



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

# SPECIFICATION

**MODEL: 025-LAP-ST7669-M**

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

**VERSION:** V1.07

Approver		Check	Design
GM	PM		

Customer Confirm

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

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## Revision History

Revision No.	History	Page No.	Date	Reviser
V1.07	First Verion	2~18	2011-01-17	Sunshine



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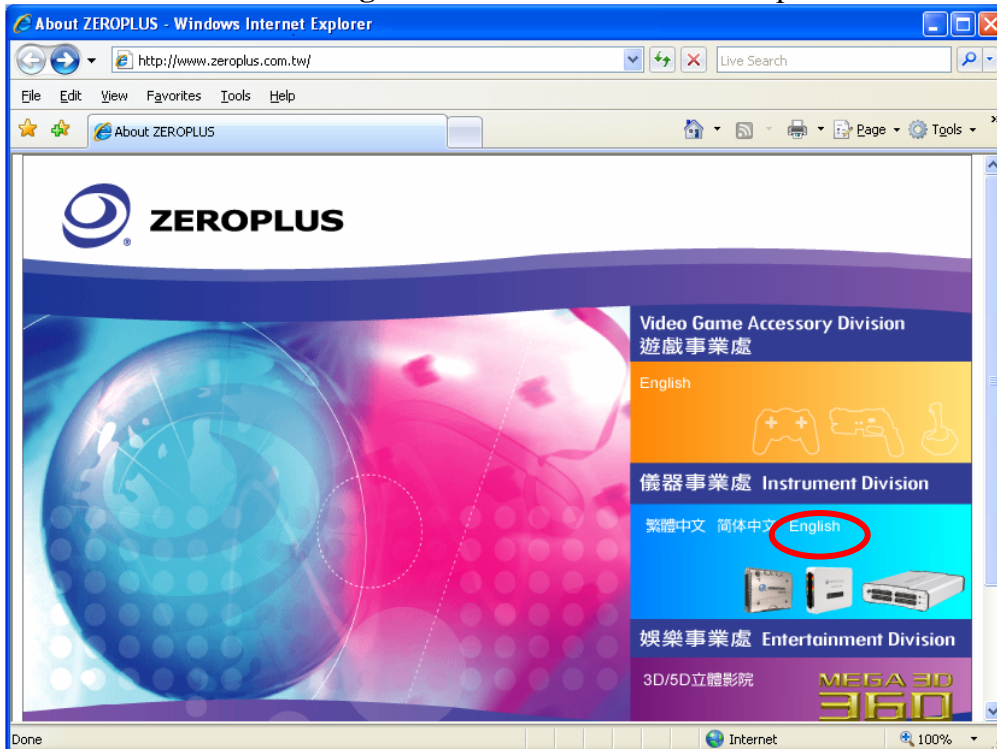
## 1 Software Download

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.

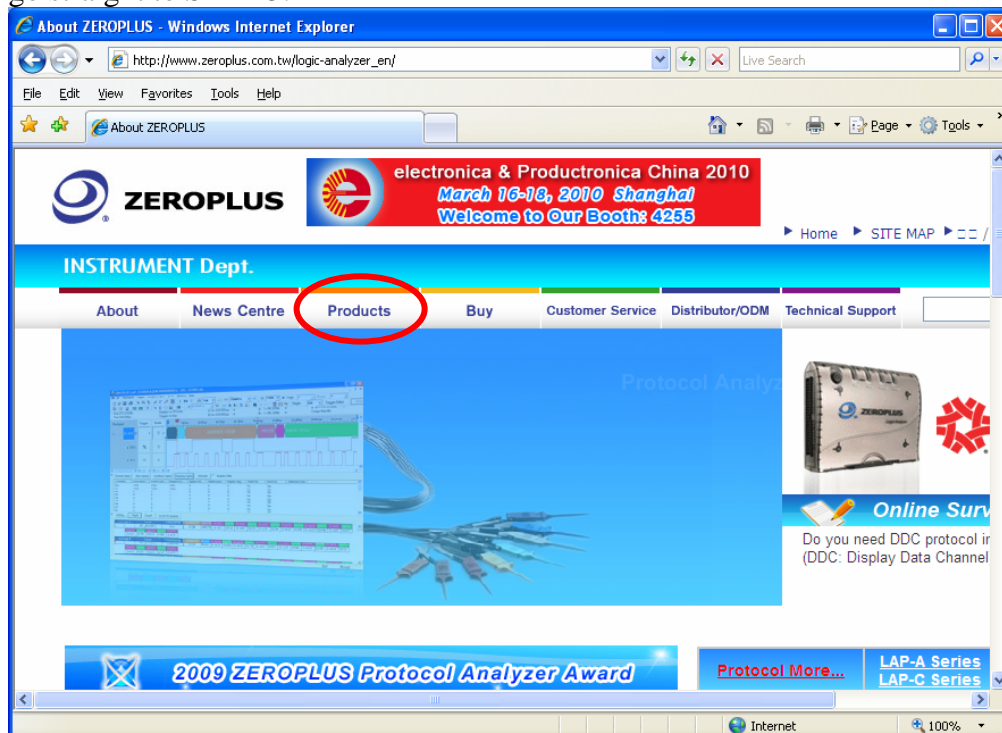
**STEP 1.** Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

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

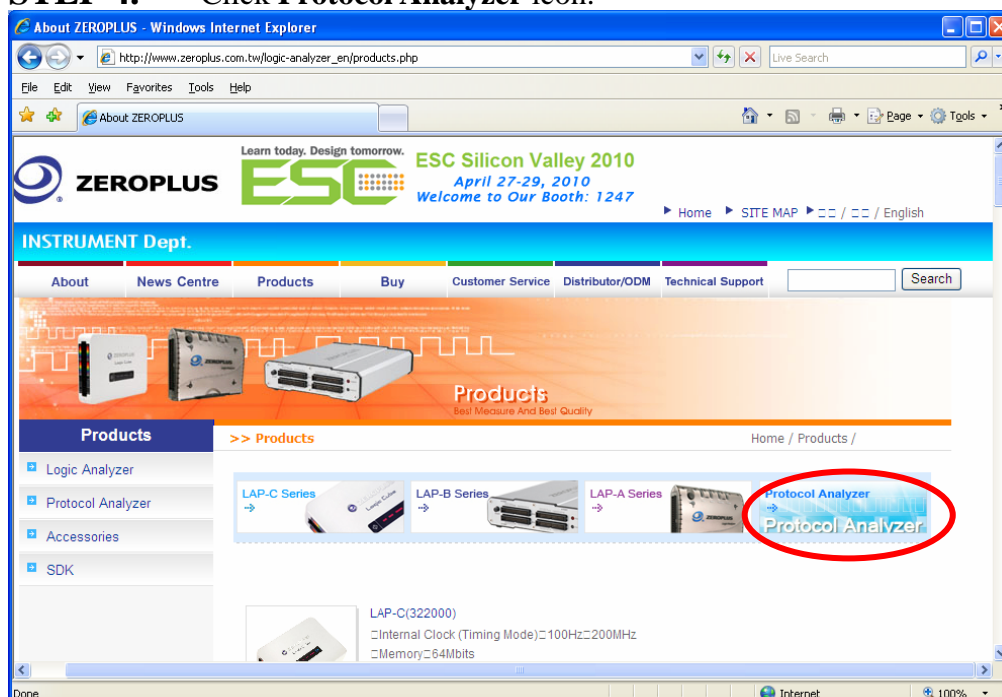




**STEP 3.** Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

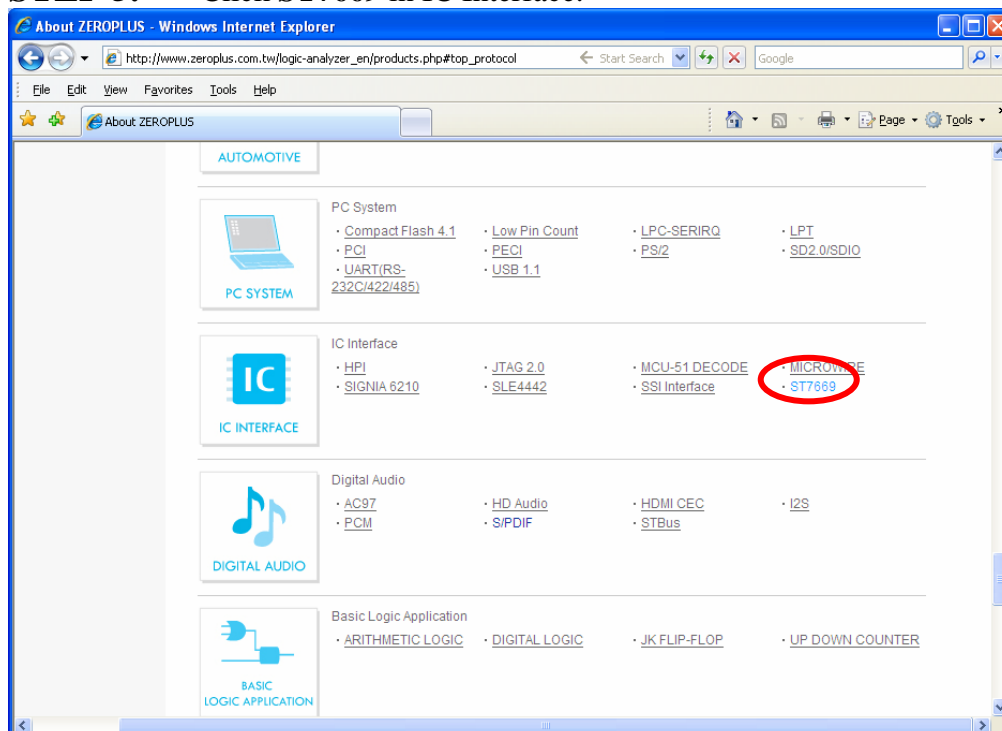


**STEP 4.** Click **Protocol Analyzer** icon.

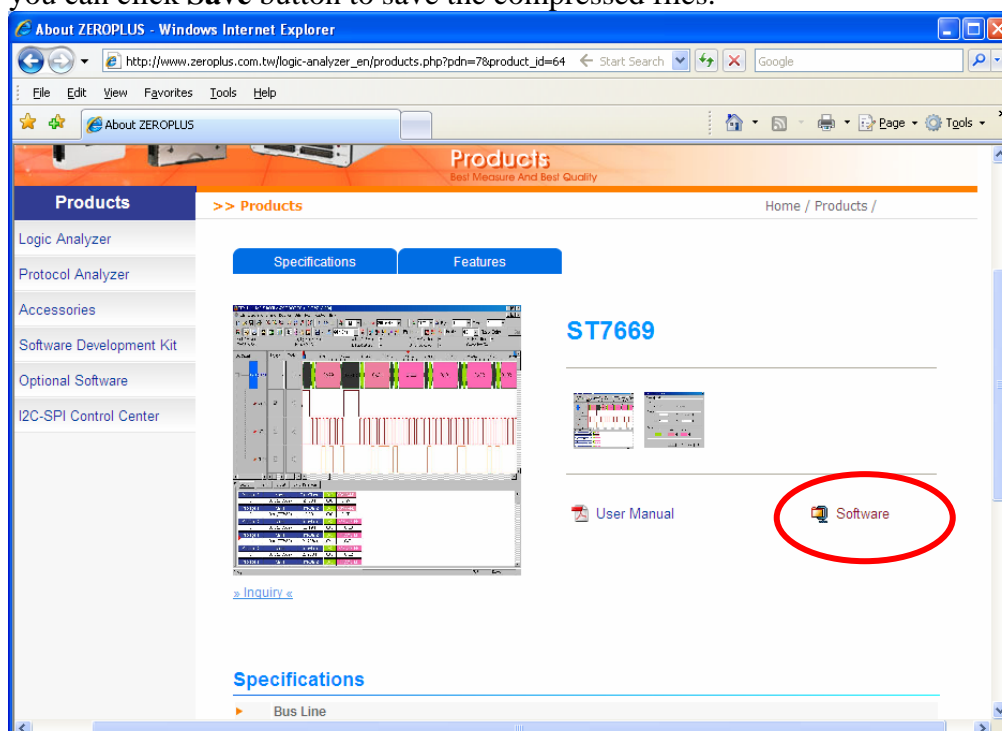




**STEP 5.** Click **ST7669** in IC Interface.

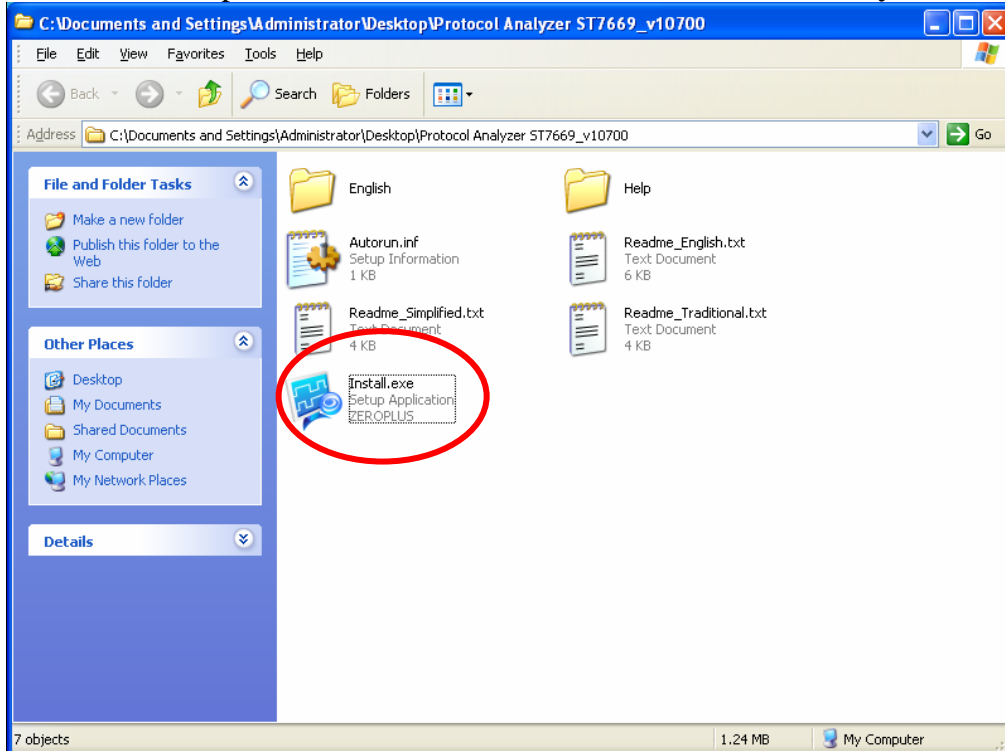


**STEP 6.** Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed files.

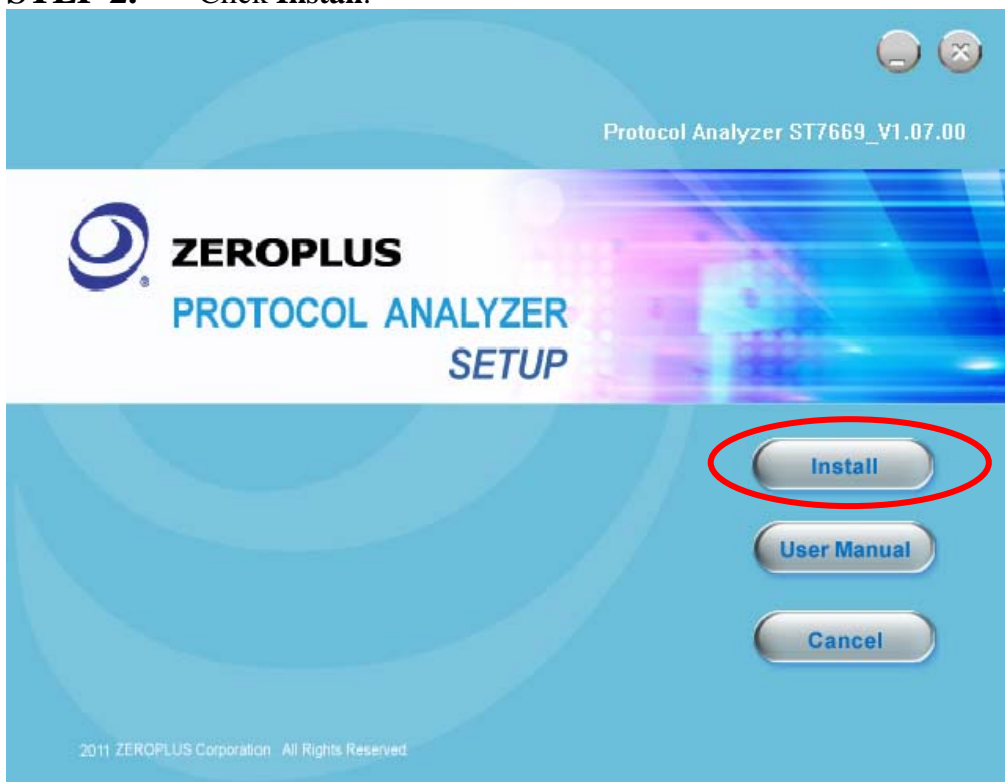


## 2 Software Installation

**STEP 1.** Open the downloaded folder to install **Protocol Analyzer ST7669**.

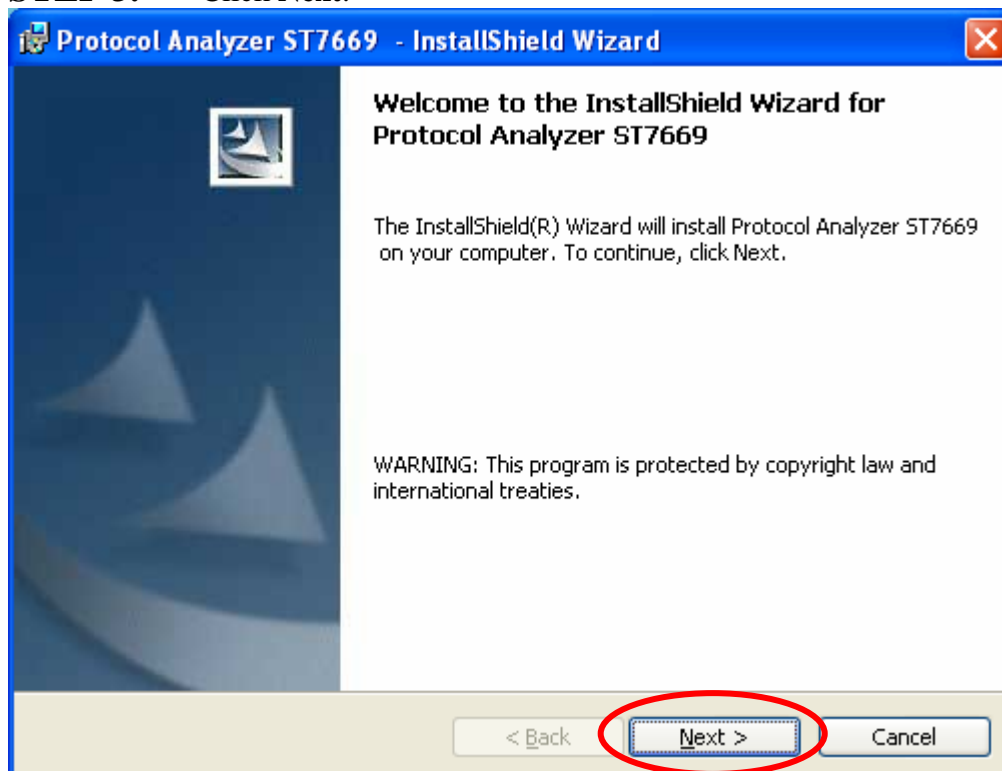


**STEP 2.** Click **Install**.

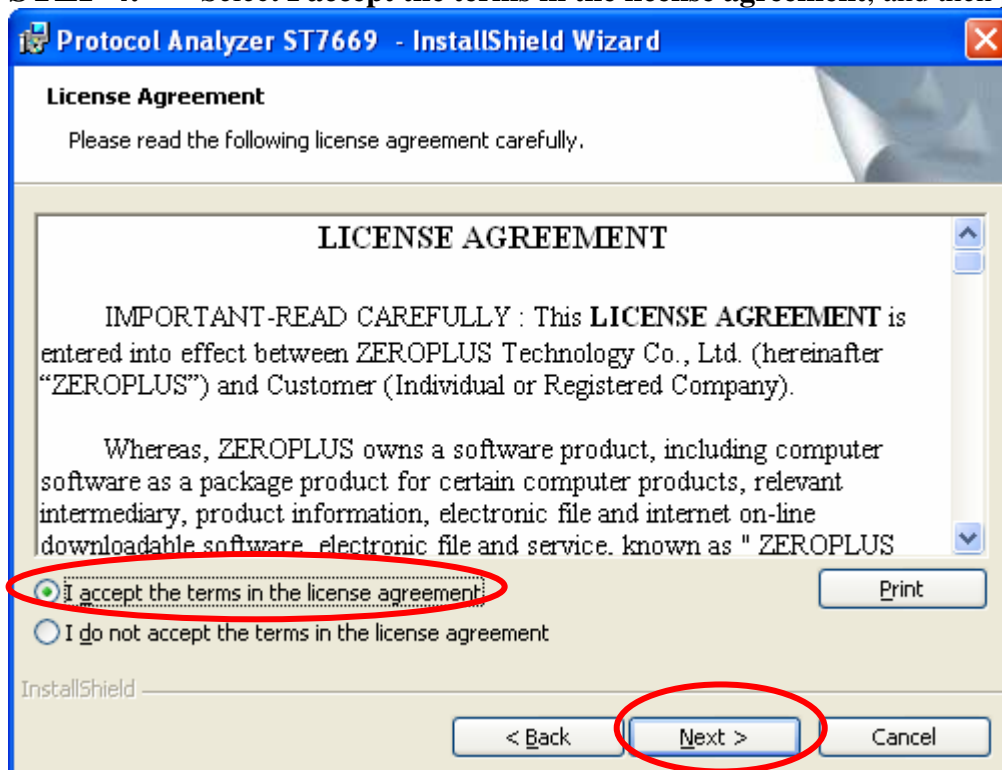




**STEP 3.** Click Next.



**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**.

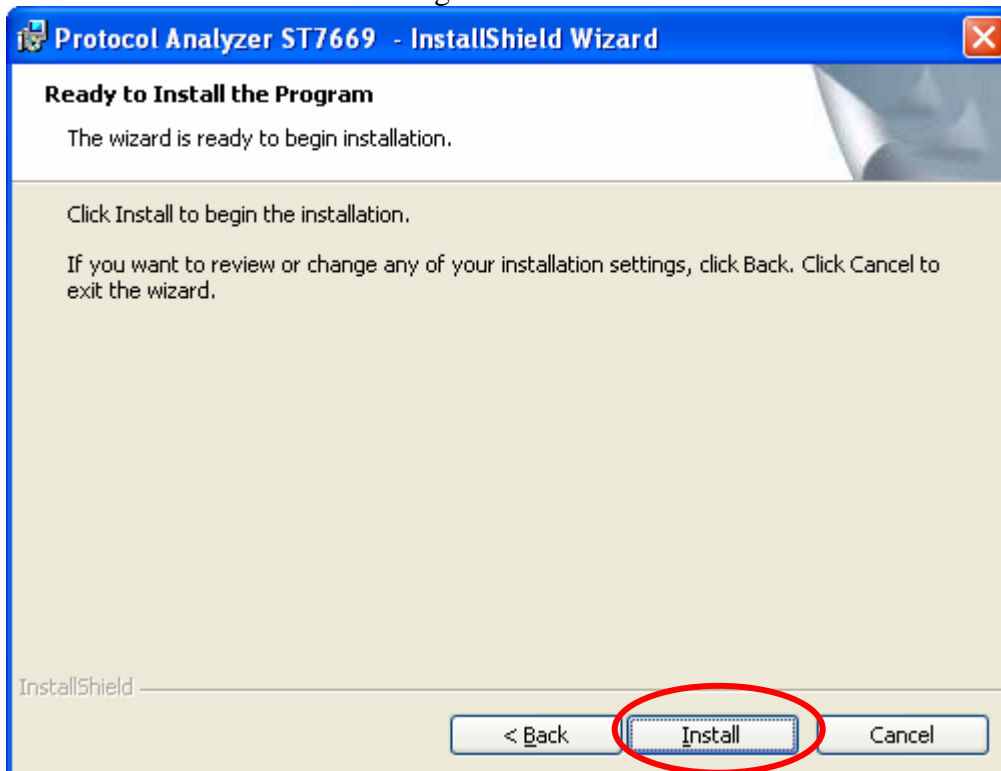
The dialog box is titled "Protocol Analyzer ST7669 - InstallShield Wizard". It has a "Customer Information" section with the instruction "Please enter your information." Below this are two text input fields: "User Name:" containing "Microsoft" and "Organization:" containing "User". There are two radio button options under "Install this application for:": "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".

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

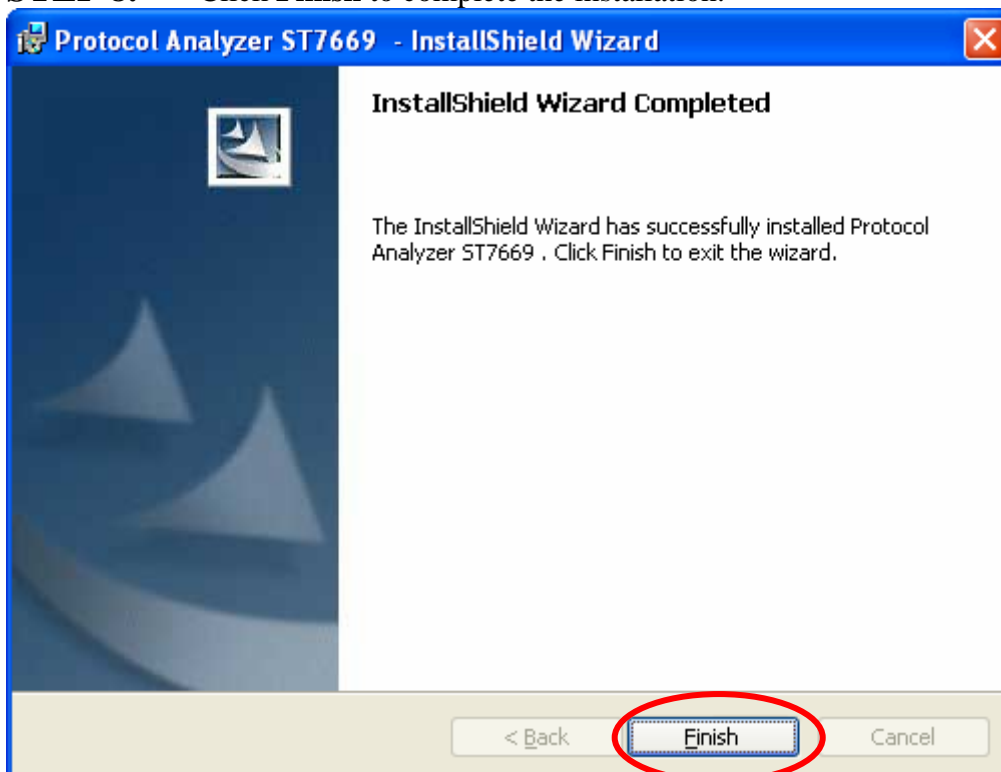
The dialog box is titled "Protocol Analyzer ST7669 - InstallShield Wizard". It has a "Setup Type" section with the instruction "Choose the setup type that best suits your needs." Below this is the text "Please select a setup type." There are two radio button options: "Complete" (selected) and "Custom". 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".



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



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

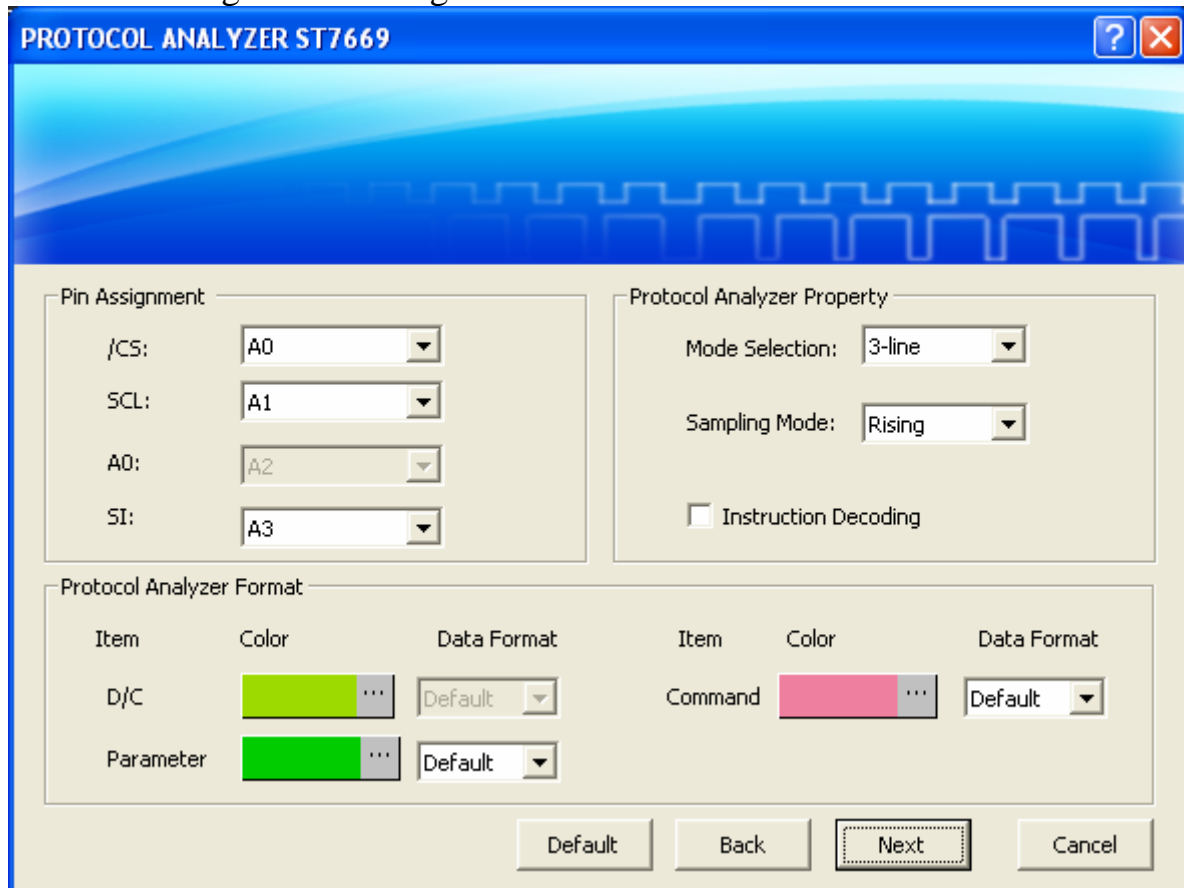




### 3 User Interface

Please refer to the below images to select options of setting **ST7669 Module**.

#### ST7669 Configuration dialog box



#### Pin Assignment:

In the 3-line Mode: The A0 channel is disabled, the /CS channel is A0 by default, the SCL channel is A2 by default and the SI channel is A3 by default.

In the 4-line Mode: The /CS channel is A0 by default, the A0 channel is A2 by default, the SCL channel is A1 by default and the SI channel is A3 by default.

#### Protocol Analyzer Property:

**Mode Selection:** Set the Mode to 3-line or 4-line.

**Sampling Mode:** Set the Mode to Rising or Falling, the default is Rising.

**Instruction Decoding:** Set the Decoding Mode to Instruction Decoding.

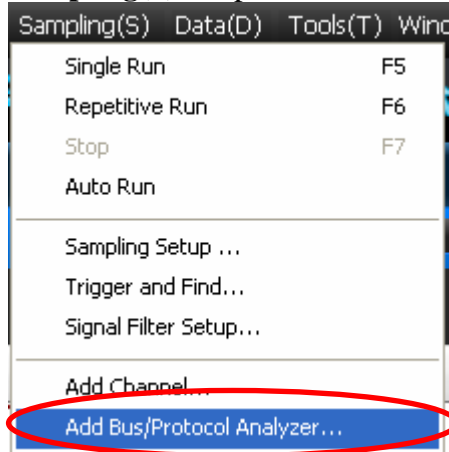
#### Protocol Analyzer Format:

The Color of each Item can be varied as the users' requirements. The Items (Command and Parameter) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Format of these Items (Command and Parameter) in the Waveform Display Area and Packet List is controlled by the Protocol Analyzer. The default Data Format is controlled by the main program and the Data Formats of these items (Command and Parameter) is the Default.

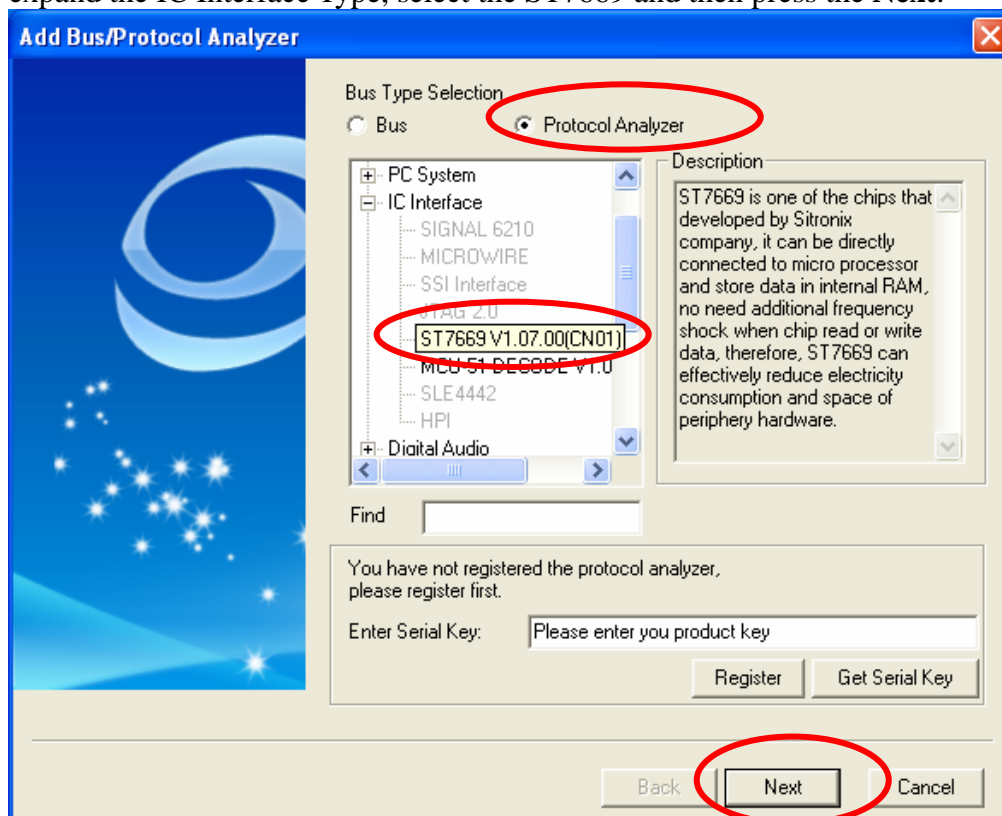


## 4 Operating Instructions

**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.

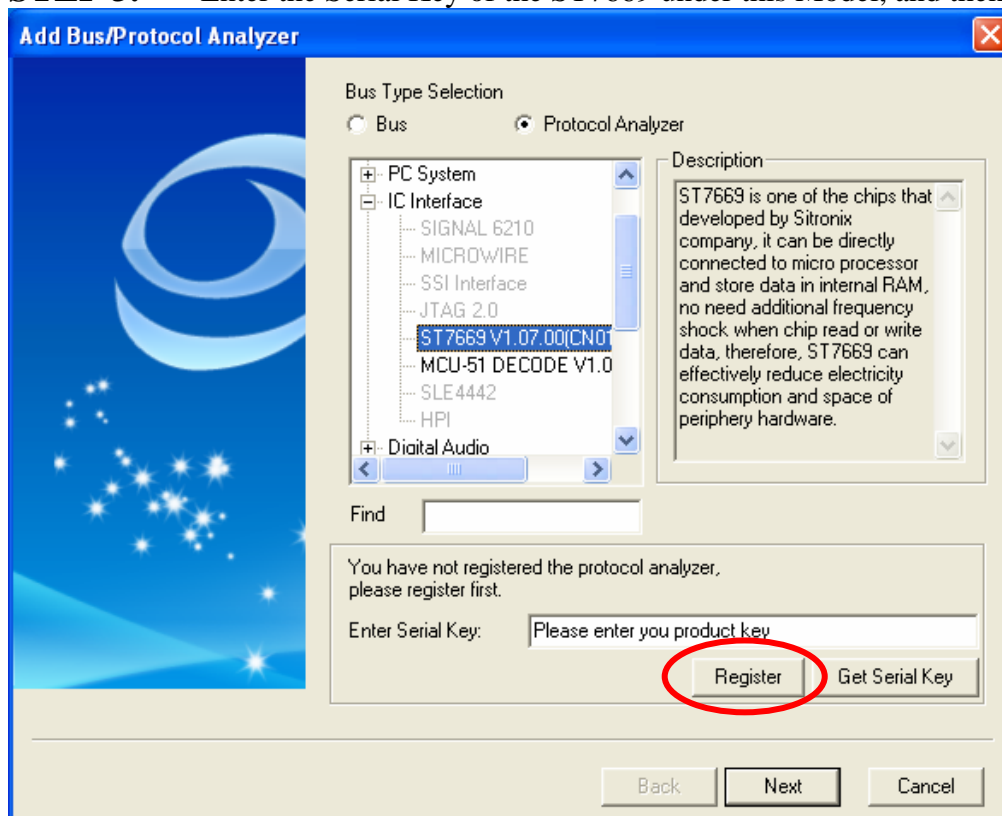


**STEP 2.** Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the IC Interface Type, select the ST7669 and then press the **Next**.

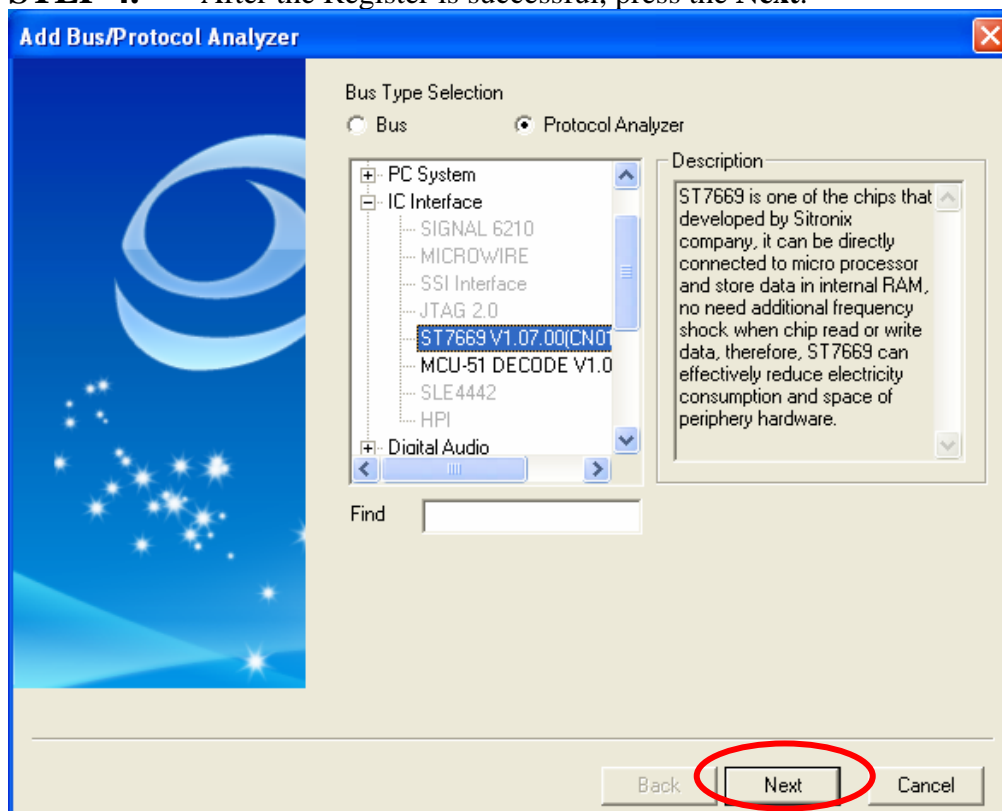




**STEP 3.** Enter the Serial Key of the ST7669 under this Model, and then press the **Register**.

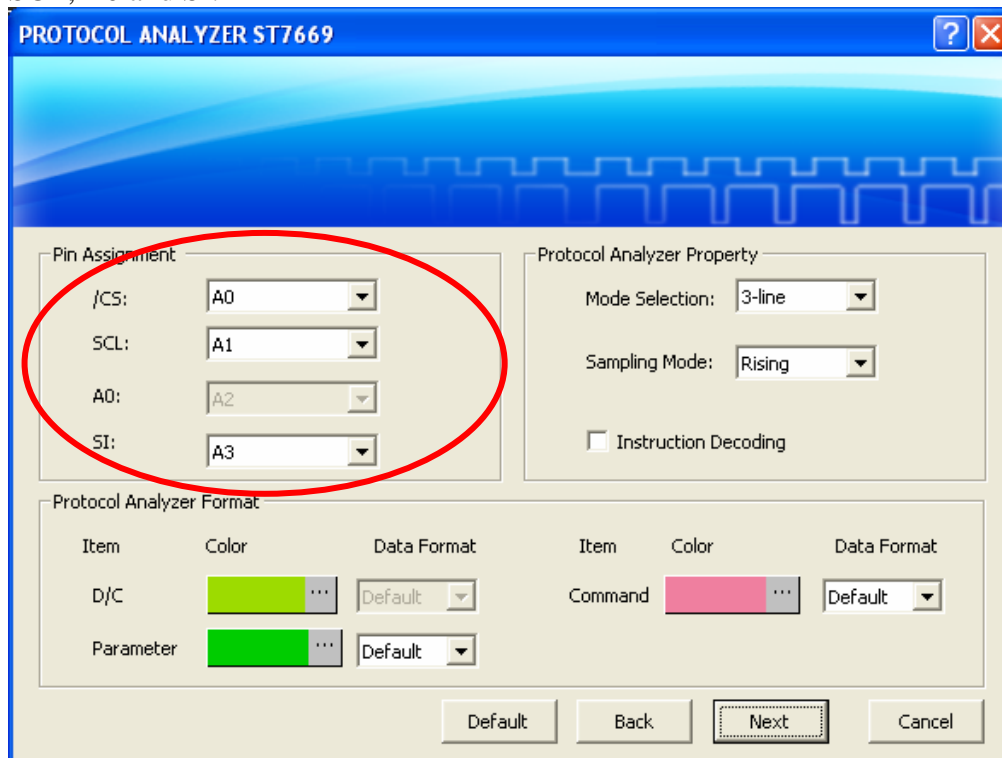


**STEP 4.** After the Register is successful, press the **Next**.

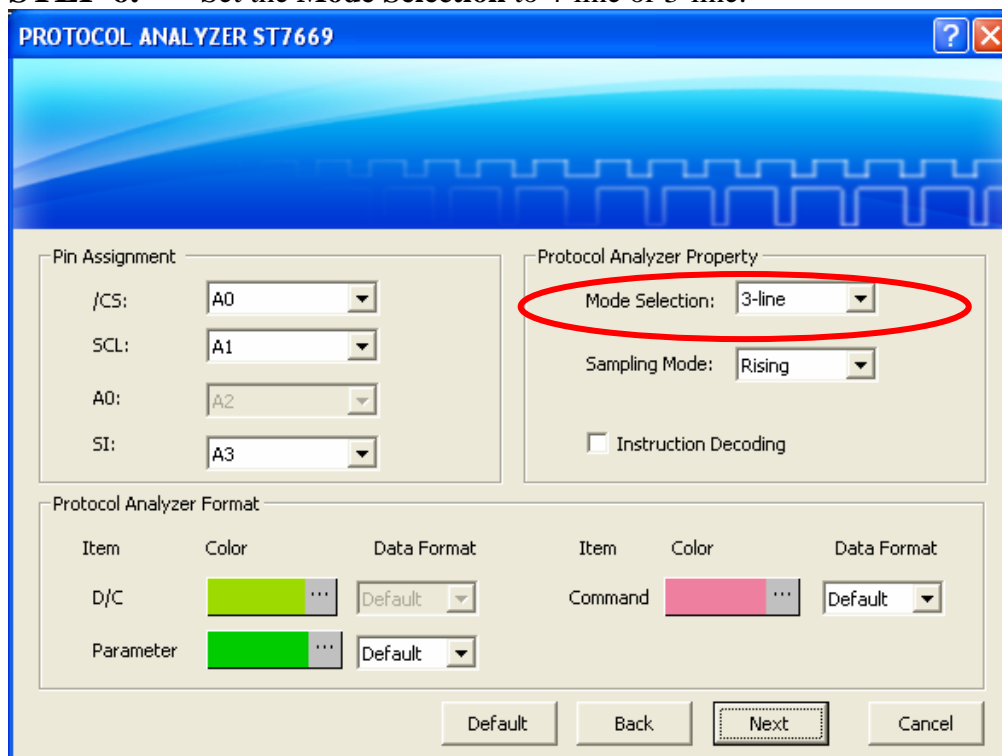




**STEP 5.** Open the PROTOCOL ANALYZER ST7669 dialog box and set the channels for /CS, SCL, A0 and SI.



**STEP 6.** Set the Mode Selection to 4-line or 3-line.





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

The screenshot shows the 'PROTOCOL ANALYZER ST7669' dialog box. It has three main sections: 'Pin Assignment', 'Protocol Analyzer Property', and 'Protocol Analyzer Format'. In the 'Pin Assignment' section, the pins are assigned as follows: /CS: A0, SCL: A1, A0: A2, and SI: A3. In the 'Protocol Analyzer Property' section, 'Mode Selection' is set to '3-line' and 'Sampling Mode' is set to 'Rising', which is highlighted with a red circle. There is an unchecked checkbox for 'Instruction Decoding'. The 'Protocol Analyzer Format' section shows two columns of settings for 'D/C' and 'Parameter' (both with green color swatches and 'Default' data format) and 'Command' (with a pink color swatch and 'Default' data format). At the bottom are buttons for 'Default', 'Back', 'Next', and 'Cancel'.

**STEP 8.** Set the **Instruction Decoding**.

The screenshot shows the 'PROTOCOL ANALYZER ST7669' dialog box. In the 'Pin Assignment' section, the pins are assigned as follows: /CS: CS, SCL: SCL, A0: A0, and SI: SI. In the 'Protocol Analyzer Property' section, 'Mode Selection' is set to '4-line' and 'Sampling Mode' is set to 'Rising'. The 'Instruction Decoding' checkbox is checked and highlighted with a red circle. The 'Protocol Analyzer Format' section is the same as in Step 7. At the bottom are buttons for 'Ok', 'Cancel', and 'Default'.



**STEP 9.** Set the Color of each Item and the Data Format of the Items (Command and Parameter).

**PROTOCOL ANALYZER ST7669**

**Pin Assignment**

/CS: A0  
SCL: A1  
A0: A2  
SI: A3

**Protocol Analyzer Property**

Mode Selection: 3-line  
Sampling Mode: Rising  
☐ Instruction Decoding

**Protocol Analyzer Format**

Item	Color	Data Format	Item	Color	Data Format
D/C	Green	Default	Command	Pink	Default
Parameter	Green	Default			

Default Back Next Cancel

**STEP 10.** Press the **Next** to finish all settings.

**PROTOCOL ANALYZER ST7669**

**Pin Assignment**

/CS: A0  
SCL: A1  
A0: A2  
SI: A3

**Protocol Analyzer Property**

Mode Selection: 3-line  
Sampling Mode: Rising  
☐ Instruction Decoding

**Protocol Analyzer Format**

Item	Color	Data Format	Item	Color	Data Format
D/C	Green	Default	Command	Pink	Default
Parameter	Green	Default			

Default Back Next Cancel





**STEP 11.** Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.

**Add Bus/Protocol Analyzer**

Please input the Bus name

BUS

Do you want to delete the other Buses and channels in the software?

☐ Yes, please delete

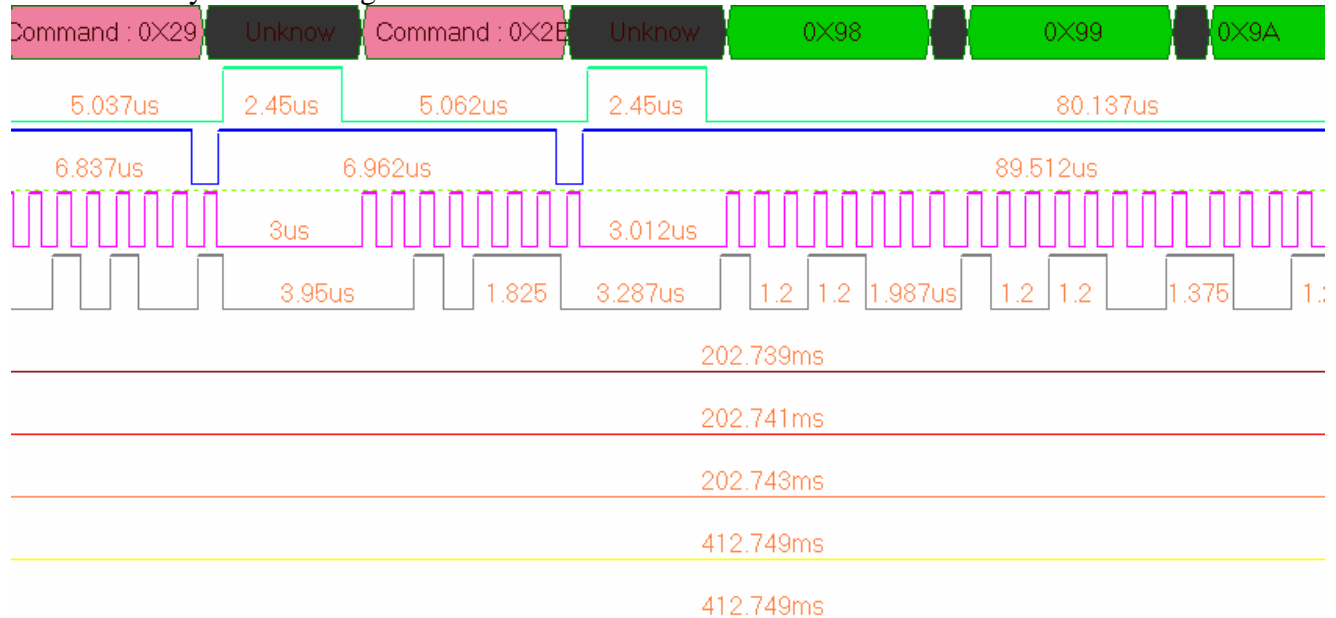
☒ No, please reserve

Back Finish Cancel



**STEP 12.** Following pictures show that 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 80MHz (the sampling frequency should be more than four 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	Command
1	Bus1(ST7669)	0.30147ms	29
Packet #	Name	TimeStamp	Command
2	Bus1(ST7669)	0.30896ms	2E
Packet #	Name	TimeStamp	Parameter
3	Bus1(ST7669)	0.31647ms	98
Packet #	Name	TimeStamp	Parameter
4	Bus1(ST7669)	0.32146ms	99
Packet #	Name	TimeStamp	Parameter
5	Bus1(ST7669)	0.32646ms	9A
Packet #	Name	TimeStamp	Parameter
6	Bus1(ST7669)	0.33147ms	9B
Packet #	Name	TimeStamp	Parameter
7	Bus1(ST7669)	0.33646ms	9C
Packet #	Name	TimeStamp	Parameter
8	Bus1(ST7669)	0.34146ms	9D