



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

SPECIFICATION

MODEL: B12007-Line Code

PART NO: _____

VERSION: V1.00

Approver		Check	Design
GM	PM		

Customer Confirm

*Please fax the file to ZeroPlus Technology after signing.

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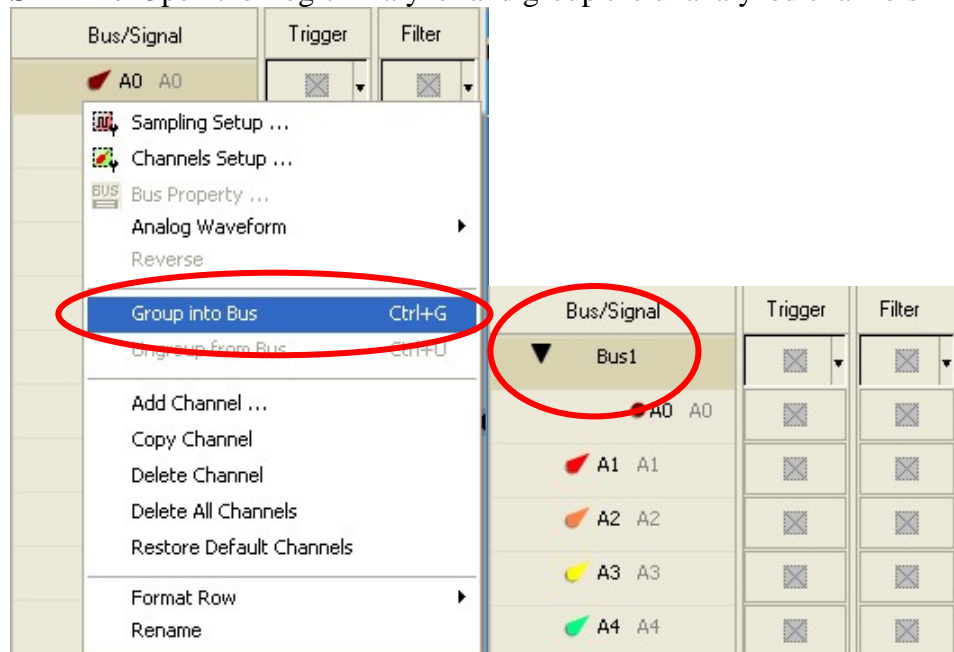
1 Software Register

Please register the software as the following steps:

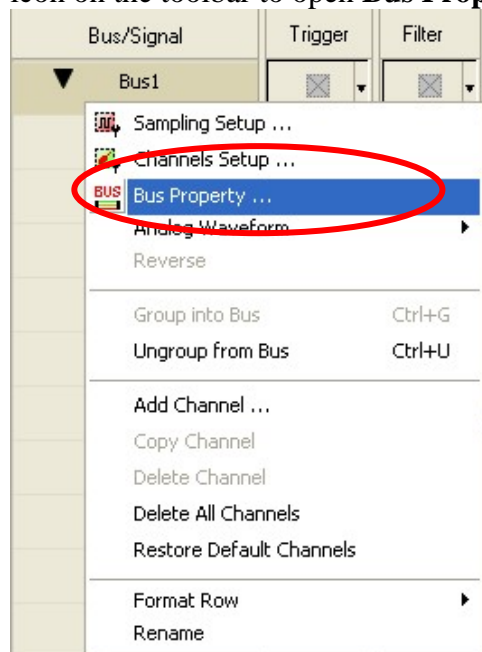
※ **Remark1:** The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ **Remark2:** 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. Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key**.

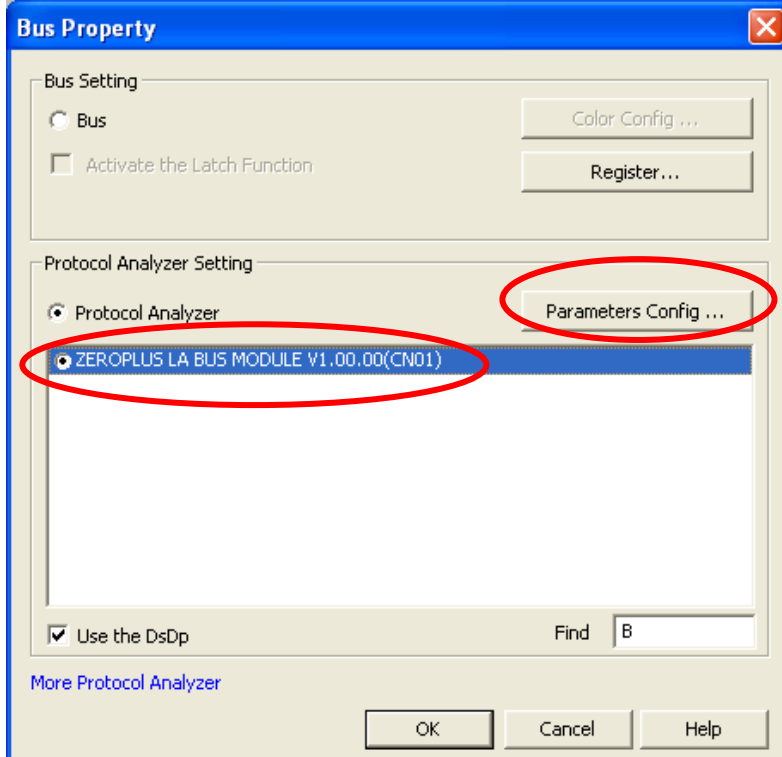


STEP 2. Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.

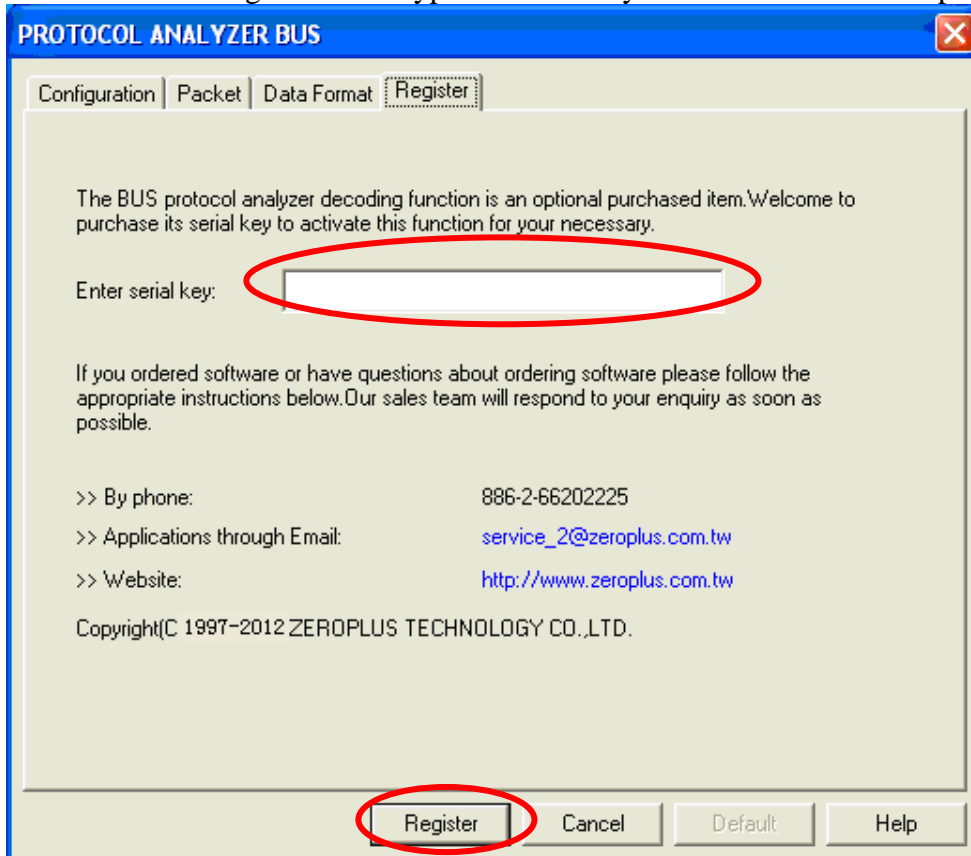




STEP 3. Select the Protocol Analyzer, and then choose **ZEROPLUS LA BUS MODULE V1.00.00 (CN01)**. Next click Parameters Configuration to open Protocol Analyzer Bus dialog box.

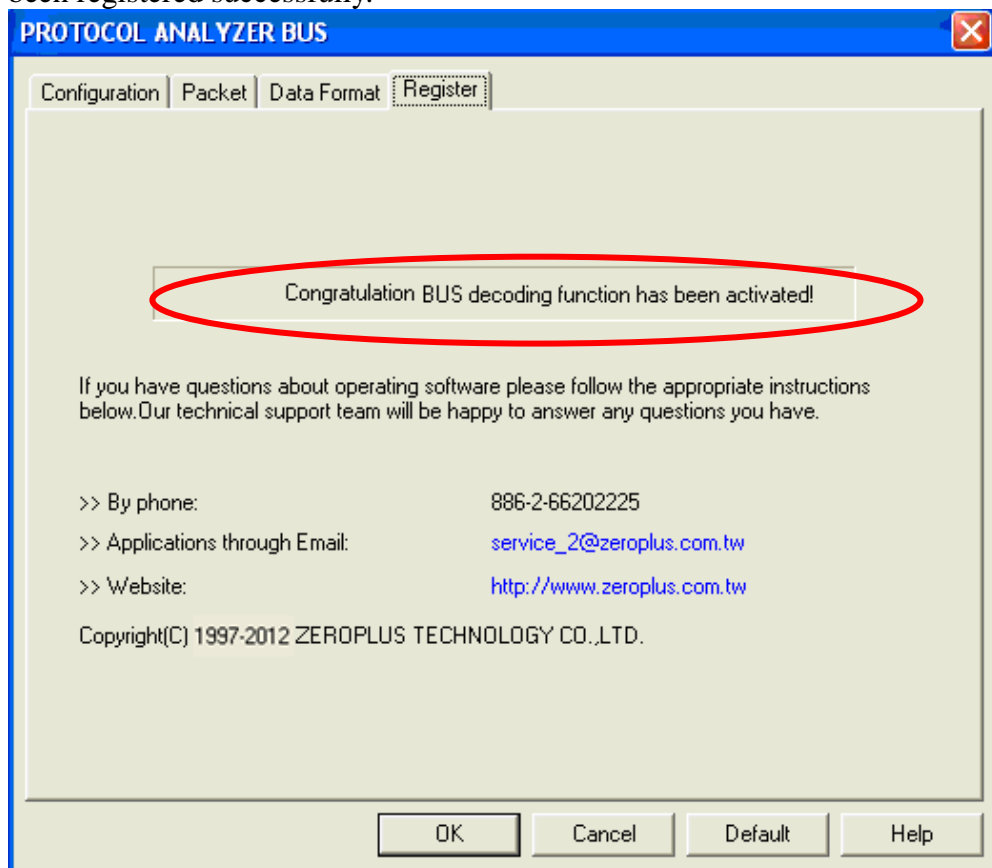


STEP 4. Press Register tab to type the serial key number of BUS. Then press Register.





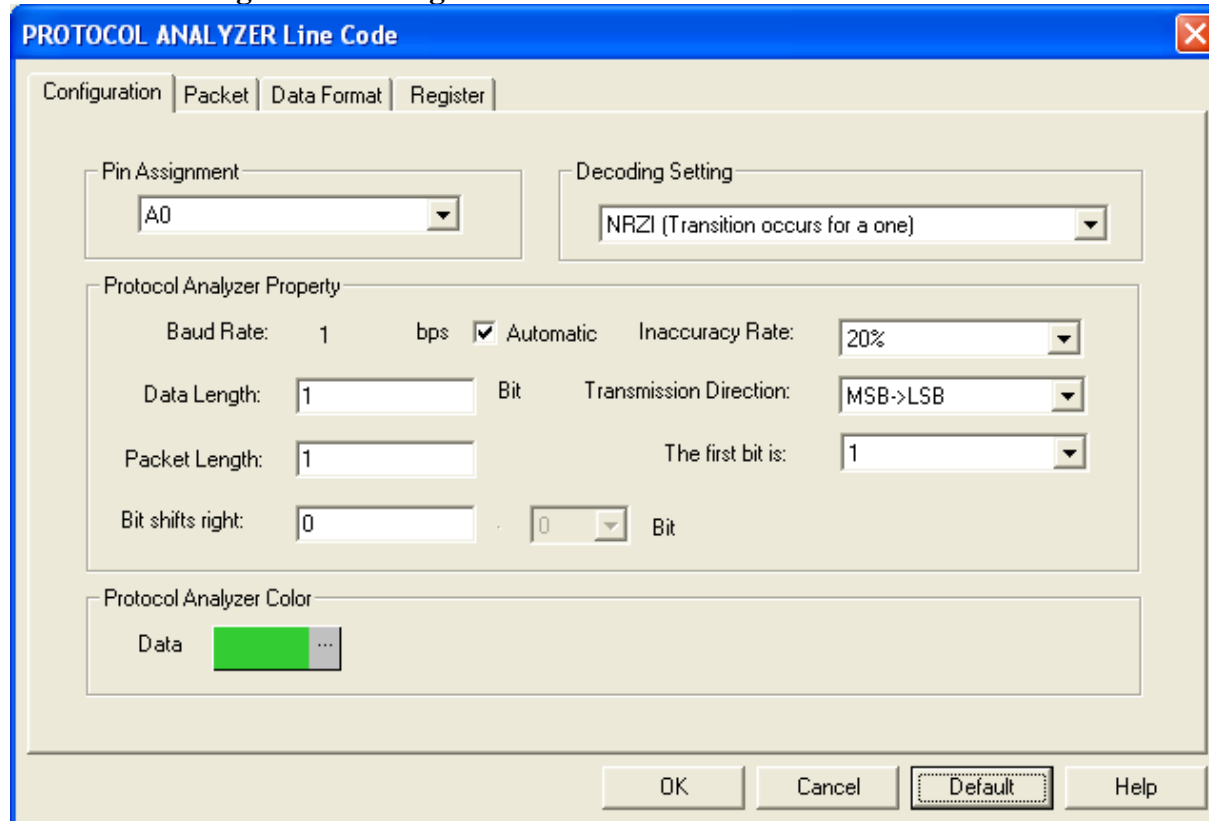
STEP 5. After pressing the Register button, following dialog box will appear, it denotes that the BUS has been registered successfully.



2 User Interface

Please refer to the below images to do settings of Line Code module.

Line Code Configuration dialog box



Pin Assignment

Line Code only needs one line to decode; it is A0 by default.

Decoding Setting

There are NRZI (Transition occurs for a one), NRZI (Transition occurs for a zero), Manchester (Thomas), Manchester (IEEE802.3), Differential Manchester and CMI to choose.

Baud Rate

It only can be integer with a range of 1 to current sampling frequency plus 10. If “Automatic” is selected, then its value can’t be edit, which will be automatically calculated and displayed. The “Automatic” is selected by default.

Inaccuracy Rate

There are 5%, 10% and 20% to choose; it is 20% by default.

Data Length

Its value is between 1 and 32; it is 1Bit by default.

Transmission Direction

MSB→LSB or LSB→MSB can be selected; it is MSB→LSB by default.

Packet Length

Its value is between 1 and 65532; it is 1 by default.

The first bit is

It is only available under NRZI (Transition occurs for a one) or NRZI (Transition occurs for a zero) mode, and only can be set as 0 or 1.

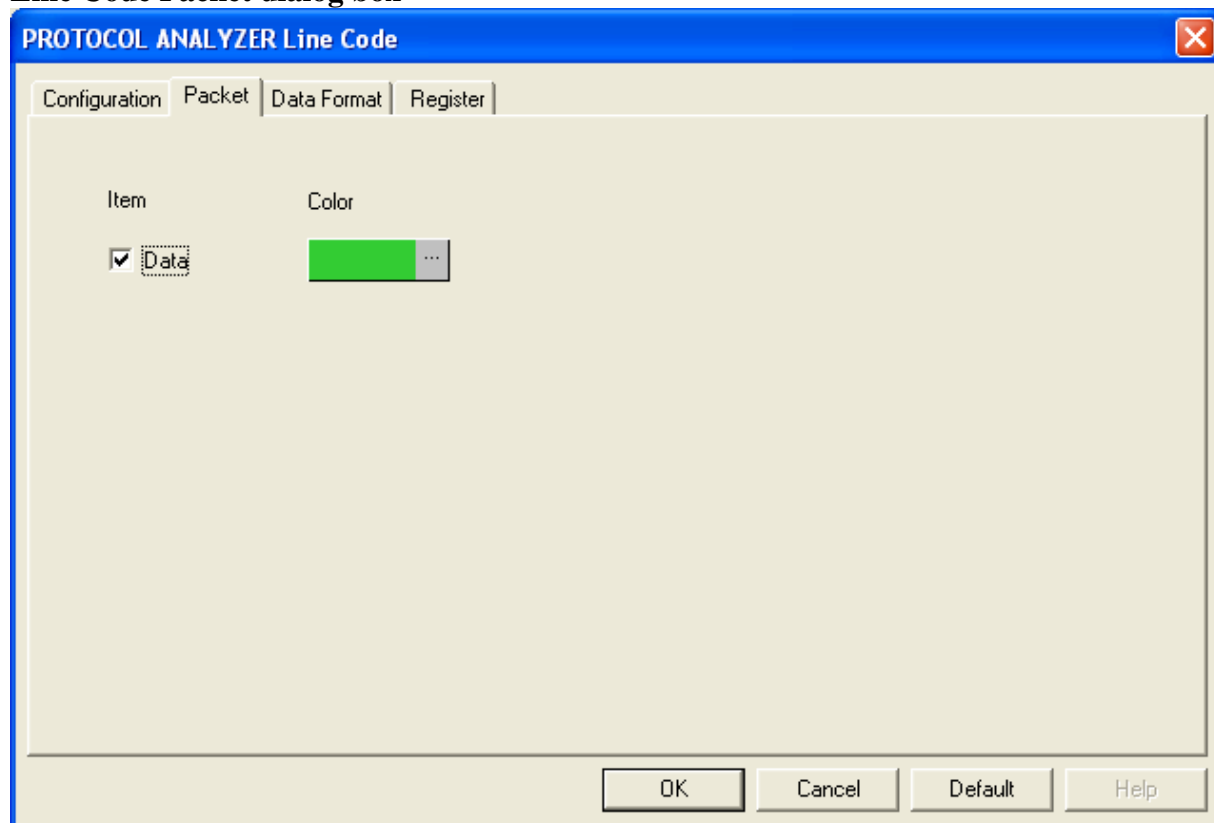
Bit shifts right

Its value is between 0 and [(data length)-1] [(data length)=signal time length/(1/ baud rate)]; the right box can be set only as '0' or '5'. Under the decoding modes of NRZI (Transition occurs for a one) and NRZI (Transition occurs for a zero), the right box is unavailable.

Protocol Analyzer Color

The color can be varied by users.

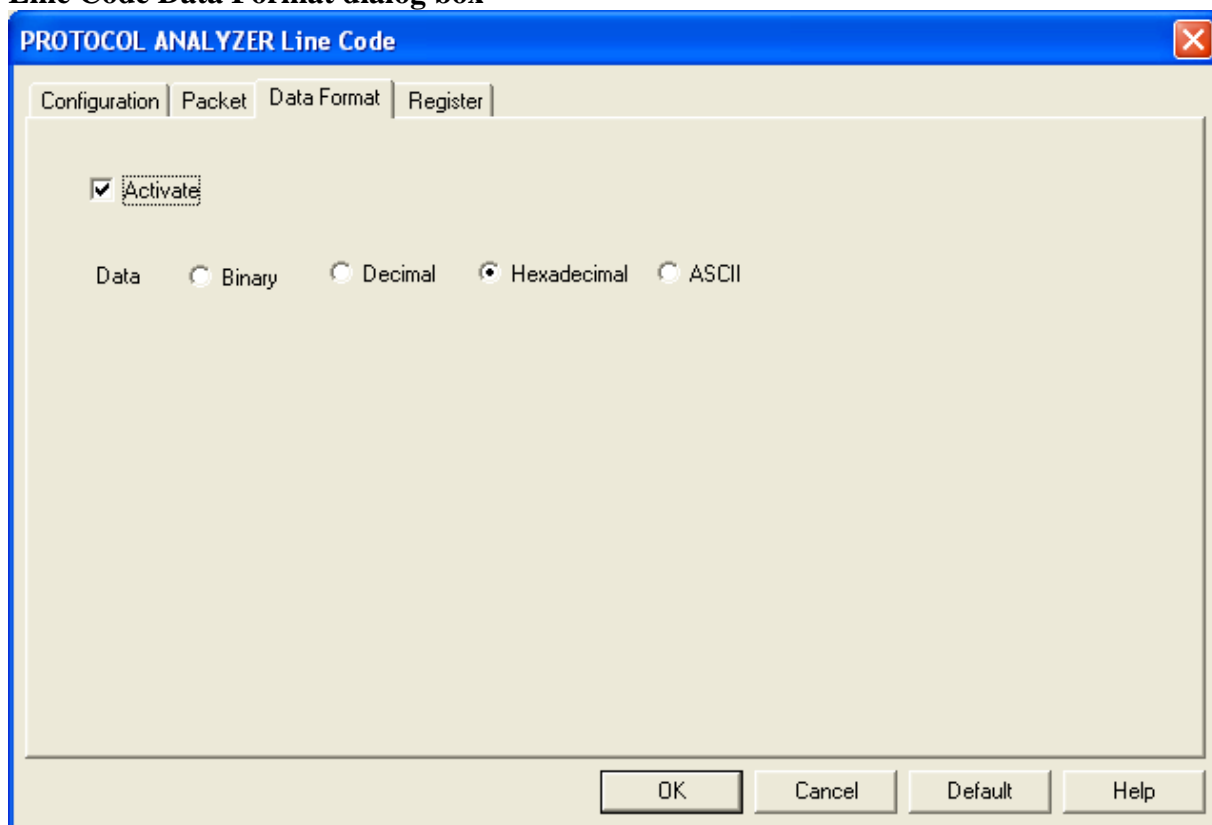
Line Code Packet dialog box



In the Packet part, users can select the items to be displayed and their colors as their requirements.



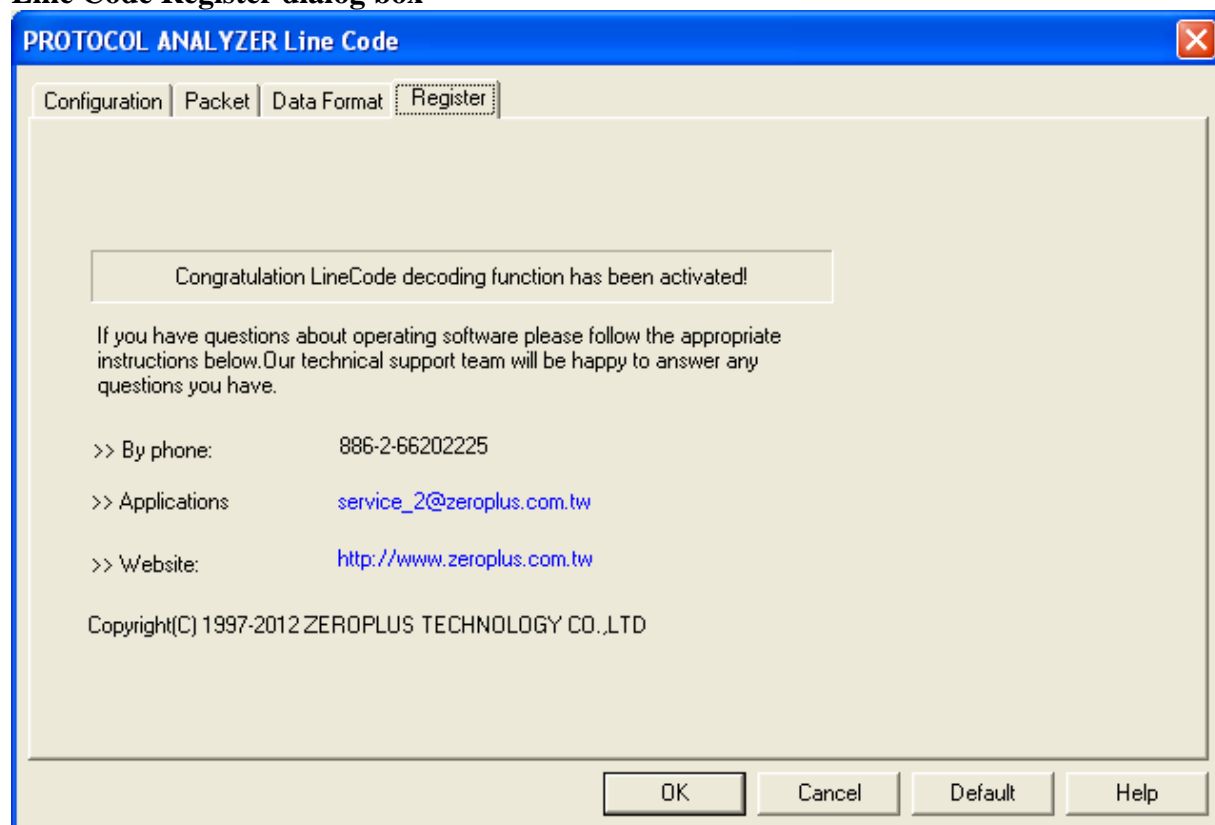
Line Code Data Format dialog box



Users can set the Data as their requirements; it is Hexadecimal by default. When the option ‘Activate’ is selected, the data format is decided by the settings in the Protocol Analyzer, or by the settings in the main program.



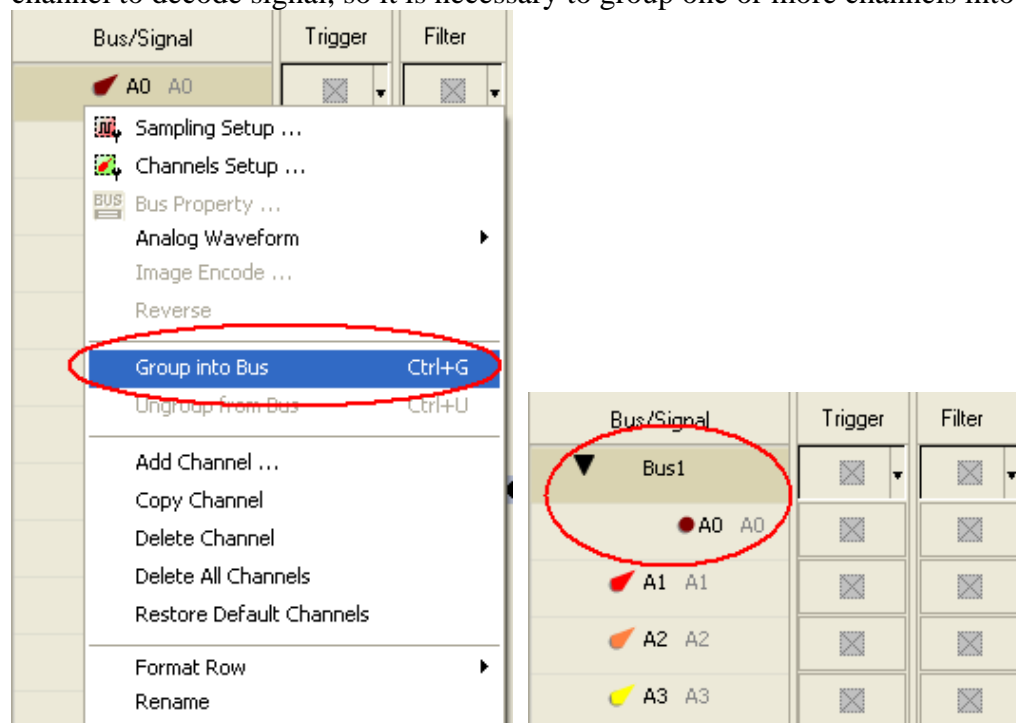
Line Code Register dialog box



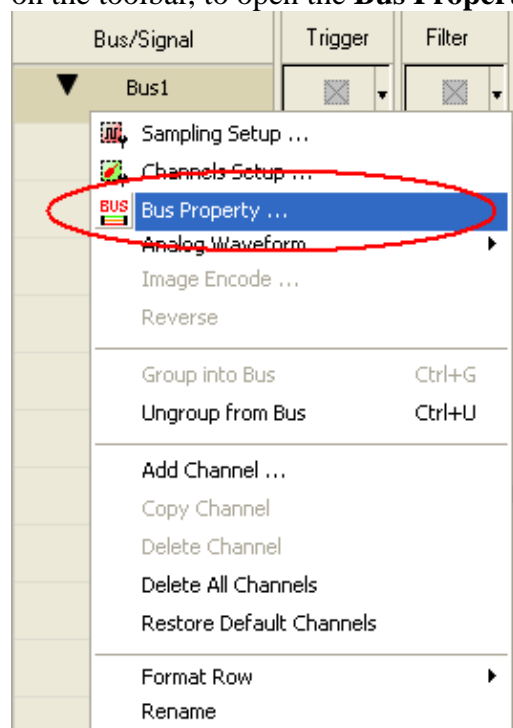
There is Zeroplus company information. If you have questions about software operations, you can contact Zeroplus by Telephone or Email.

3 Operating Instructions

STEP 1. Group A0 into **Bus1** by pressing the **Right Key** on the mouse. Line Code needs at least one channel to decode signal, so it is necessary to group one or more channels into the Bus.

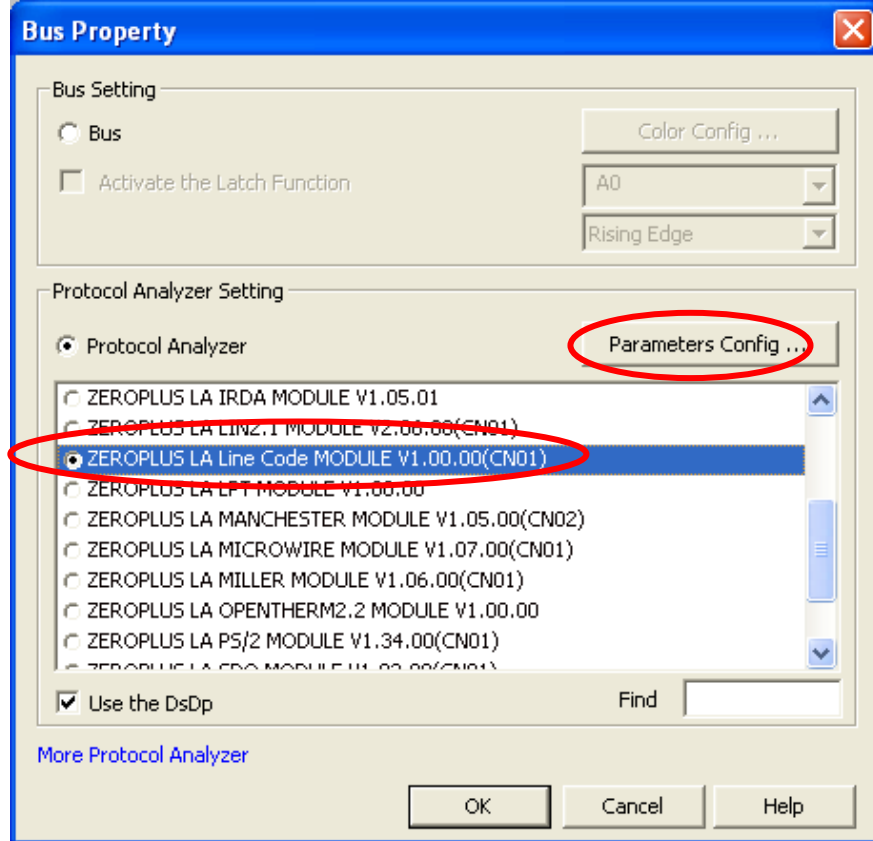


STEP 2. Select **Bus1**, press right key and select **Bus Property** from the popped menu, or click the **Bus** icon on the toolbar, to open the **Bus Property** dialog box.

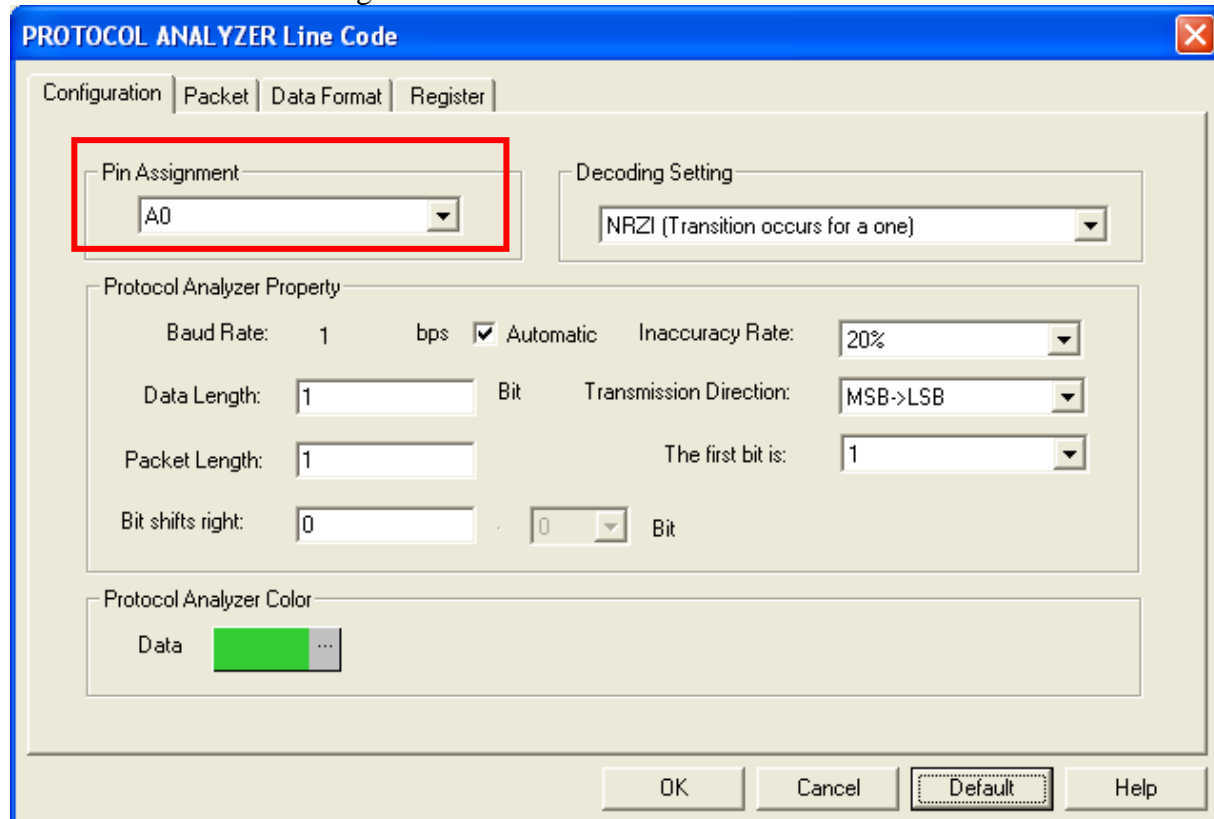




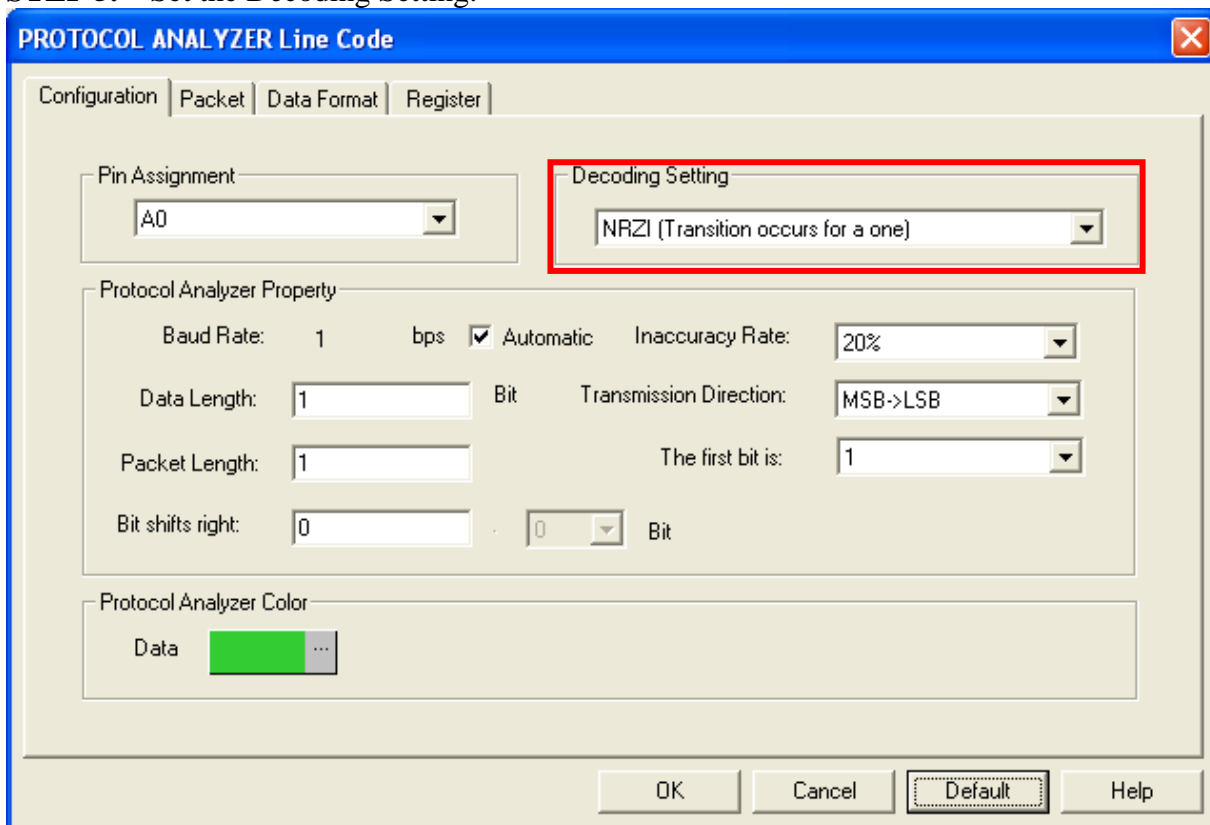
STEP 3. Select Protocol Analyzer, and select ZEROPLUS LA Line Code MODULE V1.00.00(CN01). Then click Parameters Configuration to open the Configuration dialog box.



STEP 4. Set the Pin Assignment.



STEP 5. Set the Decoding Setting.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property

Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit Transmission Direction: MSB->LSB

Packet Length: 1 The first bit is: 1

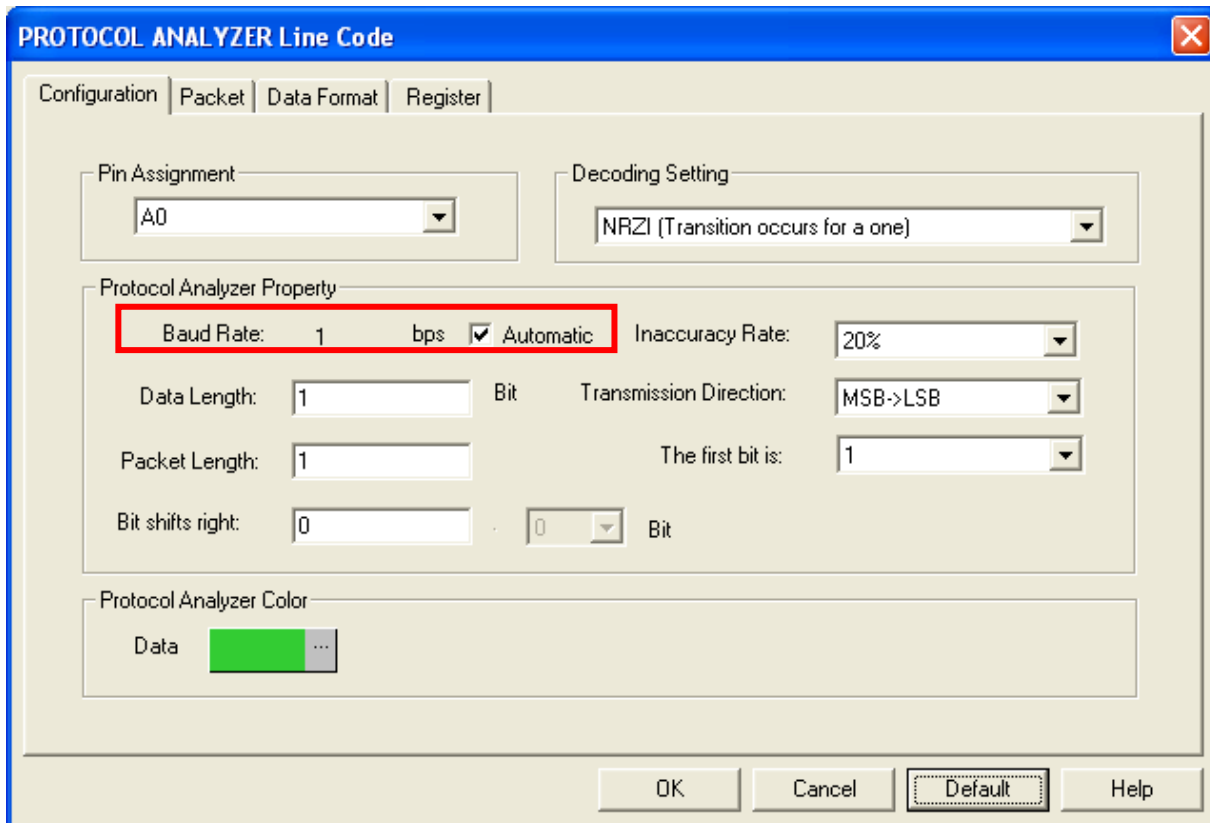
Bit shifts right: 0 Bit

Protocol Analyzer Color

Data [Green] [Grey]

OK Cancel Default Help

STEP 6. Set the Baud Rate.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property

Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit Transmission Direction: MSB->LSB

Packet Length: 1 The first bit is: 1

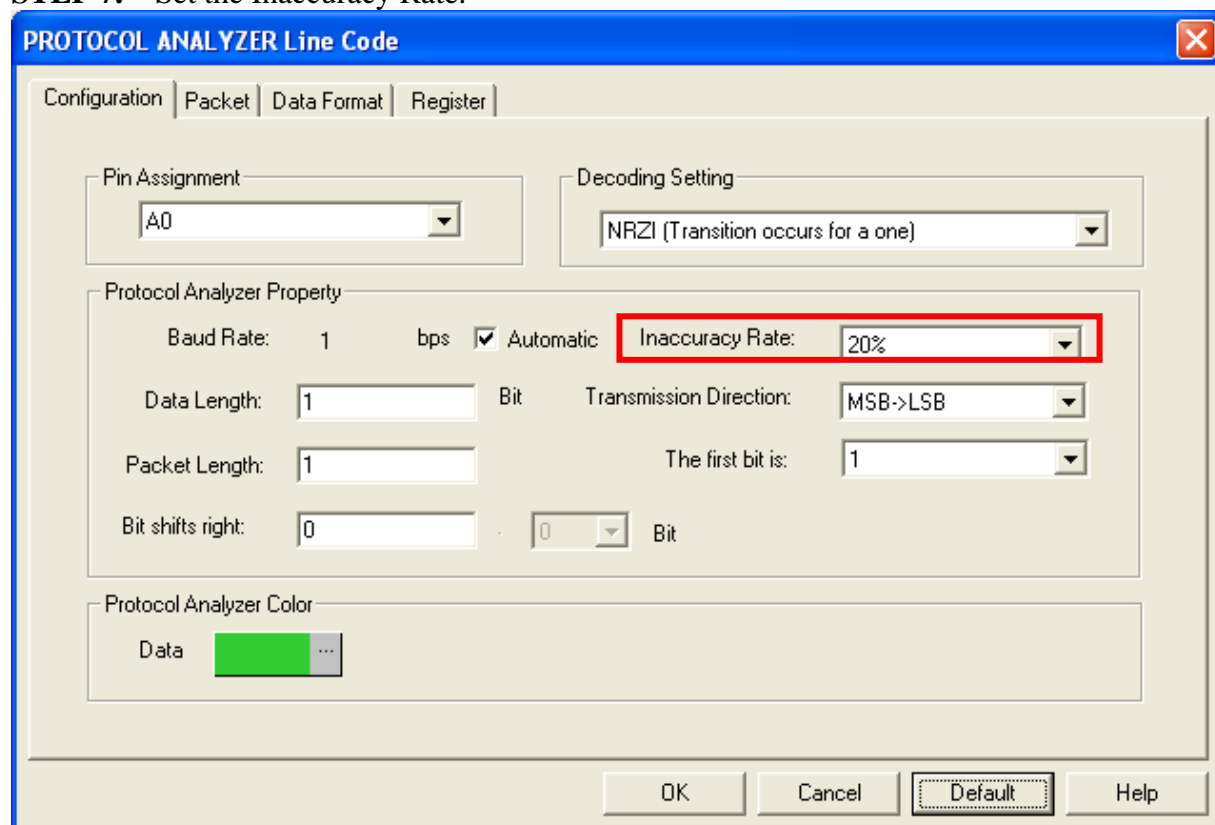
Bit shifts right: 0 Bit

Protocol Analyzer Color

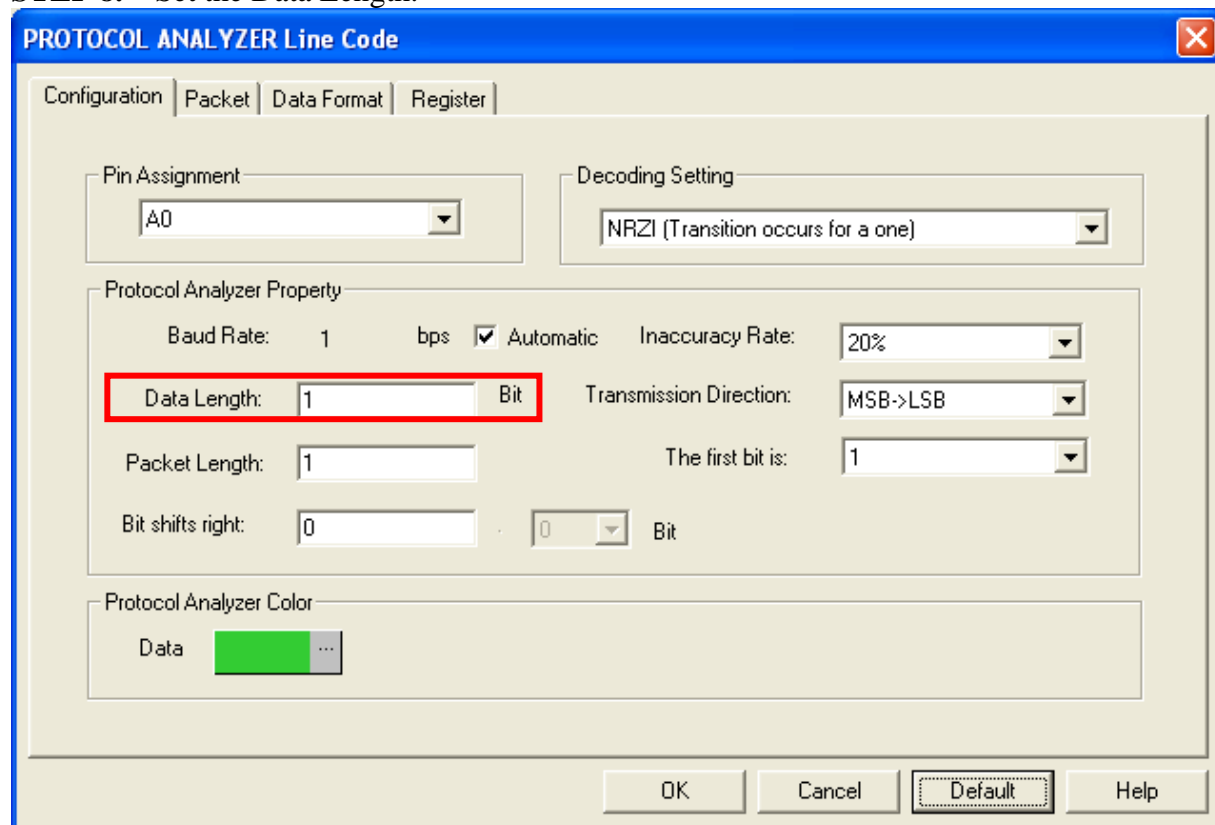
Data [Green] [Grey]

OK Cancel Default Help

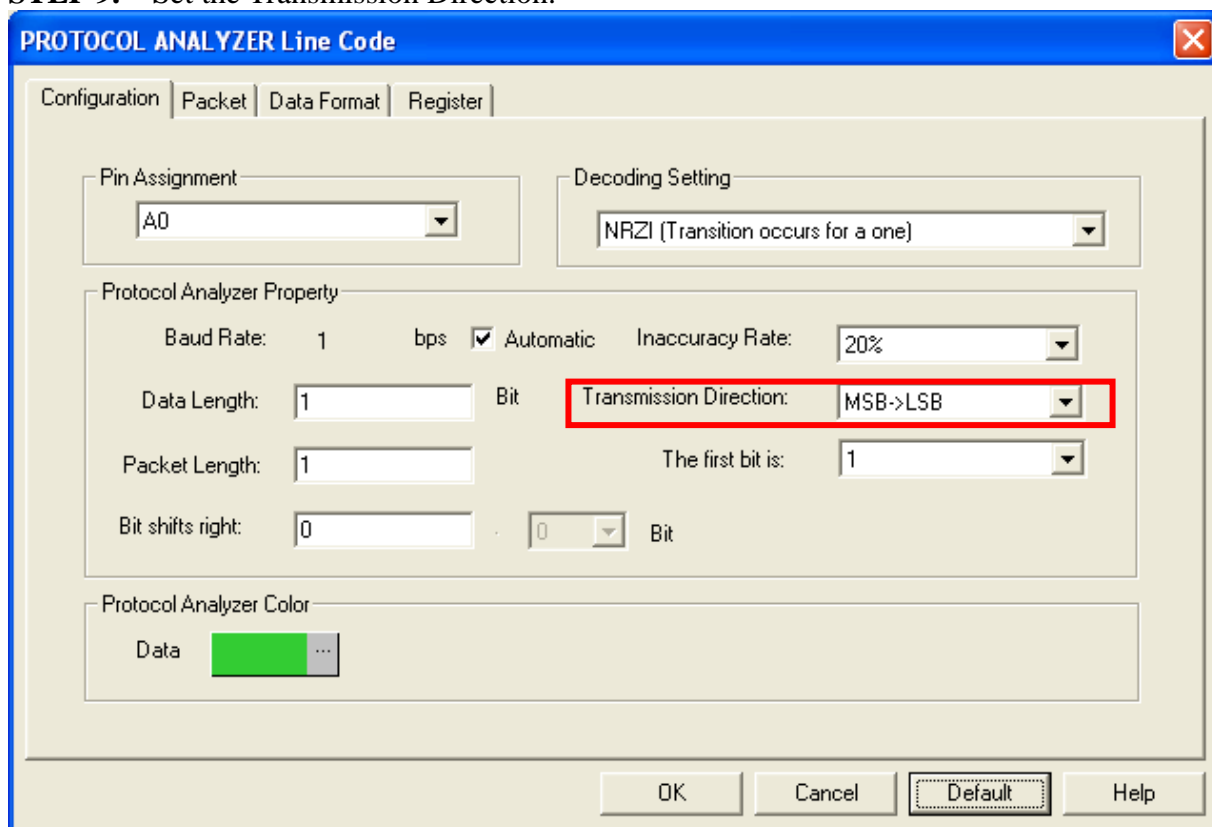
STEP 7. Set the Inaccuracy Rate.



STEP 8. Set the Data Length.



STEP 9. Set the Transmission Direction.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property


Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit **Transmission Direction: MSB->LSB**

Packet Length: 1 The first bit is: 1

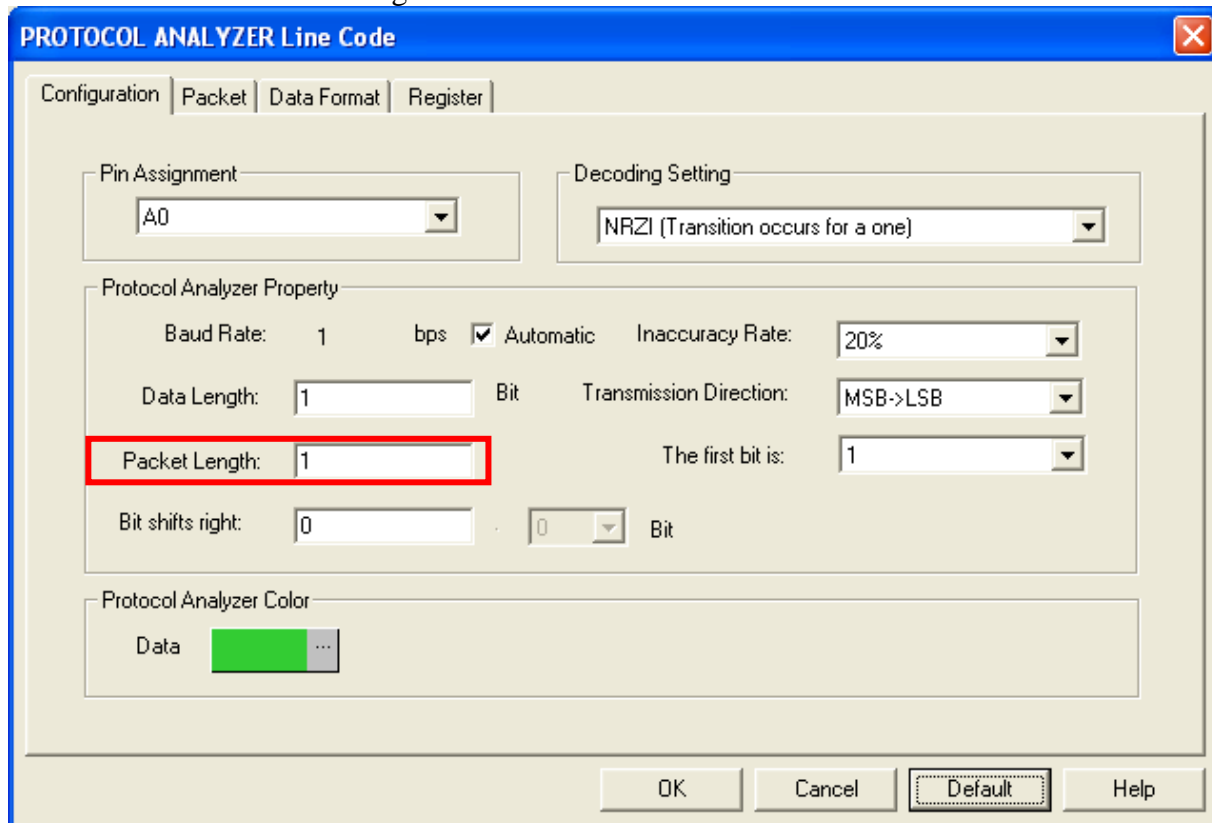
Bit shifts right: 0 Bit

Protocol Analyzer Color

Data 

OK Cancel Default Help

STEP 10. Set the Packet Length.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property


Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit Transmission Direction: MSB->LSB

Packet Length: 1 The first bit is: 1

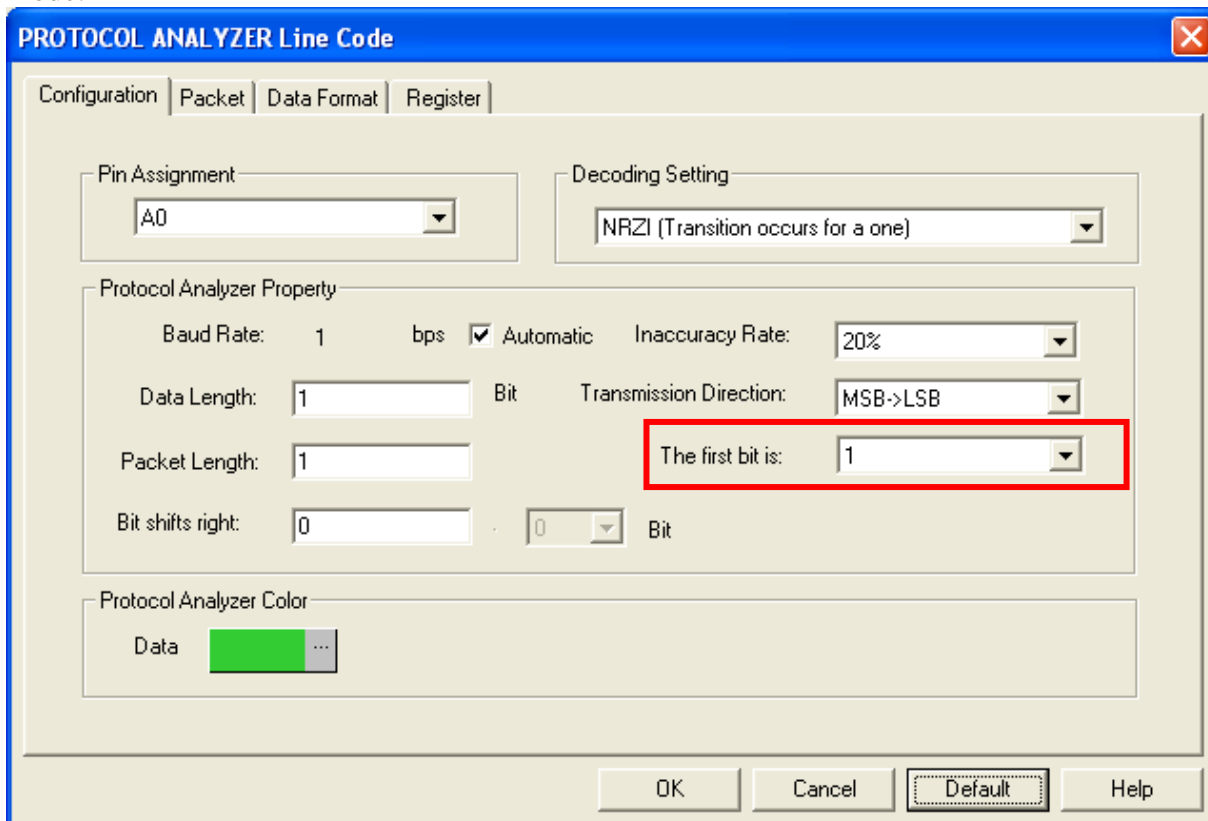
Bit shifts right: 0 Bit

Protocol Analyzer Color

Data 

OK Cancel Default Help

STEP 11. Set the fist bit under NRZI (Transition occurs for a one) or NRZI (Transition occurs for a zero) mode.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property


Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit Transmission Direction: MSB->LSB

Packet Length: 1 **The first bit is: 1**

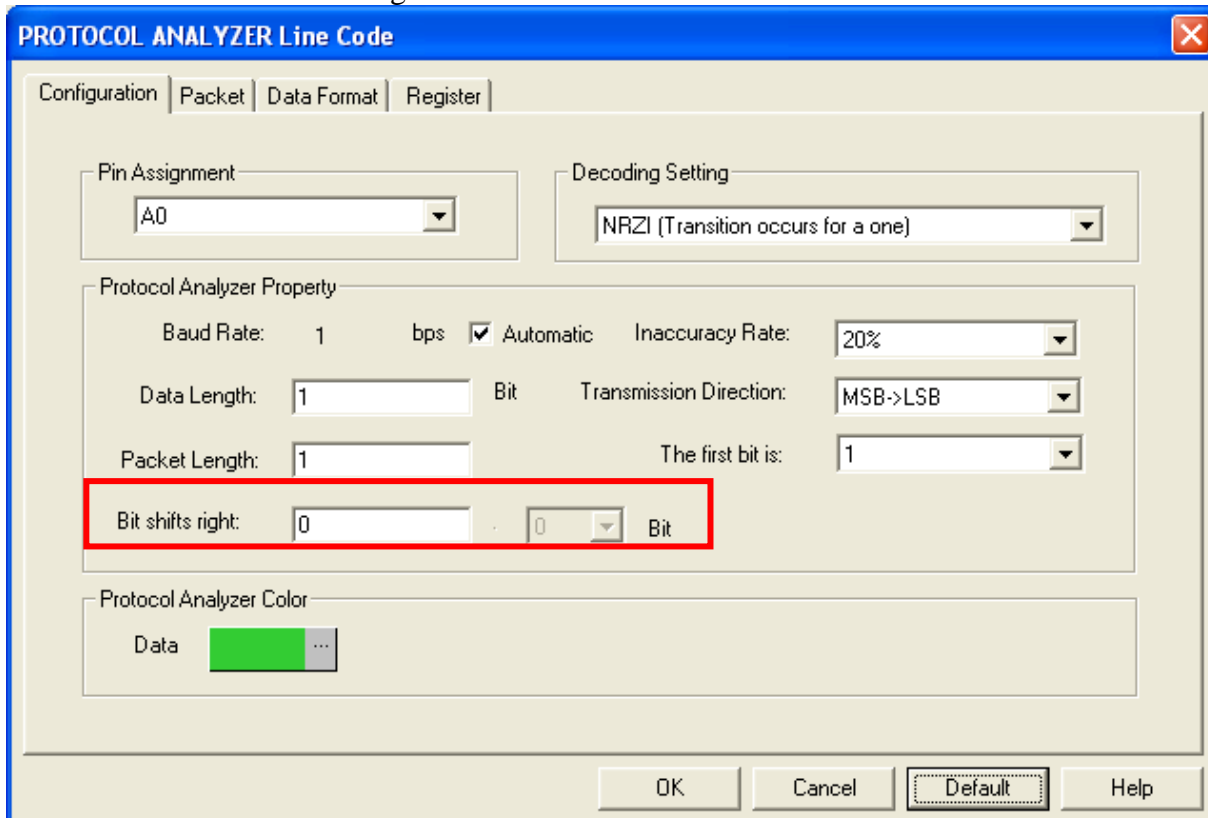
Bit shifts right: 0 Bit: 0

Protocol Analyzer Color

Data 

OK Cancel Default Help

STEP 12. Set the Bit shirts right.



PROTOCOL ANALYZER Line Code

Configuration | Packet | Data Format | Register

Pin Assignment: A0

Decoding Setting: NRZI (Transition occurs for a one)

Protocol Analyzer Property


Baud Rate: 1 bps ☒ Automatic Inaccuracy Rate: 20%

Data Length: 1 Bit Transmission Direction: MSB->LSB

Packet Length: 1 The first bit is: 1

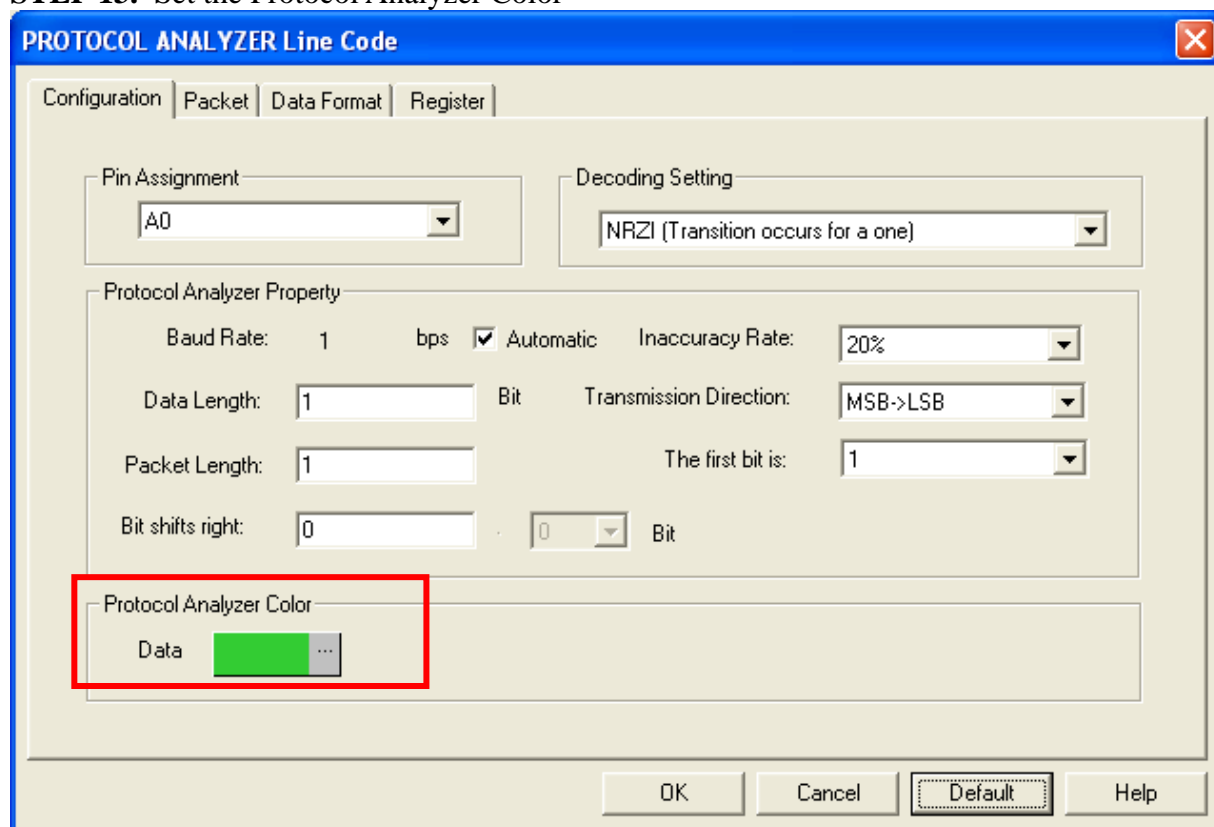
Bit shifts right: 0 Bit: 0

Protocol Analyzer Color

Data 

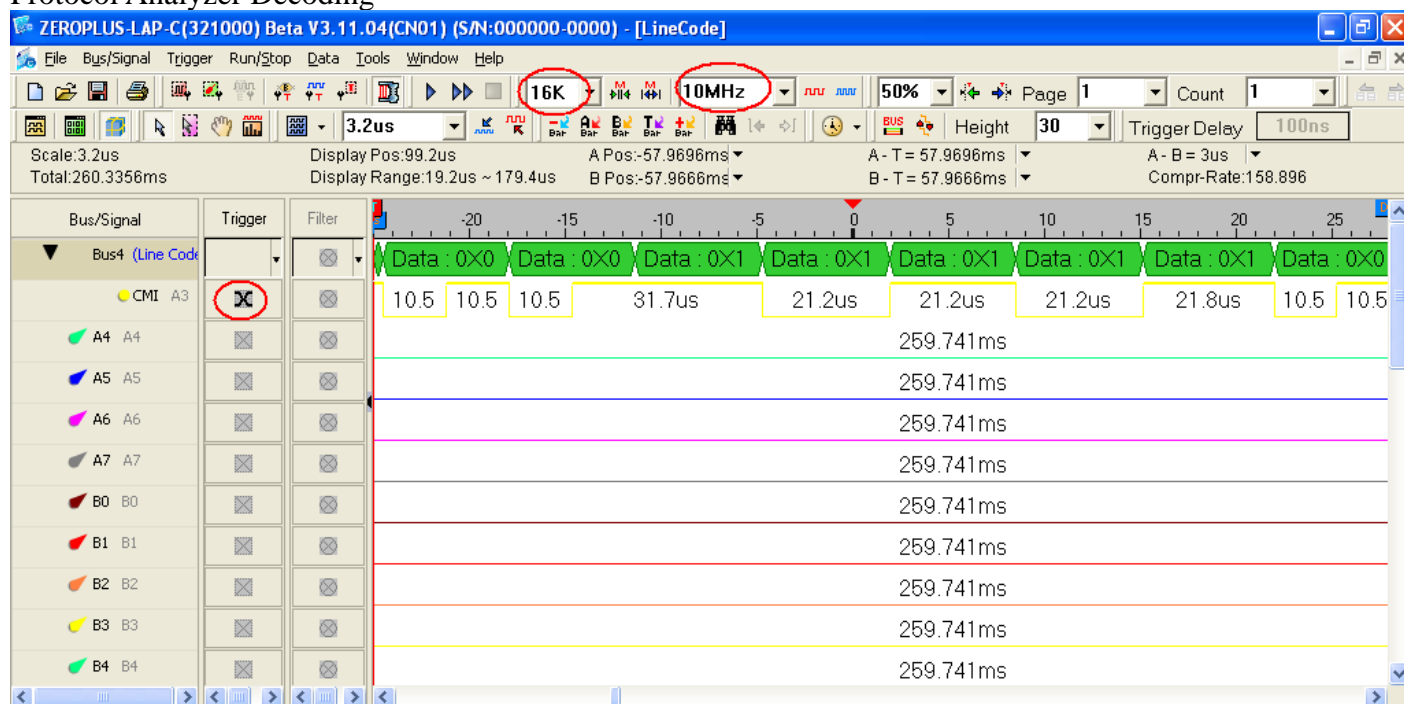
OK Cancel Default Help

STEP 13. Set the Protocol Analyzer Color



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 16K and the sampling frequency is 10MHz (the sampling frequency should be more than tens times higher than the signal to be tested).

Protocol Analyzer Decoding





Packet List

