



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.

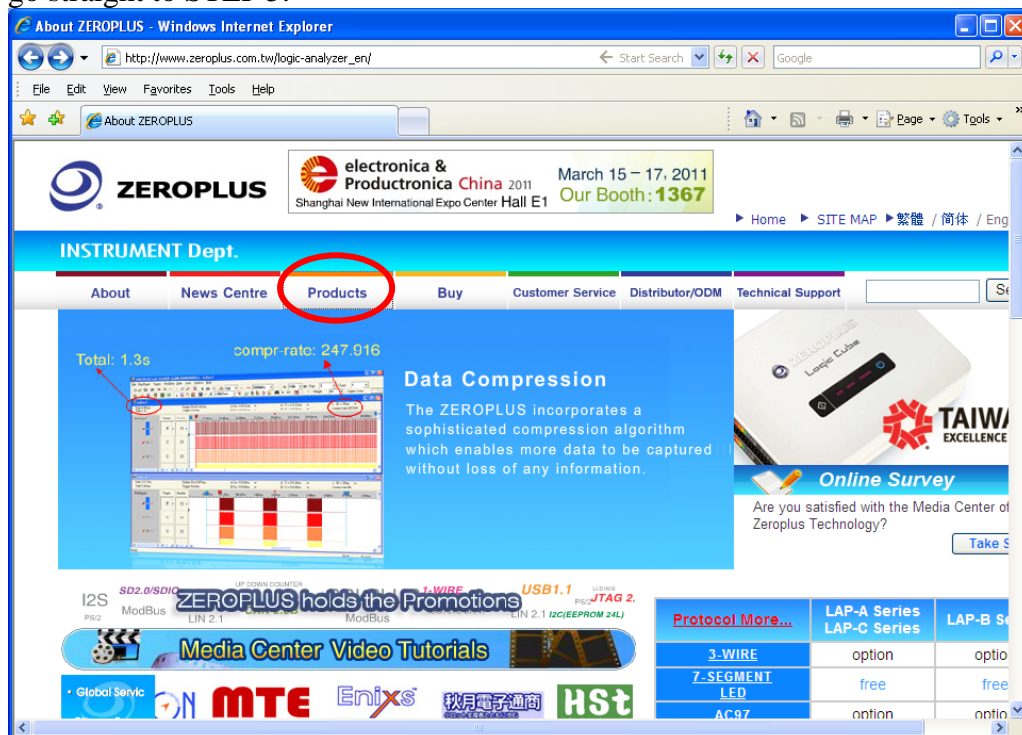
STEP 1. Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

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

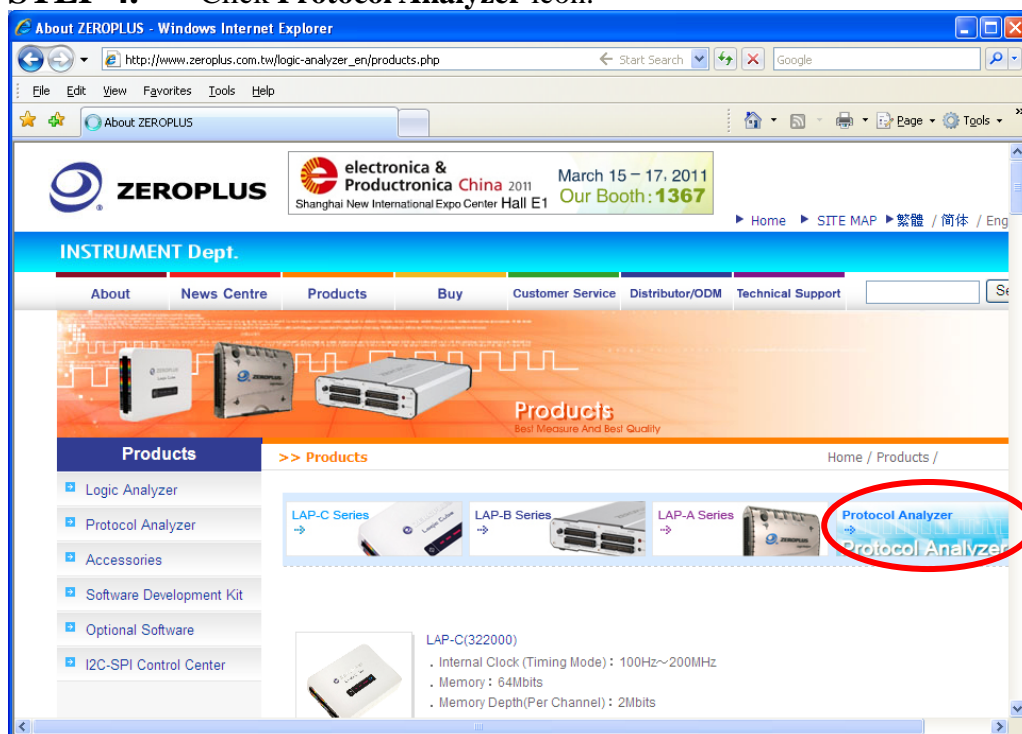




STEP 3. Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

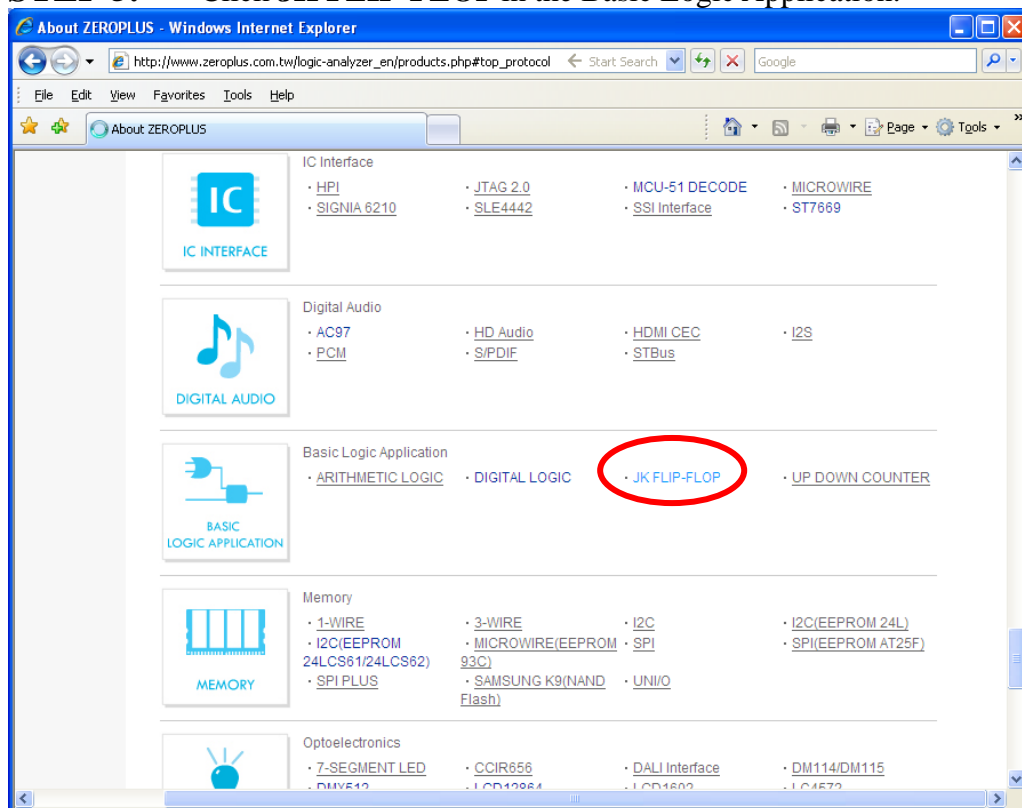


STEP 4. Click **Protocol Analyzer** icon.

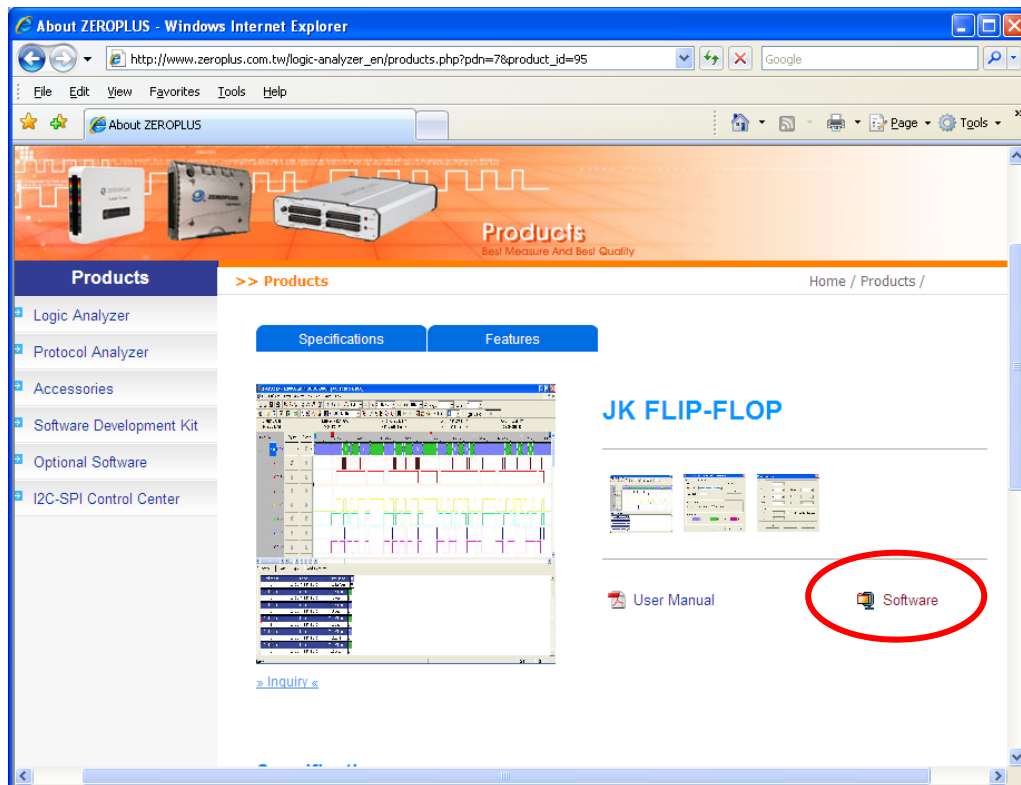




STEP 5. Click **JK FLIP-FLOP** in the Basic Logic Application.

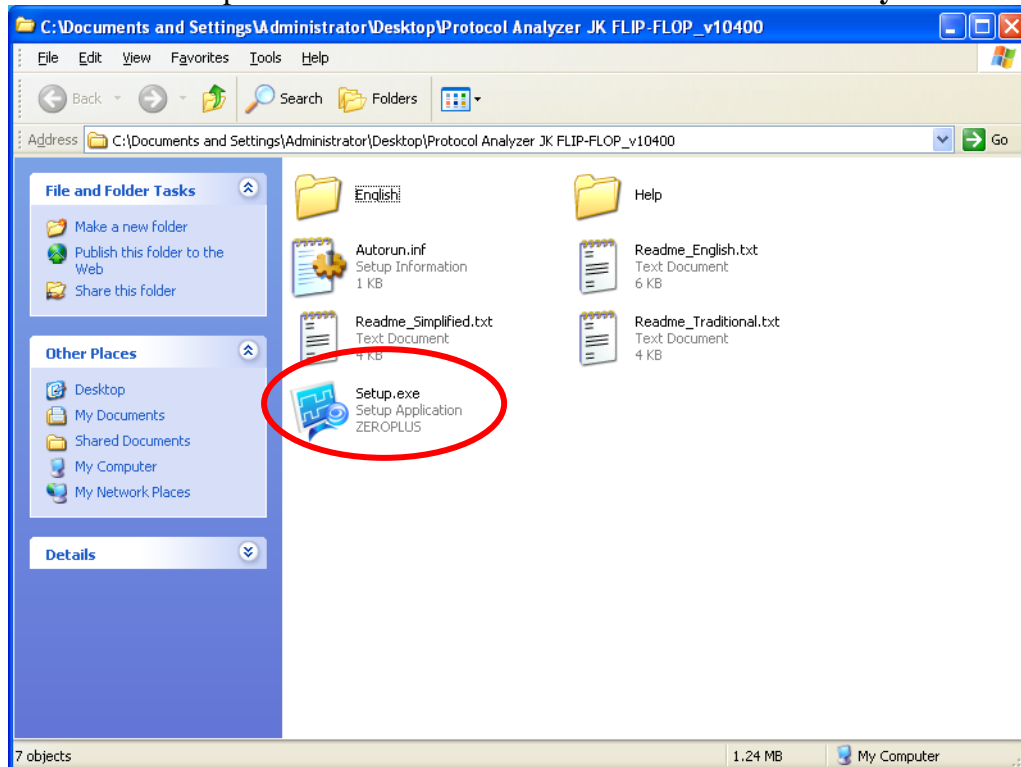


STEP 6. Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed files.

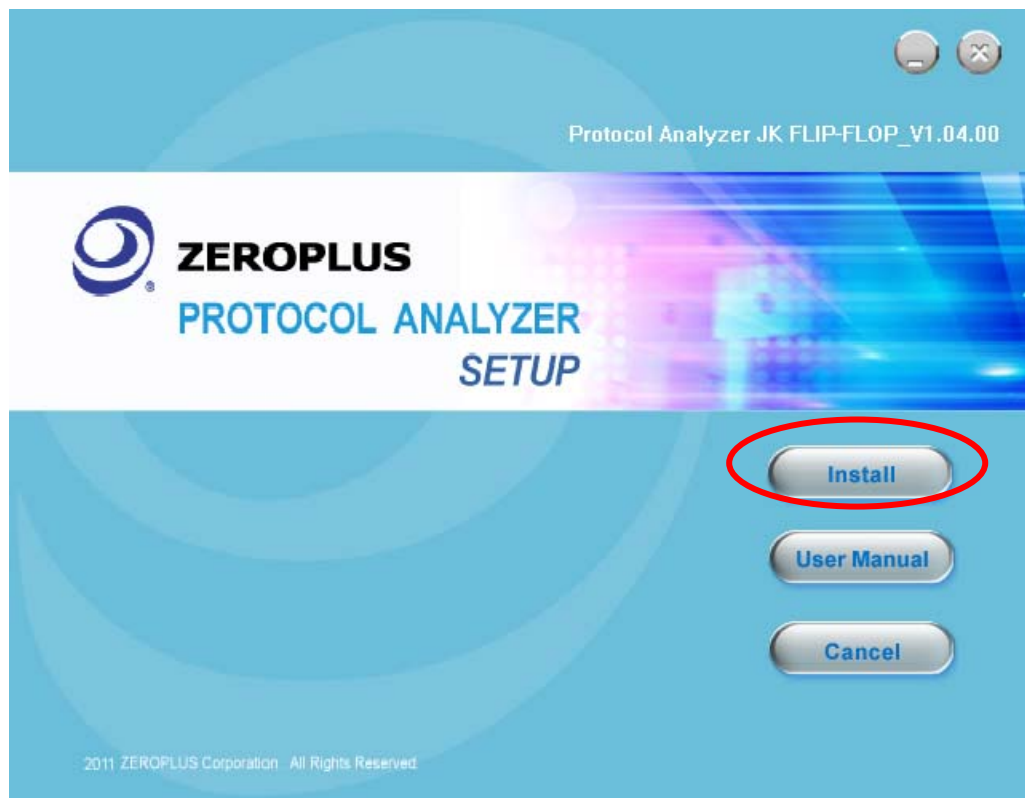


2 Software Installation

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

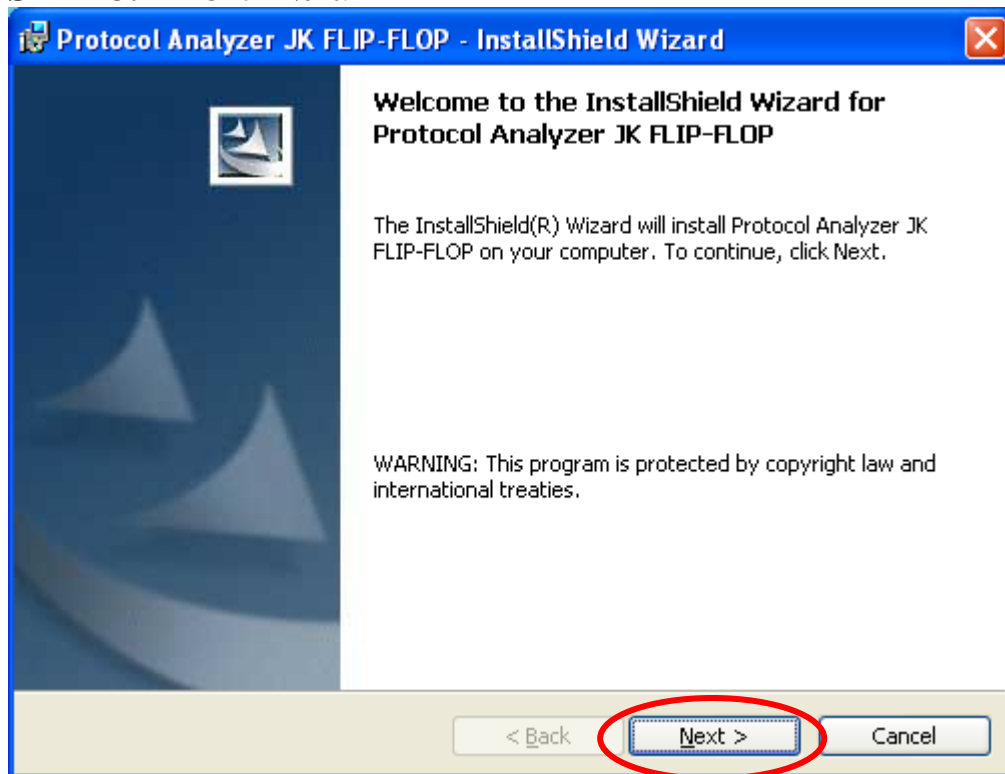


STEP 2. Click **Install**.

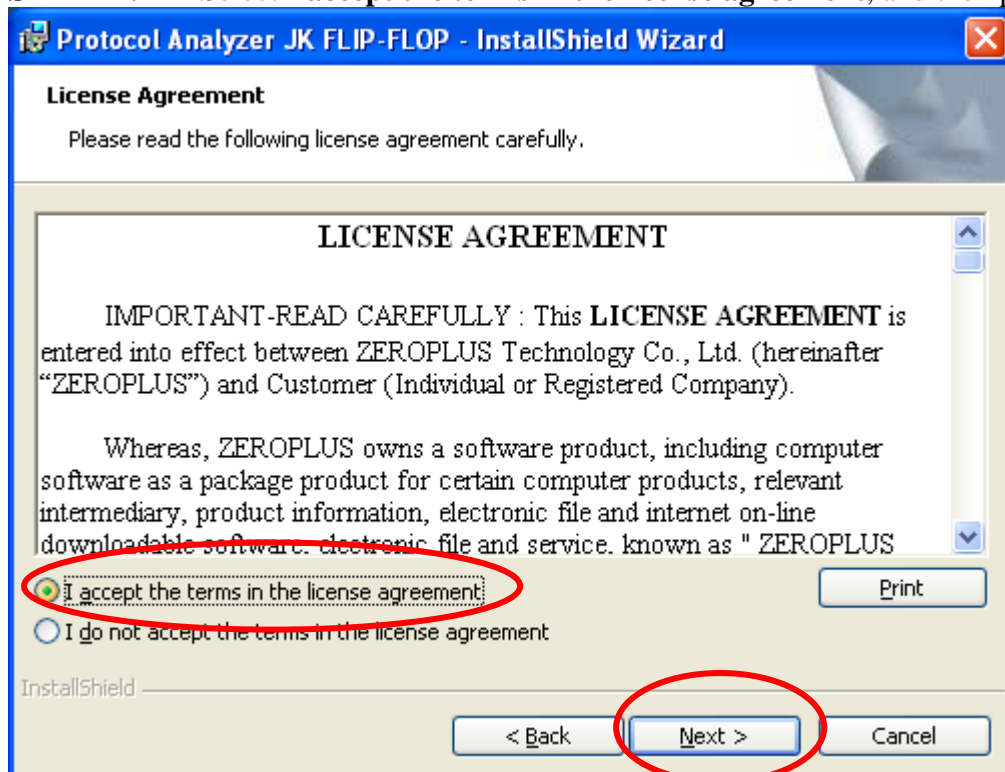




STEP 3. Click Next.



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**.

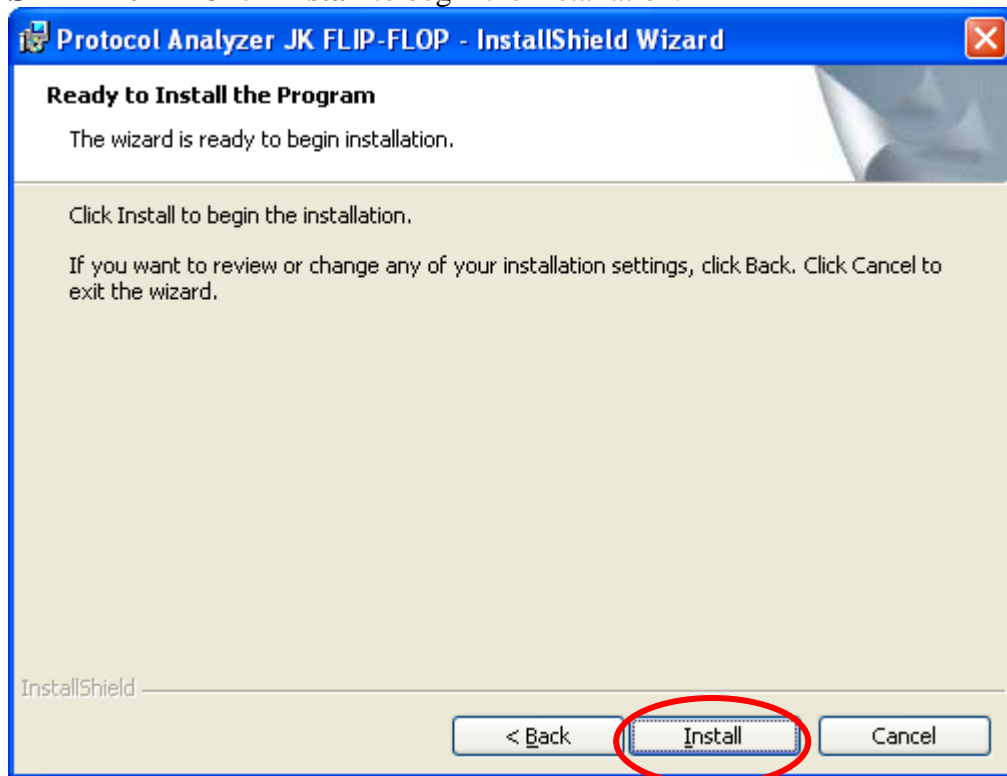
The dialog box is titled "Protocol Analyzer JK FLIP-FLOP - InstallShield Wizard". It has a blue title bar with a close button. The main area is titled "Customer Information" and contains the text "Please enter your information." Below this are two text input fields: "User Name:" with "Microsoft" entered, 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**.

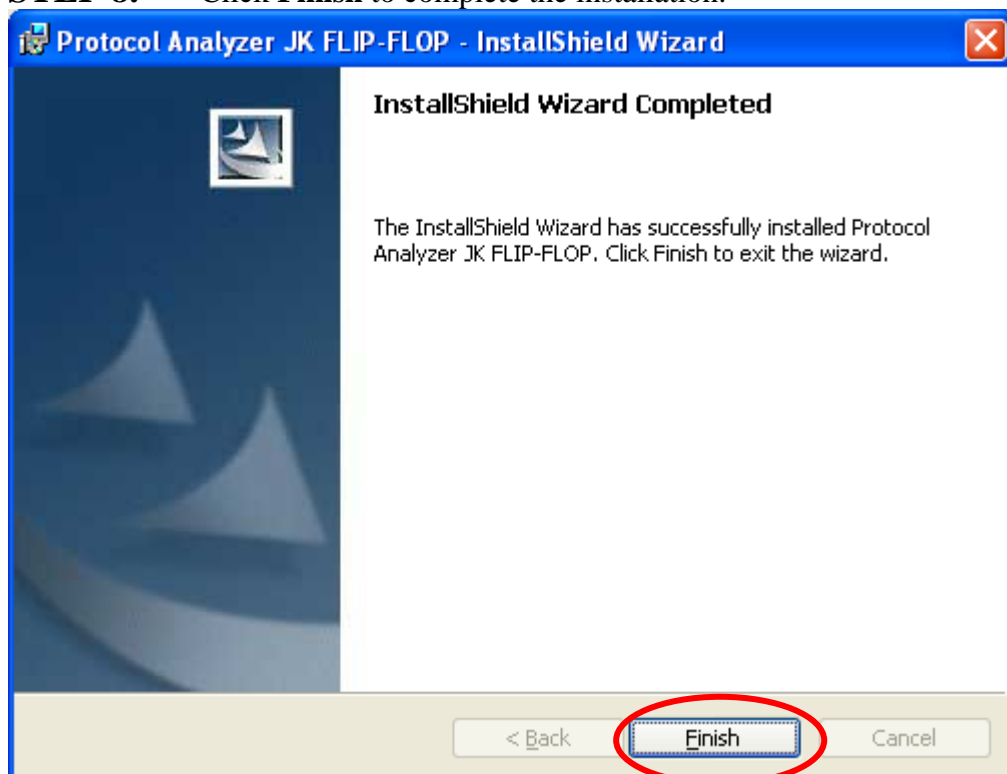
The dialog box is titled "Protocol Analyzer JK FLIP-FLOP - InstallShield Wizard". It has a blue title bar with a close button. The main area is titled "Setup Type" and contains the text "Choose the setup type that best suits your needs." Below this is the text "Please select a setup type." There are 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.

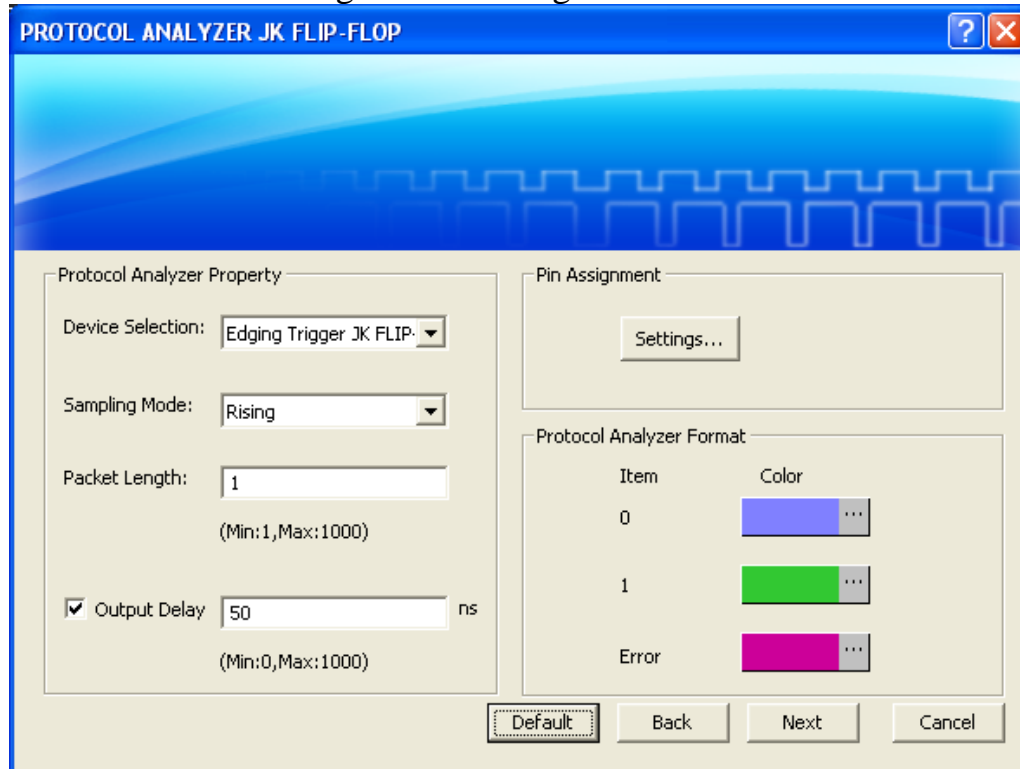




3 User Interface

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.

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

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

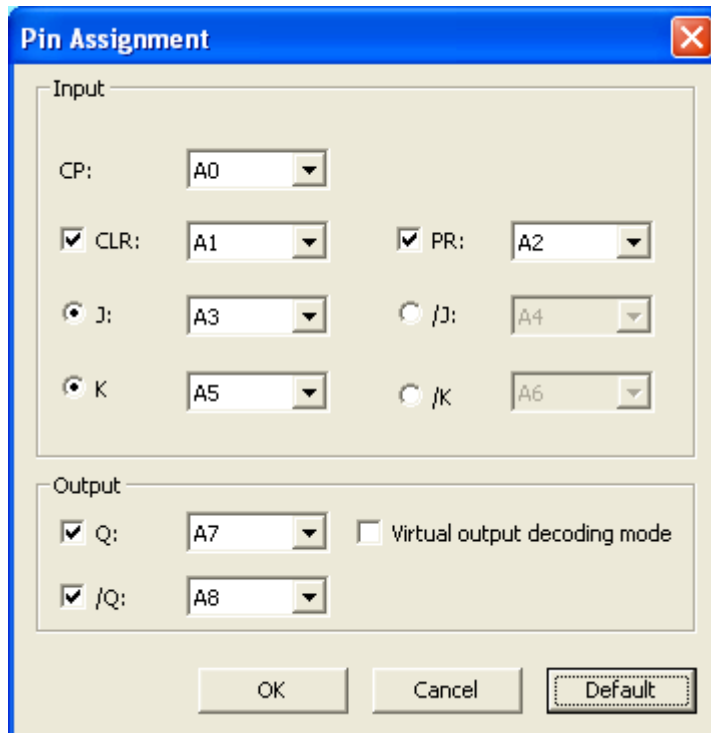
Protocol Analyzer Format:

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)
- ☒ /Q: A8 (dropdown)
- ☐ Virtual output decoding mode

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

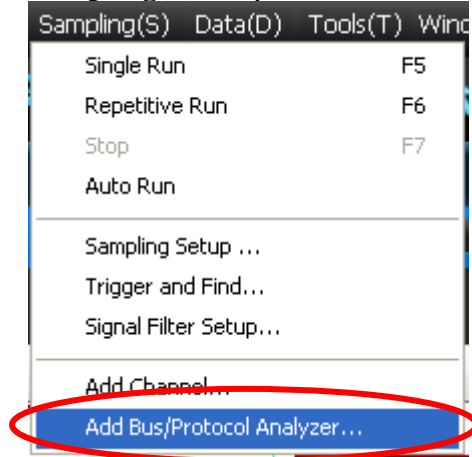
The channels (CLR, PR, J, /J, K and /K) are optional in the Input part, but only one of the channels (J and /J) can be selected, which is the same as that of the (K and /K). If the channels (/J and /K) are selected, the sampled values of the (/J and /K) must be negated in the process of decoding and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

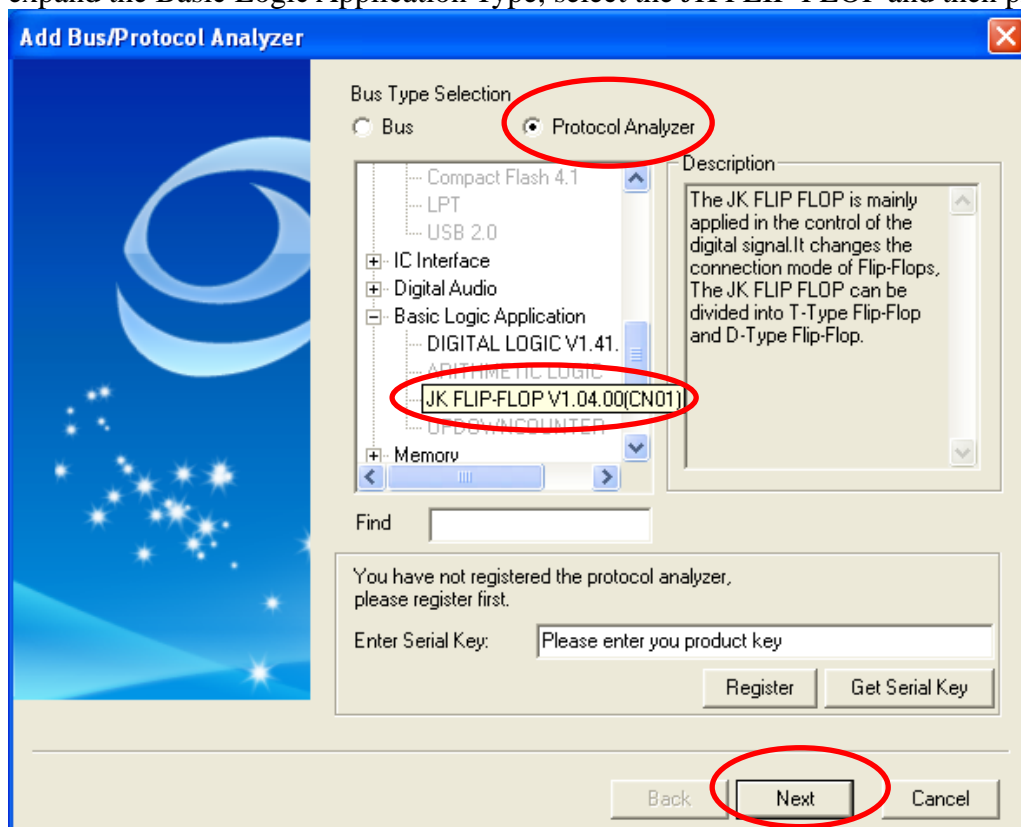


4 Operating Instructions

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.

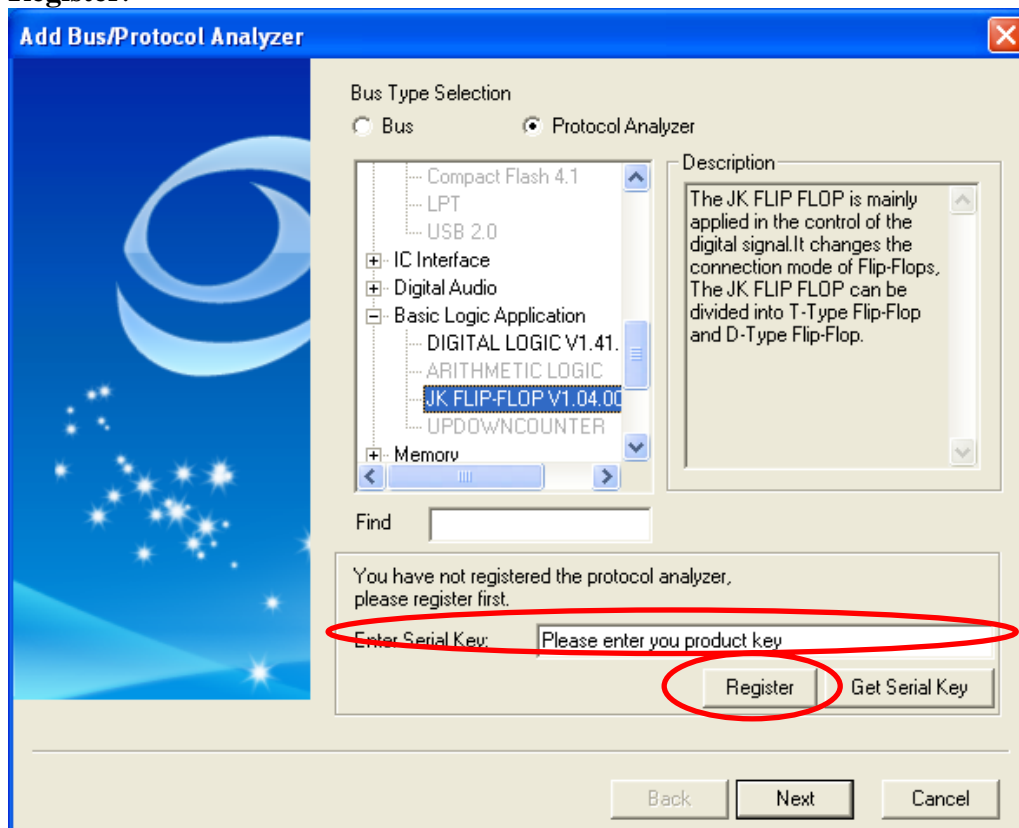


STEP 2. Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Basic Logic Application Type, select the JK FLIP-FLOP and then press the **Next**.

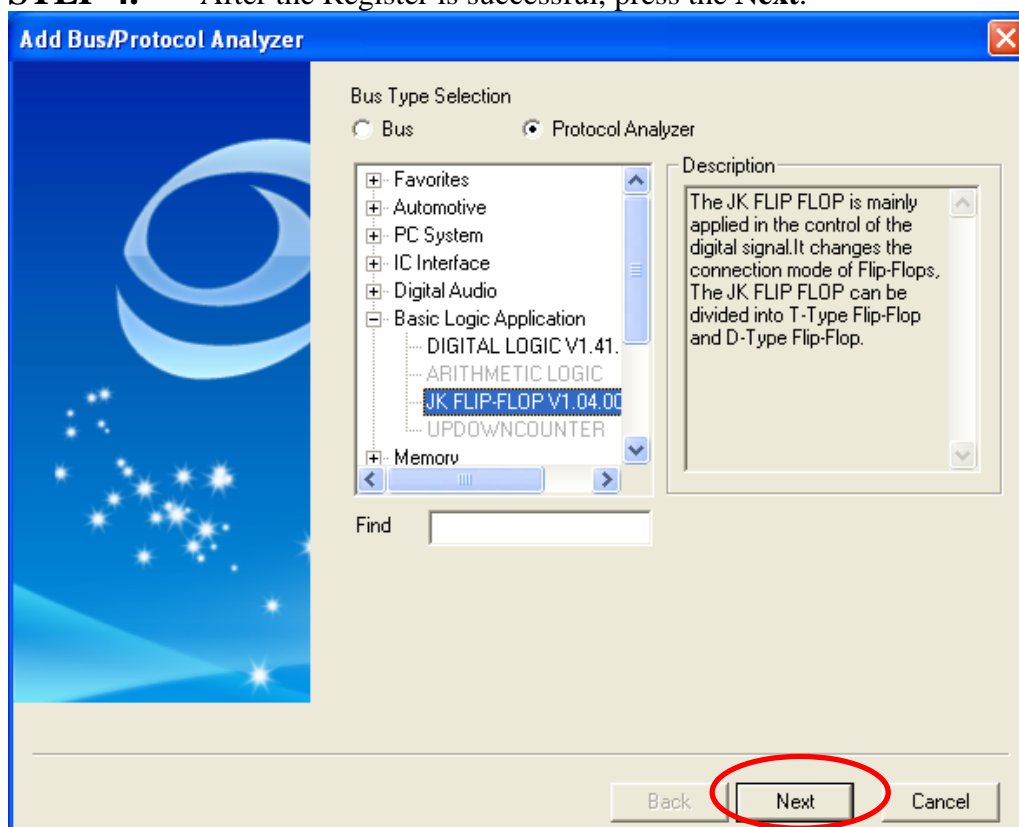




STEP 3. Enter the Serial Key of JK FLIP-FLOP under this Model, and then press the Register.

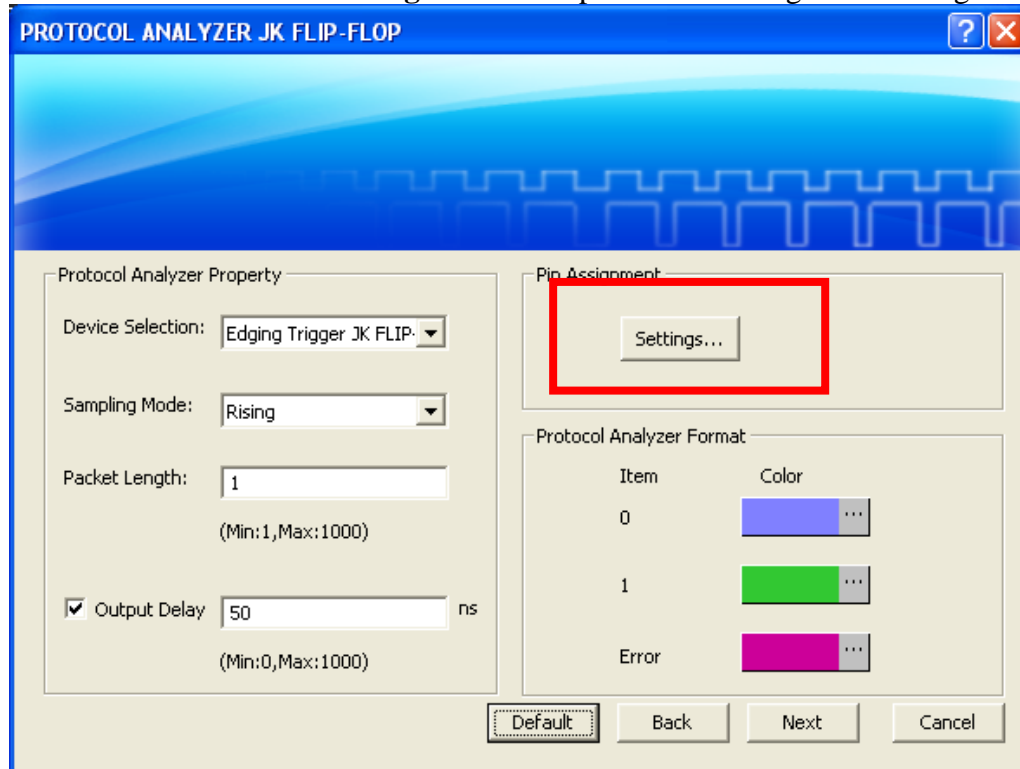


STEP 4. After the Register is successful, press the Next.

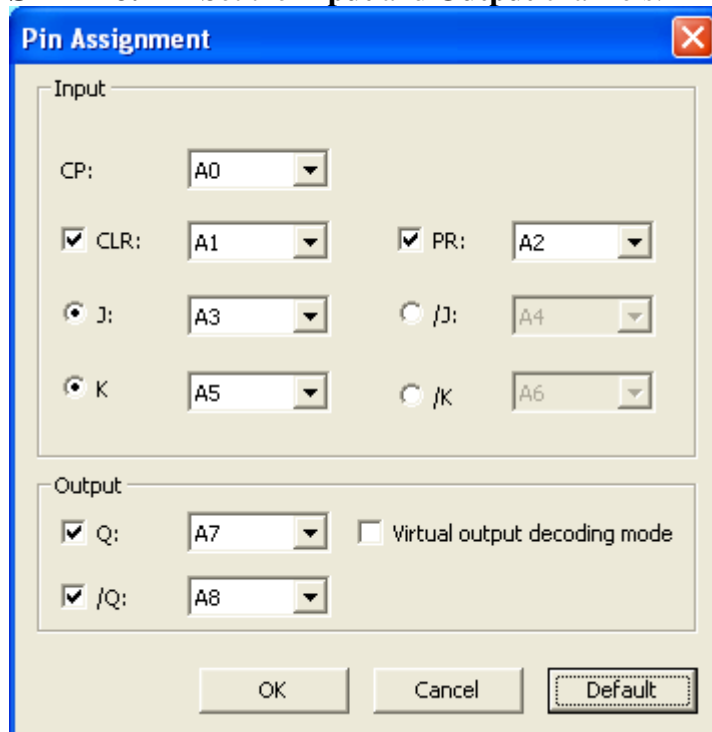




STEP 5. Press the **Settings** button to open the Pin Assignment dialog box.

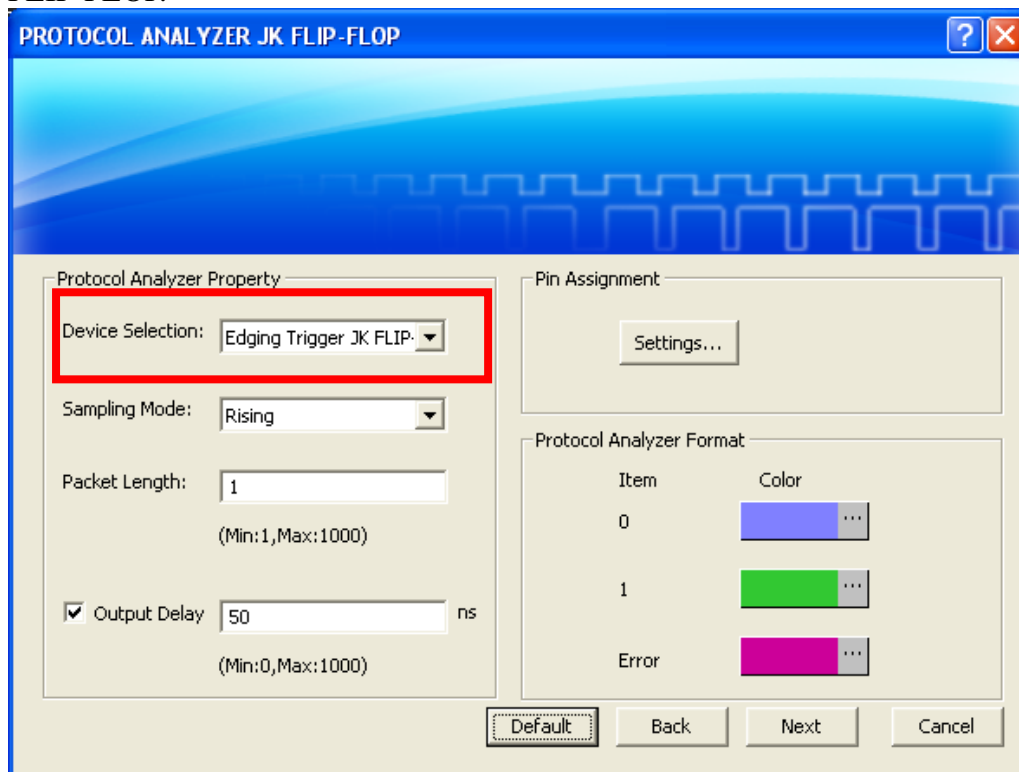


STEP 6. Set the **Input** and **Output** channels.

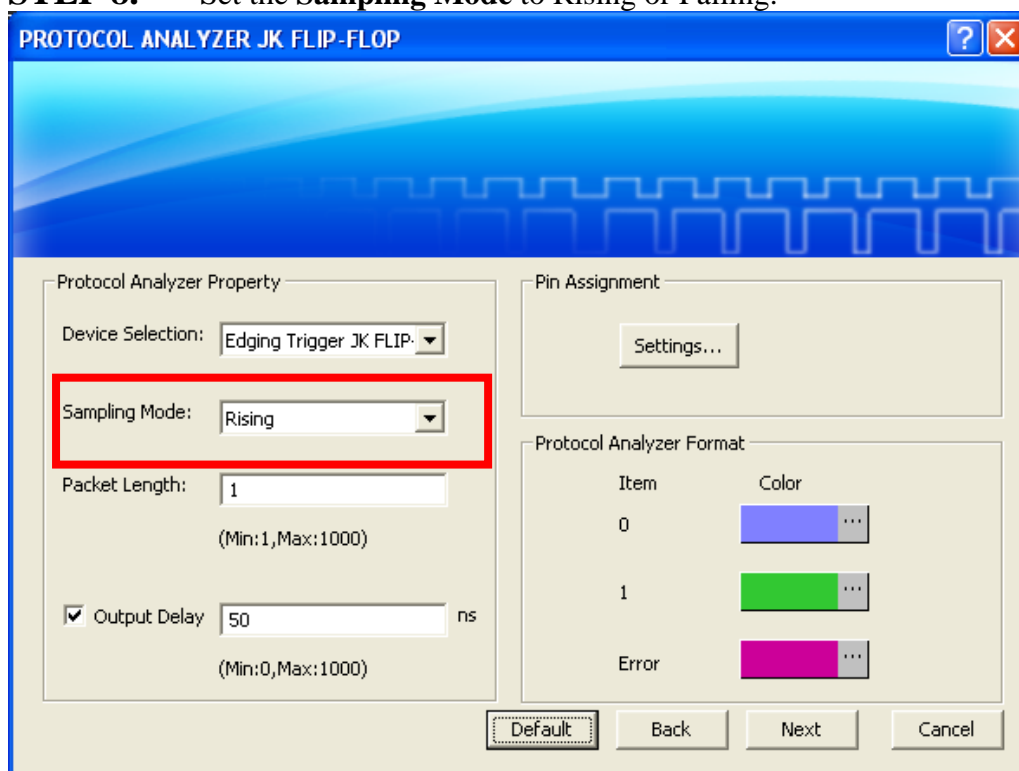




STEP 7. Set the **Device Selection** to Edging Trigger JK FLIP-FLOP or Master-Slave JK FLIP-FLOP.



STEP 8. Set the **Sampling Mode** to Rising or Falling.





STEP 9. Set the **Packet Length** in the range from 1 to 1000.

PROTOCOL ANALYZER JK FLIP-FLOP

Protocol Analyzer Property

Device Selection: Edging Trigger JK FLIP

Sampling Mode: Rising

Packet Length: 1 (Min:1,Max:1000)

☒ Output Delay 50 ns (Min:0,Max:1000)

Pin Assignment

Settings...

Protocol Analyzer Format

Item	Color
0	
1	
Error	

Default Back Next Cancel

STEP 10. Set the **Output Delay** in the range from 0 to 1000ns.

PROTOCOL ANALYZER JK FLIP-FLOP

Protocol Analyzer Property

Device Selection: Edging Trigger JK FLIP

Sampling Mode: Rising

Packet Length: 1 (Min:1,Max:1000)

☒ Output Delay 50 ns (Min:0,Max:1000)

Pin Assignment

Settings...

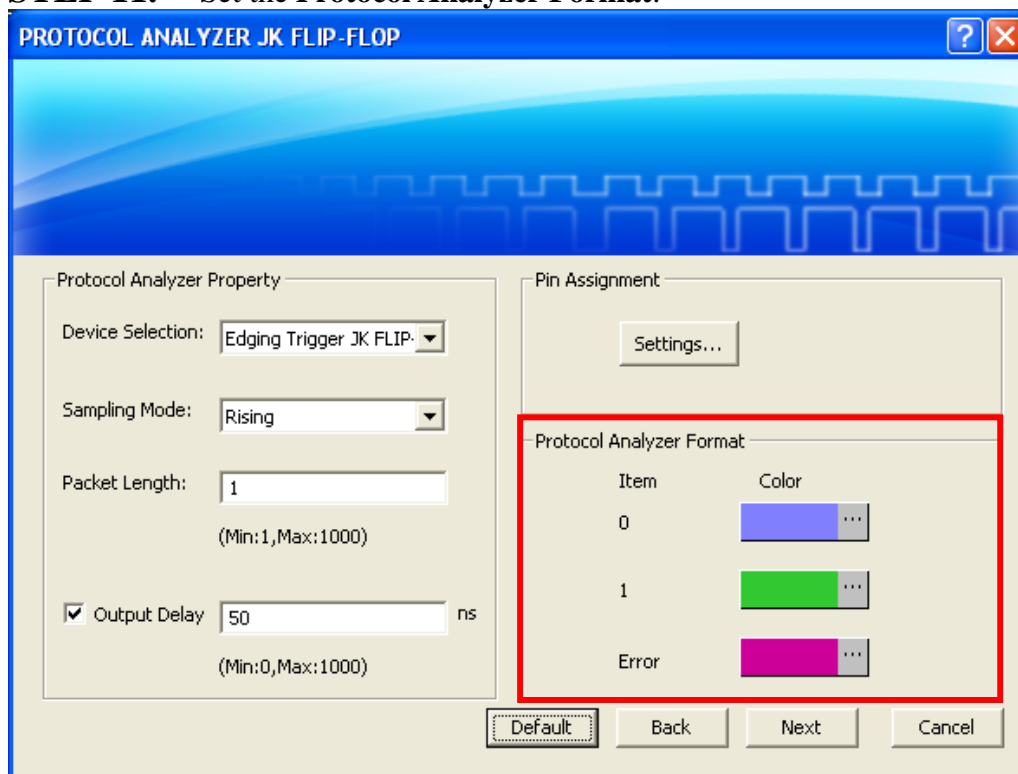
Protocol Analyzer Format

Item	Color
0	
1	
Error	

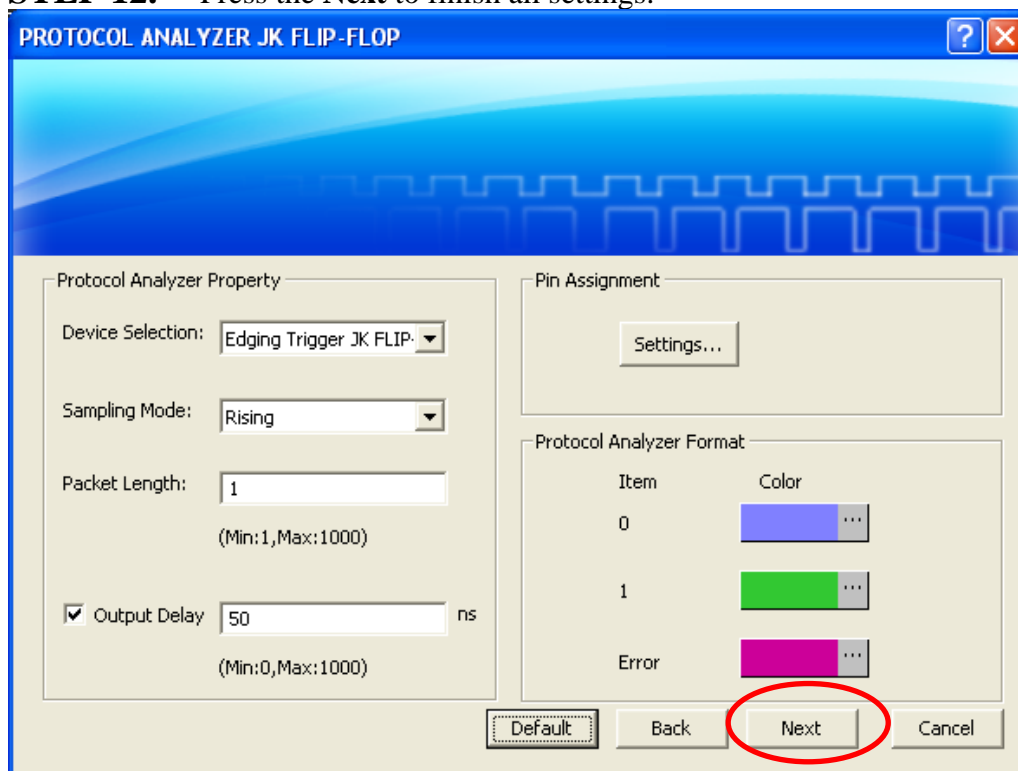
Default Back Next Cancel



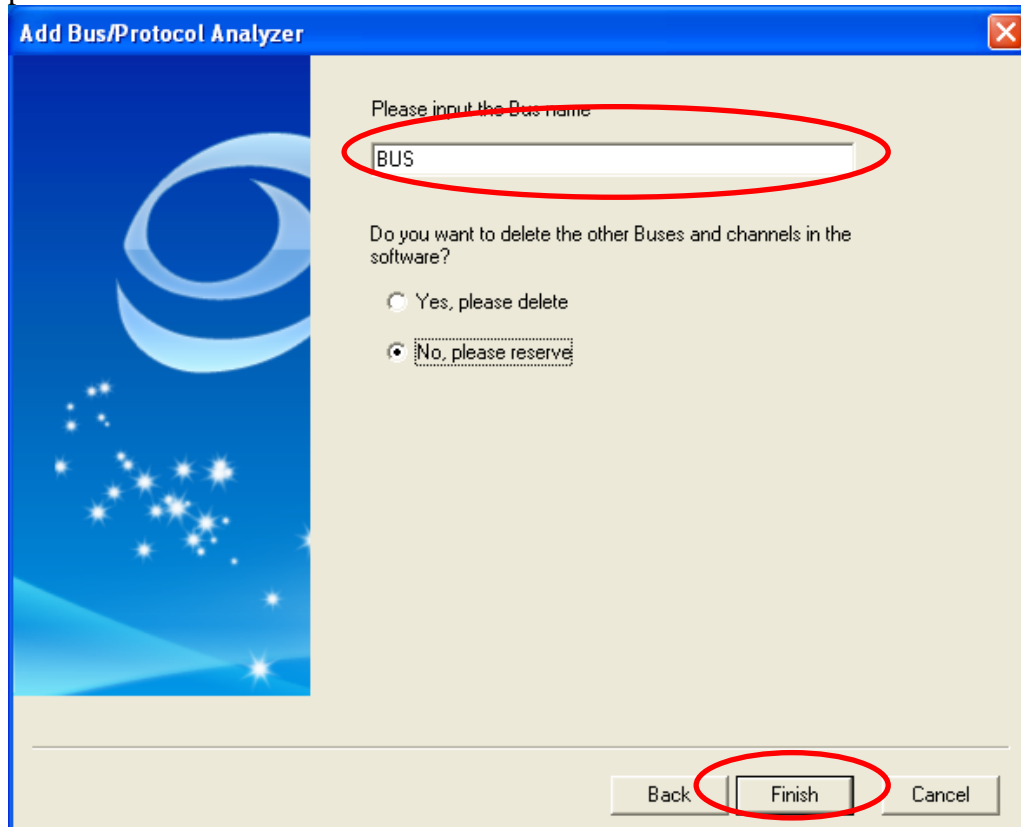
STEP 11. Set the Protocol Analyzer Format.



STEP 12. Press the Next to finish all settings.

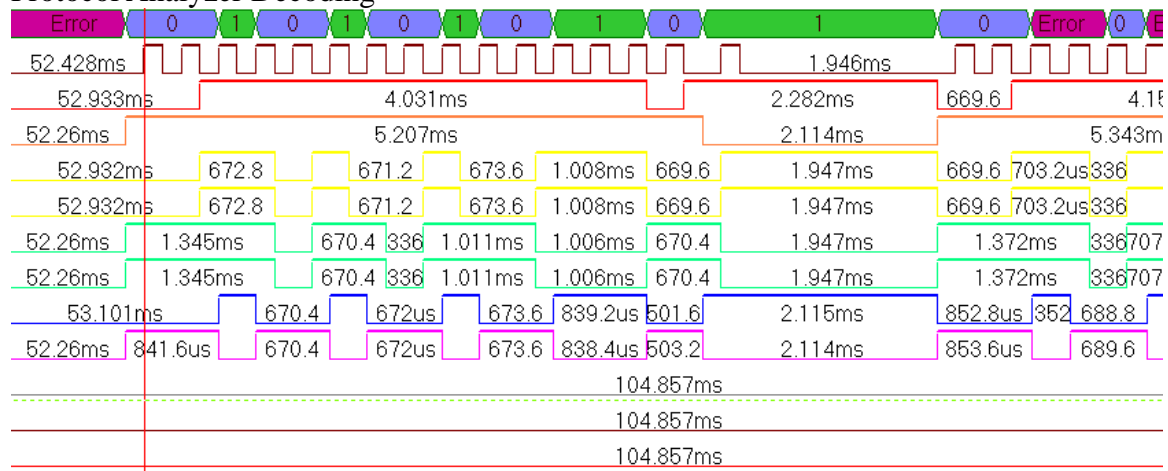


STEP 13. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.



STEP 14. 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

Navigator			
Packet List			
Statistics			
Memory Analyzer			
Setting... Refresh Export... Synch. Parameter...			
Packet #	Name	TimeStamp	DESCRIBE
1	BUS(JK FLIP-FLOP)	-52.427ms	Format Error
Packet #	Name	TimeStamp	0
2	BUS(JK FLIP-FLOP)	-0.168ms	0
Packet #	Name	TimeStamp	1
3	BUS(JK FLIP-FLOP)	0.6736ms	1
Packet #	Name	TimeStamp	0
4	BUS(JK FLIP-FLOP)	1.0088ms	0
Packet #	Name	TimeStamp	1
5	BUS(JK FLIP-FLOP)	1.6792ms	1
Packet #	Name	TimeStamp	0
6	BUS(JK FLIP-FLOP)	2.0144ms	0
Packet #	Name	TimeStamp	1
7	BUS(JK FLIP-FLOP)	2.6864ms	1