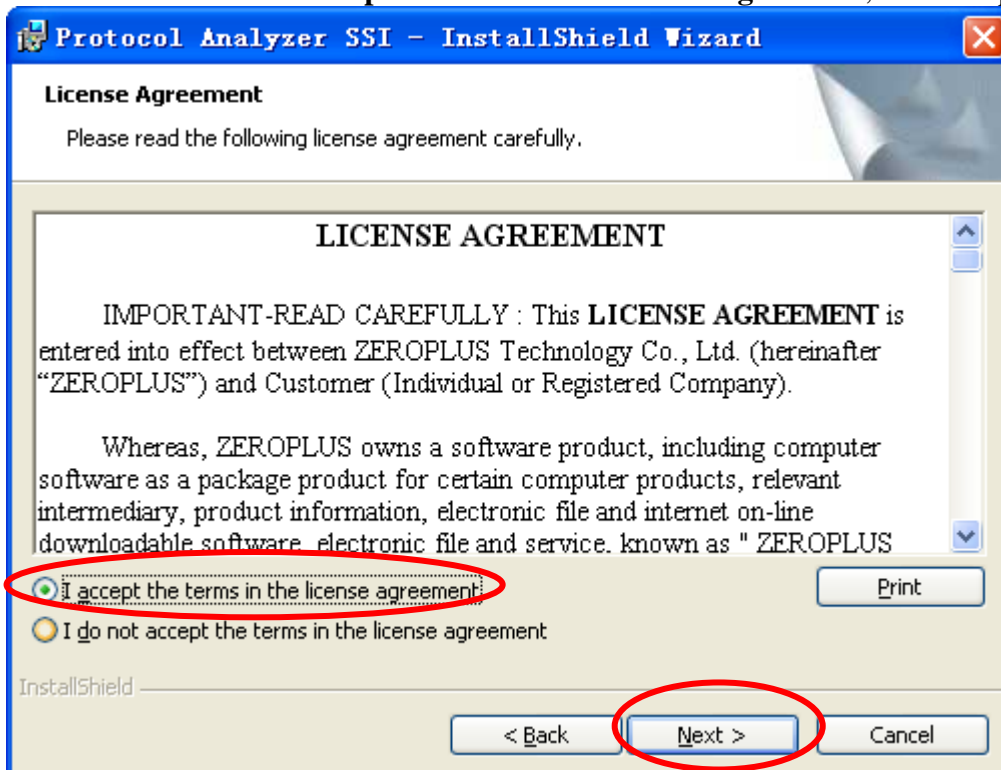




**STEP 3.** Click Next.



**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**.

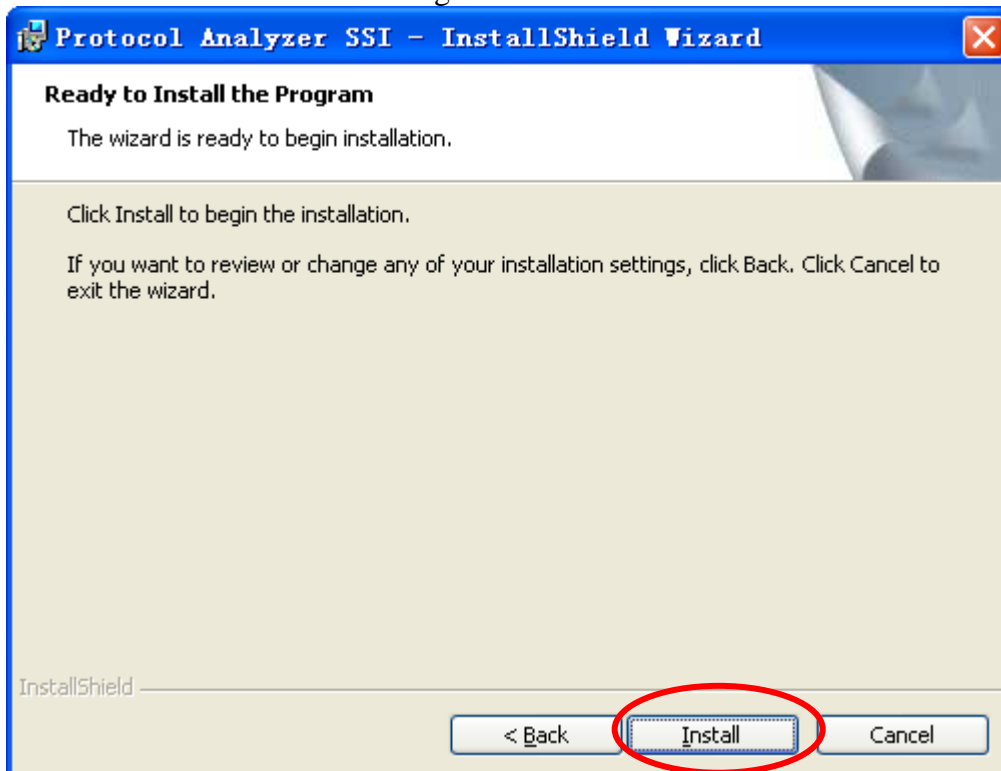
The dialog box is titled "Protocol Analyzer SSI - InstallShield Wizard". It has a "Customer Information" section with the instruction "Please enter your information." Below this are two text input fields: "User Name:" with the value "sunshine" and "Organization:" with the value "zeroplus". There is also a section "Install this application for:" with 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 >" (which is circled in red), and "Cancel".

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

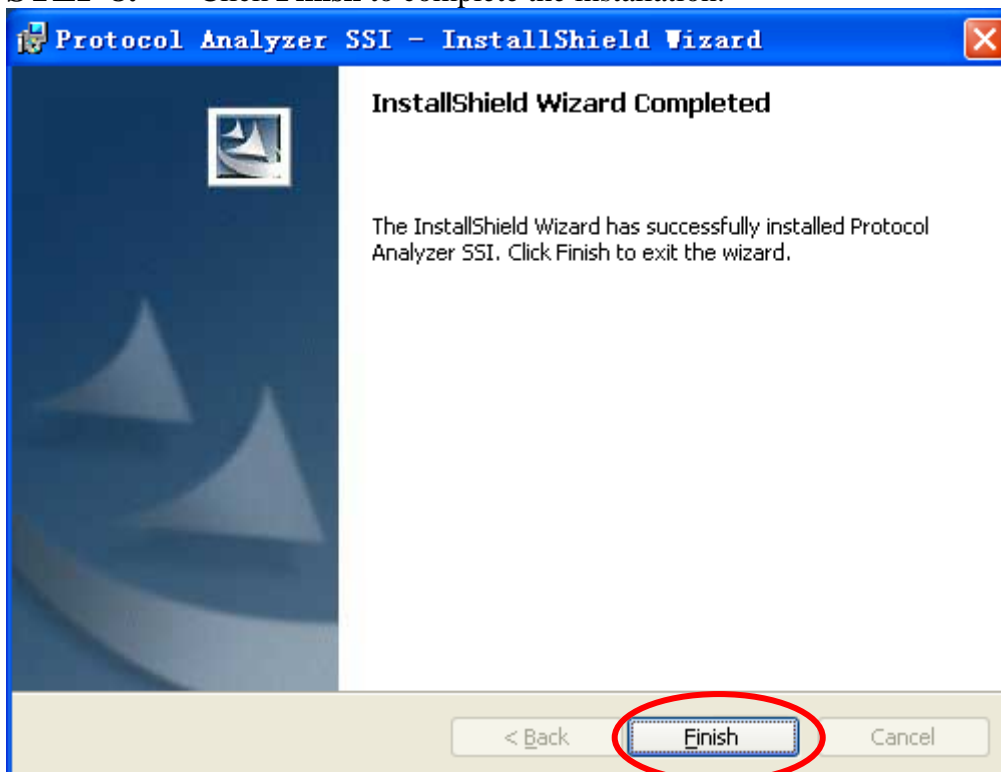
The dialog box is titled "Protocol Analyzer SSI - InstallShield Wizard". It has a "Setup Type" section with the instruction "Choose the setup type that best suits your needs." Below this is the text "Please select a setup type." There are two radio button options: "Complete" (which is selected) and "Custom". The "Complete" option has a description: "All program features will be installed. (Requires the most disk space.)" and is accompanied by a small icon of a computer with a red 'X'. The "Custom" option has a description: "Choose which program features you want installed and where they will be installed. Recommended for advanced users." and is accompanied by a small icon of a computer with a green checkmark. At the bottom, there are three buttons: "< Back", "Next >" (which is circled in red), and "Cancel".



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



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

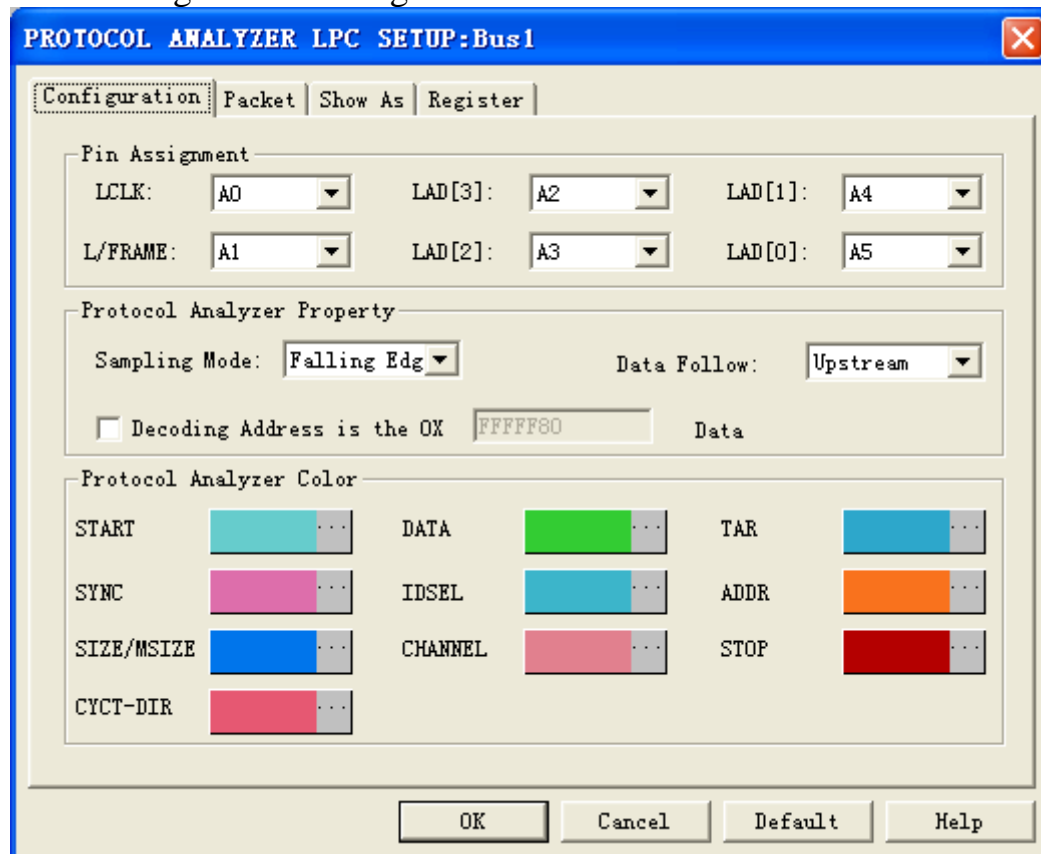




## 2 User Interface

In the configuration, please refer to images below to select options of setting **LPC** module.

### LPC Configuration Dialog Box



#### LPC Pin Assignment:

**LCLK:** It is a clock channel and, its frequency is 33MHZ. The default is A0.

**L/FRAME:** It is Start/Stop channel and its default is A1

**LAD[3]:** It is the highest bit of the data signal line and its default is A2.

**LAD[2]:** It is the second bit of the data signal line and its default is A3.

**LAD[1]:** It is the third bit of the data signal line and its default is A4.

**LAD[0]:** It is the lowest bit of the data signal line and its default is A5.

#### Protocol Analyzer Property:

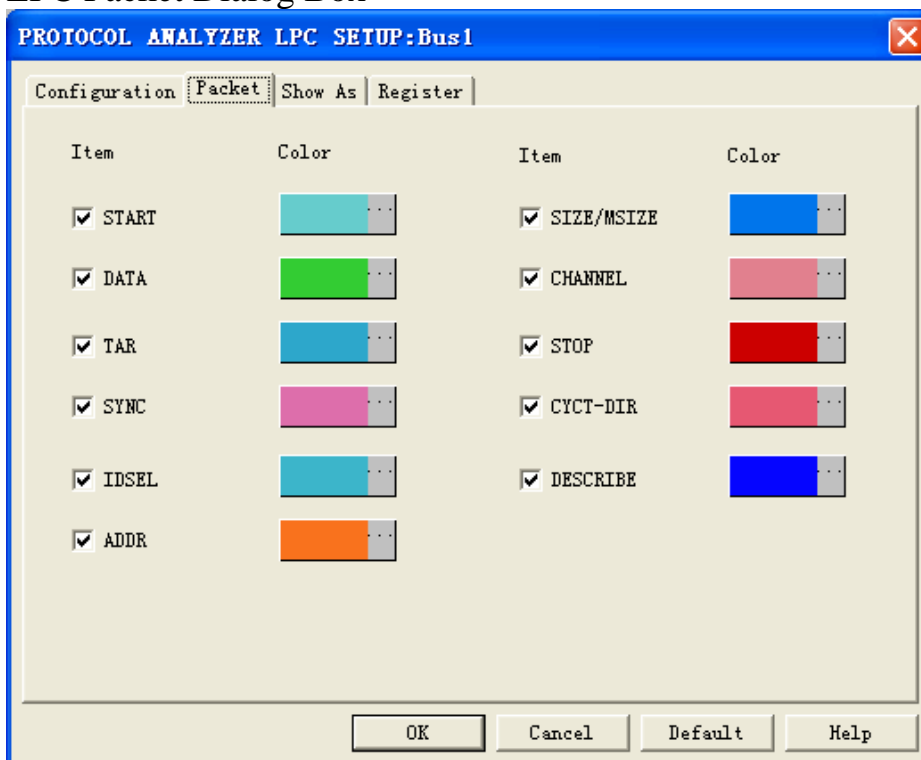
**Sampling Mode:** Two options are listed, Falling Edge and Rising Edge. The default is Falling Edge.

#### Data Follow:

Two options are listed, Downstream and Upstream. The default is Upstream.

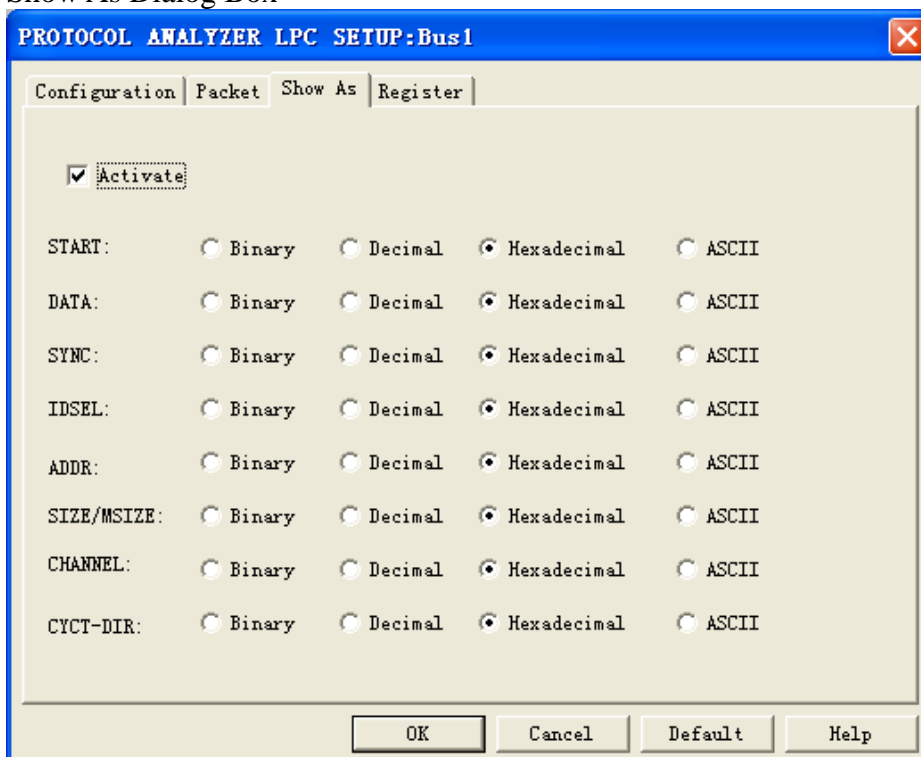


## LPC Packet Dialog Box



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

## Show As Dialog Box

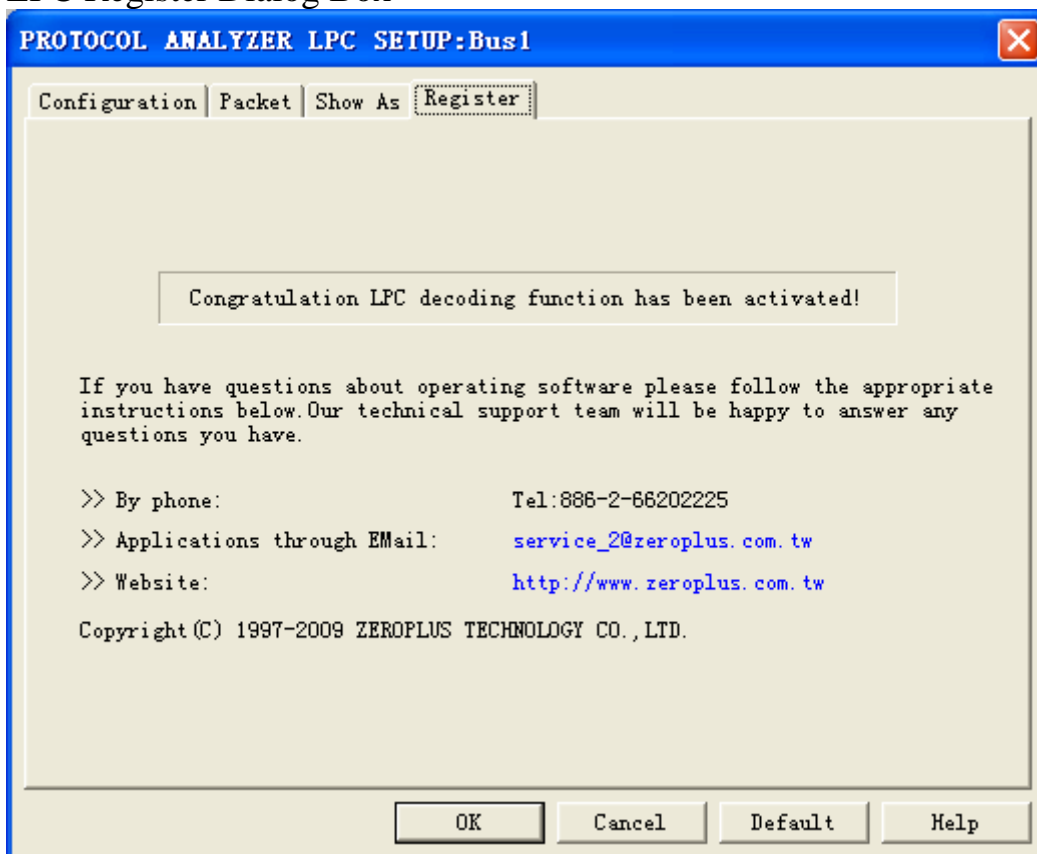


Users can set the Data Format of the START, DATA, SYNC, IDSEL, ADDR, SIZE/MSIZE, CHANNEL and CYCT-DIR as their requirements. When selecting the option, Activate, the data formats are decided by the settings in the Protocol Analyzer; when not selecting the option, Activate, the data formats are decided by the settings in the main program.





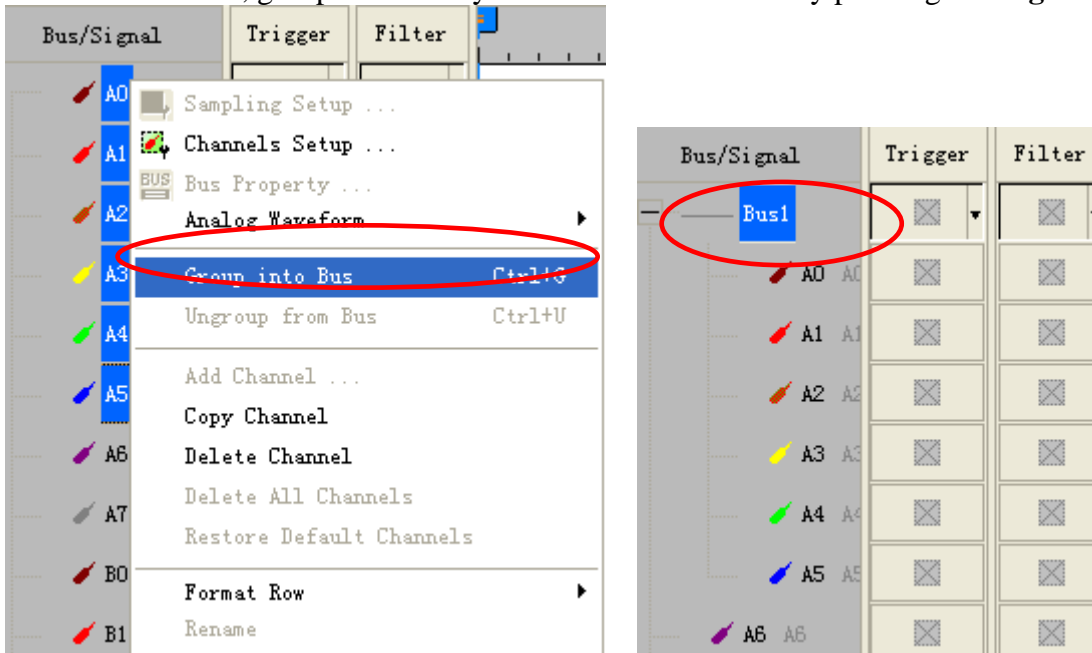
## LPC Register Dialog Box



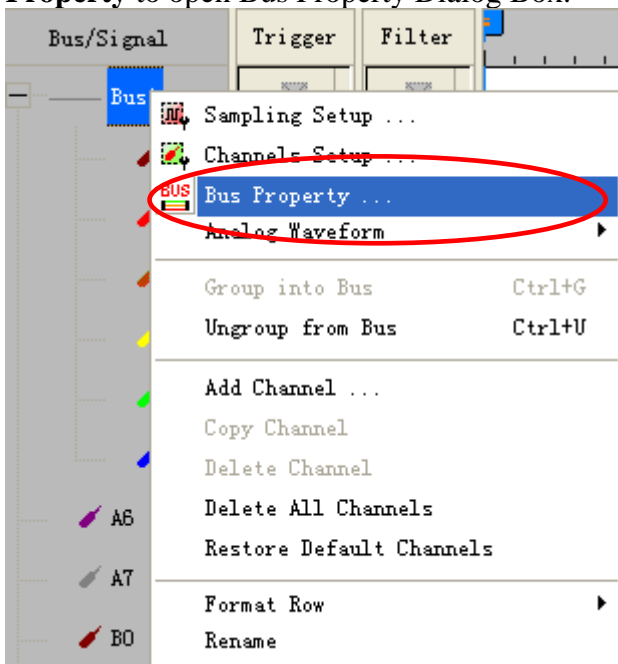
There is ZeroPlus company information. If you have any questions about software operations, you can contact ZeroPlus by Telephone or Email.

### 3 Operating Instructions

**STEP 1.** At first, group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.

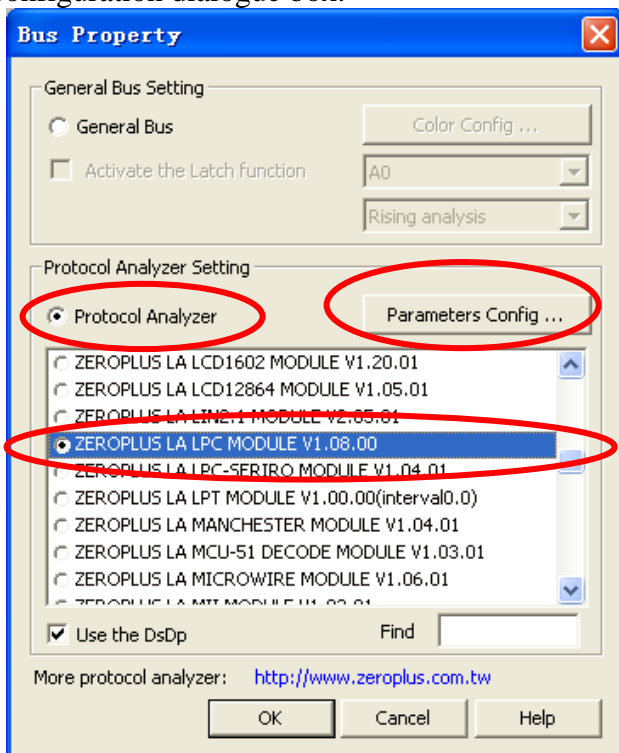


**STEP 2.** Select **Bus1**, and then press the **Right Key** on the mouse to list the menu, next click **Bus Property** to open Bus Property Dialog Box.

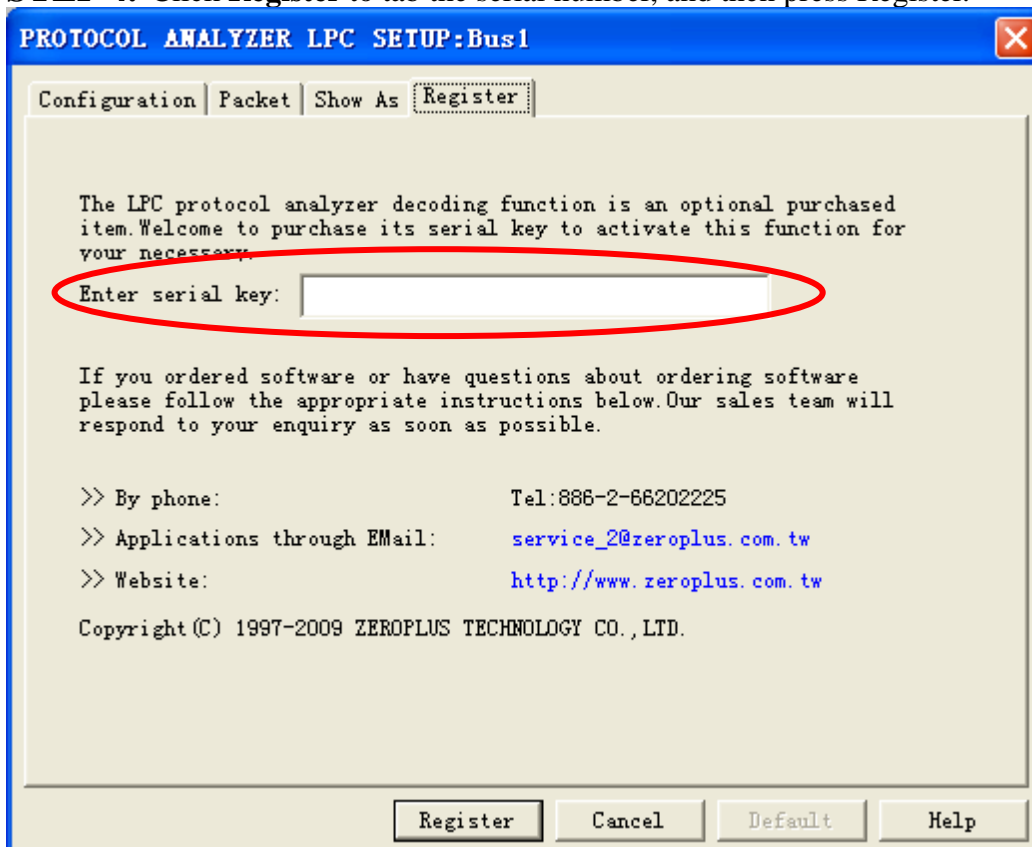




**STEP 3.** For Protocol Analyzer Parameters Configuration, select Protocol Analyzer. Then, choose **ZEROPLUS LA LPC MODULE V1.08.00**. Next click **Parameters Configuration** to open the configuration dialogue box.

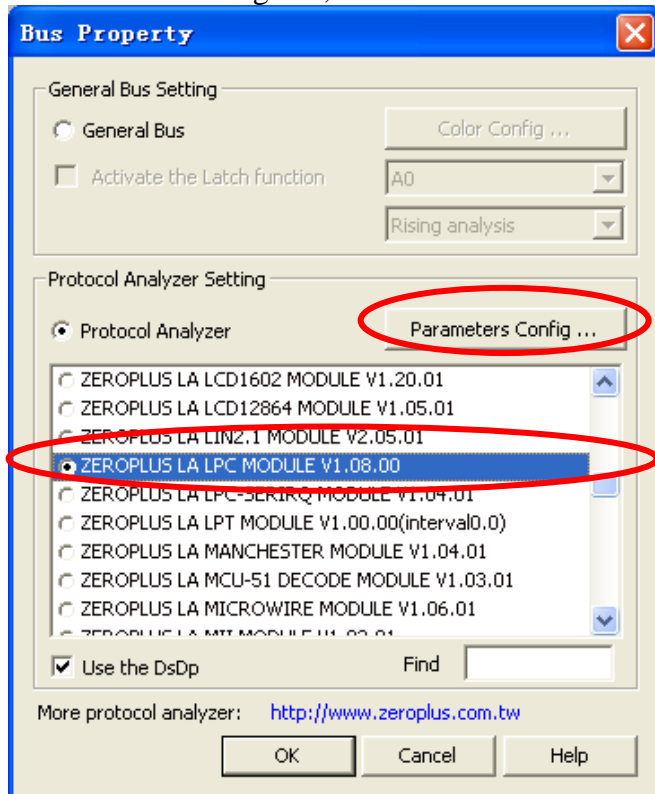


**STEP 4.** Click **Register** to tab the serial number, and then press Register.

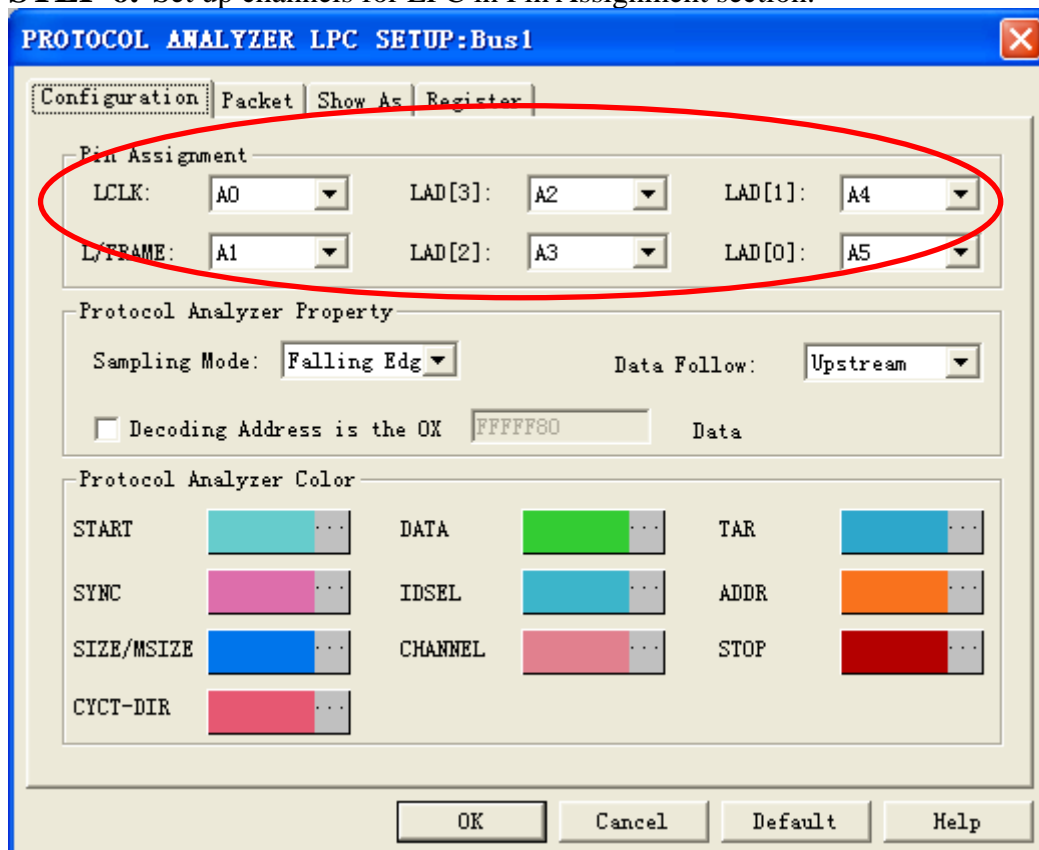




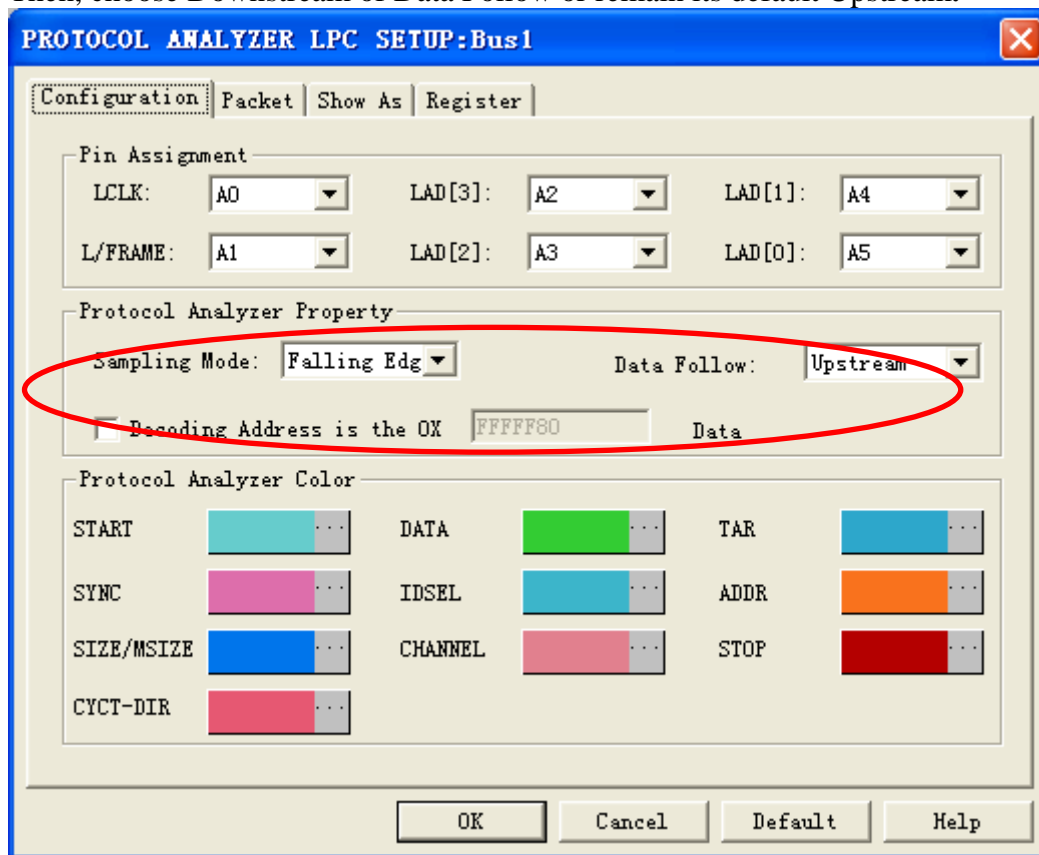
**STEP 5.** After register, come back to the Bus Property dialog box to set up the parameters configuration.



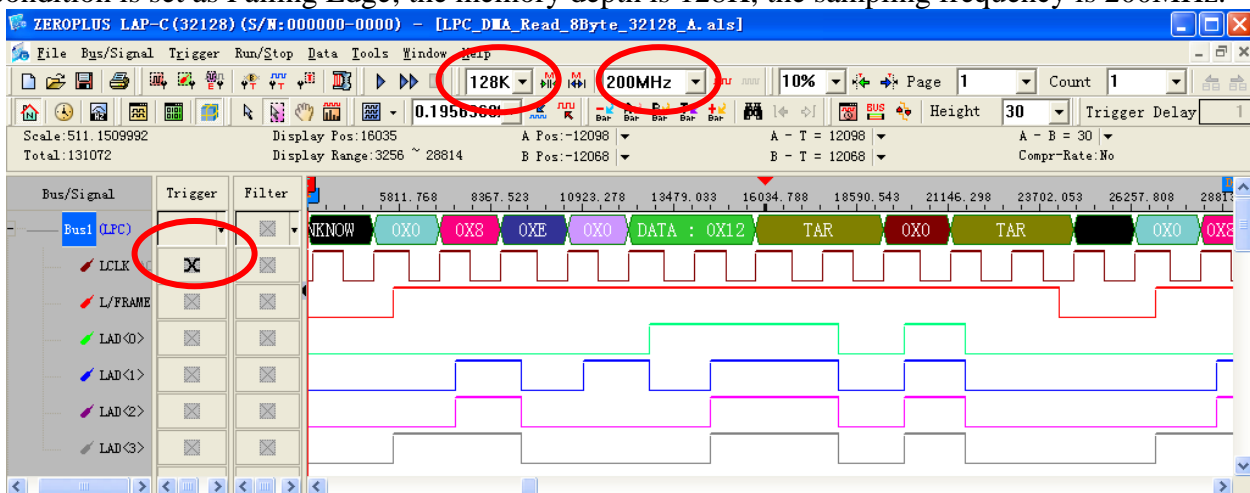
**STEP 6.** Set up channels for LPC in Pin Assignment section.



**STEP 7.** For Protocol Analyzer Property choose Sampling Mode either Falling Edge or Rising Edge. Then, choose Downstream of Data Follow or remain its default Upstream.

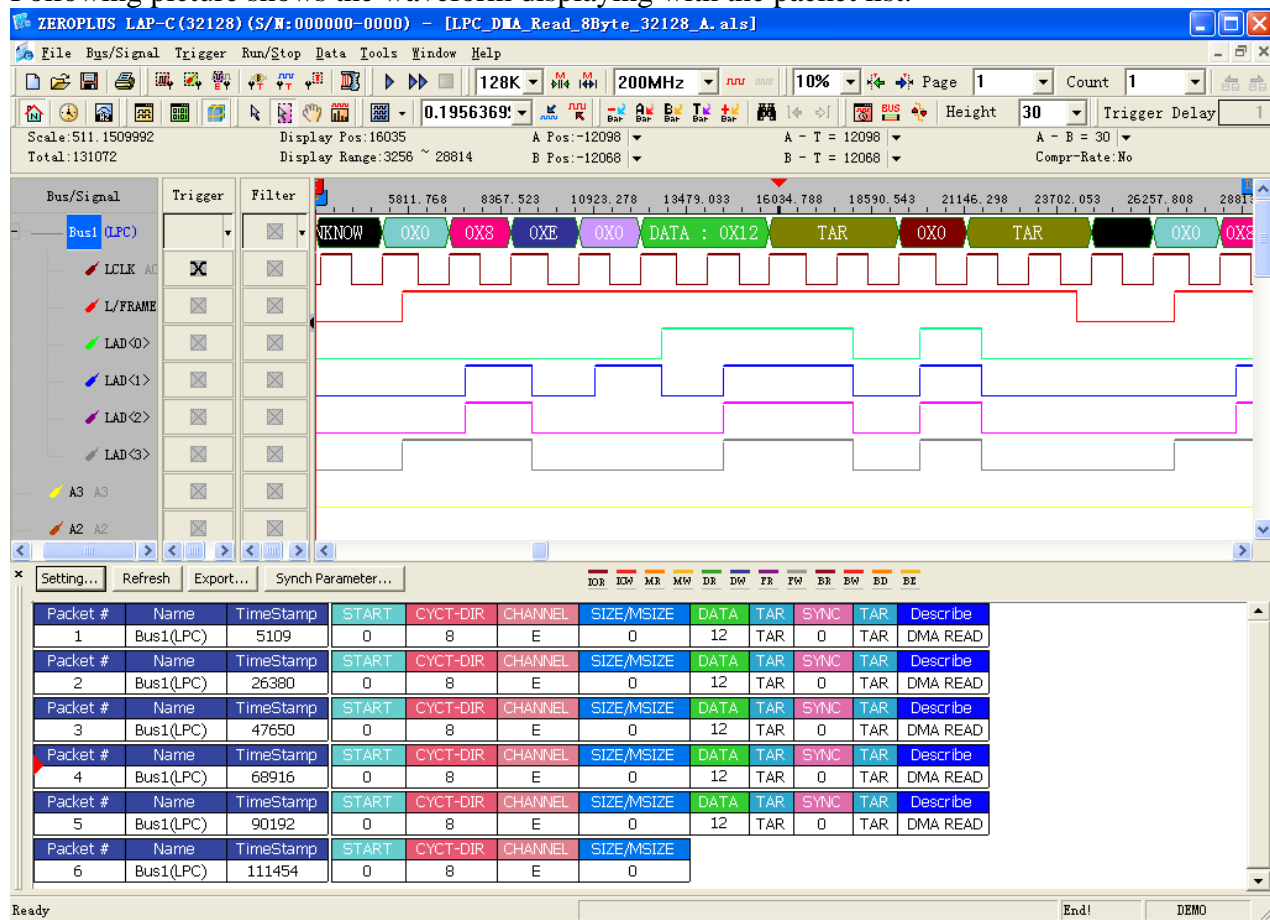


**STEP 8.** Following picture shows the completion of the protocol analyzer decoding. The trigger condition is set as Falling Edge; the memory depth is 128K; the sampling frequency is 200MHz.





Following picture shows the waveform displaying with the packet list.



### Support the function of Packet Format Select:

When pressing the IO READ, IO WRITE, MEMORY READ, MEMORY WRITE, DMA READ, DMA WRITE, FIRMWARE MEMORY READ, FIRMWARE MEMORY WRITE, BUS MASTER MEMORY READ, BUS MASTER MEMORY WRITE, BUS MASTER I/O READ or BUS MASTER I/O WRITE Button, the corresponding packet will be displayed; when any of these buttons isn't to be pressed, all the packets will be displayed.