



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

SPECIFICATION

MODEL: B08028-LAP- Low Pin Count-M

PART NO: _____

VERSION: V1.09

Approver		Check	Design
GM	PM		

Customer Confirm

*Please fax the file to Zeroplus Technology after signing.

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1 Software Download

Please download the software as the following steps:

Remark: 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.

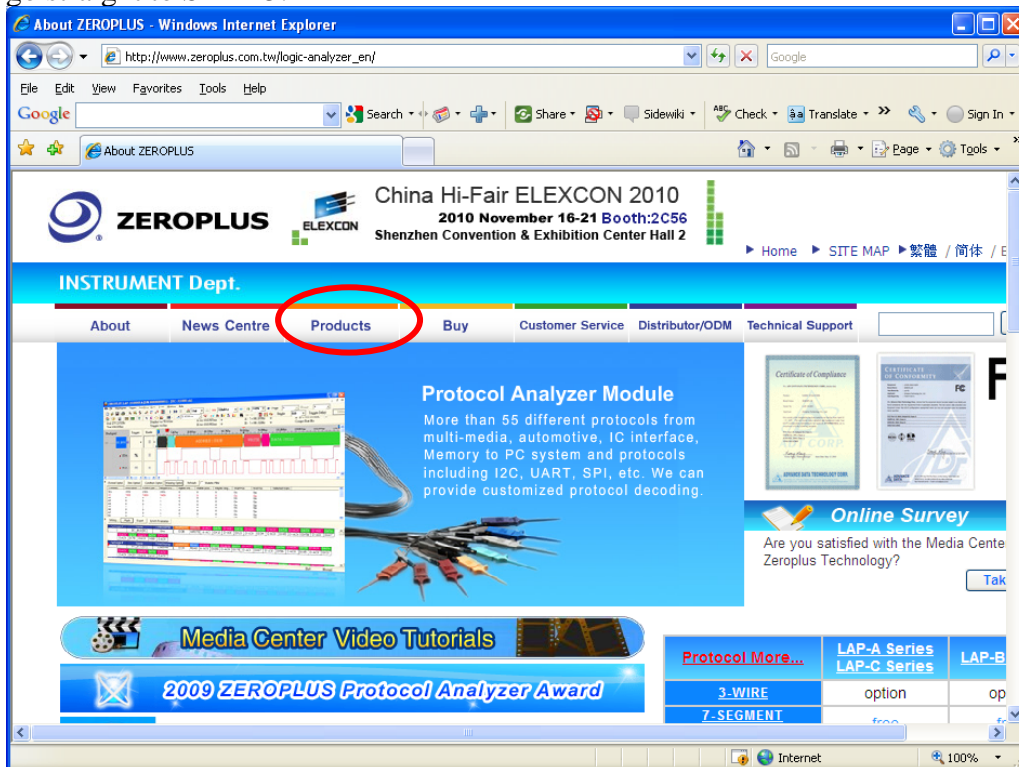
STEP 1. Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

STEP 2. Click **English** in the Instrument Division part on the Homepage.

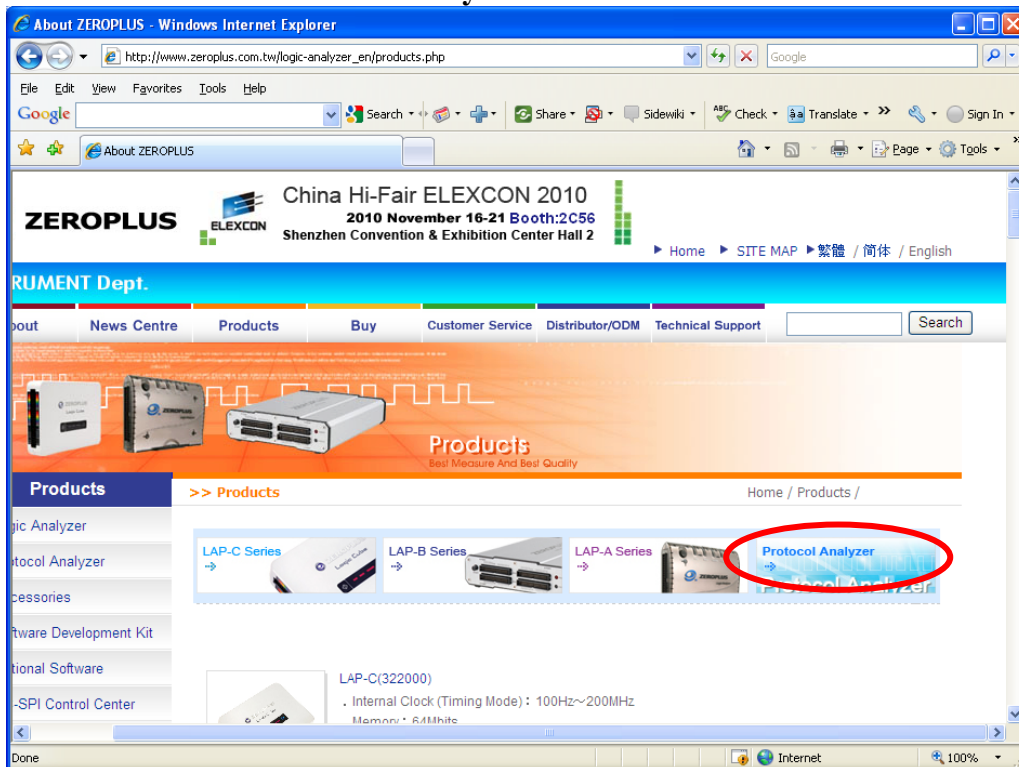




STEP 3. Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

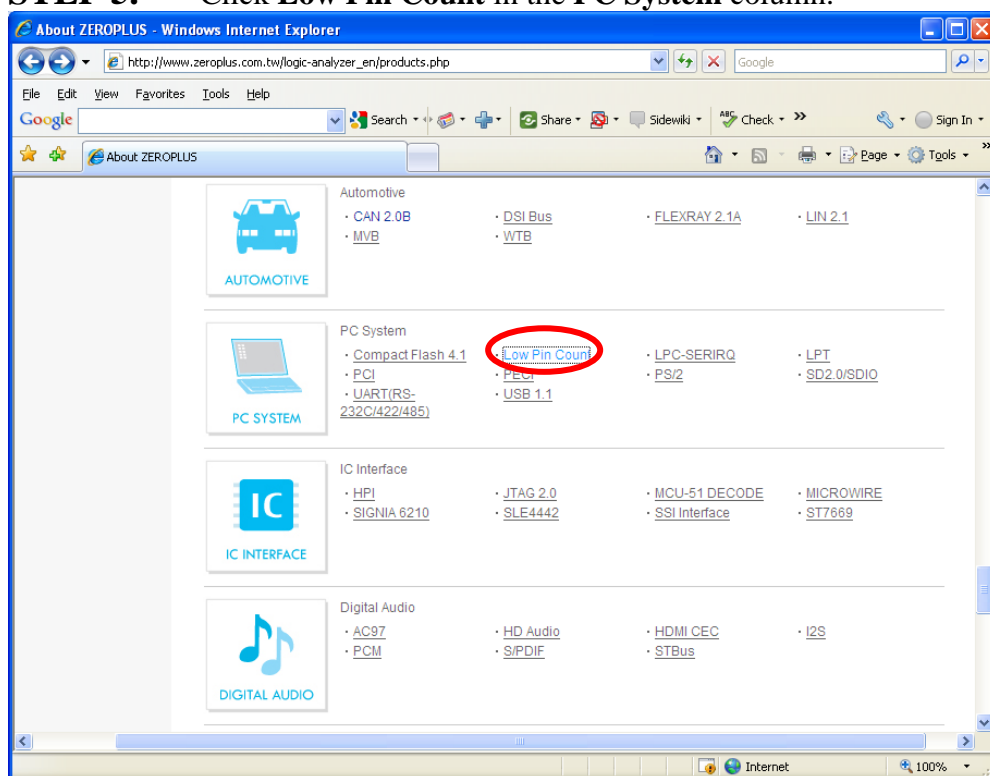


STEP 4. Click **Protocol Analyzer** icon.

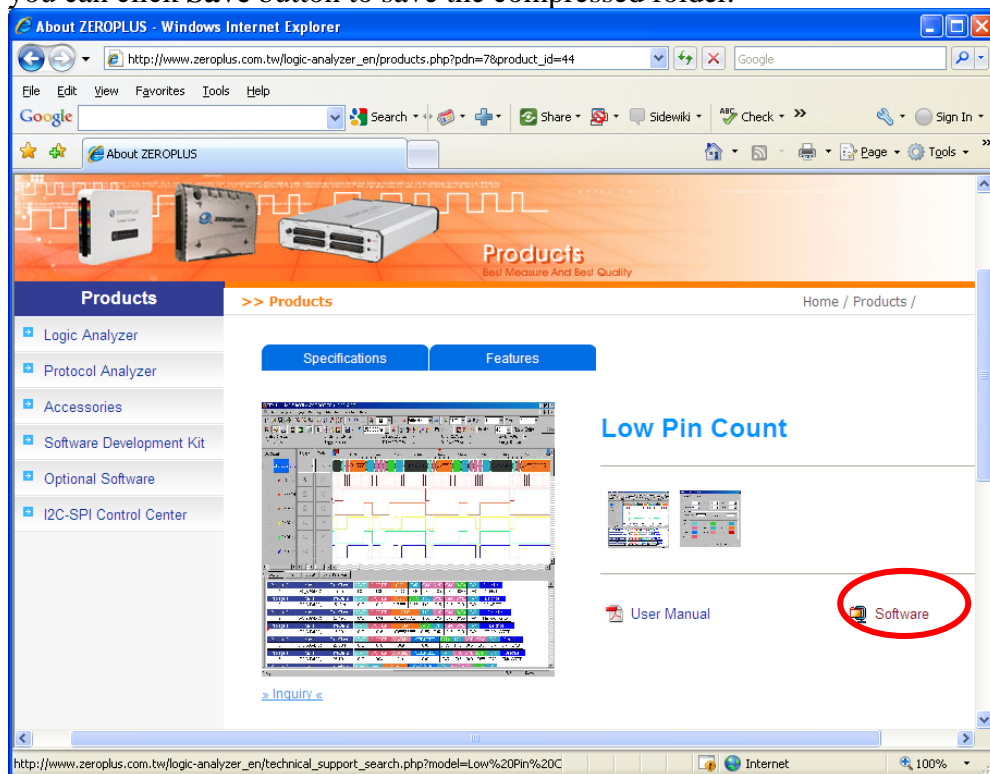




STEP 5. Click **Low Pin Count** in the **PC System** column.



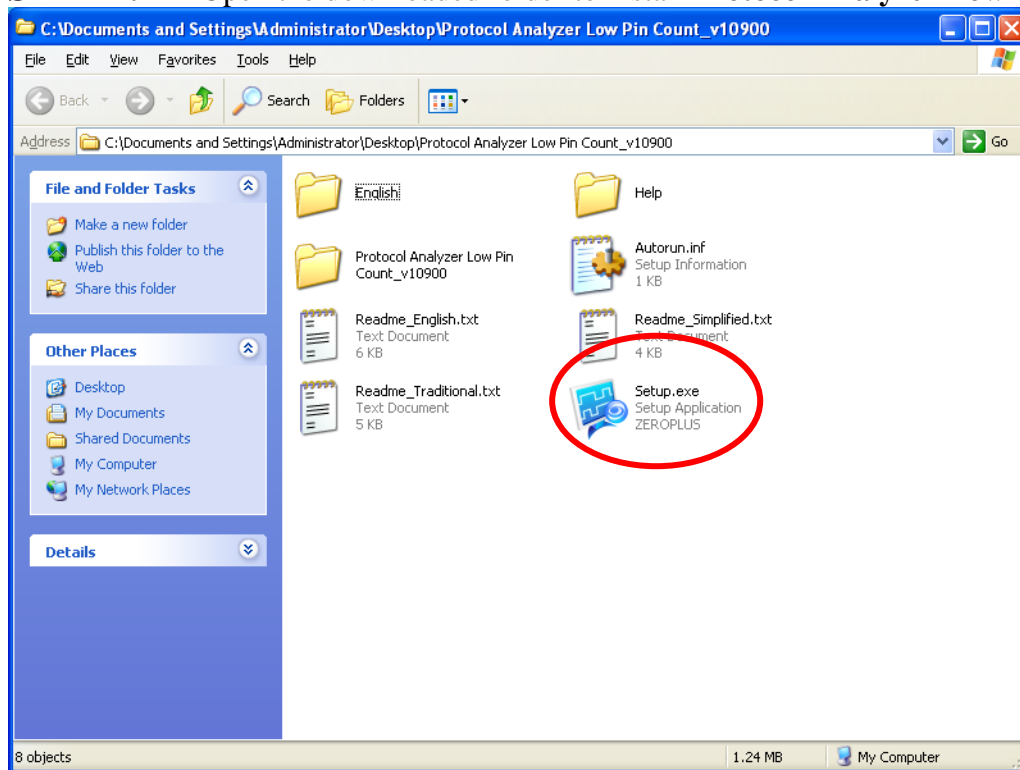
STEP 6. Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed folder.



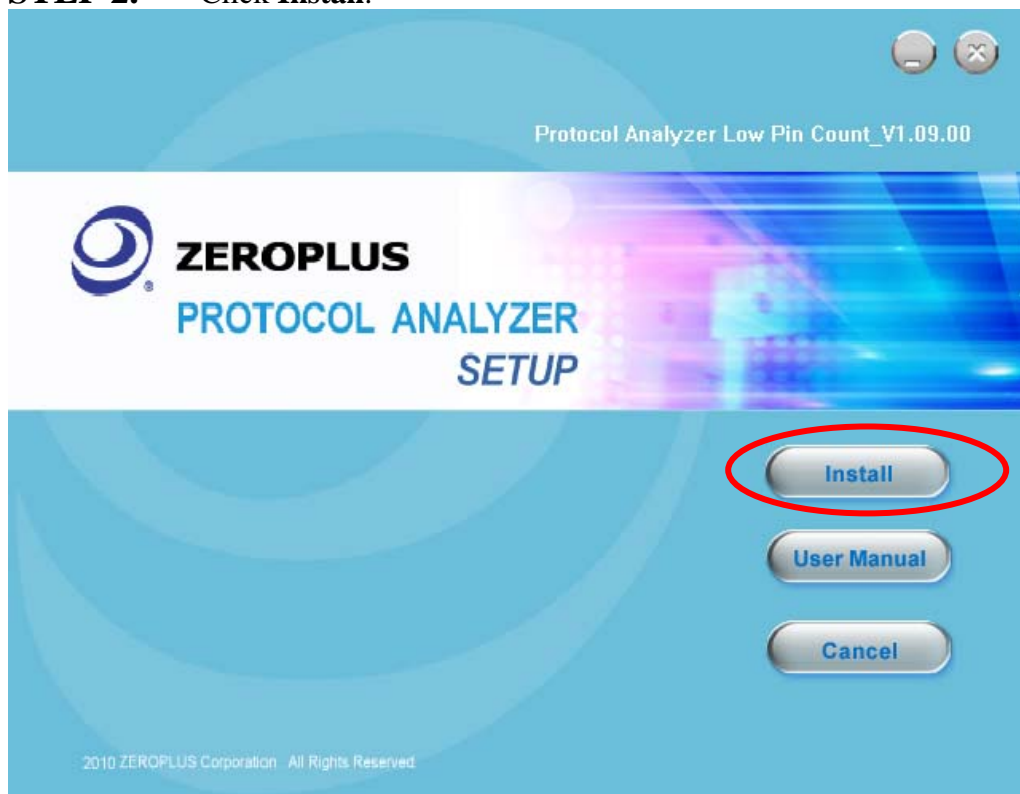


2 Software Installation

STEP 1. Open the downloaded folder to install **Protocol Analyzer Low Pin Count**.

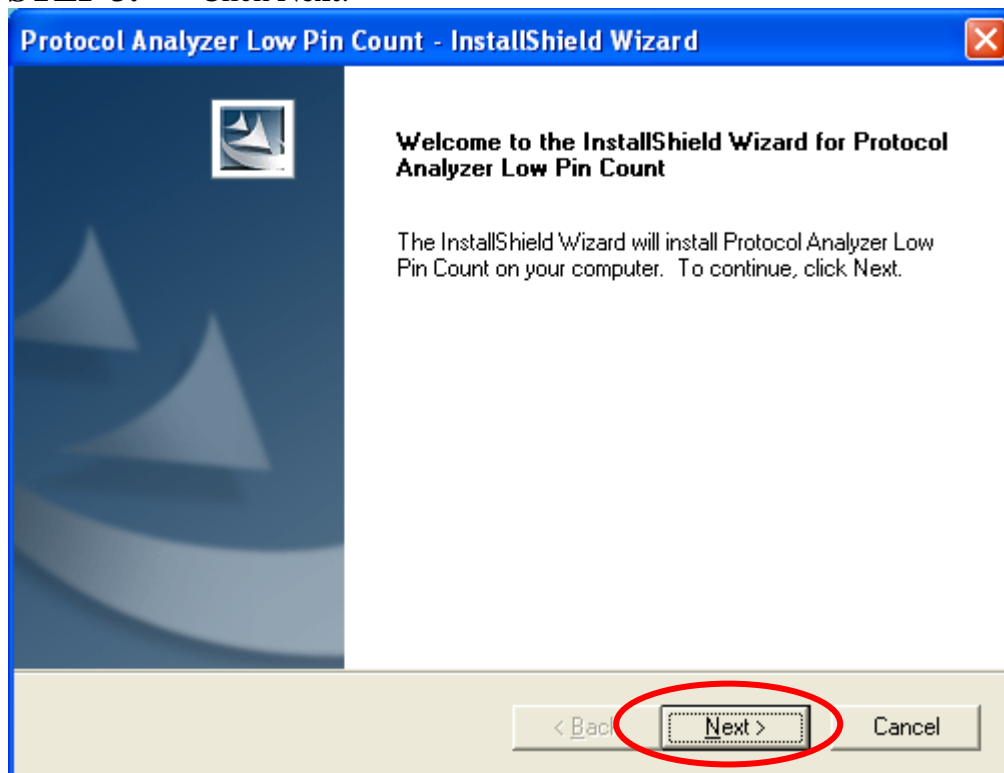


STEP 2. Click **Install**.

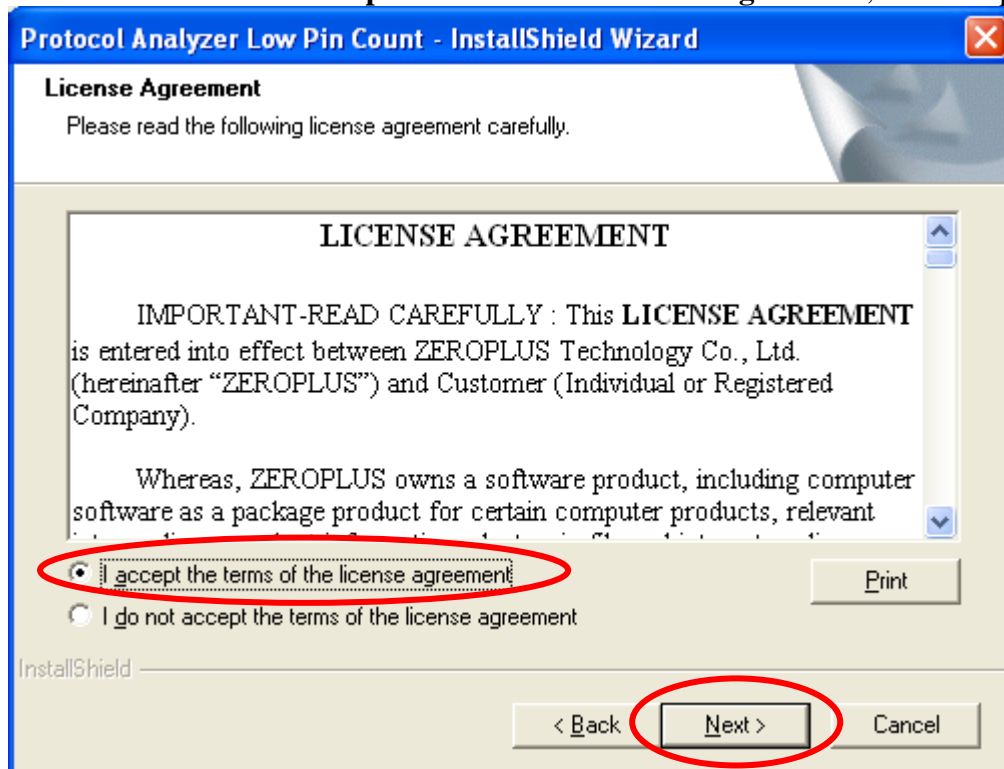




STEP 3. Click Next.



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





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

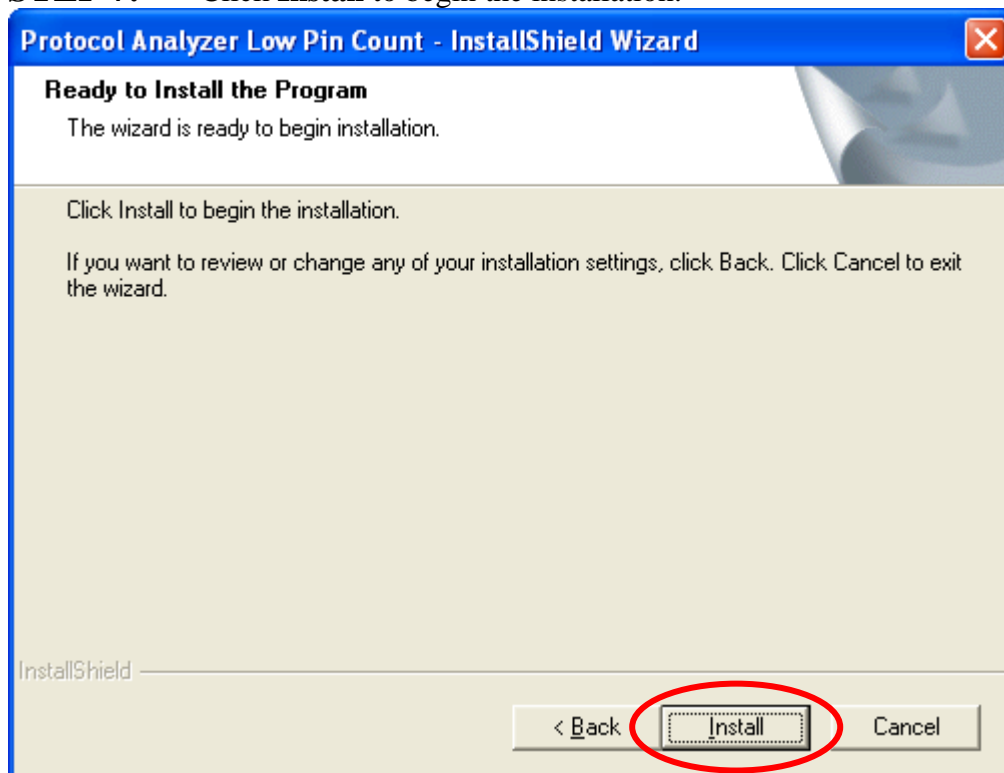
The dialog box is titled "Protocol Analyzer Low Pin Count - InstallShield Wizard". It has a blue header bar with a close button (X) in the top right corner. The main area is titled "Customer Information" and contains the instruction "Please enter your information." Below this, there are two text input fields: "User Name:" with the text "Microsoft" entered, and "Company Name:" with the text "User" entered. Below these fields, there is a section titled "Install this application for:" with two radio button options: "Anyone who uses this computer (all users)" (which is selected) and "Only for me (Microsoft)". At the bottom of the dialog, there are three buttons: "< Back", "Next >" (which is circled in red), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

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

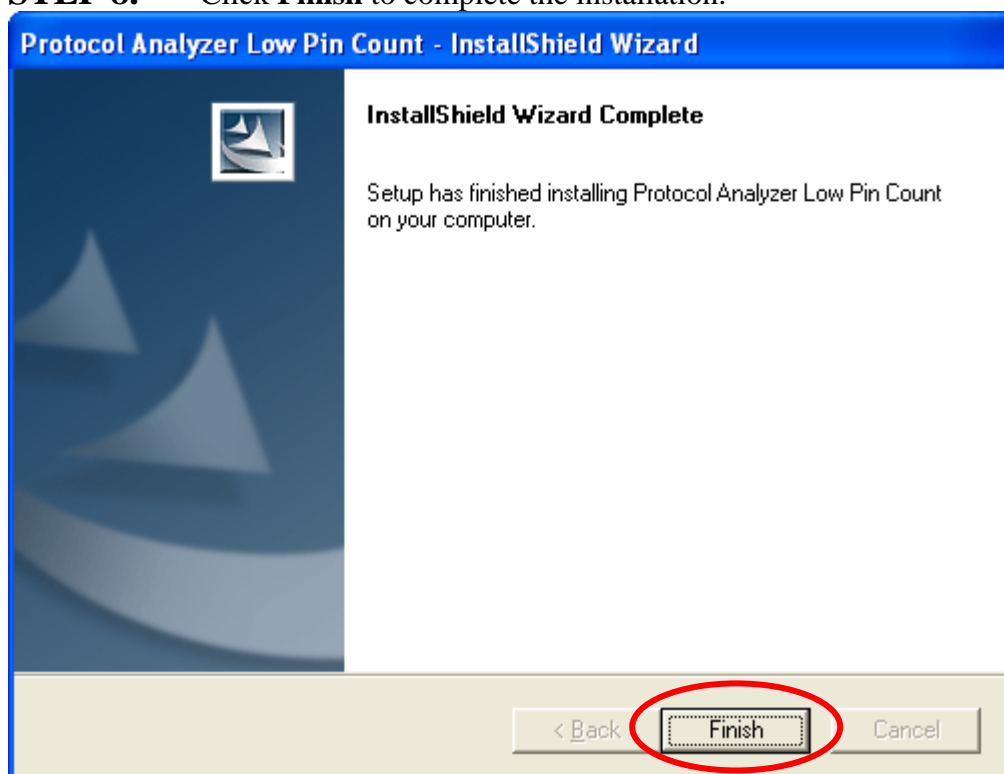
The dialog box is titled "Protocol Analyzer Low Pin Count - InstallShield Wizard". It has a blue header bar with a close button (X) in the top right corner. The main area is titled "Setup Type" and contains the instruction "Select the setup type to install." Below this, there is a section titled "Please select a setup type." with two radio button options: "Complete" (which is selected) and "Custom". Each option has a small icon representing a computer with a red checkmark. The "Complete" option has the text "All program features will be installed. (Requires the most disk space.)" and the "Custom" option has the text "Select which program features you want installed. Recommended for advanced users." At the bottom of the dialog, there are three buttons: "< Back", "Next >" (which is circled in red), and "Cancel". 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.

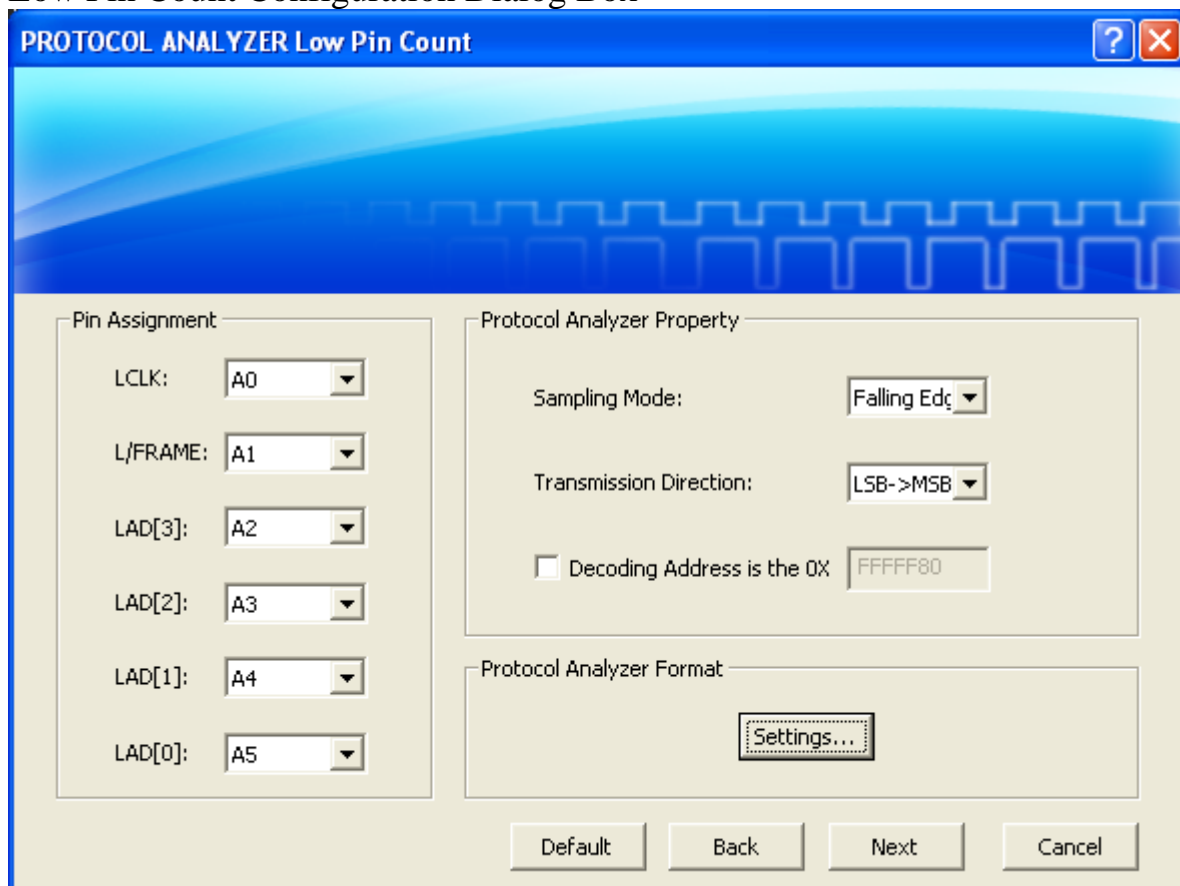




3 User Interface

In the configuration, please refer to below images to select options of the **Low Pin Count** module.

Low Pin Count Configuration Dialog Box



Pin Assignment:

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

L/FRAME: It is the 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.

Transmission Direction: Two options are listed, LSB->MSB and MSB->LSB. The default is LSB->MSB.

Decoding Address is the 0X:

When the Item is selected, the value can be entered from 0 to 0xFFFFFFFF. When the value of Address is the entered value, the decoding will be displayed. The default is not selected.

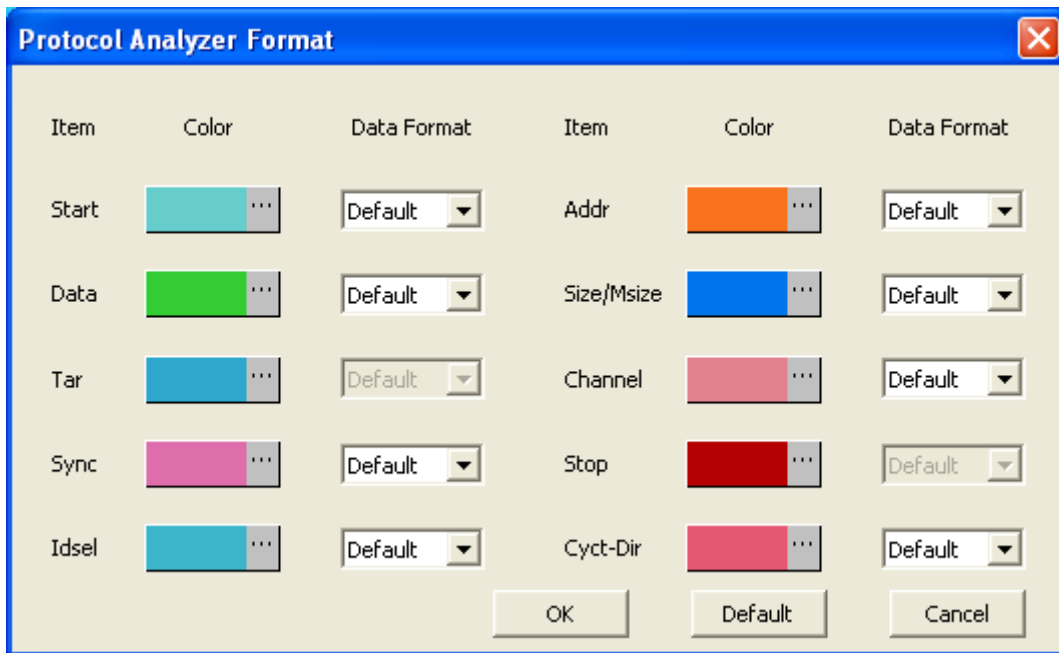
Protocol Analyzer Color:

The protocol analyzer colors can be varied by users.



Protocol Analyzer Format:

Press the **Settings** button to open the Protocol Analyzer Format dialog box. The Color of each Item can be varied as the users' requirements. The Items (Start, Addr, Data, Size/Msize, Sync, Idsel and Cyct-Dir) can be set as Binary, Decimal, Hexadecimal ASCII or Default. And the Data Formats of these Items (Start, Addr, Data, Size/Msize, Sync, Idsel and Cyct-Dir) in the Waveform Display Area and Packet List are controlled by the Protocol Analyzer. The default Data Formats are controlled by the main program and the Data Formats of these items (Start, Addr, Data, Size/Msize, Sync, Idsel and Cyct-Dir) are the Default.



The dialog box titled "Protocol Analyzer Format" contains a table with two columns of settings. Each row represents an item with its color selection (a colored box with a three-dot menu) and its data format (a dropdown menu set to "Default").

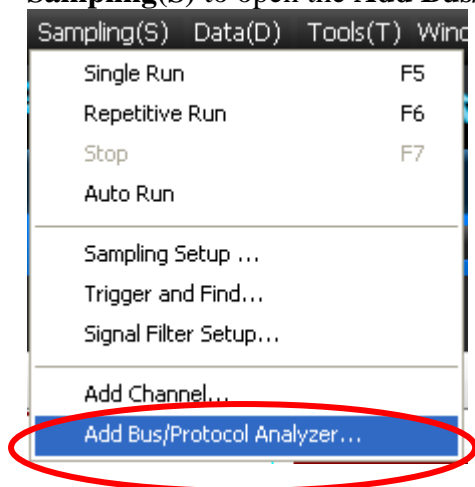
Item	Color	Data Format	Item	Color	Data Format
Start		Default	Addr		Default
Data		Default	Size/Msize		Default
Tar		Default	Channel		Default
Sync		Default	Stop		Default
Idsel		Default	Cyct-Dir		Default

At the bottom right of the dialog box are three buttons: "OK", "Default", and "Cancel".

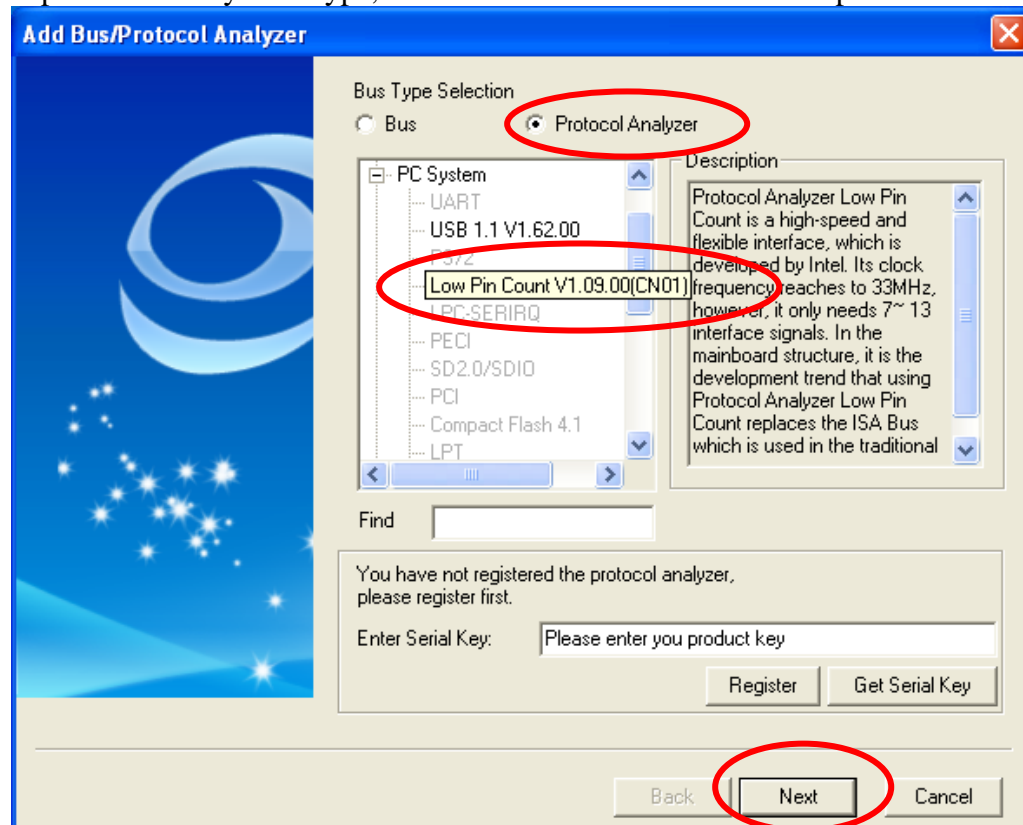


4 Operating Instructions

STEP 1. Select the **Add Bus/Protocol Analyzer** item on the pull-down menu of the **Sampling(S)** to open the **Add Bus/Protocol Analyzer** dialog box.

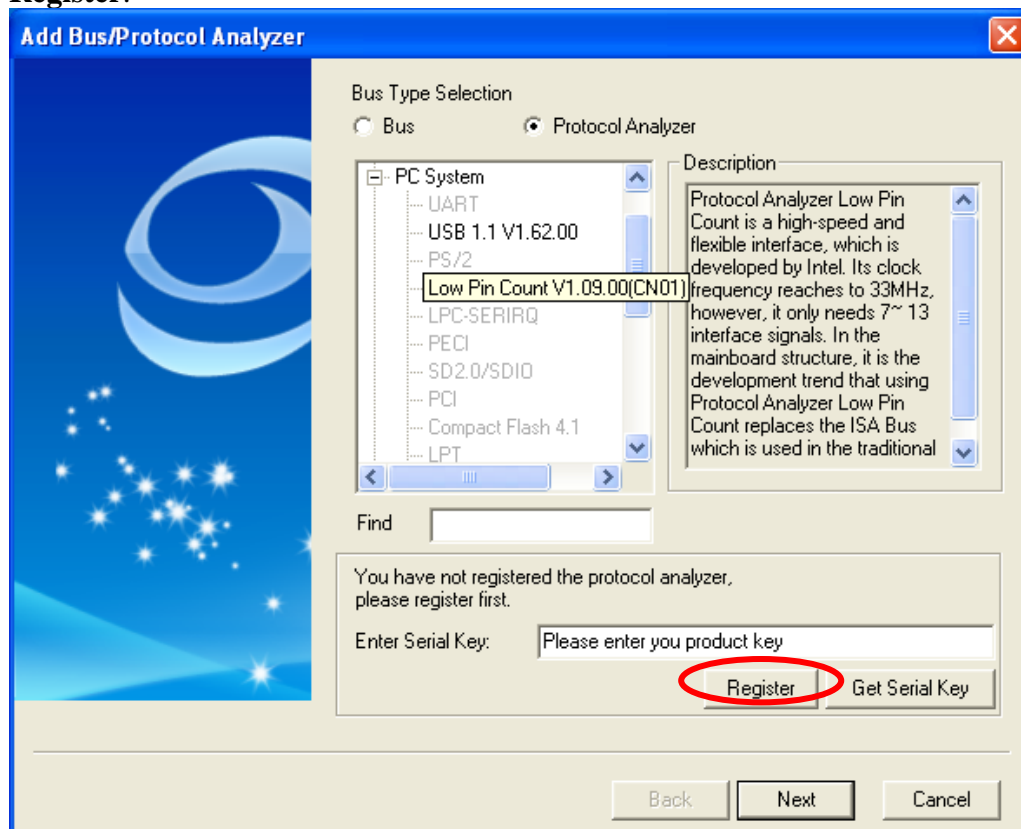


STEP 2. Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the PC System Type, select the Low Pin Count and then press the **Next**.

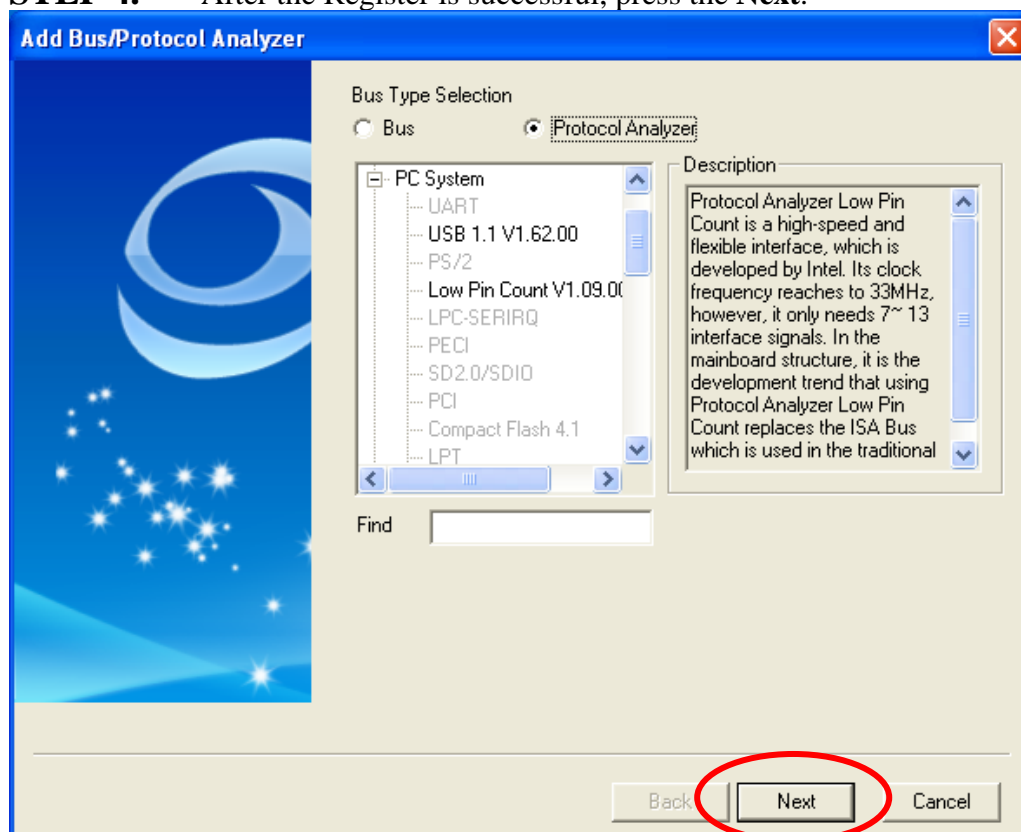




STEP 3. Enter the Serial Key of Low Pin Count under this Model, and then press the **Register**.

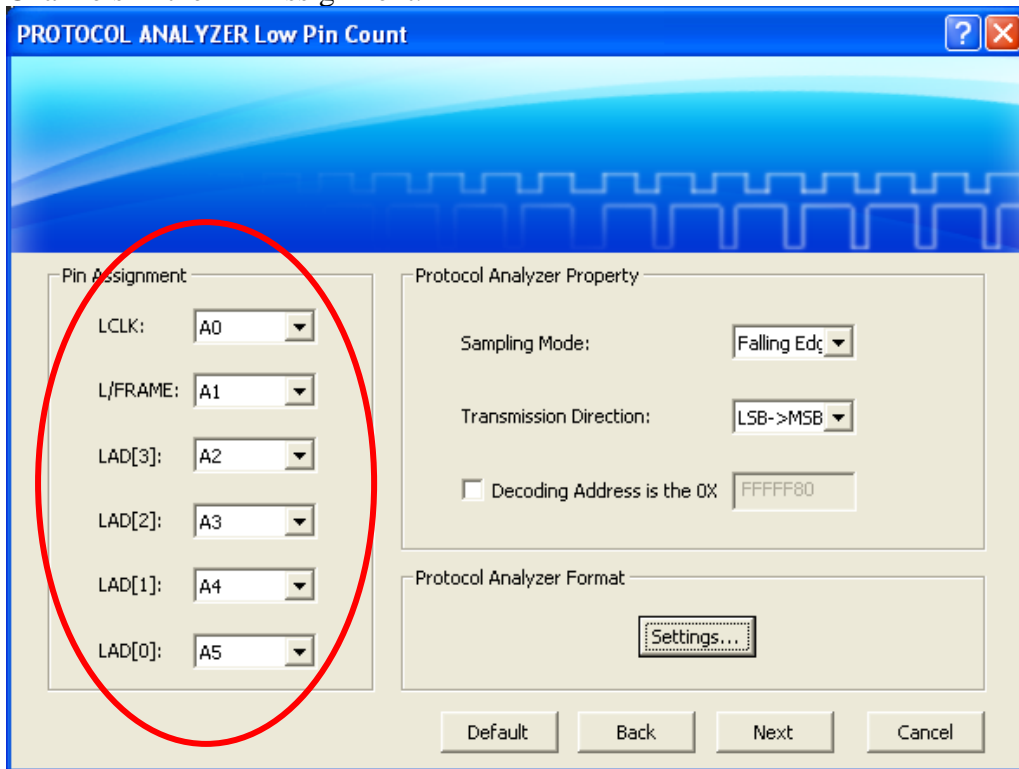


STEP 4. After the Register is successful, press the **Next**.

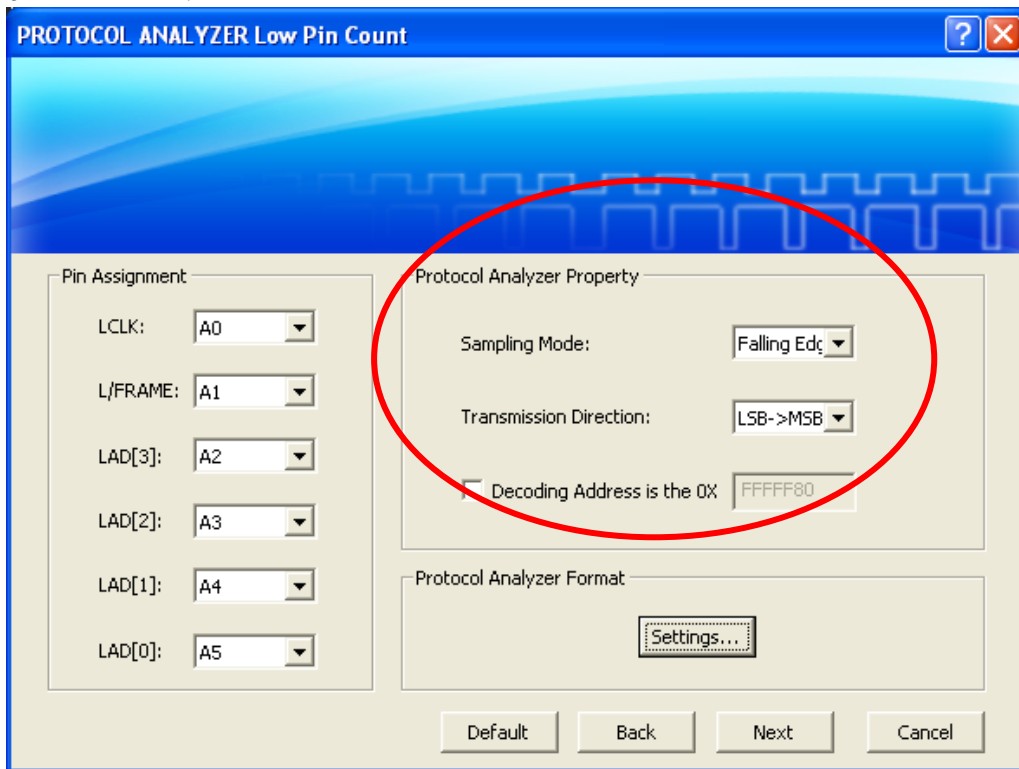




STEP 5. Open the PROTOCOL ANALYZER Low Pin Count dialog box and set the Channels in the Pin Assignment.

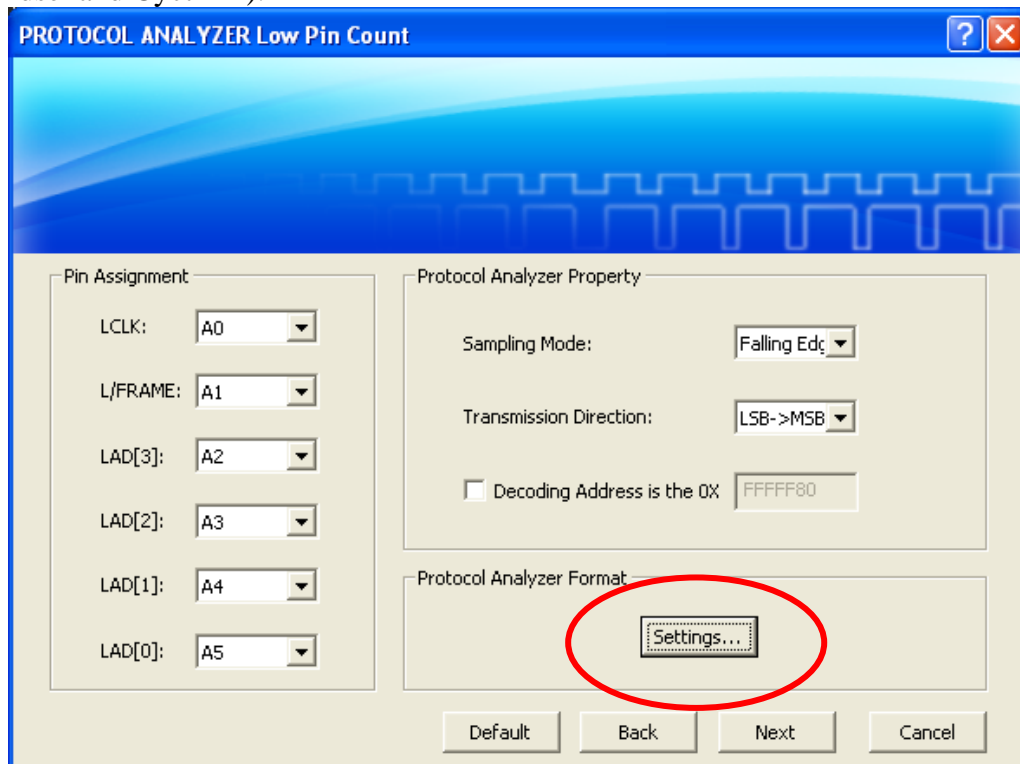


STEP 6. In the PROTOCOL ANALYZER Low Pin Count dialog box, select the Falling Edge or Rising Edge as the Sampling Mode, set the LSB->MSB or MSB->LSB as the Transmission Direction and set the value of the Decoding Address in the range from 0 to 0xFFFFFFFF.

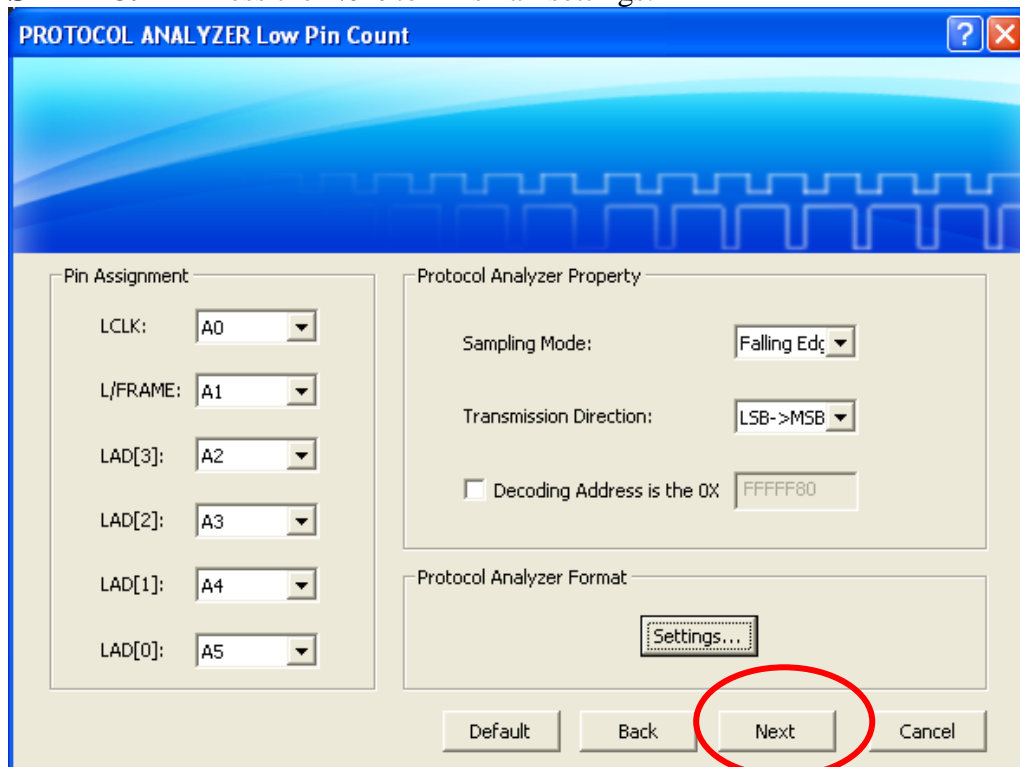




STEP 7. Press the **Settings** button to open the Protocol Analyzer Format dialog box, and then set the Color of each Item and Data Format of the Items (Start, Addr, Data, Size/Msize, Sync, Idsel and Cylct-Dir).

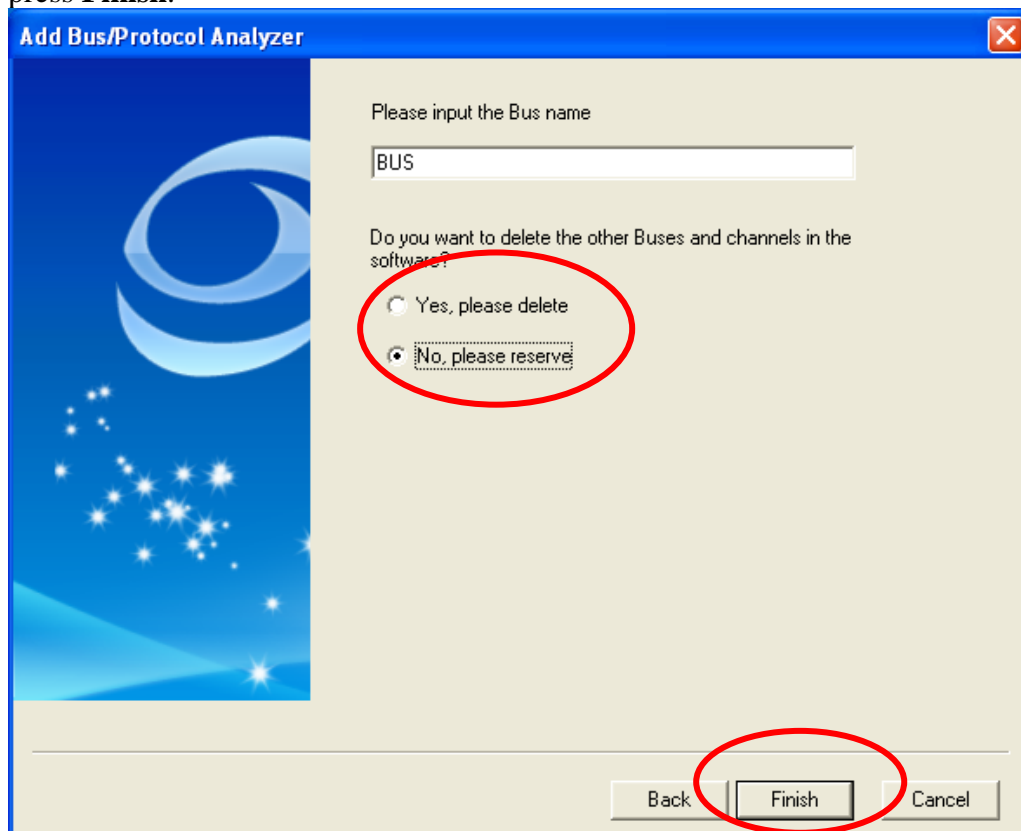


STEP 8. Press the **Next** to finish all settings.



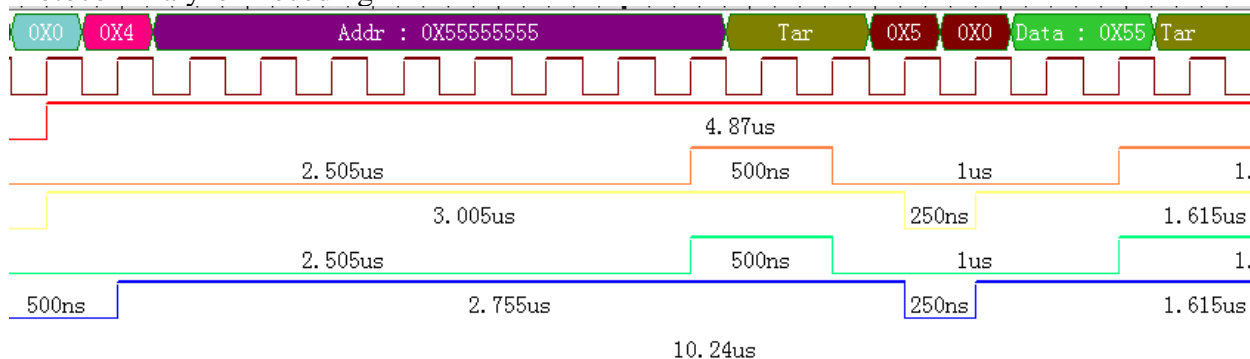


STEP 9. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.



STEP 10. Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Either Edge; the memory depth is 128K; the sampling frequency is 200MHz (the sampling frequency should be more than 4 times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List

Navigator Packet List Statistics Memory Analyzer											
Setting... Refresh Export... Synch. Parameter...				IOR IOW MR MW DR DW FR FW ER EW ED EE TR TW							
Packet #	Name	TimeStamp	Start	Cyct-Dir	Addr	Tar	Sync	Sync	Data	Tar	DESCRIBE
1	Bus1(Low Pin Count)	0.00013ms	0	4	55555555	Tar	5	0	1BYTES	Tar	MEMORY READ