



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

# SPECIFICATION

**MODEL: B08013-LAP-JK FLIP-FLOP-M**

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

**VERSION:** V1.04

Approver		Check	Design
GM	PM		

Customer Confirm

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

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## 1 Software Download

Please install 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.

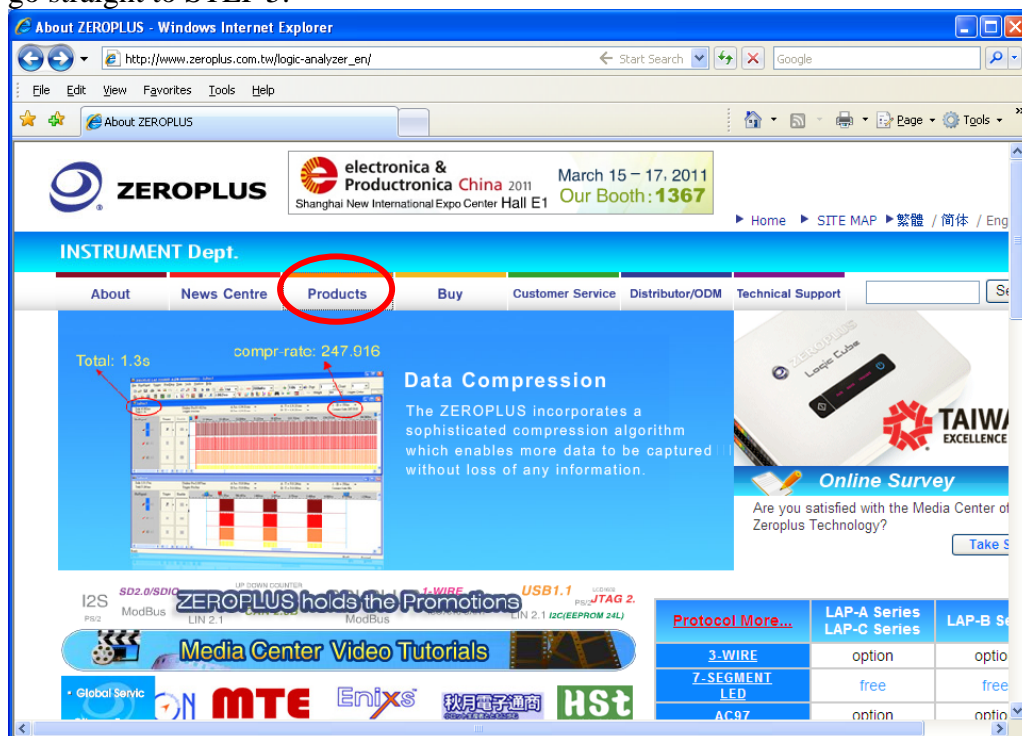
**STEP 1.** Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

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

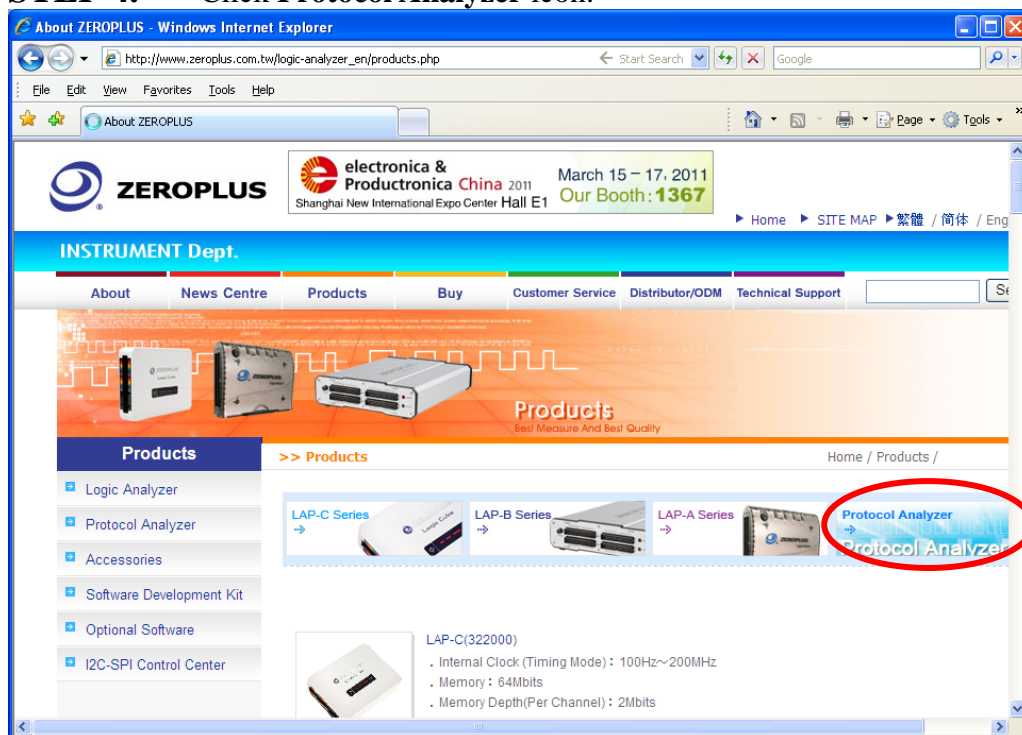




**STEP 3.** Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

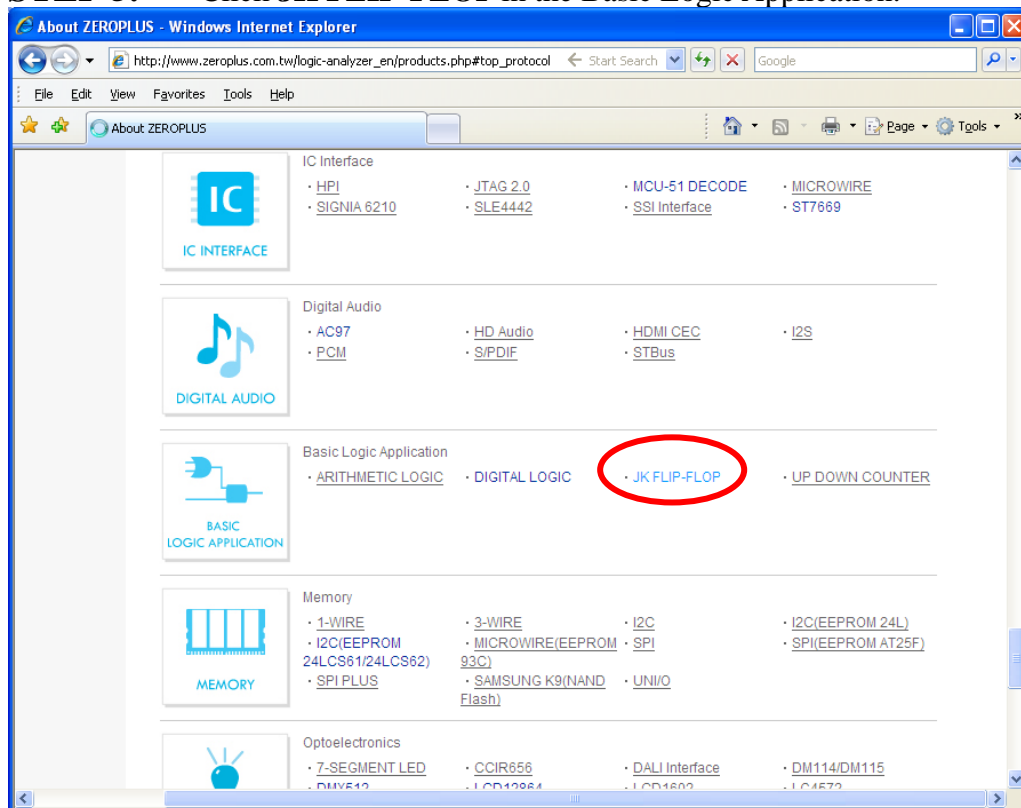


**STEP 4.** Click **Protocol Analyzer** icon.

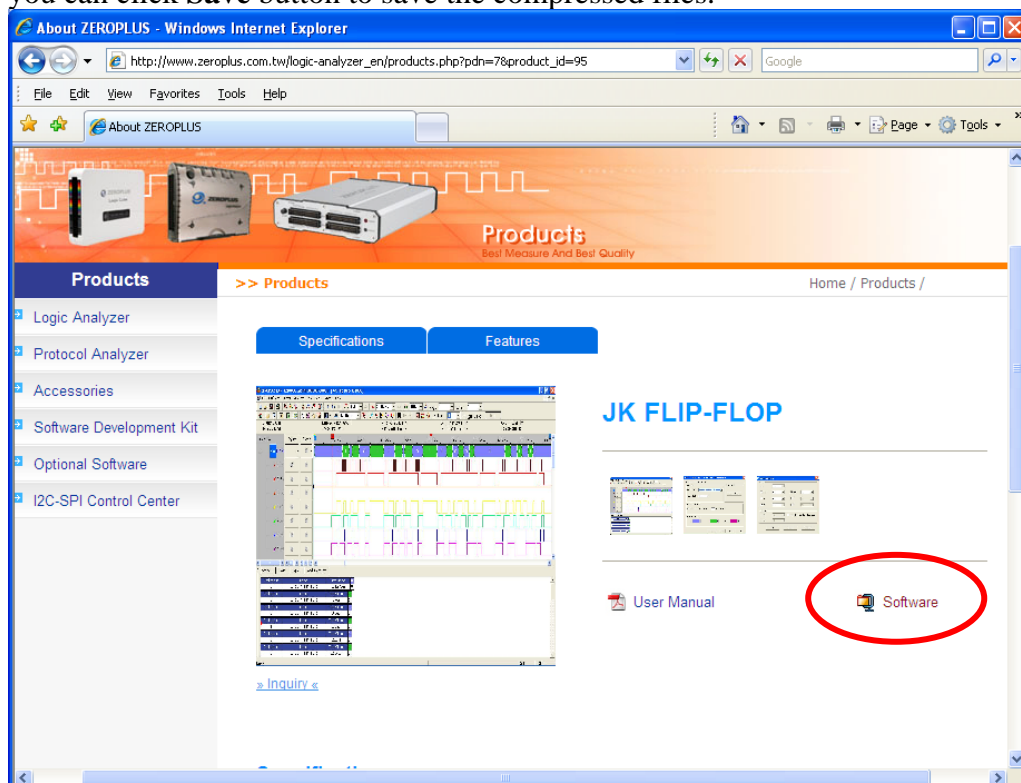




## STEP 5. Click JK FLIP-FLOP in the Basic Logic Application.



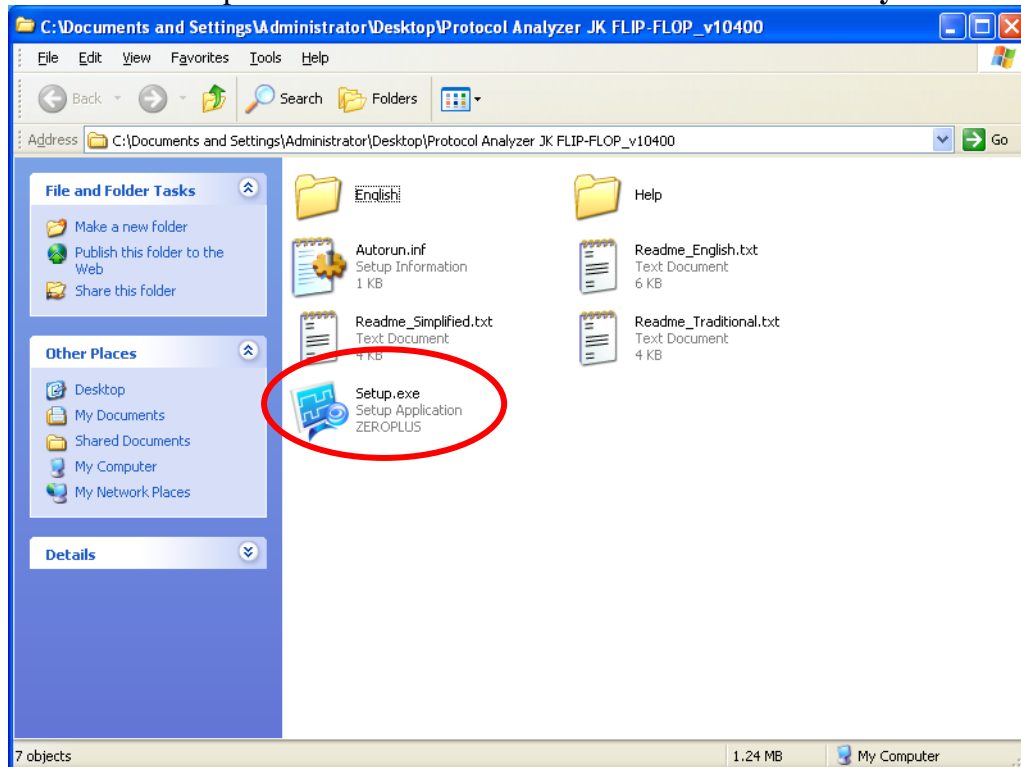
## STEP 6. Click Software in the Products page. When the File Download dialog box appears, you can click Save button to save the compressed files.



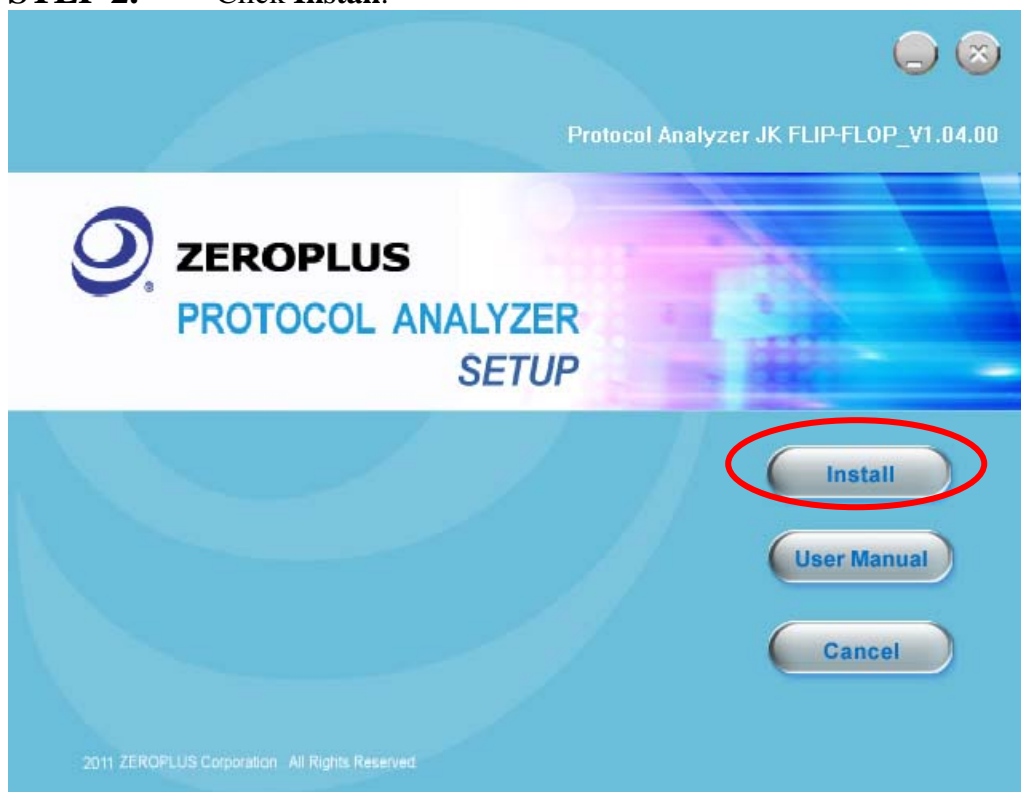


## 2 Software Installation

**STEP 1.** Open the downloaded folder to install **Protocol Analyzer JK FLIP-FLOP**.



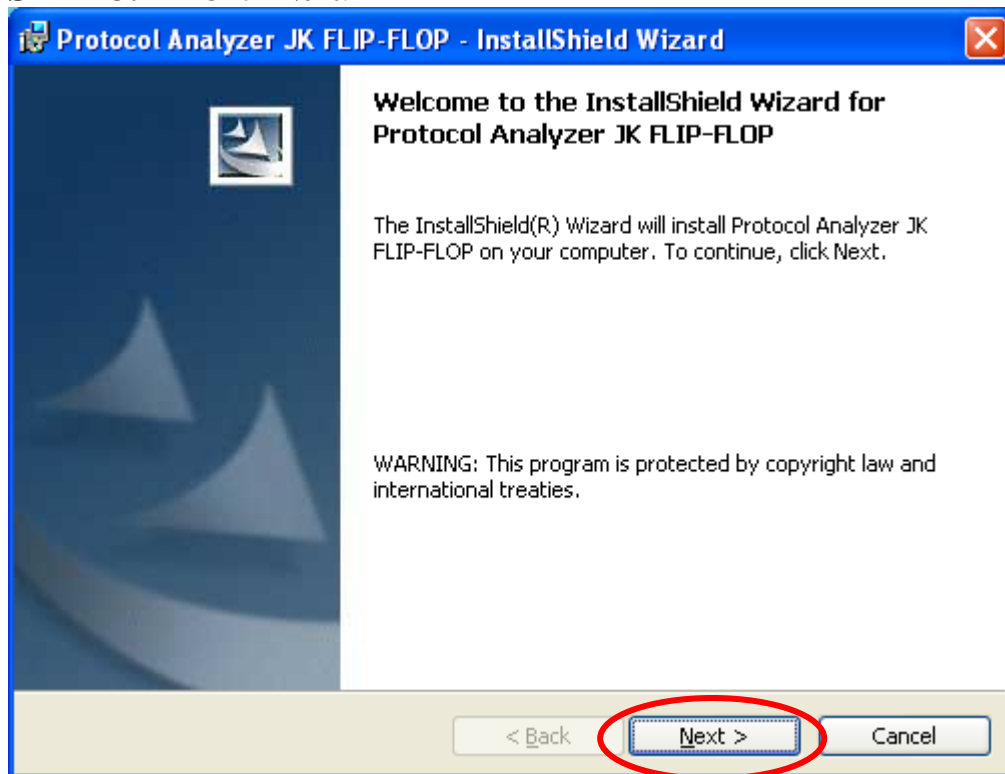
**STEP 2.** Click **Install**.



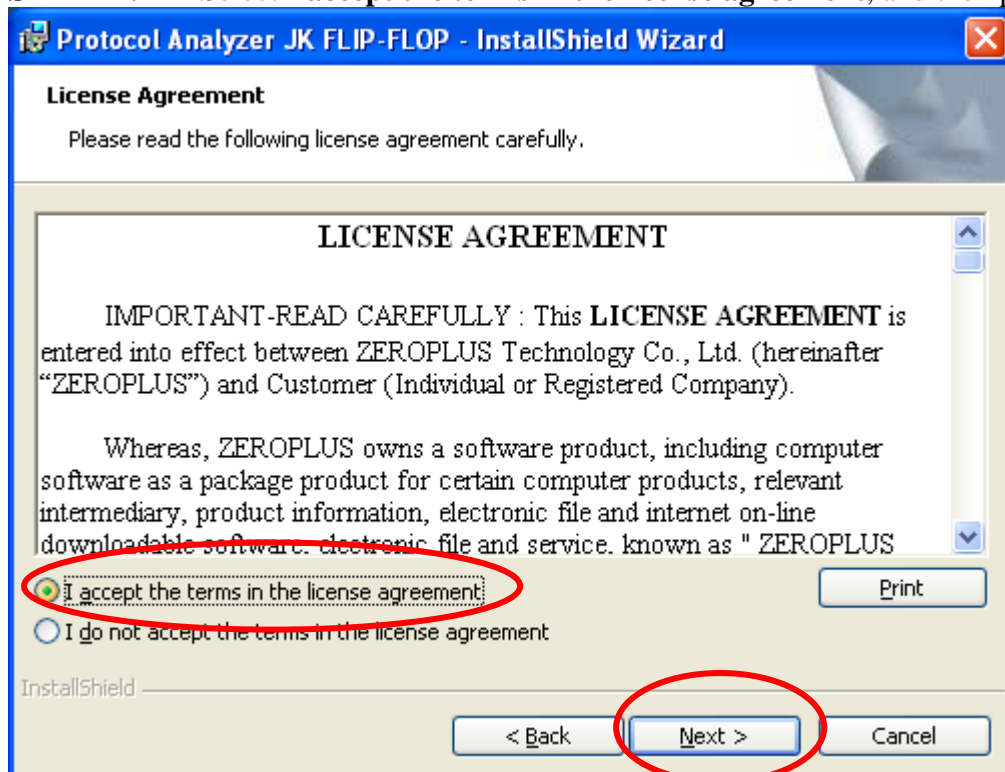




**STEP 3.** Click Next.



**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 JK FLIP-FLOP - InstallShield Wizard". It has a blue title bar with a close button. The main area is titled "Customer Information" and contains the text "Please enter your information." Below this are two text input fields: "User Name:" with "Microsoft" entered, and "Organization:" with "User" entered. Below the fields are two radio button options: "Anyone who uses this computer (all users)" (selected) and "Only for me (Microsoft)". At the bottom, there are three buttons: "< Back", "Next >" (circled in red), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

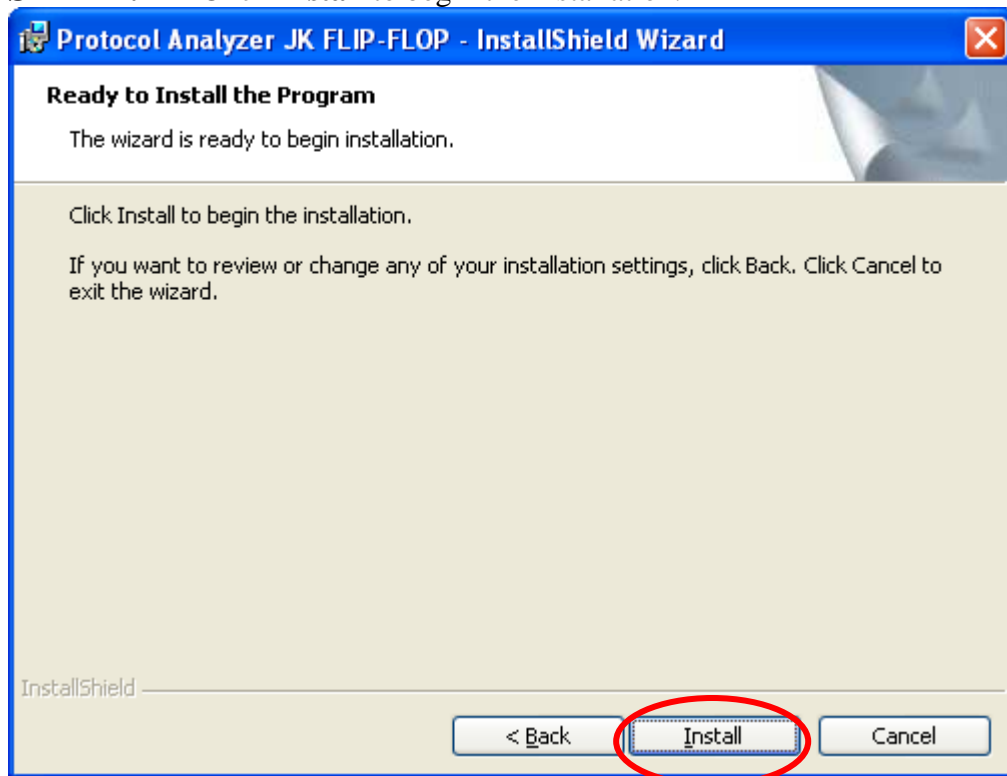
**STEP 6.** Select **Complete** and then click **Next**.

The dialog box is titled "Protocol Analyzer JK FLIP-FLOP - InstallShield Wizard". It has a blue title bar with a close button. The main area is titled "Setup Type" and contains the text "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" (selected) and "Custom". The "Complete" option has a description: "All program features will be installed. (Requires the most disk space.)". The "Custom" option has a description: "Choose which program features you want installed and where they will be installed. Recommended for advanced users." At the bottom, there are three buttons: "< Back", "Next >" (circled in red), and "Cancel". The "InstallShield" logo is visible in the bottom left corner.

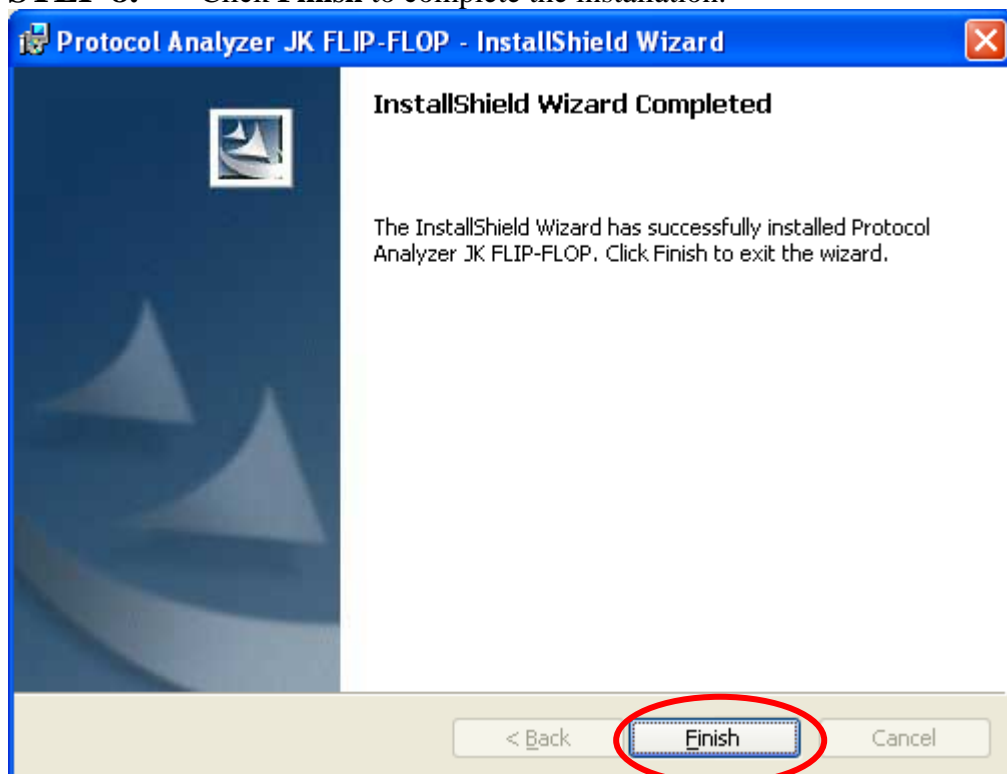




**STEP 7.** Click **Install** to begin the installation.



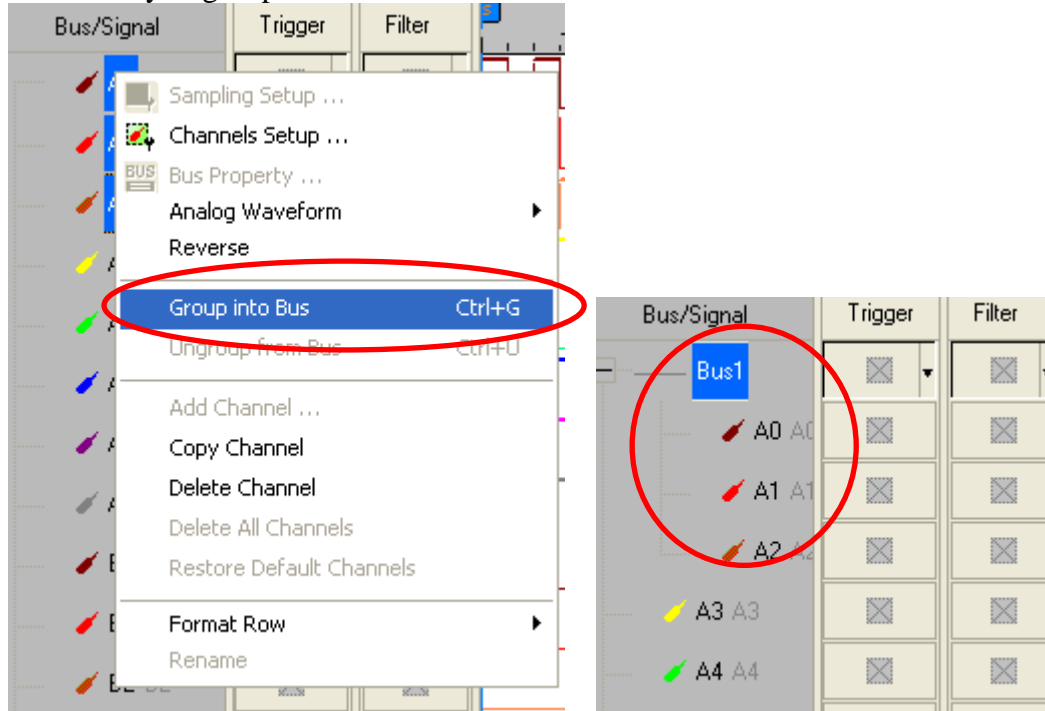
**STEP 8.** Click **Finish** to complete the installation.



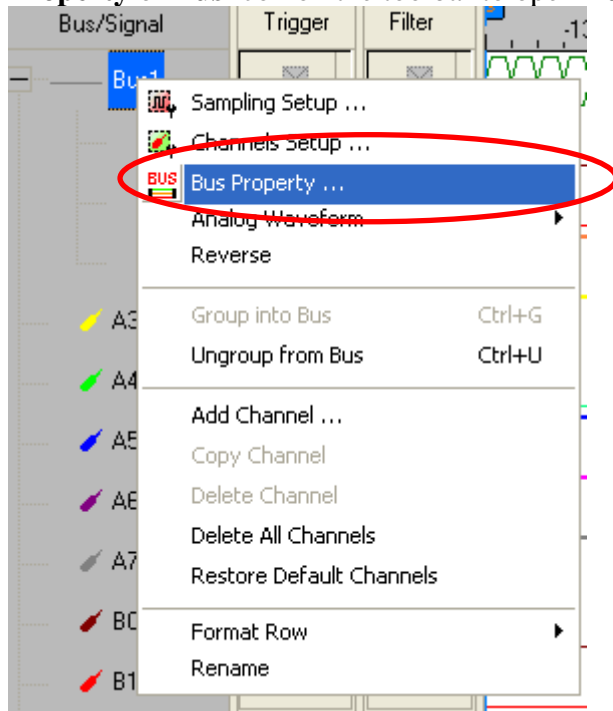


### 3 Software Register

**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse. **JK FLIP-FLOP** needs three or more channels to decode signals, so it is necessary to group three or more channels into a Bus.

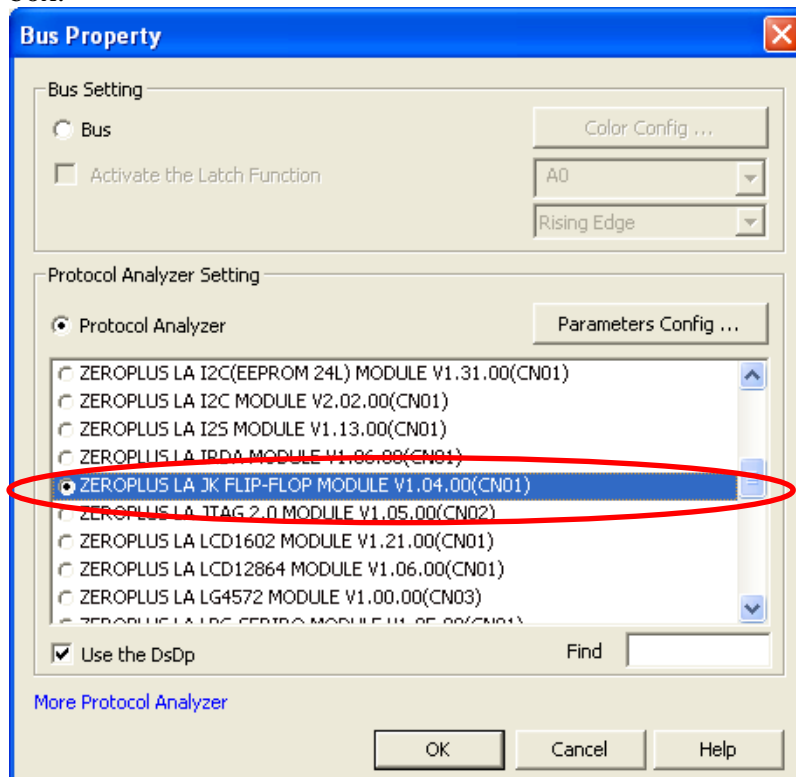


**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.

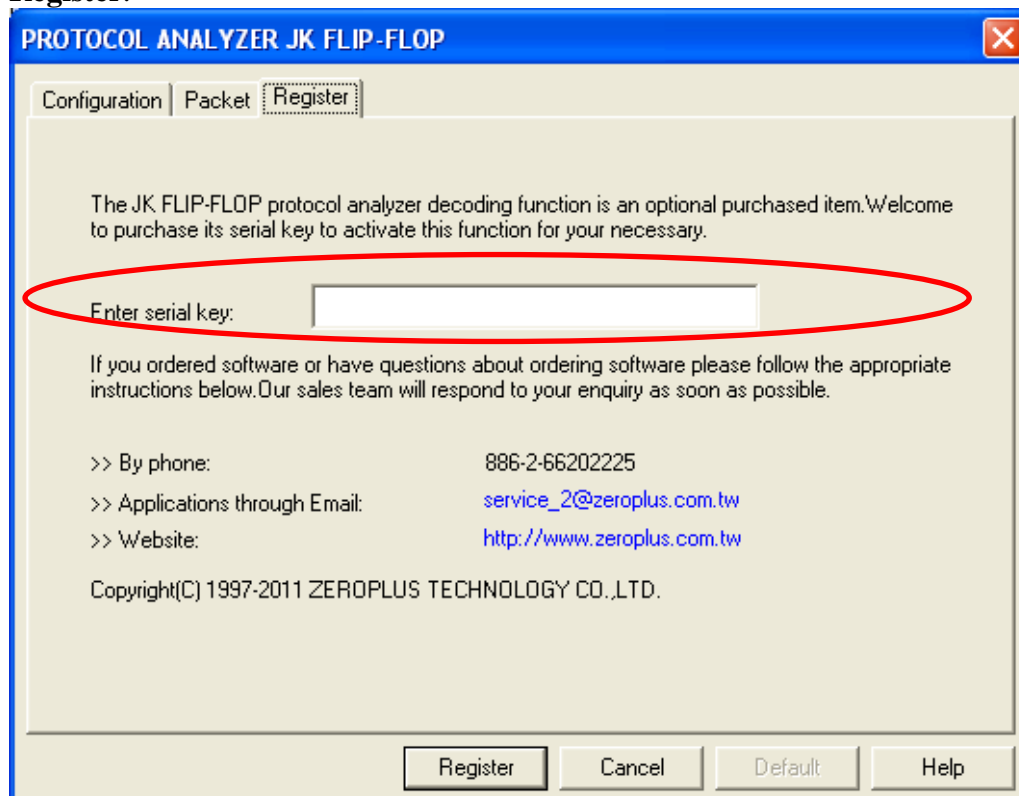




**STEP 3.** For Protocol Analyzer **JK FLIP-FLOP** Parameters Configuration, select Protocol Analyzer, and then choose **ZEROPLUS LA JK FLIP-FLOP MODULE V1.04.00(CN01)**. Next click **Parameters Configuration** to open the **PROTOCOL ANALYZER JK FLIP-FLOP** dialog box.

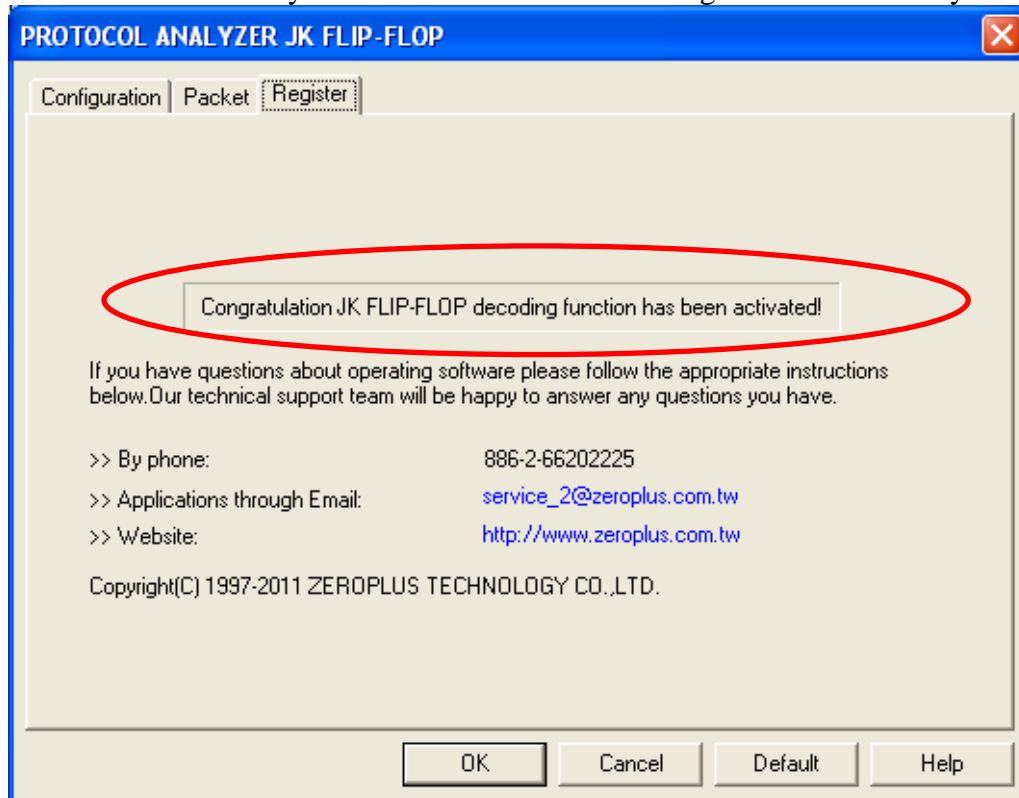


**STEP 4.** Press the Register tab to enter the serial key of the **JK FLIP-FLOP**. Then, press **Register**.





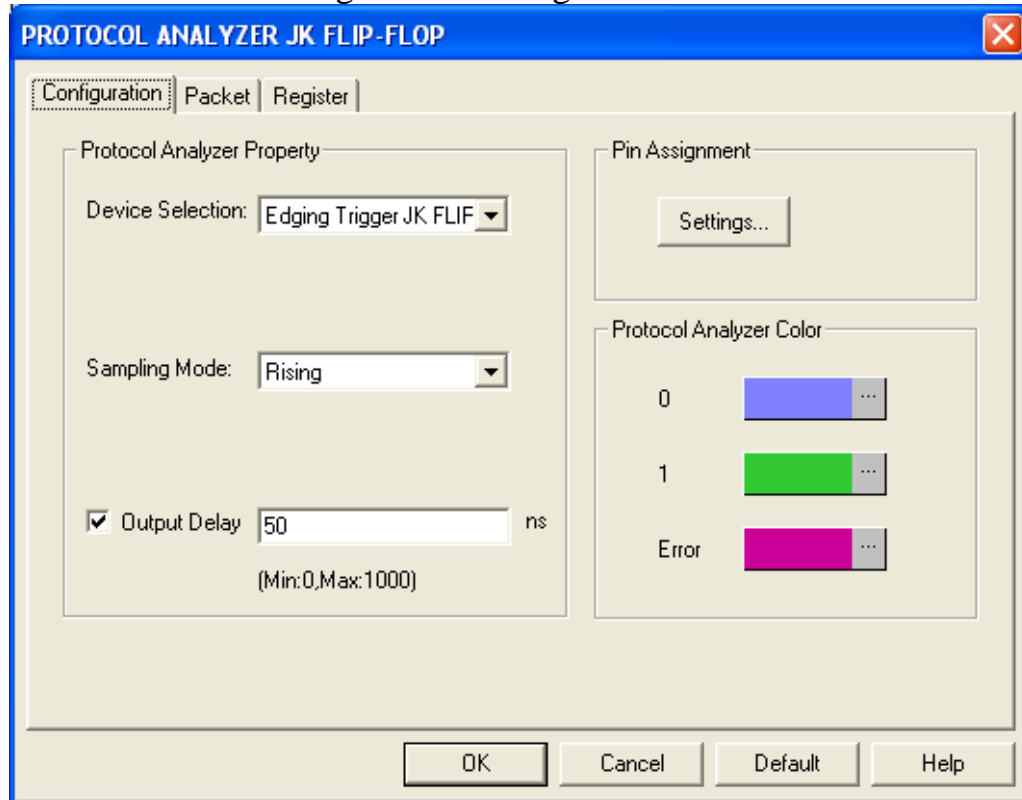
**STEP 5.** After pressing the Register button, the following dialog box will appear; it denotes that the Protocol Analyzer JK FLIP-FLOP has been registered successfully.



## 4 User Interface

In the configuration dialog box, please refer to the below images to select options of setting **JK FLIP-FLOP** Module.

### JK FLIP-FLOP Configuration Dialog Box



#### Protocol Analyzer Property:

**Device Selection:** Set the Device to Edging Trigger JK FLIP-FLOP or Master-Slave JK FLIP-FLOP.

**Sampling Mode:** Set the Mode to Rising or Falling.

**Output Delay:** Set the Delay Time in the range from 0 to 1000ns, and the default is 50ns.

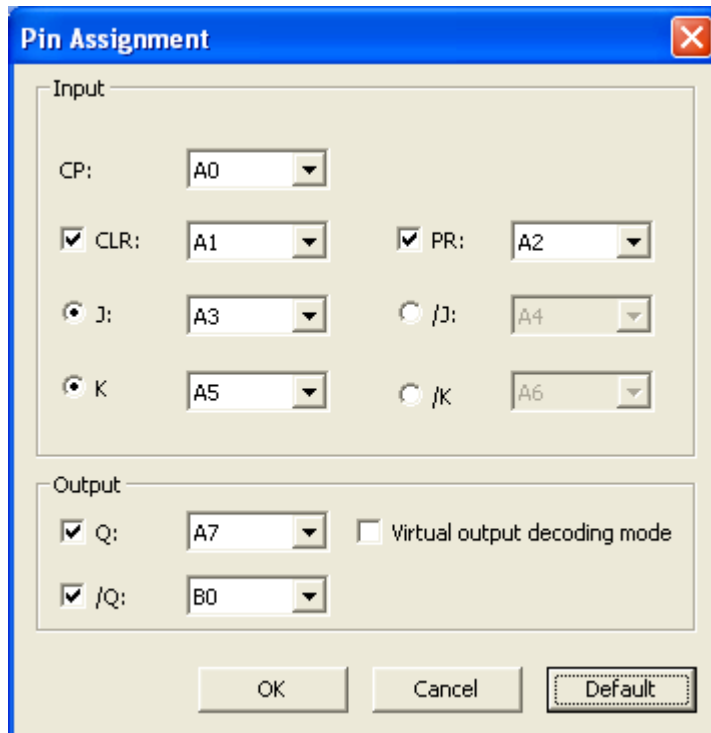
#### Protocol Analyzer Color:

Users can vary the color of the items according to their own requirements.



## Pin Assignment:

Press the **Settings** button in the Pin Assignment to open the corresponding dialog box.



The dialog box is titled "Pin Assignment" and has a close button (X) in the top right corner. It is divided into two main sections: "Input" and "Output".

**Input Section:**

- CP: A0 (dropdown)
- ☒ CLR: A1 (dropdown)
- ☒ PR: A2 (dropdown)
- ☐ J: A3 (dropdown)
- ☐ /J: A4 (dropdown)
- ☐ K: A5 (dropdown)
- ☐ /K: A6 (dropdown)

**Output Section:**

- ☒ Q: A7 (dropdown)
- ☐ Virtual output decoding mode
- ☒ /Q: B0 (dropdown)

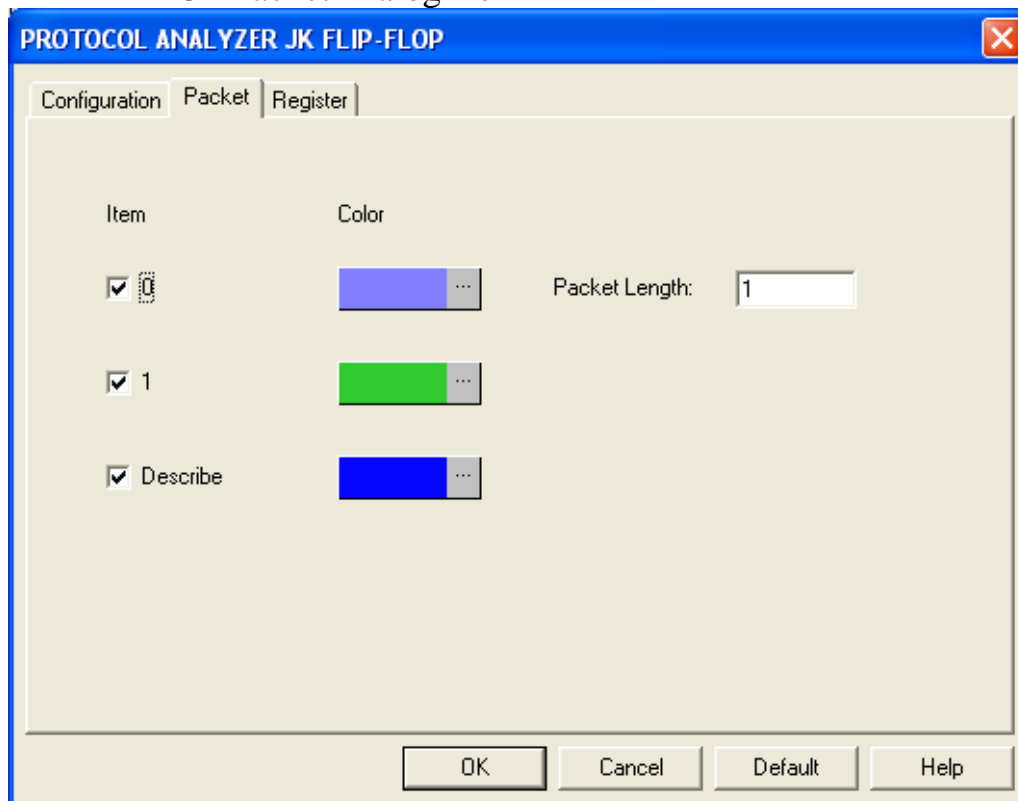
At the bottom, there are three buttons: "OK", "Cancel", and "Default".

The channels (CLR, PR, J, /J, K and /K) are optional in the Input part, but only one of the channels (J and /J) can be selected, which is the same as that of the (K and /K). If the channels (/J and /K) are selected, the sampled values of the (/J and /K) must be negated in the process of decoding and compared with the values of (J and K) in the True Table.

The channels (Q and /Q) can be selected. If the option, Virtual output decoding mode, is enabled, the Output channels are disabled, that is to say, the channels (Q and /Q) can't be set. When the decoding is performed, the decoded results are obtained according to the Input channels only.



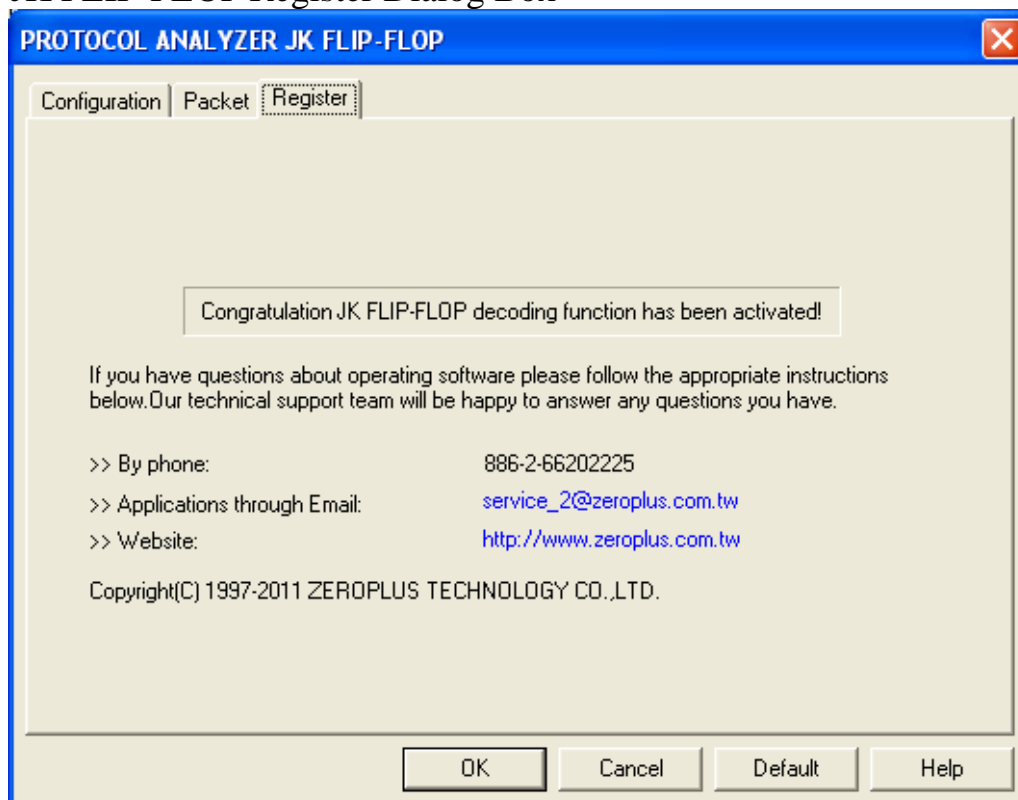
## JK FLIP-FLOP Packet Dialog Box



In the Packet dialog box, users can vary the color of items and set the item to be displayed.

**Packet Length:** Set the Length in the range from 1 to 1000.

## JK FLIP-FLOP Register Dialog Box



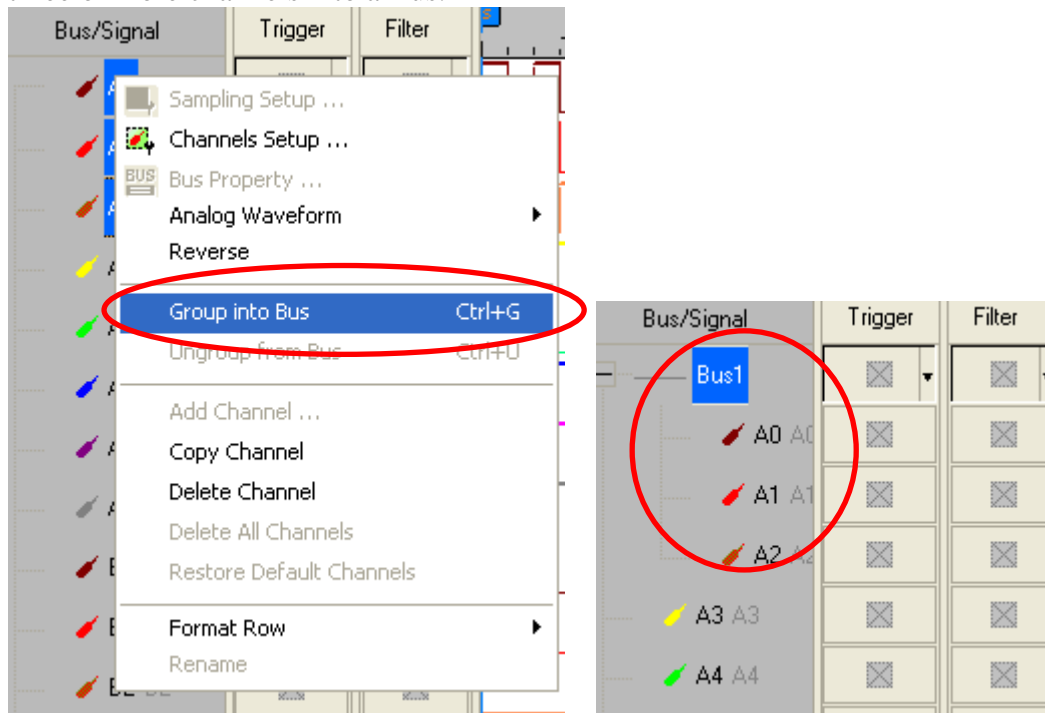
There is written Zeroplus company information. If you have any questions about software operations, you can contact Zeroplus by Telephone or Email.



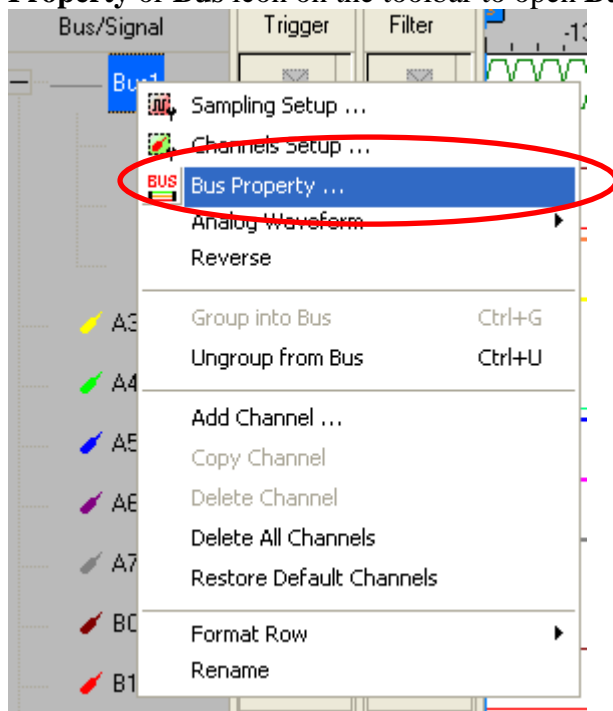


## 5 Operating Instructions

**STEP 1.** Group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse. The **JK FLIP-FLOP** needs three or more channels to decode signals, so it is necessary to group three or more channels into a Bus.

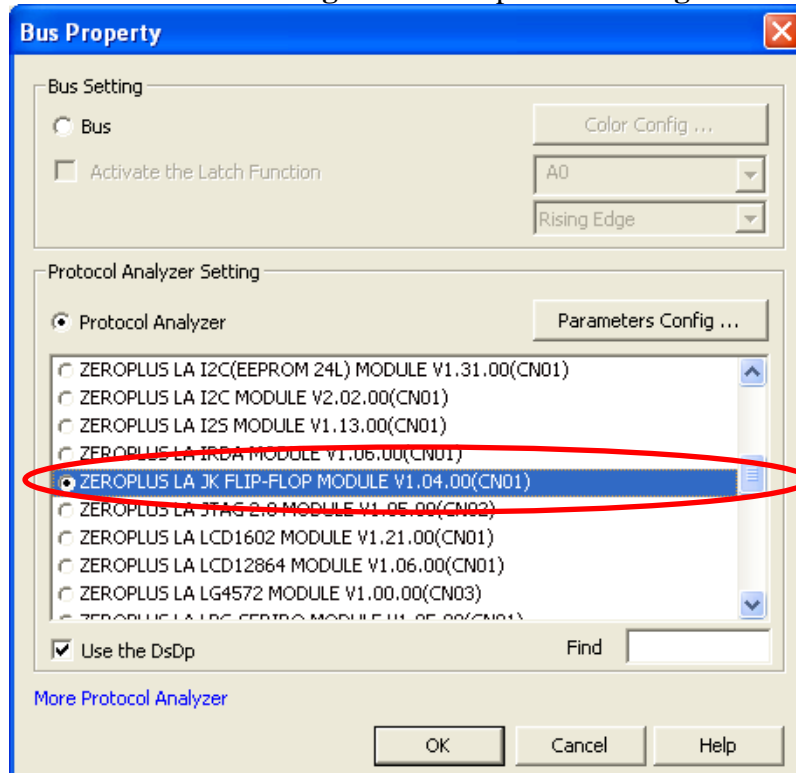


**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.

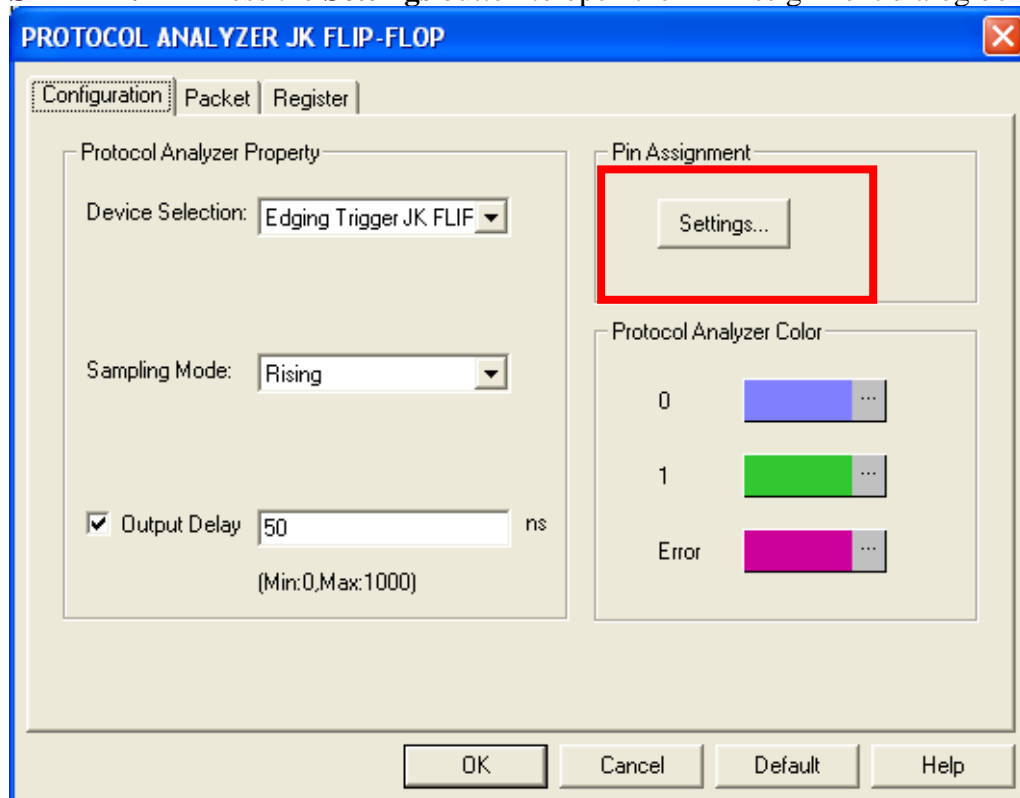




**STEP 3.** For Protocol Analyzer **JK FLIP-FLOP** Parameters Configuration, select Protocol Analyzer, and then choose **ZEROPLUS LA JK FLIP-FLOP MODULE V1.04.00(CN01)**. Next click **Parameters Configuration** to open the **Configuration** dialog box.

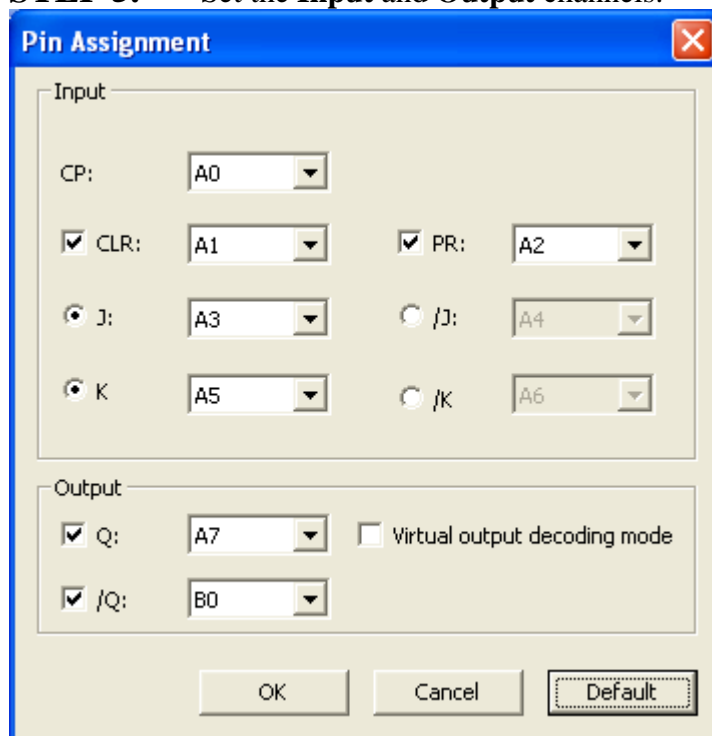


**STEP 4.** Press the **Settings** button to open the Pin Assignment dialog box.





**STEP 5.** Set the **Input** and **Output** channels.

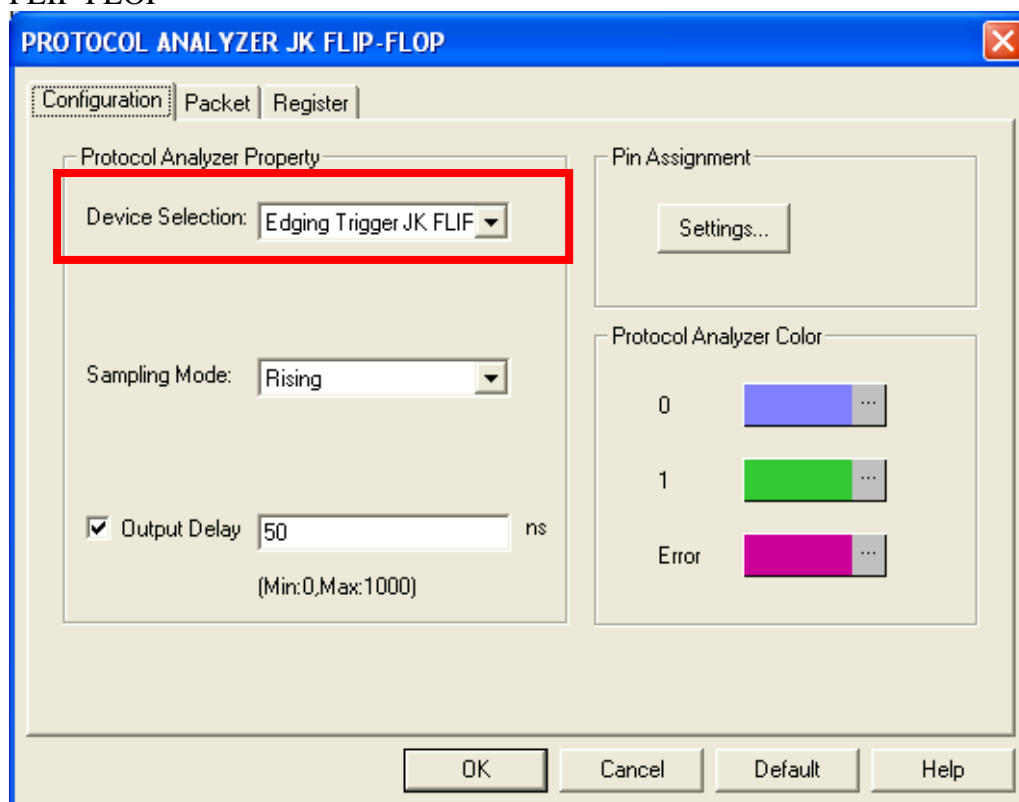


The Pin Assignment dialog box is shown with the following settings:

- Input:**
  - CP: A0
  - ☒ CLR: A1
  - ☒ PR: A2
  - ☒ J: A3
  - ☐ /J: A4
  - ☒ K: A5
  - ☐ /K: A6
- Output:**
  - ☒ Q: A7
  - ☐ Virtual output decoding mode
  - ☒ /Q: B0

Buttons: OK, Cancel, Default

**STEP 6.** Set the **Device Selection** to Edging Trigger JK FLIP-FLOP or Master-Slave JK FLIP-FLOP



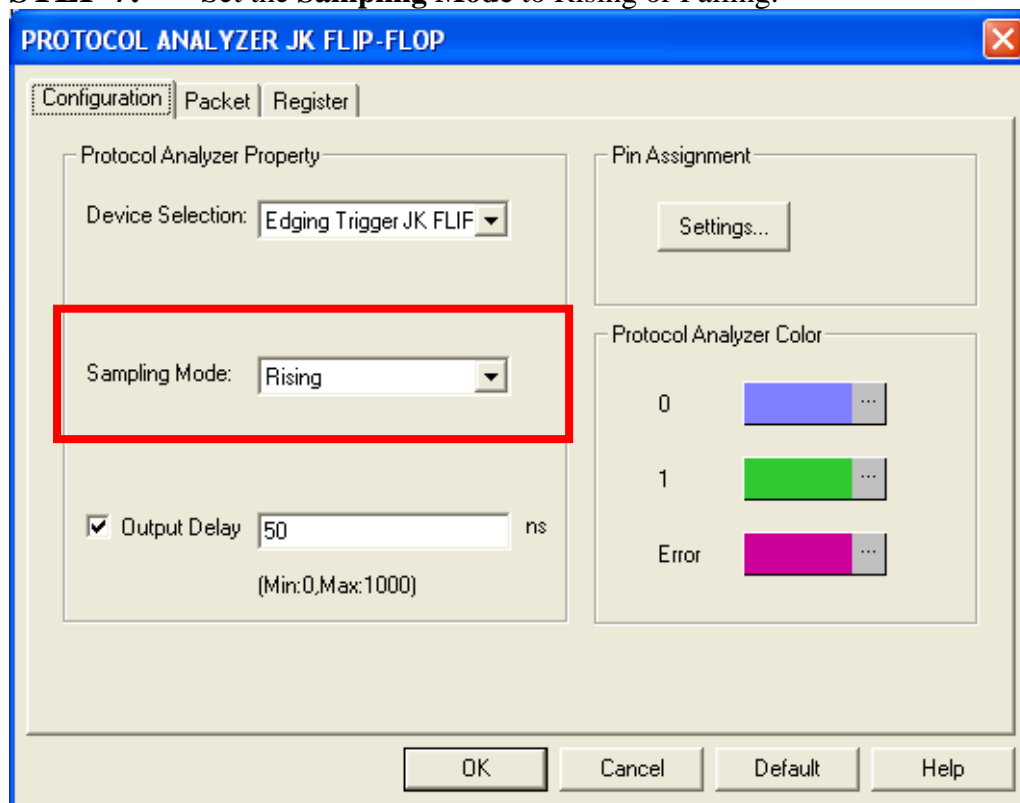
The PROTOCOL ANALYZER JK FLIP-FLOP dialog box is shown with the following settings:

- Configuration** | Packet | Register
- Protocol Analyzer Property:**
  - Device Selection:** Edging Trigger JK FLIF (highlighted with a red box)
  - Sampling Mode:** Rising
  - ☒ **Output Delay:** 50 ns (Min:0,Max:1000)
- Pin Assignment:** Settings...
- Protocol Analyzer Color:**
  - 0: Blue
  - 1: Green
  - Error: Magenta

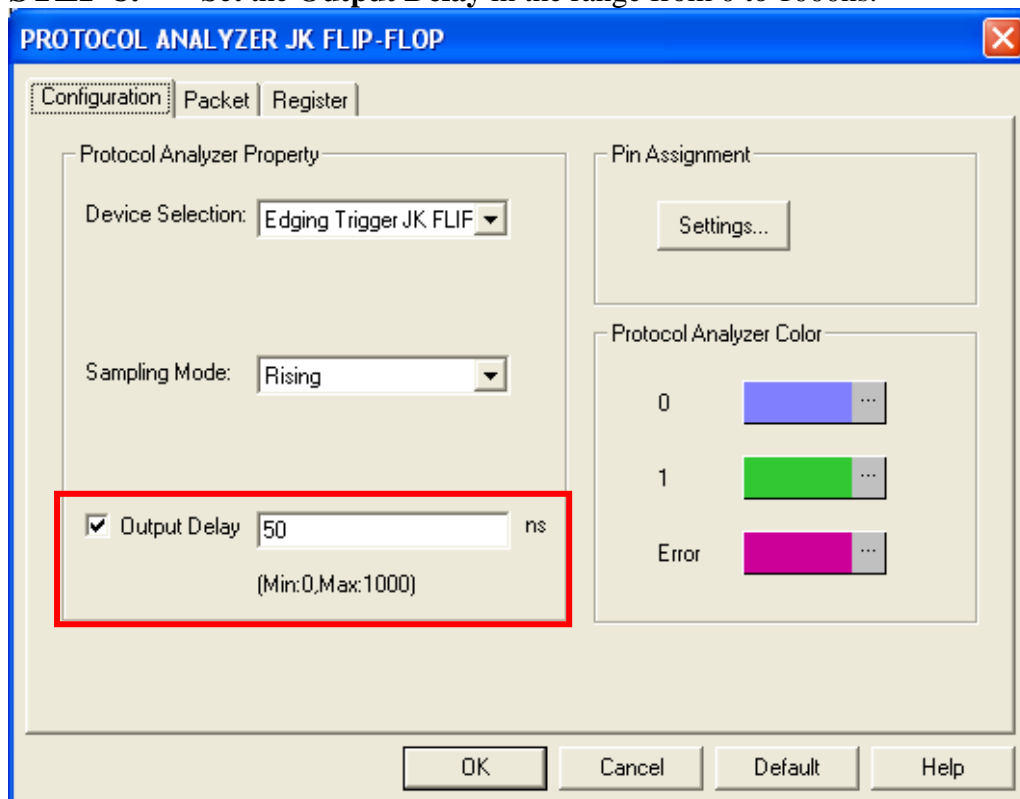
Buttons: OK, Cancel, Default, Help



**STEP 7.** Set the **Sampling Mode** to Rising or Falling.

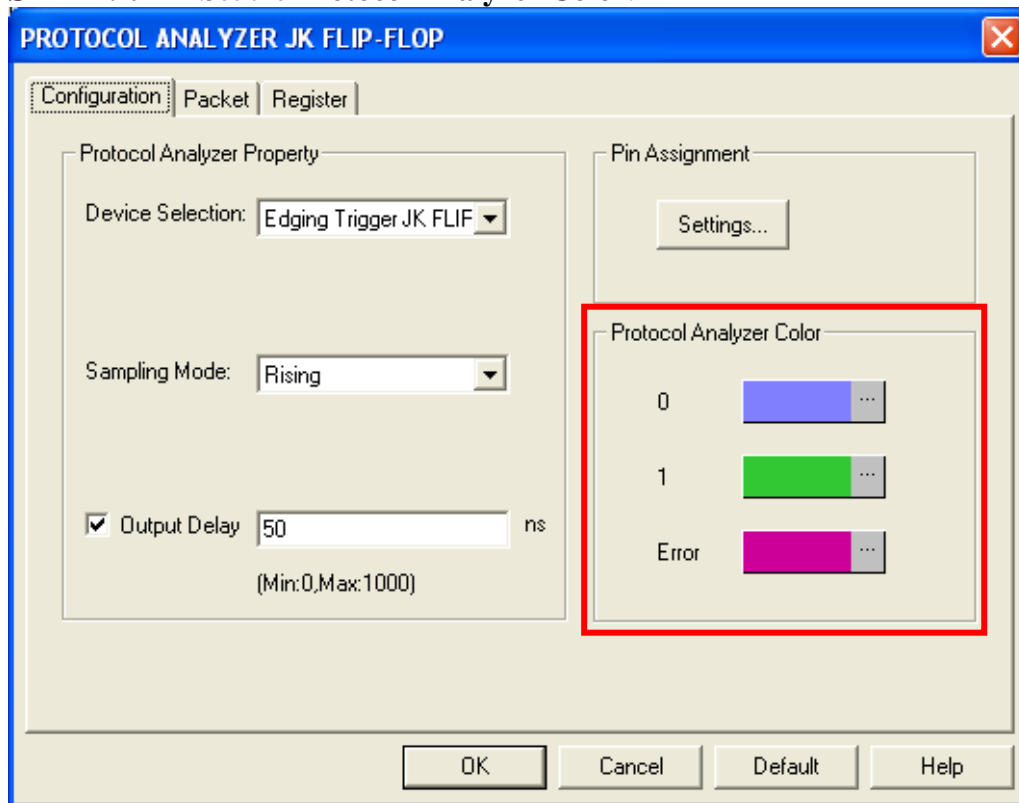


**STEP 8.** Set the **Output Delay** in the range from 0 to 1000ns.



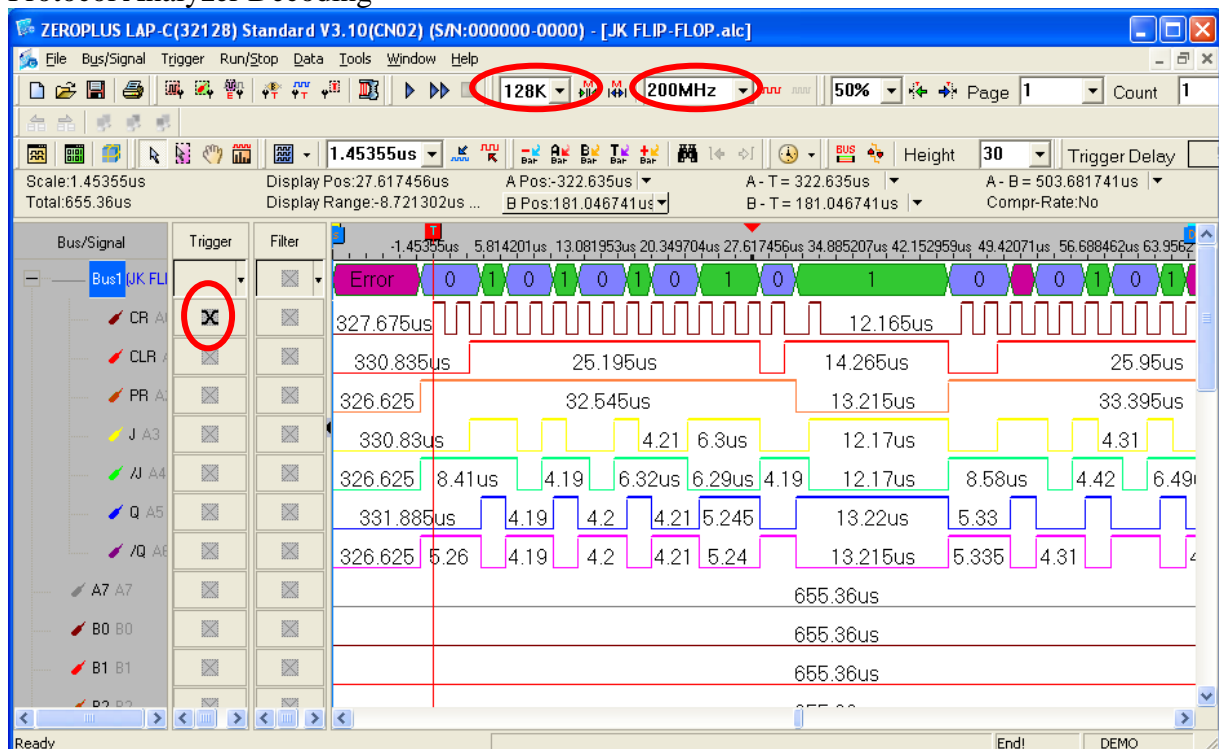


## STEP 9. Set the Protocol Analyzer Color.



**STEP 10.** Following pictures show the completion of the protocol analyzer decoding and the 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 eight times higher than the signal to be tested).

## Protocol Analyzer Decoding





## Packet List

