



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

# SPECIFICATION

**MODEL: B10013-LAP-MIL-STD-1553-M**

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

**VERSION:** V1.00

Approver		Check	Design
GM	PM		

Customer Confirm

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

2F, NO.123, Jian Ba Rd,  
Chung Ho City, Taipei Hsian, R.O.C.

Tel: +886-2-66202225  
Fax: +886-2-22234362



## Content

1	Software Download .....	3
2	Software Installation.....	6
3	User Interface .....	10
4	Operating Instructions .....	12



## 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.

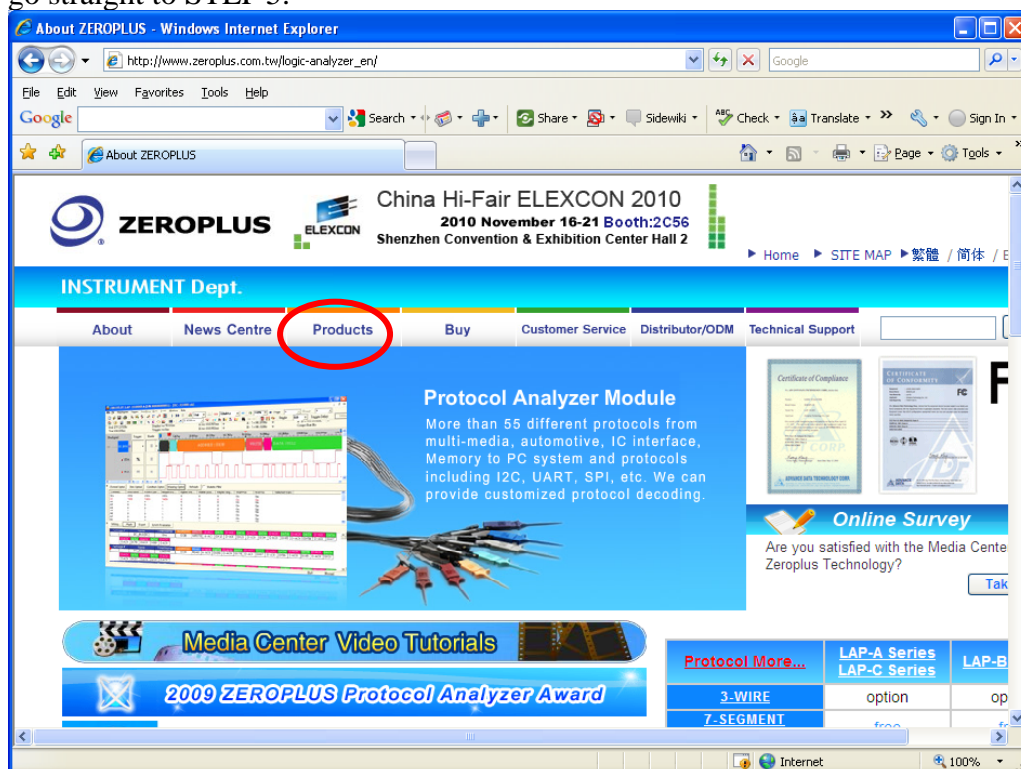
**STEP 1.** Visit the website of ZeroPlus: <http://www.zeroplus.com.tw>.

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

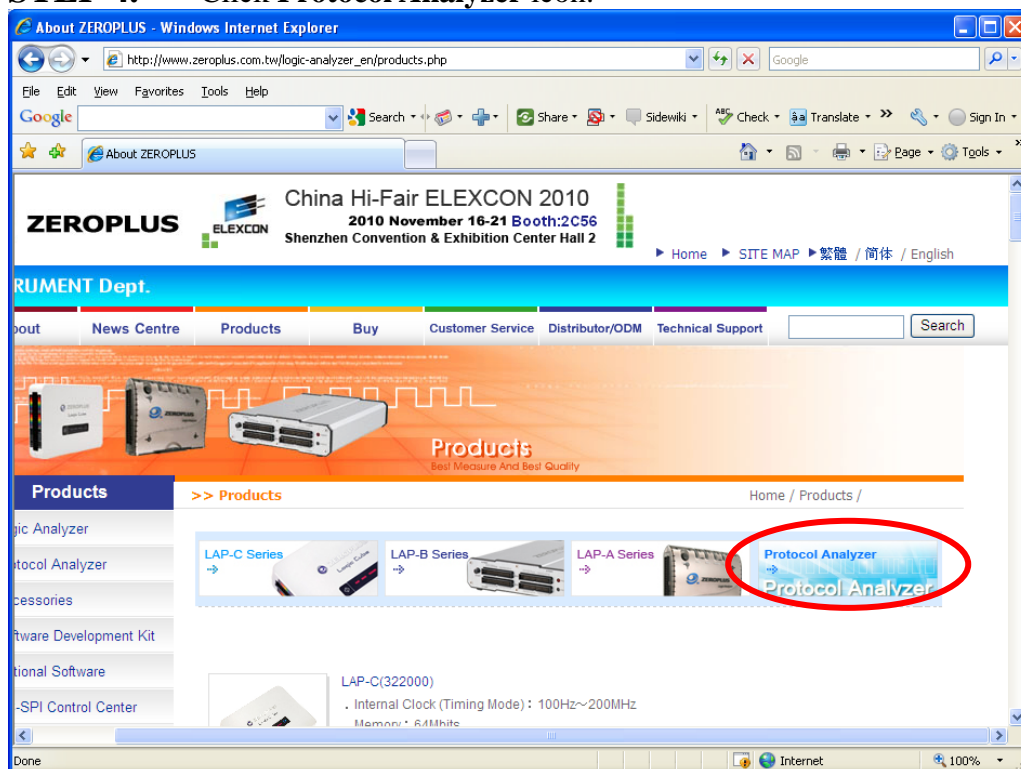




**STEP 3.** Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.

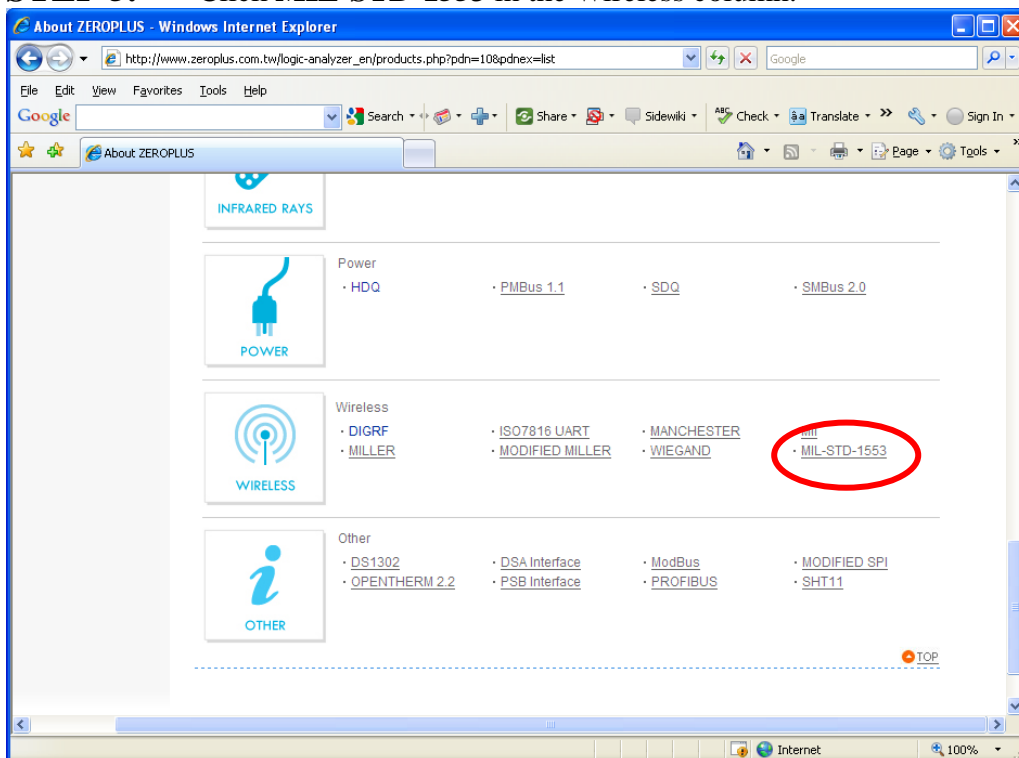


**STEP 4.** Click **Protocol Analyzer** icon.

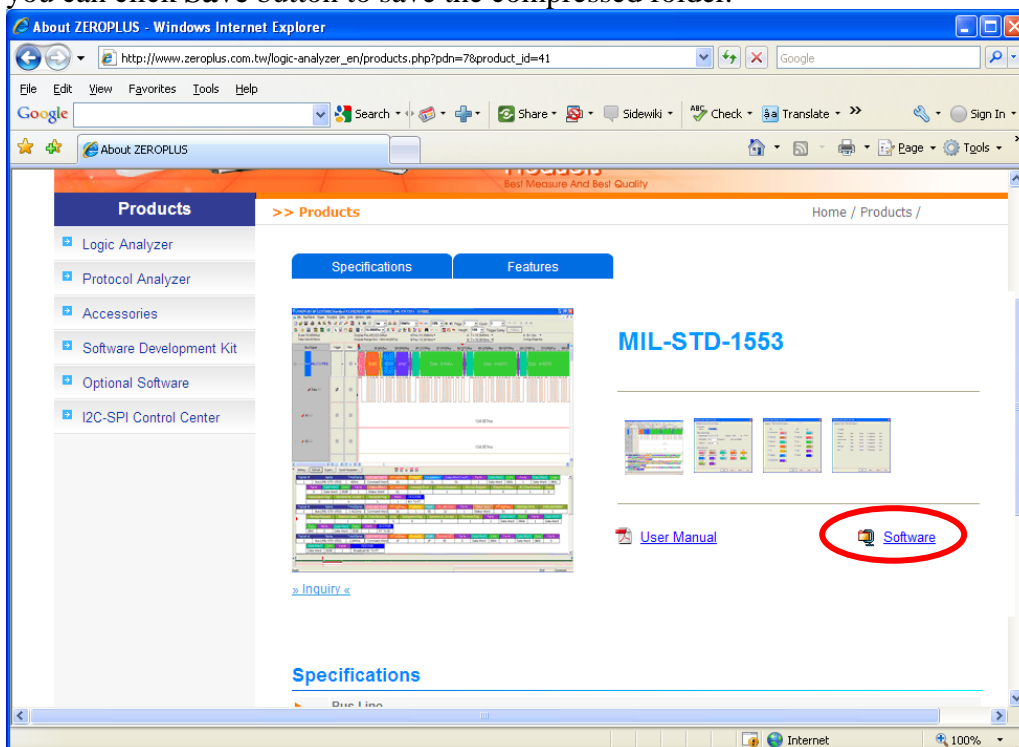




**STEP 5.** Click **MIL-STD-1553** in the Wireless column.



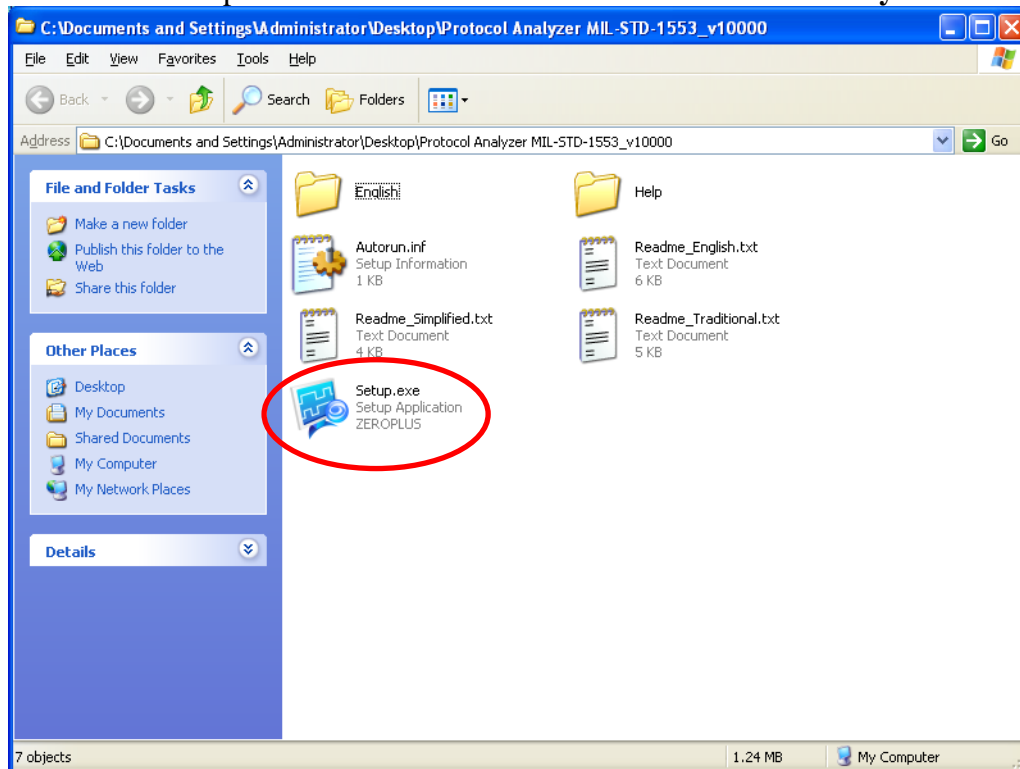
**STEP 6.** Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed folder.



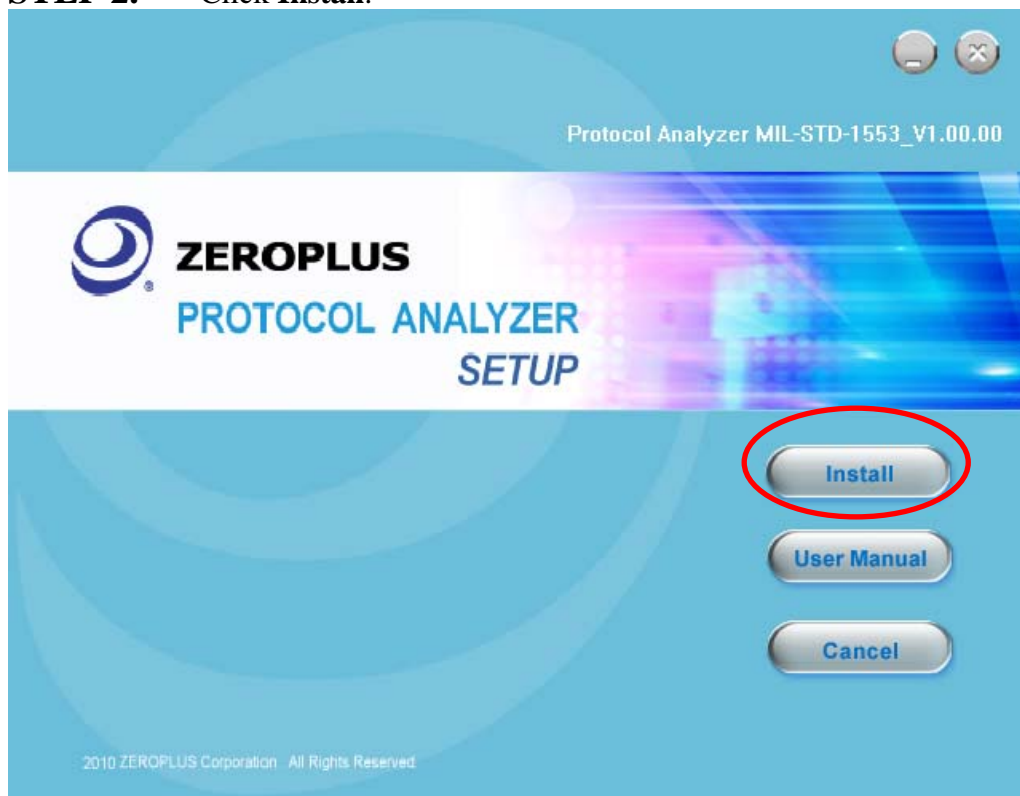


## 2 Software Installation

**STEP 1.** Open the downloaded folder to install **Protocol Analyzer MIL-STD-1553**.



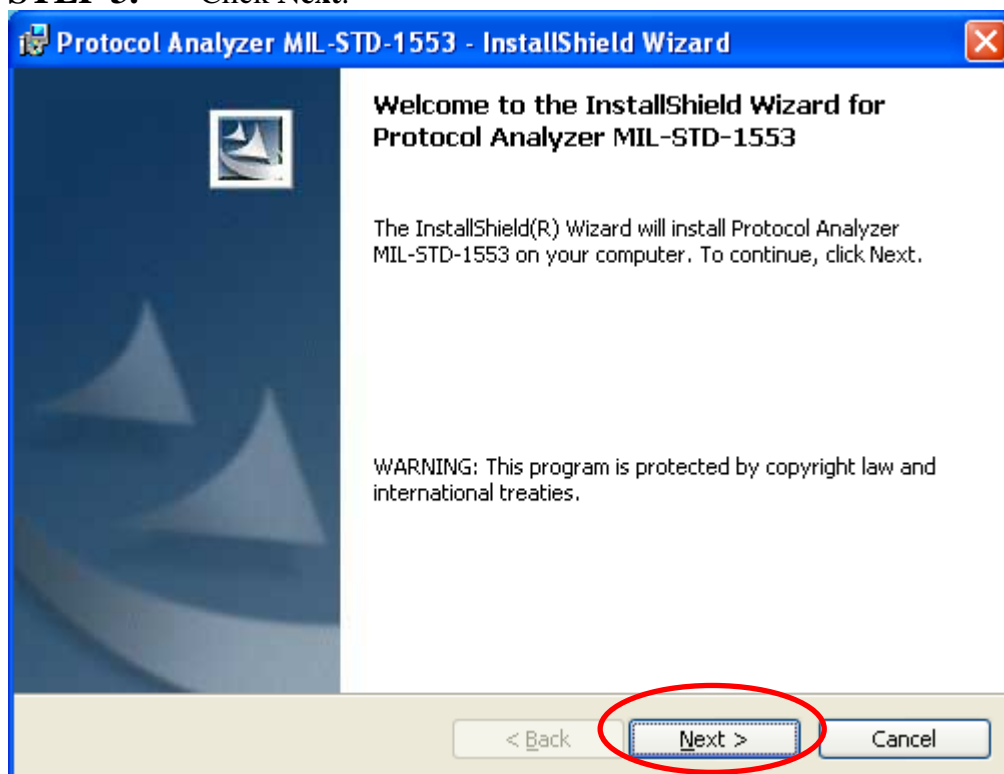
**STEP 2.** Click **Install**.



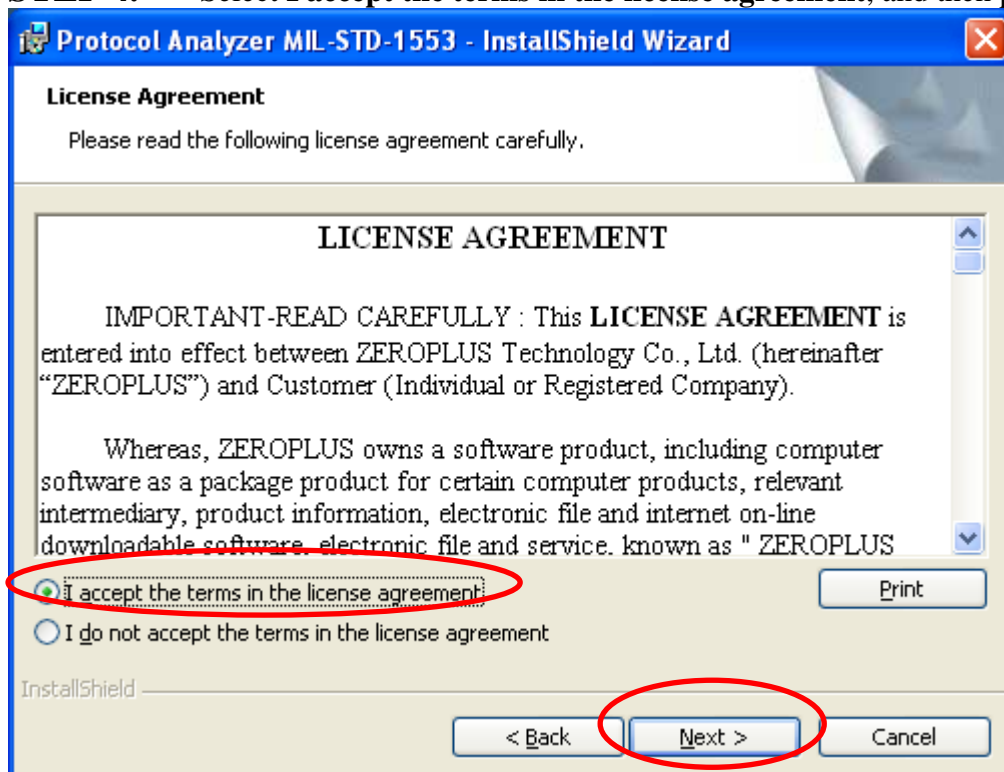




**STEP 3.** Click Next.



**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 MIL-STD-1553 - InstallShield Wizard". It has a blue header bar with a close button (X) on the right. The main area is titled "Customer Information" and contains the text "Please enter your information." Below this, there are two text input fields: "User Name:" with "Microsoft" entered, and "Organization:" with "User" entered. Below the 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, there is a status bar with the "InstallShield" logo. To the right of the status bar are three buttons: "< Back", "Next >" (which is circled in red), and "Cancel".

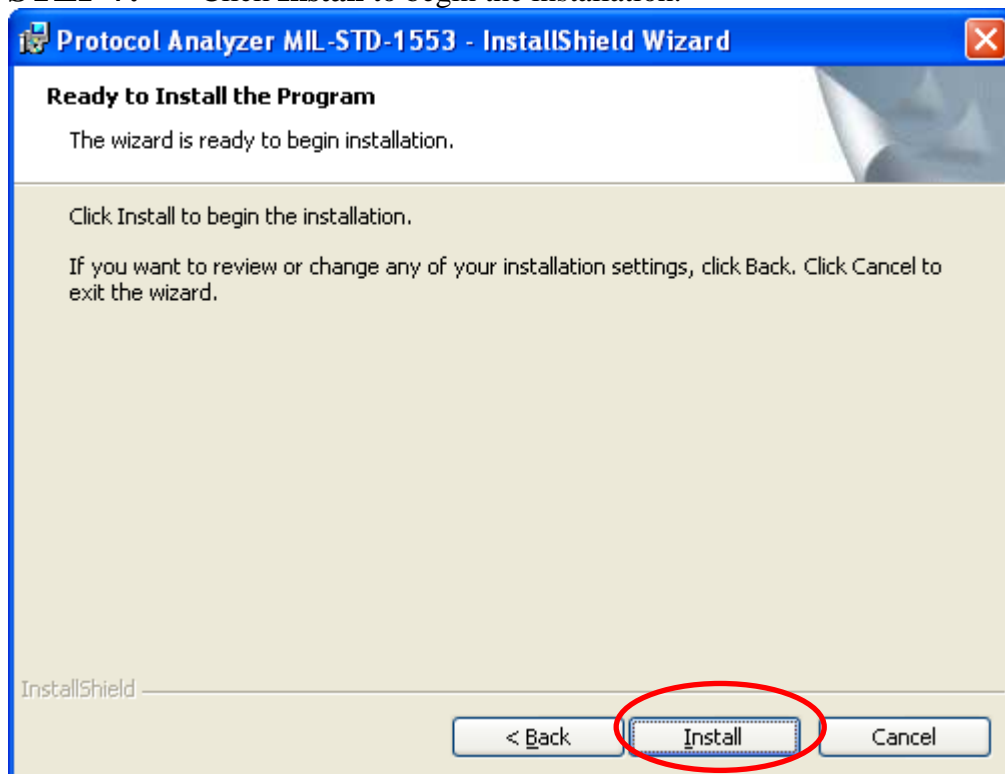
**STEP 6.** Select **Complete** and then click **Next**.

The dialog box is titled "Protocol Analyzer MIL-STD-1553 - InstallShield Wizard". It has a blue header bar with a close button (X) on the right. The main area is titled "Setup Type" and contains the text "Choose the setup type that best suits your needs." 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 of a computer with a red 'X' and a description: "All program features will be installed. (Requires the most disk space.)" for Complete, and "Choose which program features you want installed and where they will be installed. Recommended for advanced users." for Custom. At the bottom, there is a status bar with the "InstallShield" logo. To the right of the status bar are three buttons: "< Back", "Next >" (which is circled in red), and "Cancel".

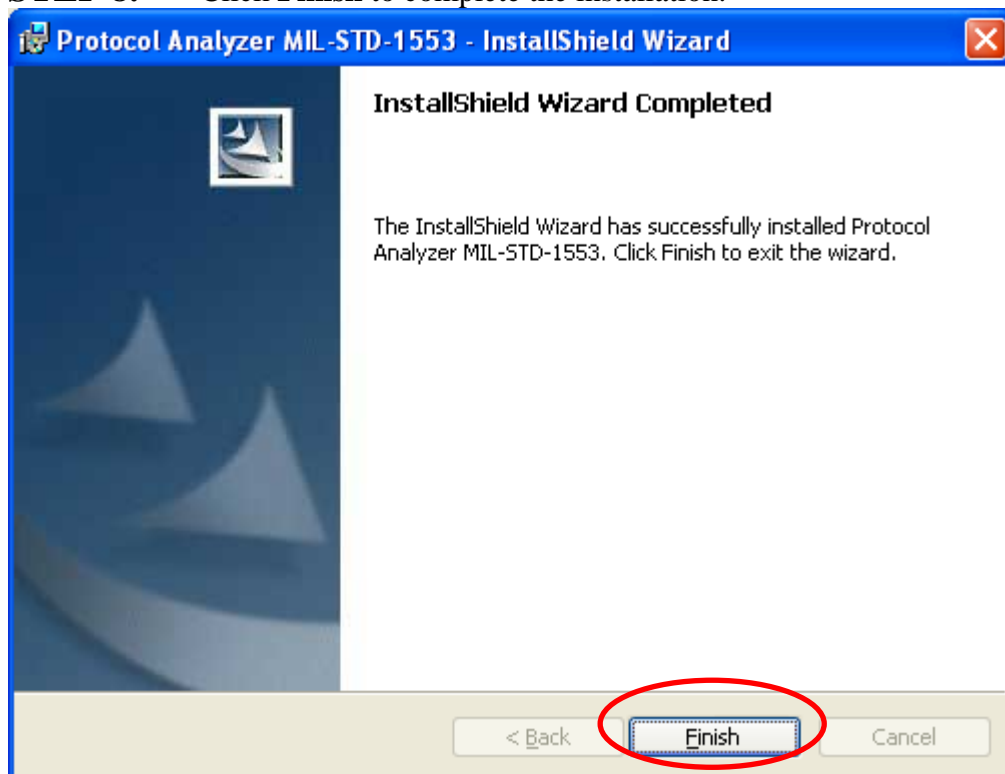




**STEP 7.** Click **Install** to begin the installation.



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

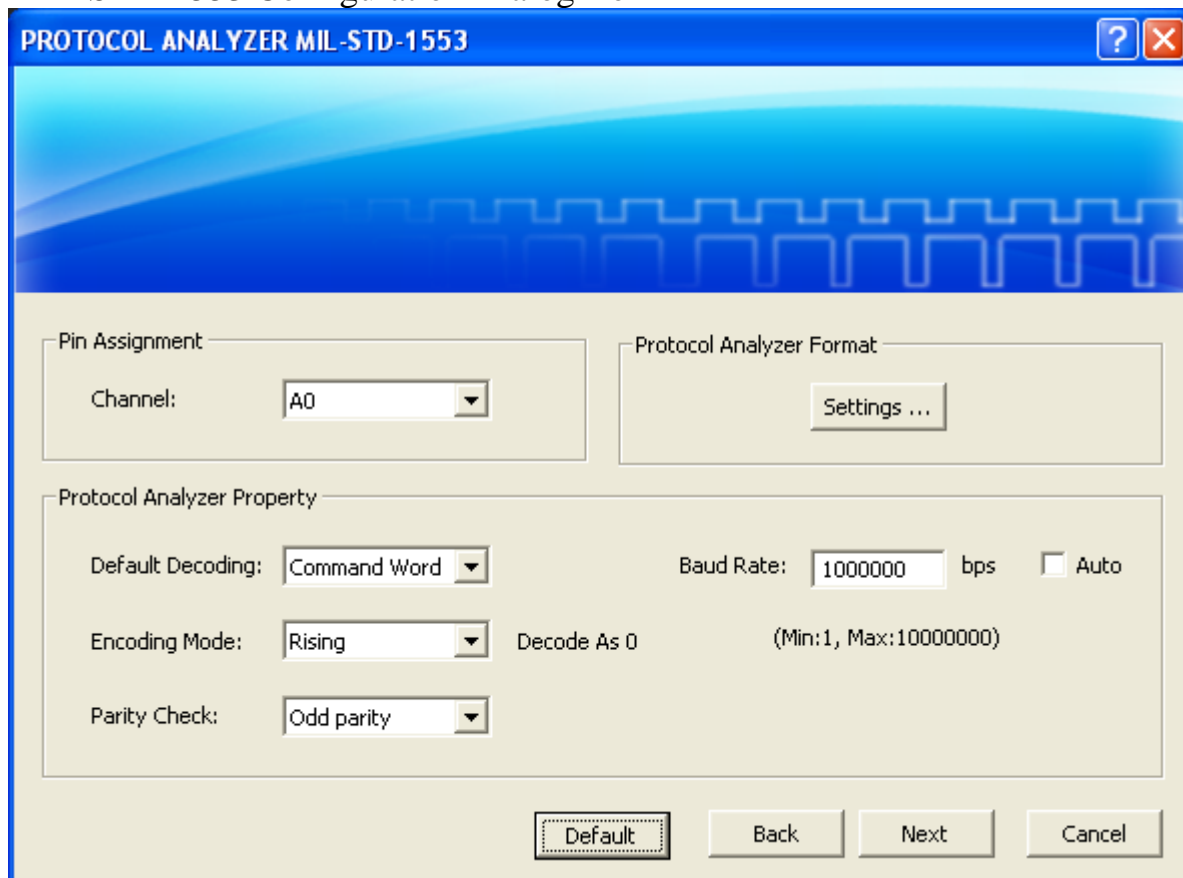




### 3 User Interface

In the configuration, please refer to below images to select options of the MIL-STD-1553 module.

#### MIL-STD-1553 Configuration Dialog Box



#### Pin Assignment:

The MIL-STD-1553 only needs one channel to decode the signals, the default is A0.

#### Protocol Analyzer Property:

**Default Decoding:** The Default Decoding mode can be selected from the two options (Command Word and Status Word) on the pull-down menu to decode the initial word, and the default is Command Word.

**Encoding Mode:** Two options (Rising and Falling) can be selected to decode as 0, the default is Rising.

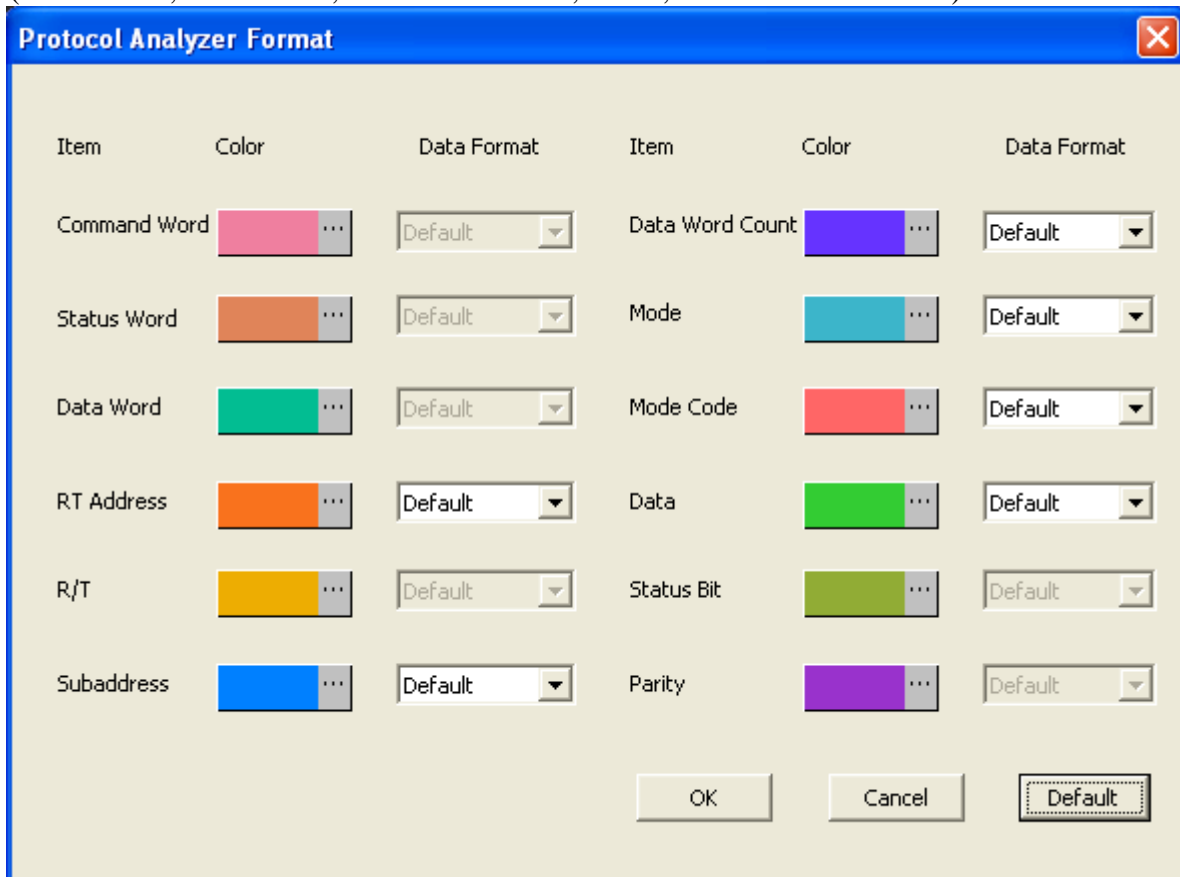
**Parity Check:** There are two options on the pull-down menu: Odd parity and Even parity, and the default is Odd parity.

**Baud Rate:** Users can enter the baud rate in the range from 1bps to 10Mbps or select a value from the pull-down menu as their requirements. At the same time, when the option, **Auto**, is activated, the baud rate can be calculated and displayed by the main program automatically.











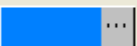



### Protocol Analyzer Format:

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 (RT Address, Subaddress, Data Word Count, Mode, Mode Code and Data) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Formats of these Items (RT Address, Subaddress, Data Word Count, Mode, Mode Code and Data) 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 (RT Address, Subaddress, Data Word Count, Mode, Mode Code and Data) are the Default.



The dialog box titled "Protocol Analyzer Format" contains a table for configuring items. Each item has a color selection button (a colored square followed by three dots) and a data format dropdown menu. The items are arranged in two columns. At the bottom right, there are three buttons: "OK", "Cancel", and "Default".

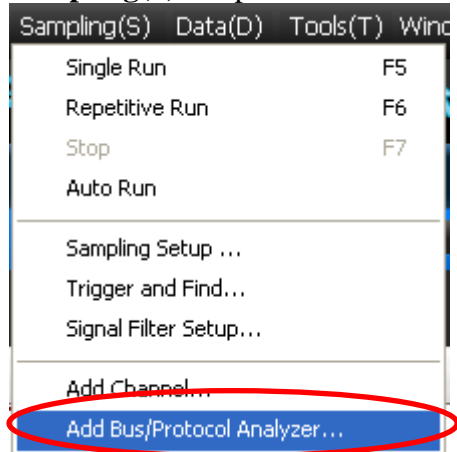
Item	Color	Data Format	Item	Color	Data Format
Command Word		Default	Data Word Count		Default
Status Word		Default	Mode		Default
Data Word		Default	Mode Code		Default
RT Address		Default	Data		Default
R/T		Default	Status Bit		Default
Subaddress		Default	Parity		Default

OK Cancel Default

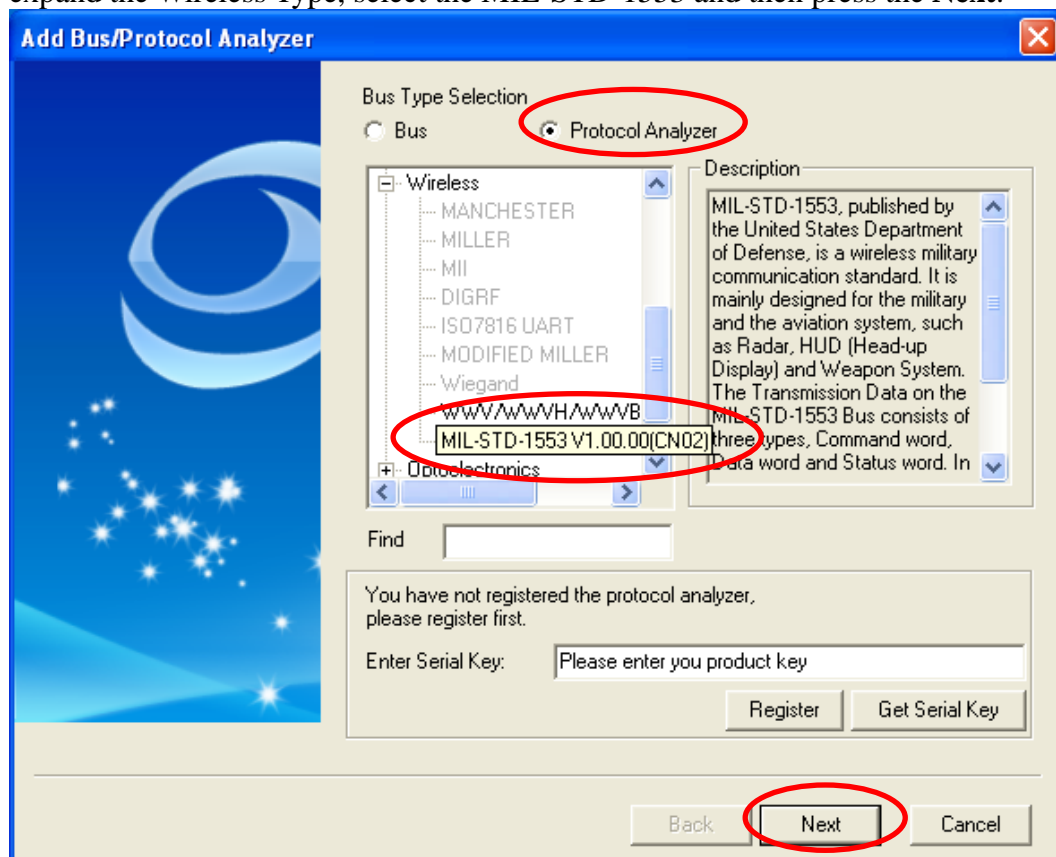


## 4 Operating Instructions

**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.

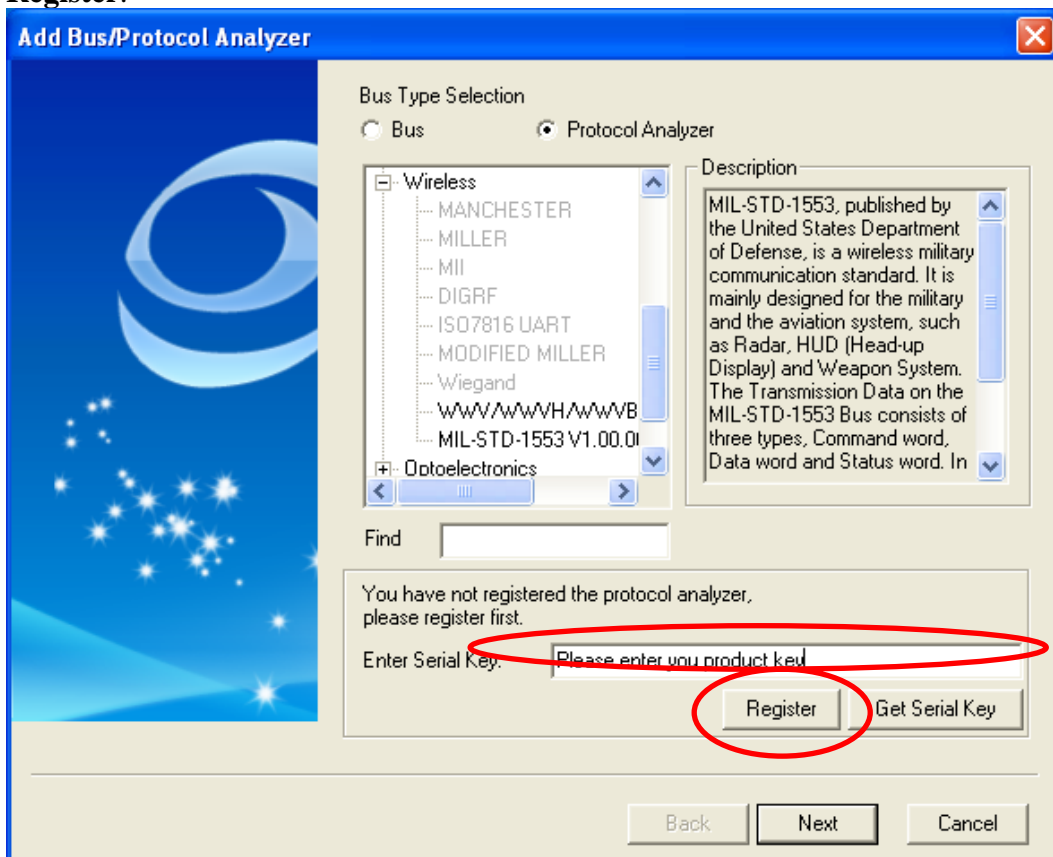


**STEP 2.** Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Wireless Type, select the MIL-STD-1553 and then press the **Next**.

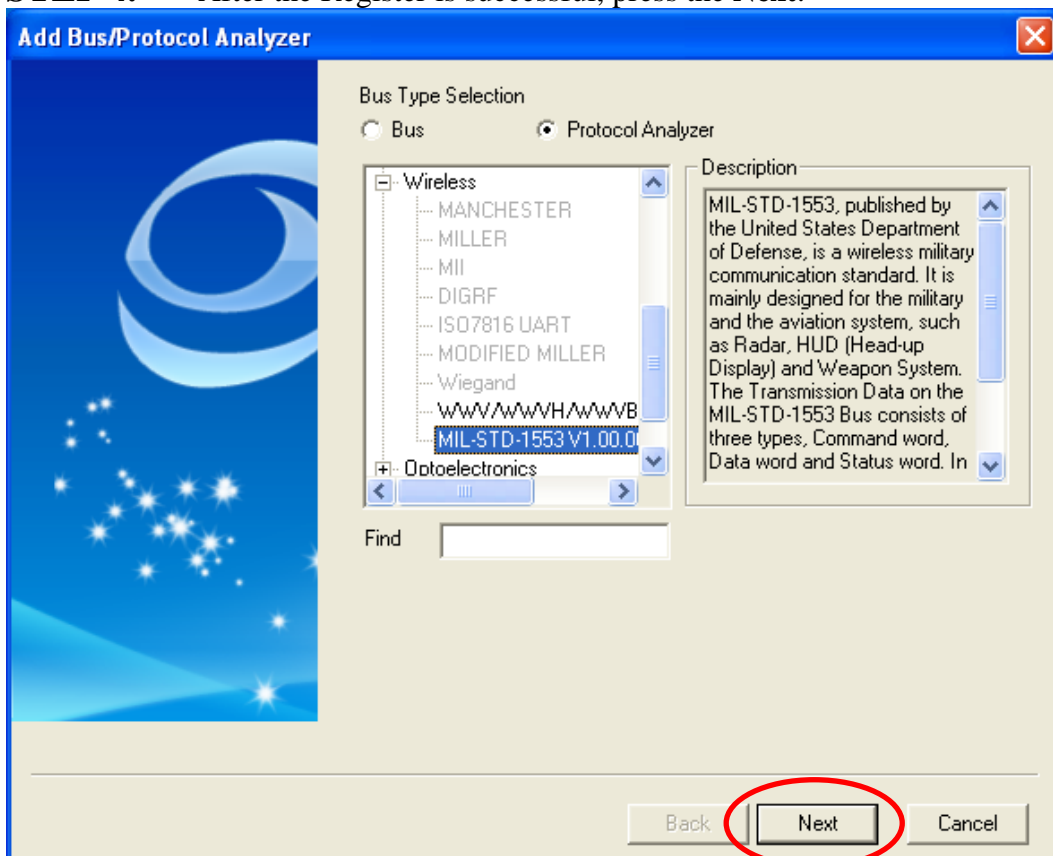




**STEP 3.** Enter the Serial Key of MIL-STD-1553 under this Model, and then press the **Register**.

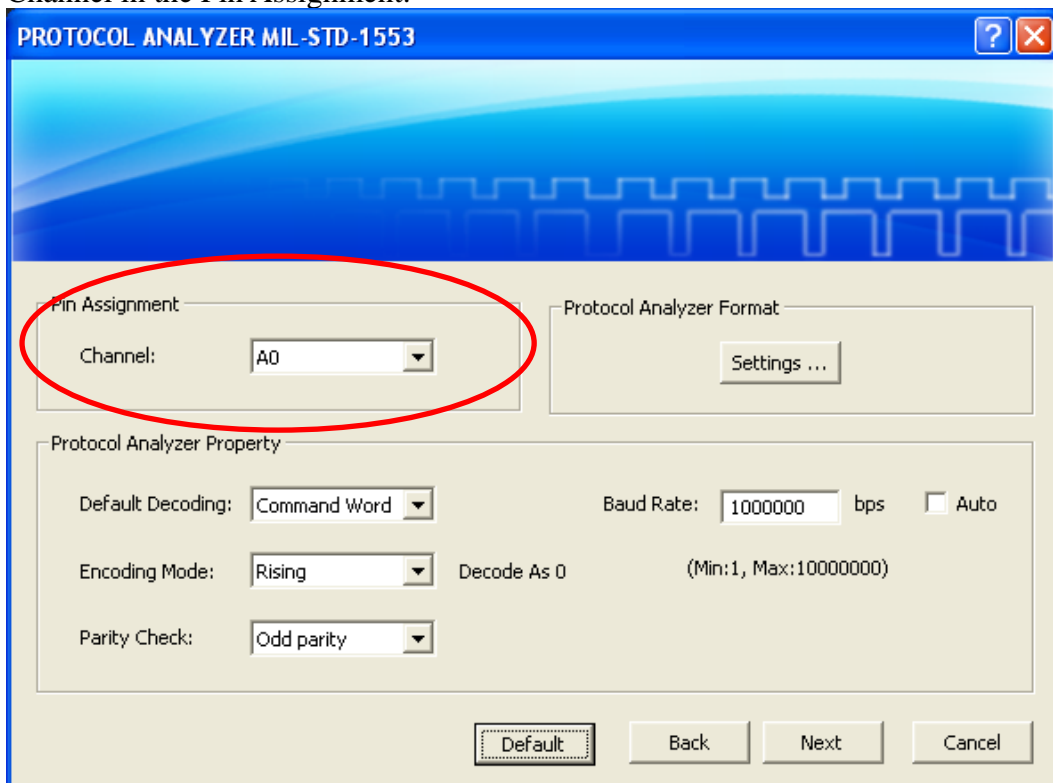


**STEP 4.** After the Register is successful, press the **Next**.

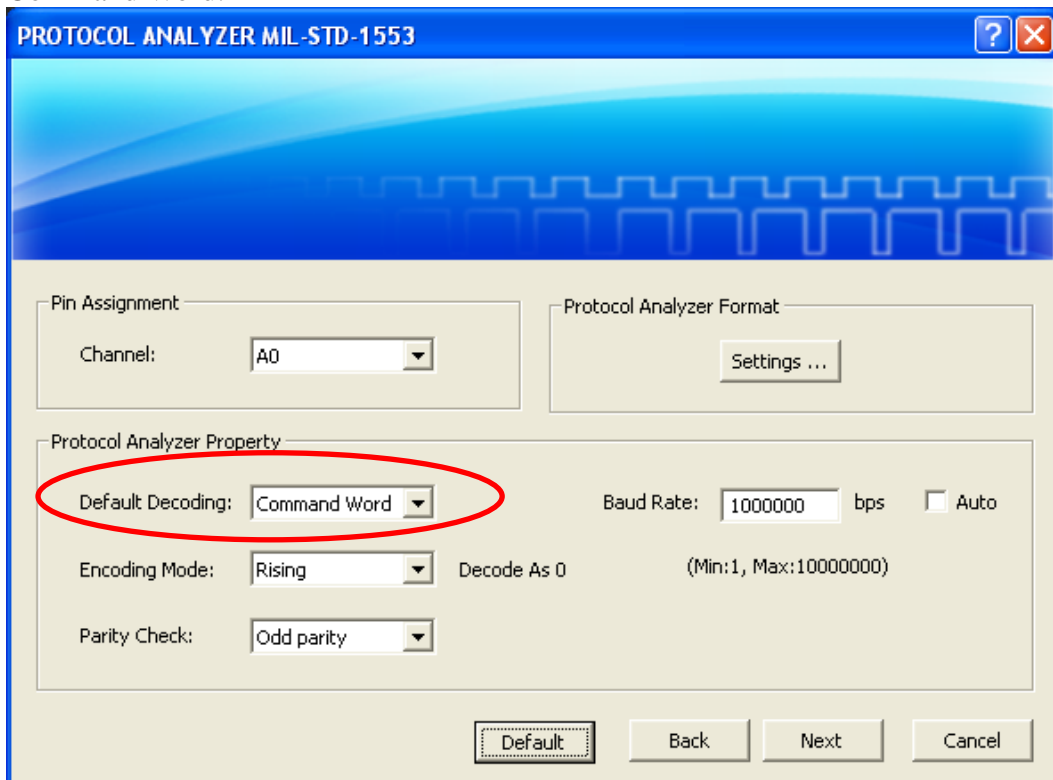




**STEP 5.** Open the PROTOCOL ANALYZER MIL-STD-1553 dialog box and set the Channel in the Pin Assignment.



**STEP 6.** Set the Default Decoding to Command Word or Status Word, and the default is Command Word.





**STEP 7.** Set the Encoding Mode to Rising or Falling to decode as 0.

PROTOCOL ANALYZER MIL-STD-1553

Pin Assignment  
Channel: A0

Protocol Analyzer Format  
Settings ...

Protocol Analyzer Property  
Default Decoding: Command Word  
Baud Rate: 1000000 bps ☐ Auto  
**Encoding Mode: Rising** Decode As 0 (Min:1, Max:100000000)  
Parity Check: Odd parity

Default Back Next Cancel

**STEP 8.** Set the Parity Check to Odd parity or Even parity, the default is Odd parity.

PROTOCOL ANALYZER MIL-STD-1553

Pin Assignment  
Channel: A0

Protocol Analyzer Format  
Settings ...

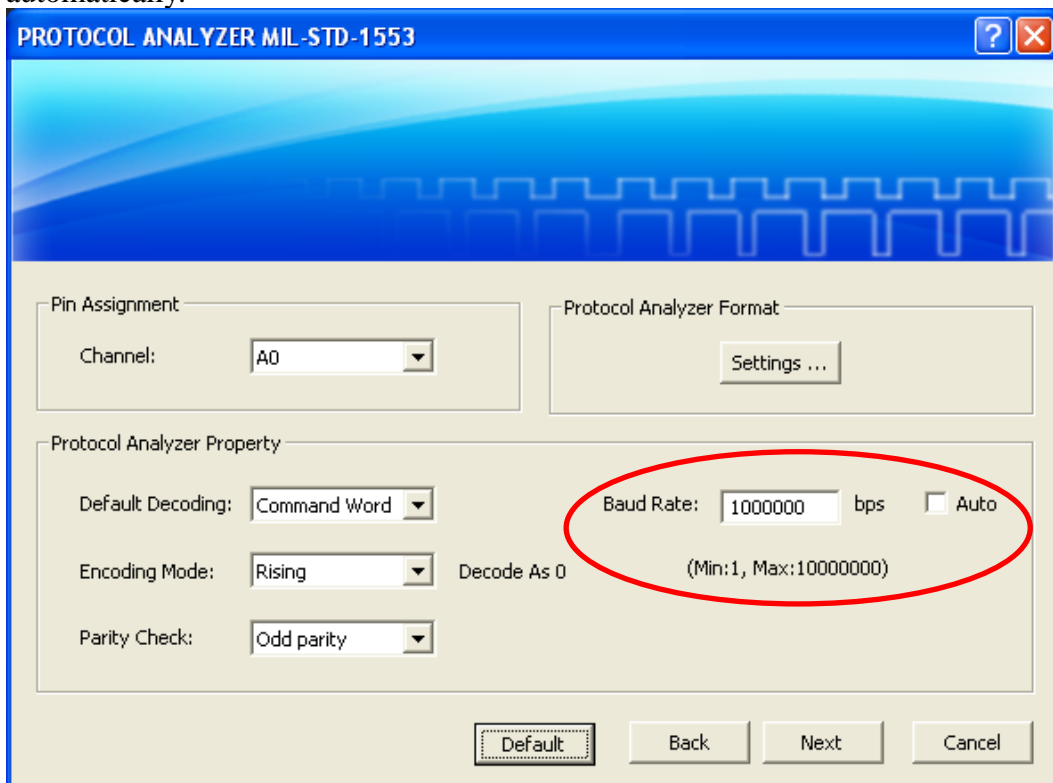
Protocol Analyzer Property  
Default Decoding: Command Word  
Baud Rate: 1000000 bps ☐ Auto  
Encoding Mode: Rising Decode As 0 (Min:1, Max:100000000)  
**Parity Check: Odd parity**

Default Back Next Cancel

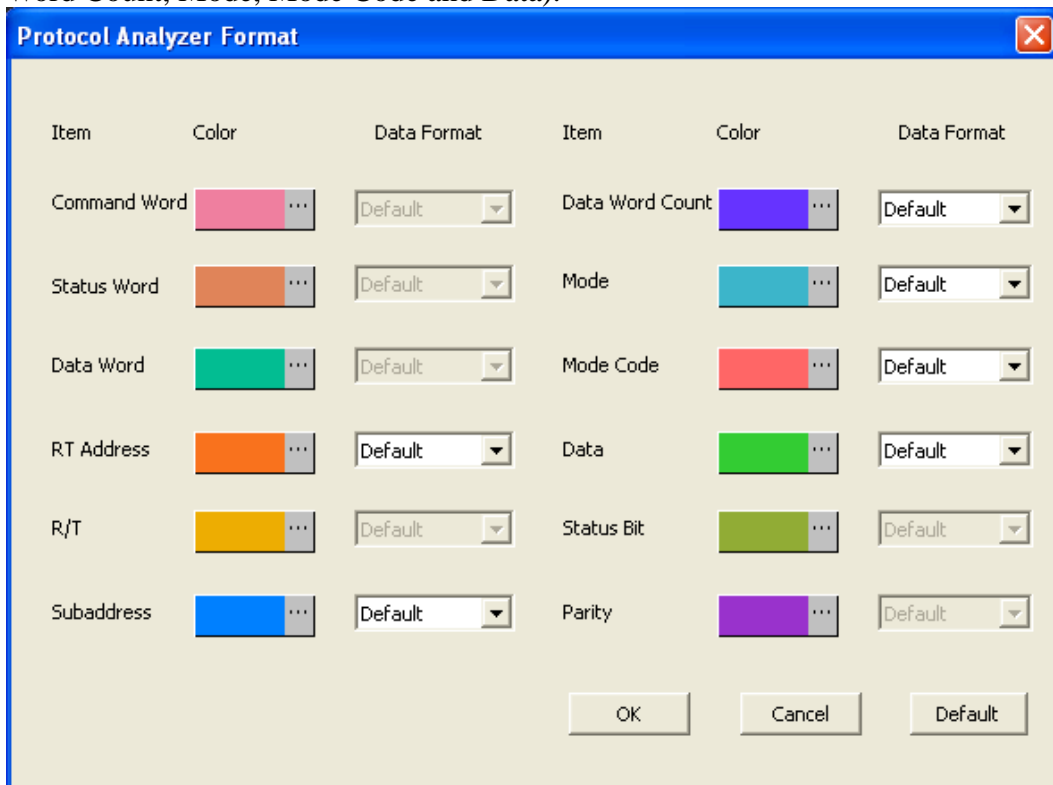




**STEP 9.** Set the **Baud Rate** or select the **Auto** to calculate and display the Baud Rate automatically.



**STEP 10.** Press the **Settings** button to open the Protocol Analyzer Format dialog box, and then set the Color of each Item and the Data Format of the Items (RT Address, Subaddress, Data Word Count, Mode, Mode Code and Data).





**STEP 11.** Press the **Next** to finish all settings.

PROTOCOL ANALYZER MIL-STD-1553

Pin Assignment  
Channel: A0

Protocol Analyzer Format  
Settings ...

Protocol Analyzer Property  
Default Decoding: Command Word  
Encoding Mode: Rising  
Parity Check: Odd parity  
Baud Rate: 1000000 bps  
Auto

Decode As 0 (Min:1, Max:10000000)

Default Back Next Cancel

**STEP 12.** 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

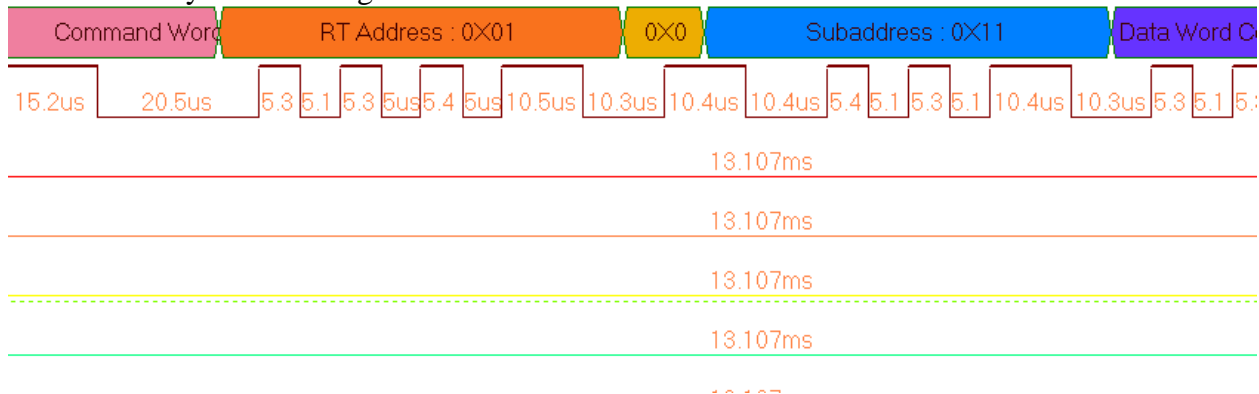
Do you want to delete the other Buses and channels in the software?  
☐ Yes, please delete  
☒ No, please reserve

Back Finish Cancel



**STEP 13.** Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set to Either Edge, the memory depth is 128K; the sampling frequency is 10MHz (the sampling frequency should be more than ten times higher than the signal to be tested).

### Protocol Analyzer Decoding



### Packet List

Navigator											Packet List	Statistics	Memory Analyzer
Setting...			Refresh	Export...	Synch. Parameter...			BR	RB	RR	BBR	BRR	
Packet #	Name		TimeStamp	Command Word	RT Address	Receive	Subaddress	Data Word Count	Parity	Data Word	Data		
1	Bus1(MIL-STD-1553)		0ms	Command Word	01	0	11	01	1	Data Word	090A		
	Parity	Data Word	Data	Parity	Data Word	Data	Parity	Status Word	RT Address	Message Error	Instrumentation		
	1	Data Word	0B0C	0	Data Word	0D0E	1	Status Word	01	1	1		
	Service Request		Reserve Status		BC Cmd Receive		Busy	Subsystem Flag		Dynamic BC Accept			
	1		0		1	0		0		1	1		
	DESCRIBE												
	BCr To RT												
Packet #	Name		TimeStamp	Command Word	RT Address	Transmit	Mode	Tr Last Cmd	Parity	Status Word	RT Address		
2	Bus1(MIL-STD-1553)		1.4211ms	Command Word	01	1	00	12	1	Status Word	01		
	Message Error		Instrumentation		Service Request		Reserve Status		BC Cmd Receive		Busy		
	0		1		0		1		0	0	0		
		Terminal Flag	Parity	Data Word	Data	Parity	Data Word	Data	Parity	Data Word	DESCRIBE		
	1	1	Data Word	090A	1	Data Word	0B0C	0	Data Word	0D0E	RT To BC		