

# SPECIFICATION

**MODEL: Serial Wire Debug(SWD)**

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

**VERSION:** V1.01

Approver		Check	Design
GM	PM		

Customer Confirm

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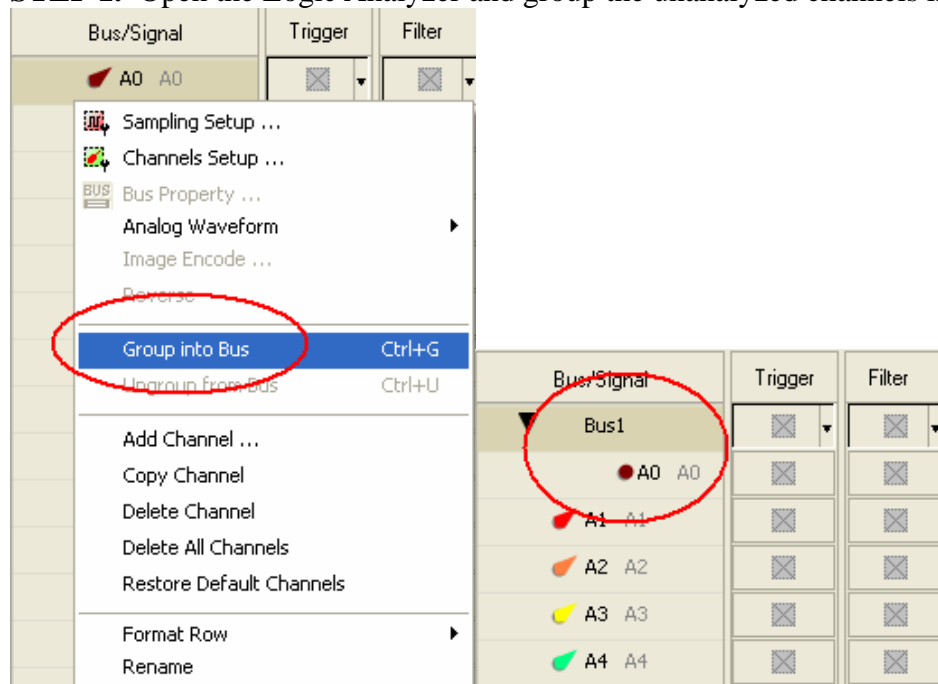
# 1 Software Register

Please register the software as the following steps:

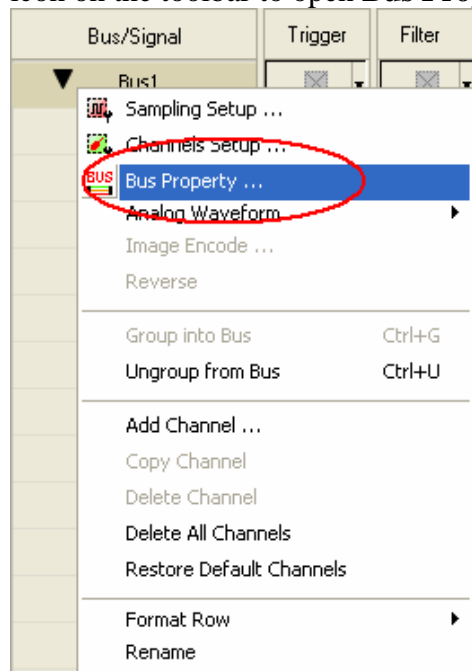
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

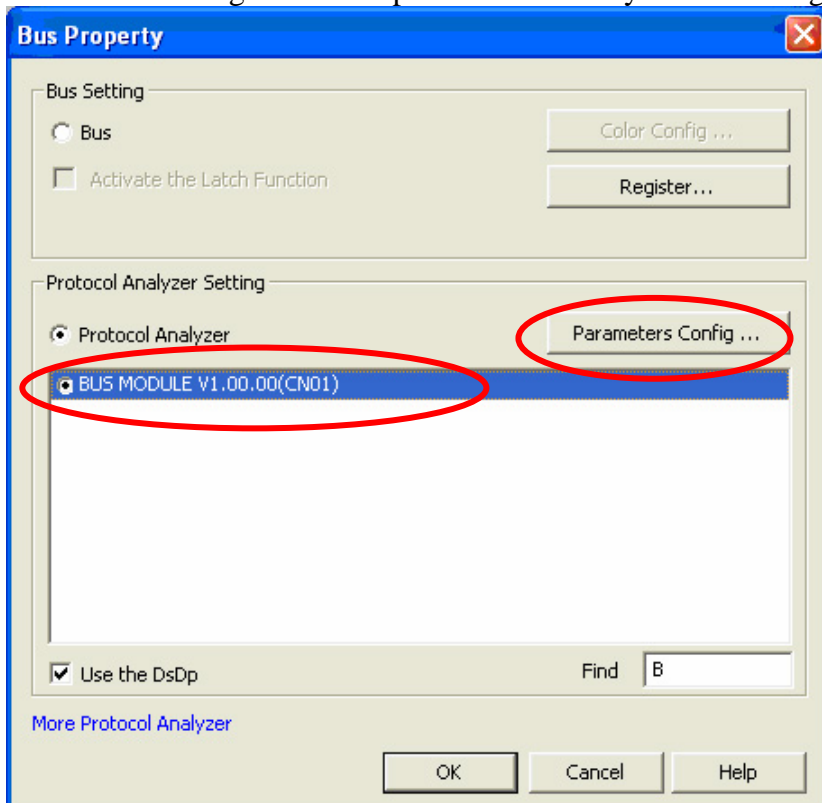
**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key**.



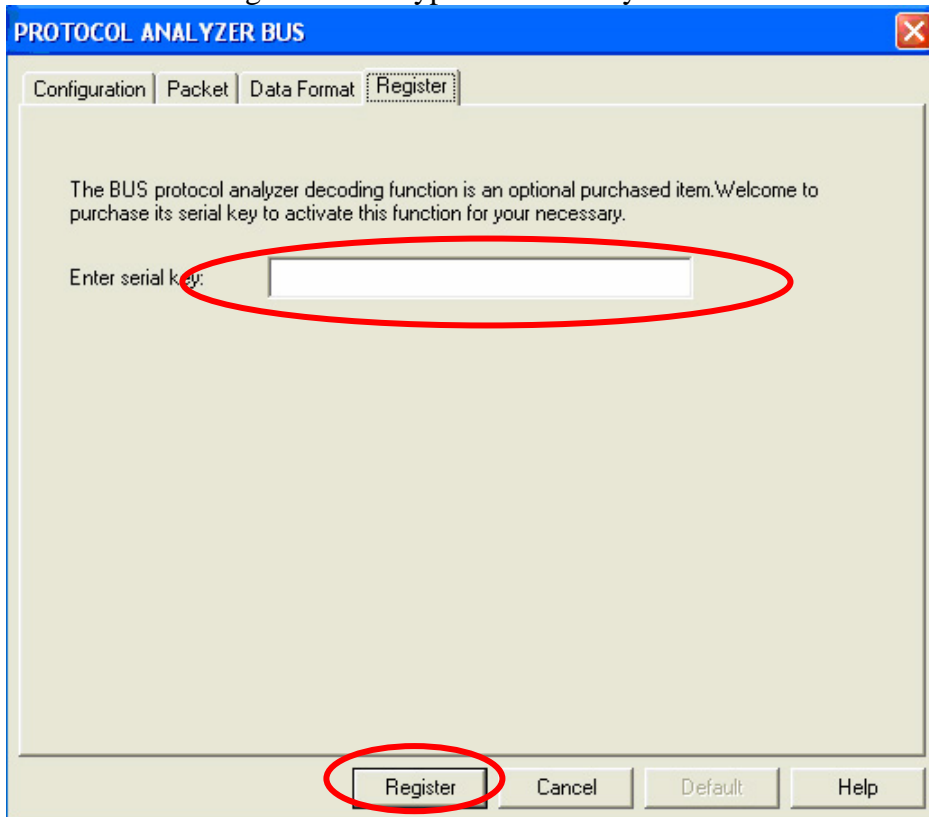
**STEP 2.** Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



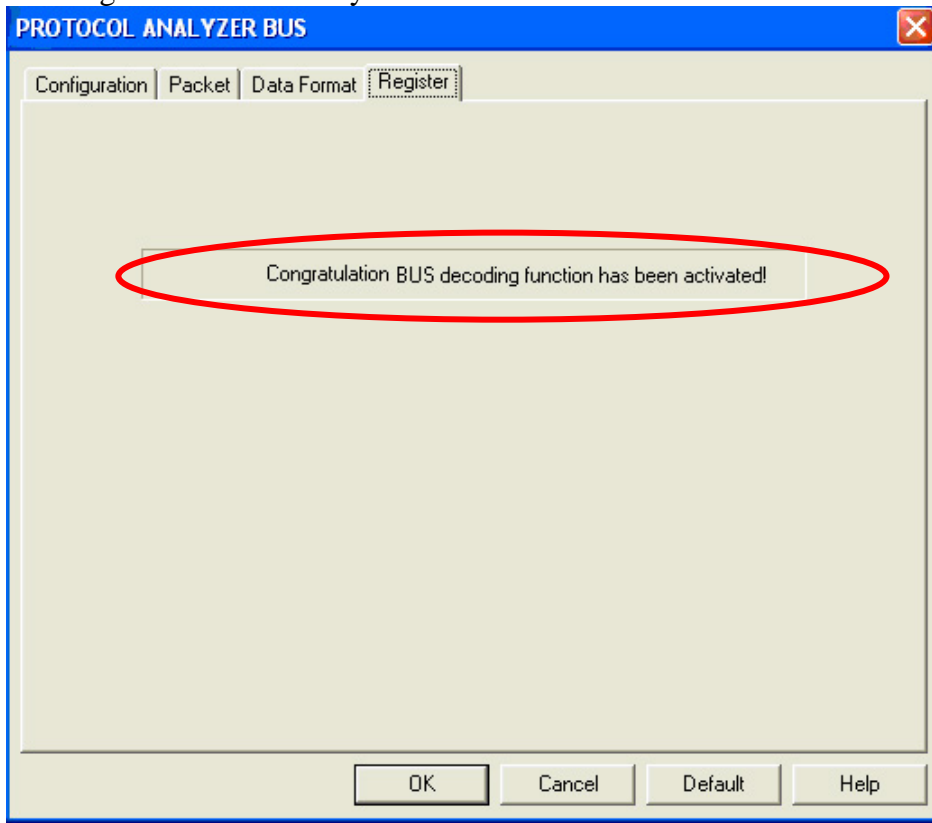
**STEP 3.** Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 (CN01)**. Next click Parameters Configuration to open Protocol Analyzer Bus dialog box.



**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.

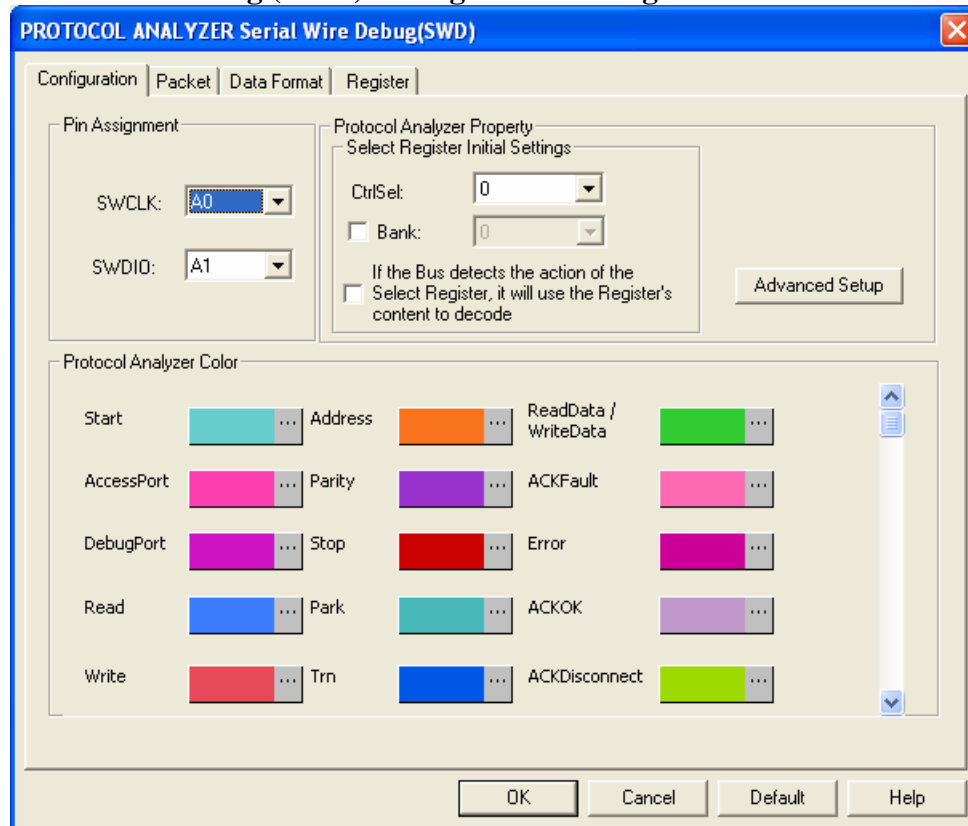


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## 2 User Interface

Please refer to the below images to do settings of **Serial Wire Debug (SWD)** module.

### Serial Wire Debug (SWD) Configuration dialog box



#### Pin Assignment:

Serial Wire Debug(SWD) needs at least 2 lines to decode. SWCLK is A0 and SWDIO is A1 by default.

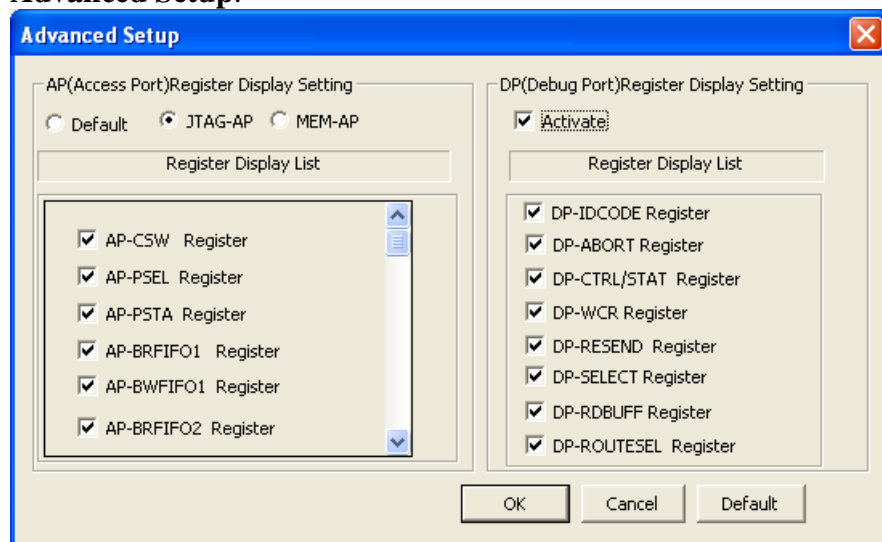
#### Protocol Analyzer Property:

CtrlSel: 0 and 1 can be selected. It is 0 by default.

Bank: 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 can be selected. It is not activated by default.

If the Bus detects the action of the Select Register, it will use the Register's content to decode: If this option is activated, the Bus will use the Register's content to decode after it detects the action of the Select Register.

## Advanced Setup:



Users can set the AP Register Display and DP Register Display.

**AP(Access Port) Register Display:** Users can set it to Default, JTAG-AP or MEM-AP.

If “Default” is selected, the Register Display List is unavailable.

If “JTAG-AP” is selected, in the Register Display List users can set AP-CSW Register, AP-PSEL Register, AP-PSTA Register, AP-BRFIFO1 Register, AP-BWFIFO1 Register, AP-BRFIFO2 Register, AP-BWFIFO2 Register, AP-BRFIFO3 Register, AP-BWFIFO3 Register, AP-BRFIFO4 Register, AP-BWFIFO5 Register and AP-IDR Register.

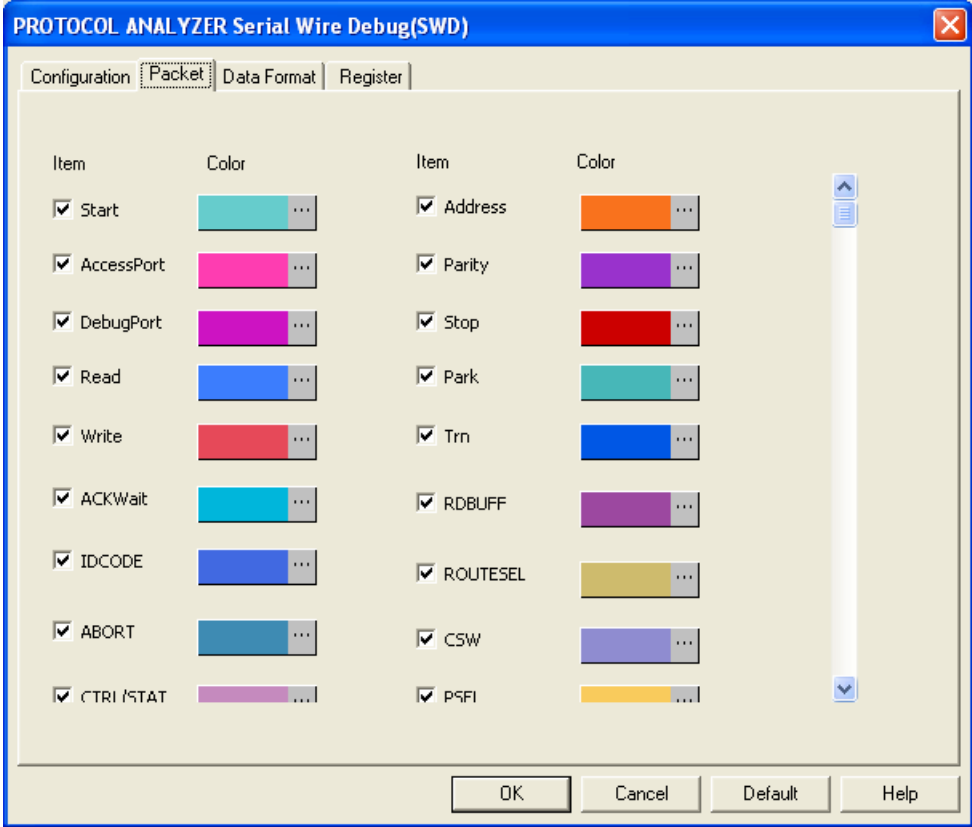
If “MEM-AP” is selected, in the Register Display List users can set AP-CSW Register, AP-IDR Register, AP-TAR Register, AP-DRW Register, AP-BD0 Register, AP-BD1 Register, AP-BD2 Register, AP-BD3 Register, AP-CFG Register and AP-BASE Register.

**DP(Debug Port) Register Display:** If it is activated, in the Register Display List users can set DP-IDCODE Register, DP-ABORT Register, DP-CTRL/STAT Register, DP-WCR Register, DP-RESEND Register, DP-SELECT Register, DP-RDBUFF Register and DP-ROUTESEL Register.

## Protocol Analyzer Color:

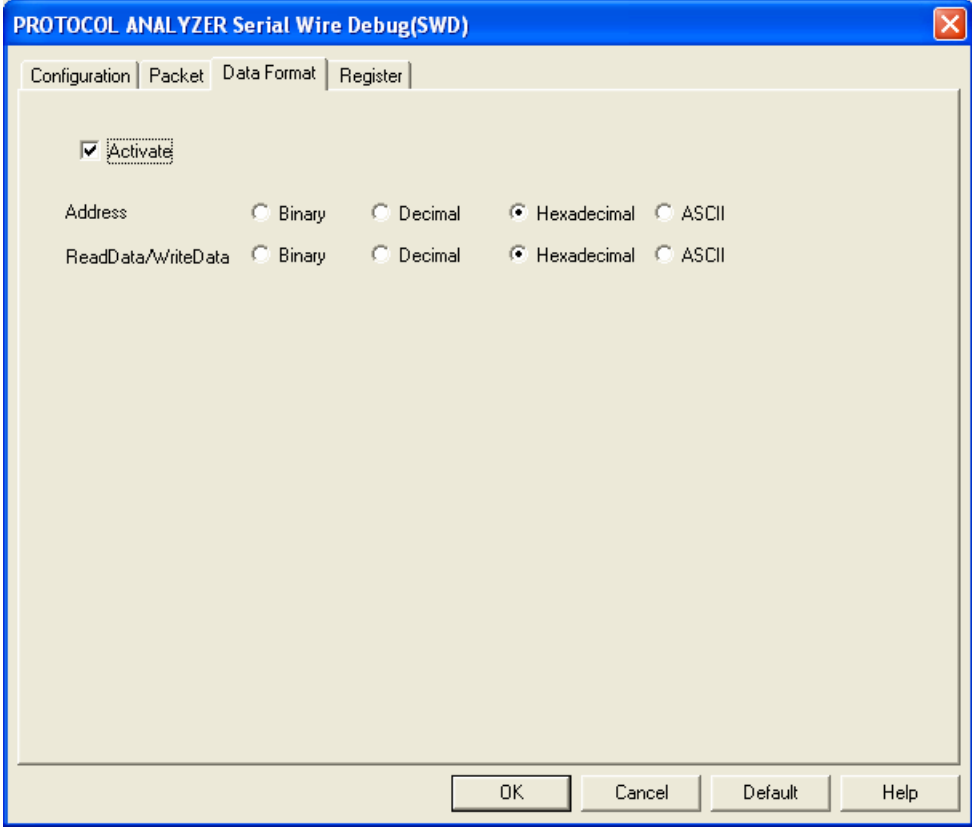
The color can be varied by users.

Serial Wire Debug (SWD) Packet dialog box



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

Serial Wire Debug (SWD) Data Format dialog box



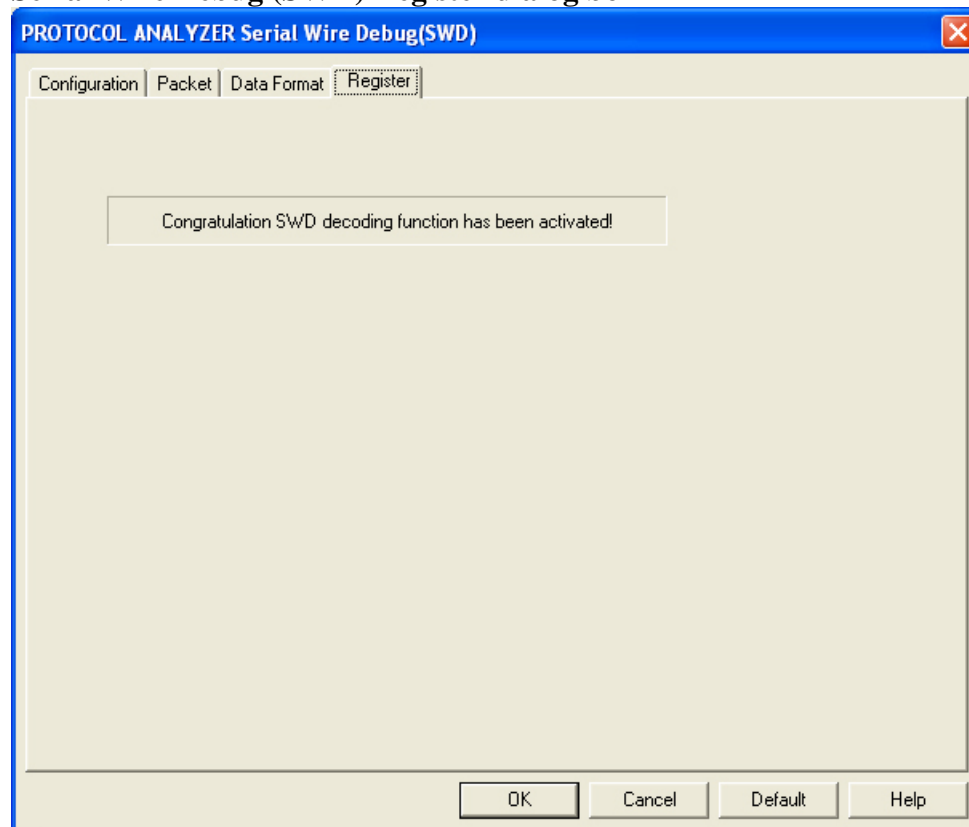
Users can set the Data Format of Address and ReadData/WriteData as their requirements. When selecting the option Activate, the Address and ReadData/WriteData format are decided by the settings in the Protocol Analyzer; when not selecting the option Activate, the data format is decided by the settings in the main



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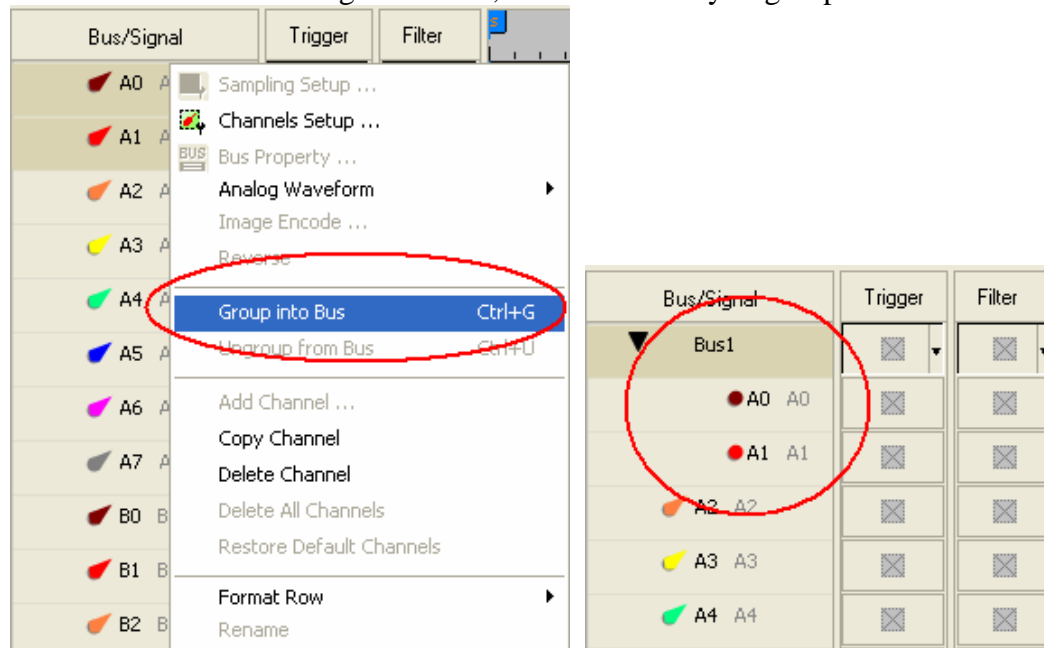
program.

### Serial Wire Debug (SWD) Register dialog box

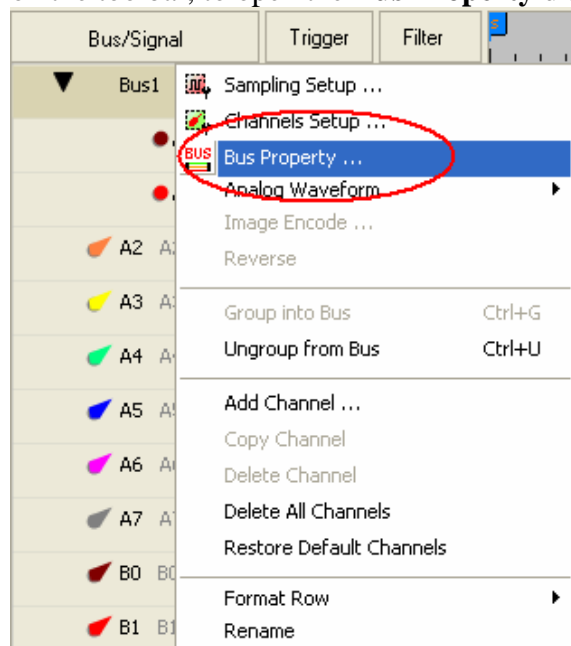


### 3 Operating Instructions

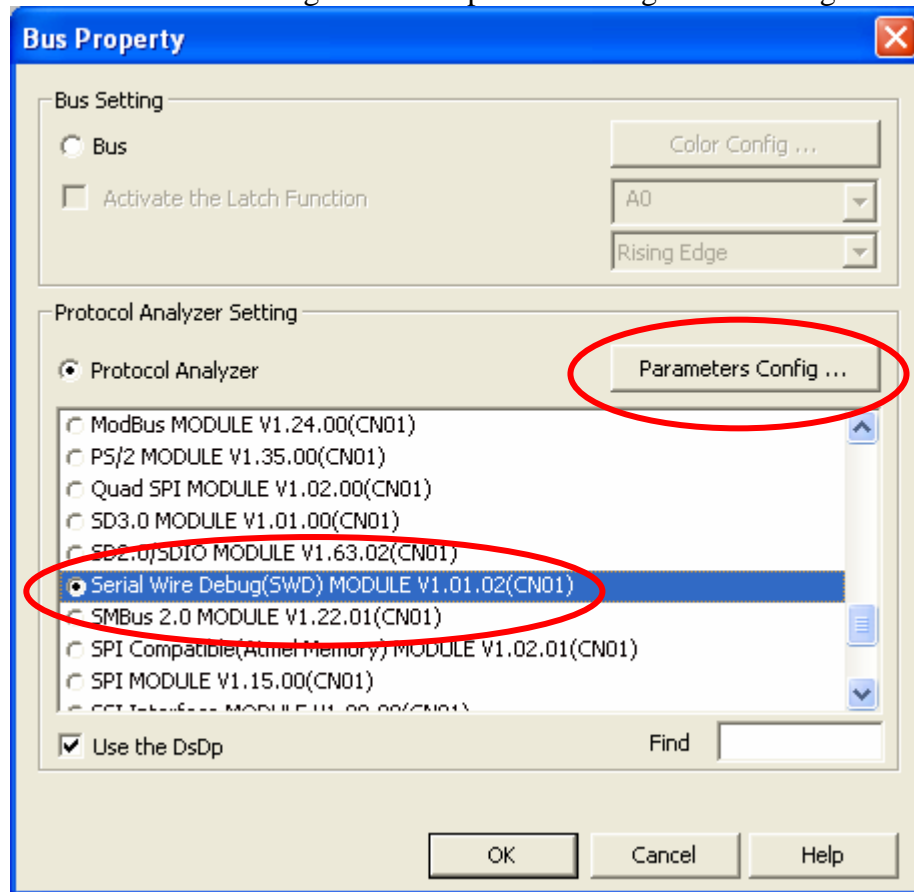
**STEP 1.** Group A0-A1 into **Bus1** by pressing the **Right Key** on the mouse. Serial Wire Debug(SWD) needs two channels to decode signal at least, so it is necessary to group two or more channels into the Bus.



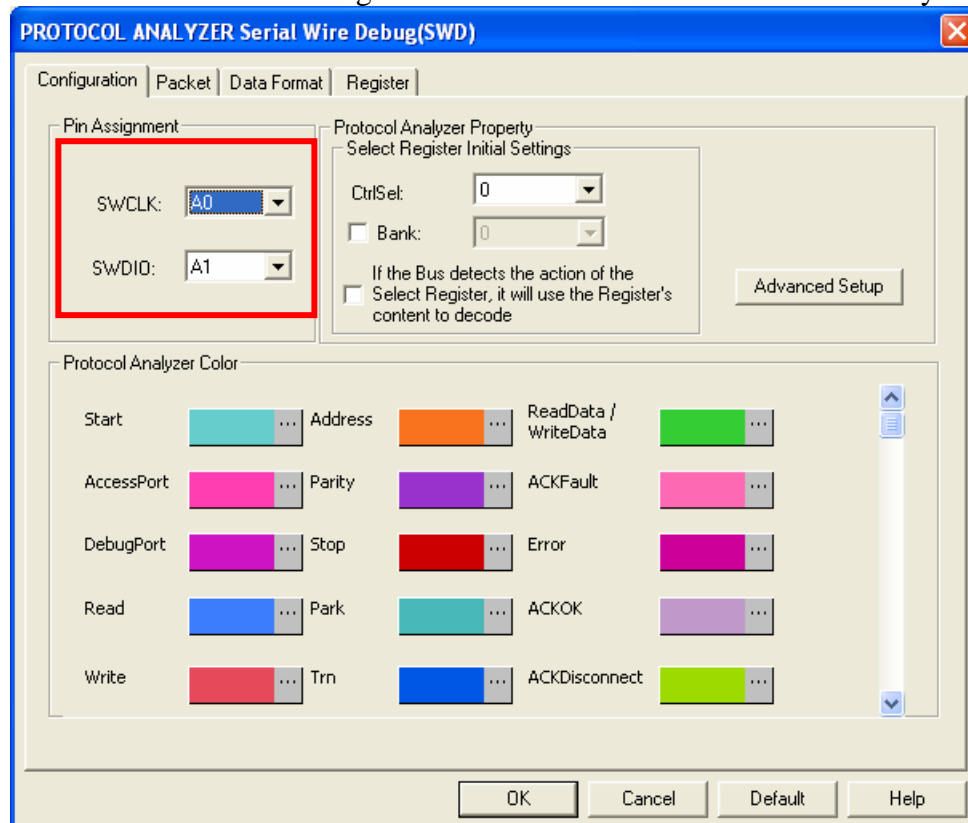
**STEP 2.** Select **Bus1**, press right key and select **Bus Property** from the popped menu, or click the **Bus** icon on the toolbar, to open the **Bus Property** dialog box.



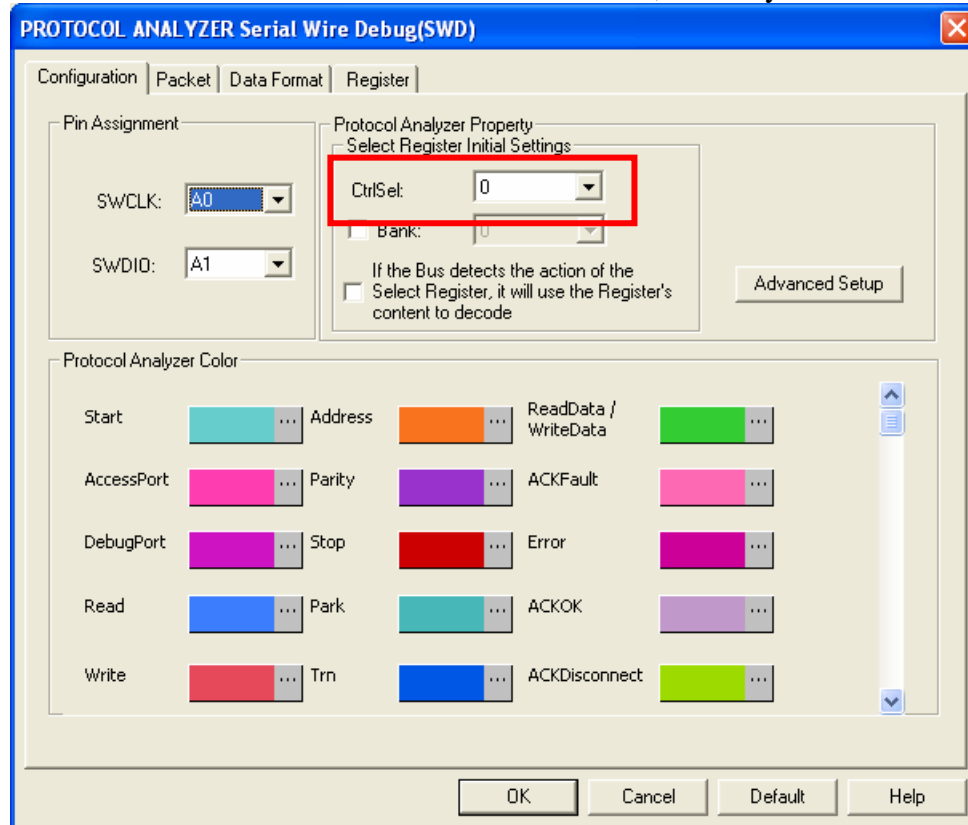
**STEP 3.** Select Protocol Analyzer, and select Serial Wire Debug(SWD) MODULE V1.01.02 (CN01). Then click Parameters Configuration to open the Configuration dialog box.



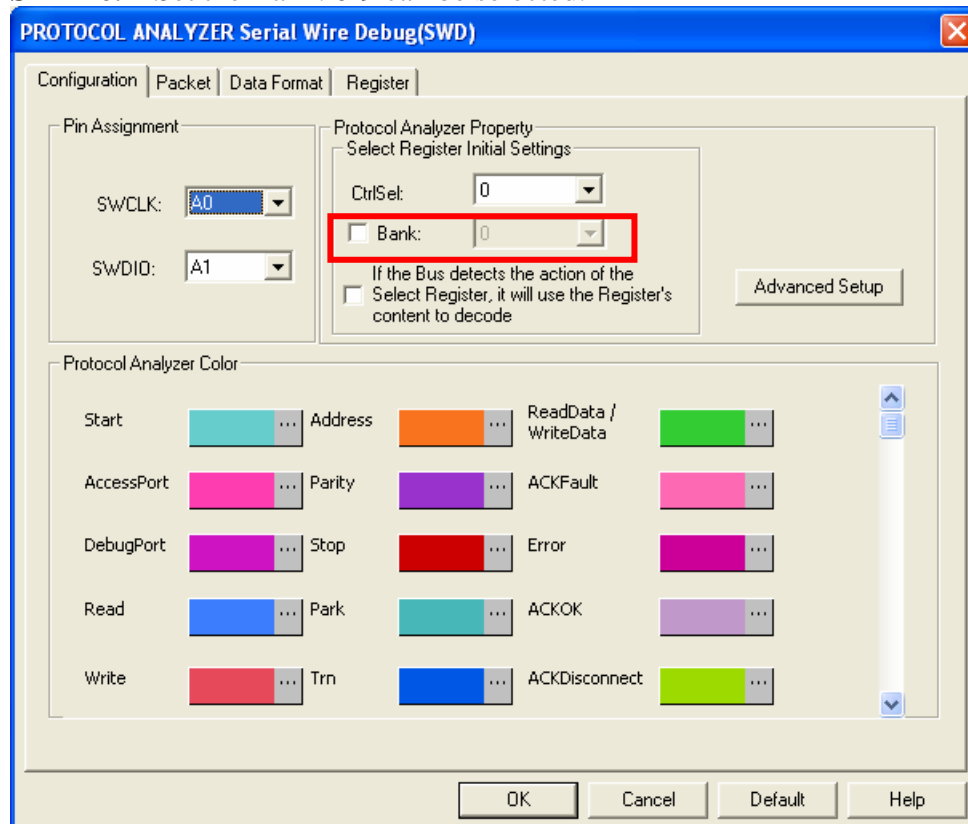
**STEP 4.** Set the Pin Assignment. SWCLK is A0 and SWDIO is A1 by default.



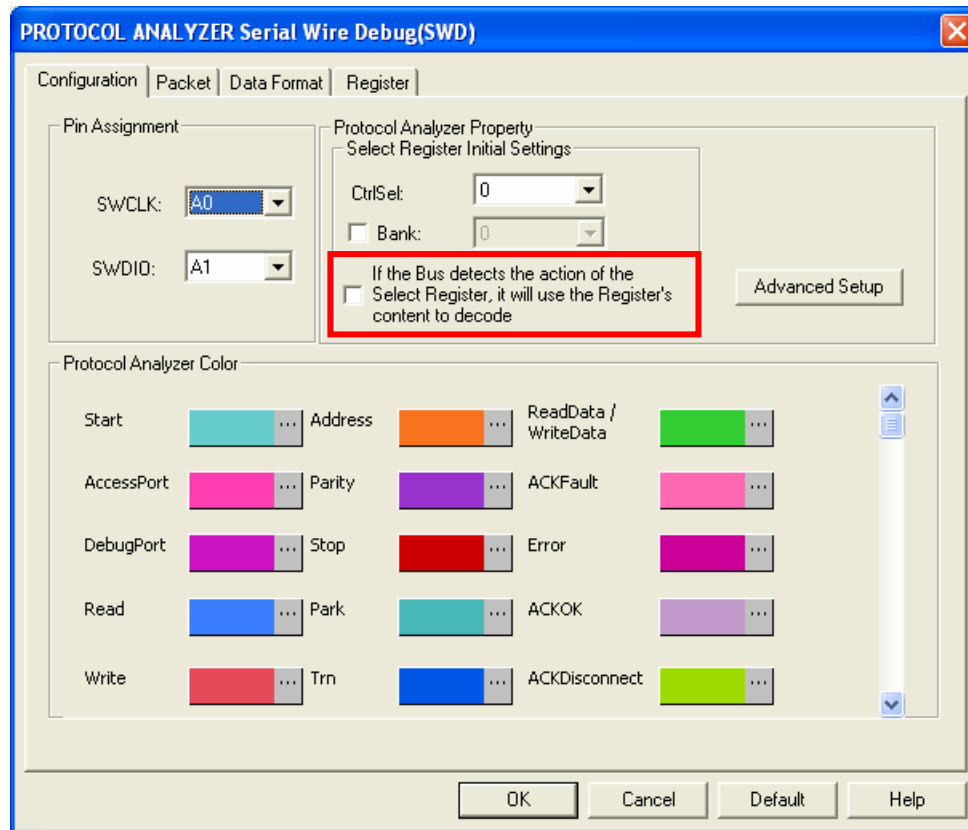
**STEP 5.** Set the CtrlSel. 0 and 1 can be selected; it is 0 by default.



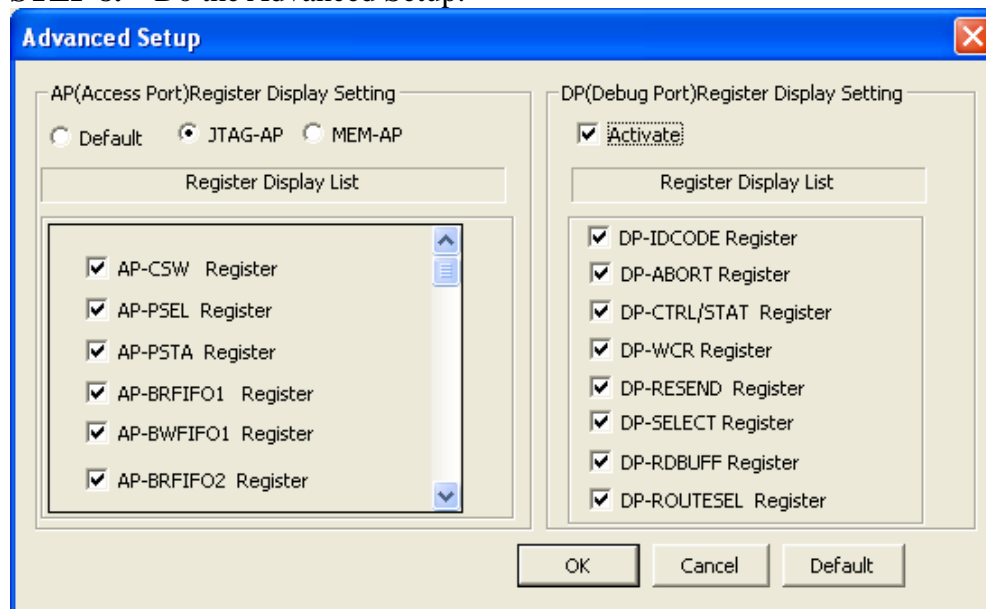
**STEP 6.** Set the Bank. 0-9 can be selected.



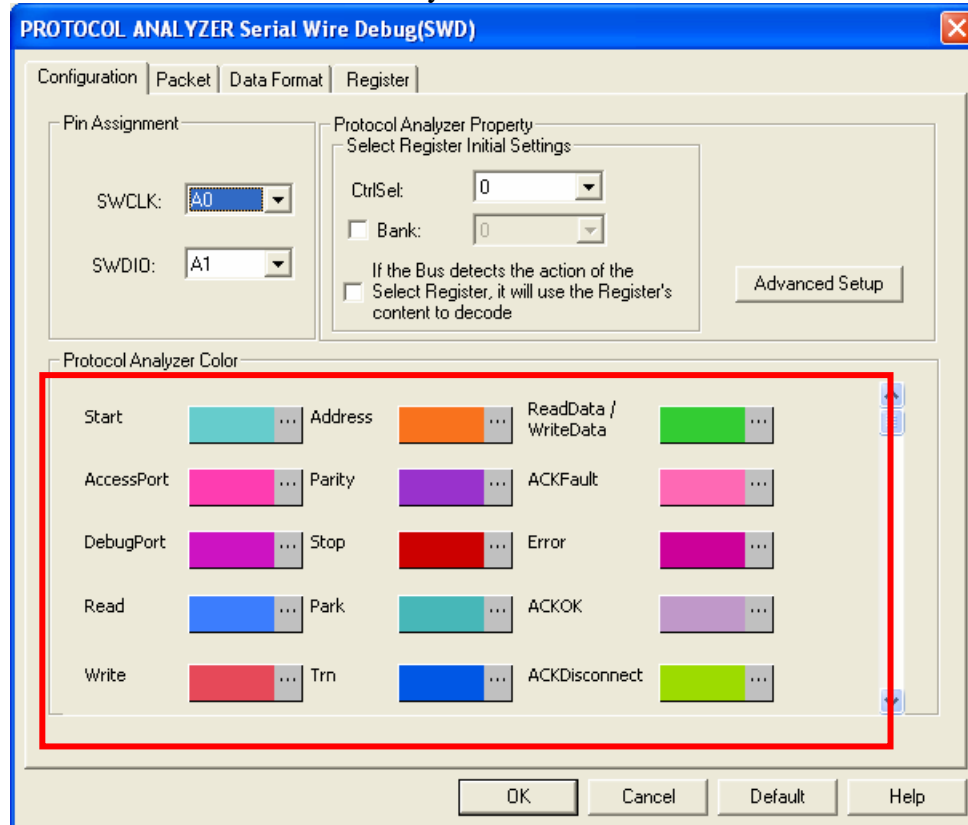
**STEP 7.** Select the option “If the Bus detects the action of the Select Register, it will use the Register’s content to decode”.



**STEP 8.** Do the Advanced Setup.

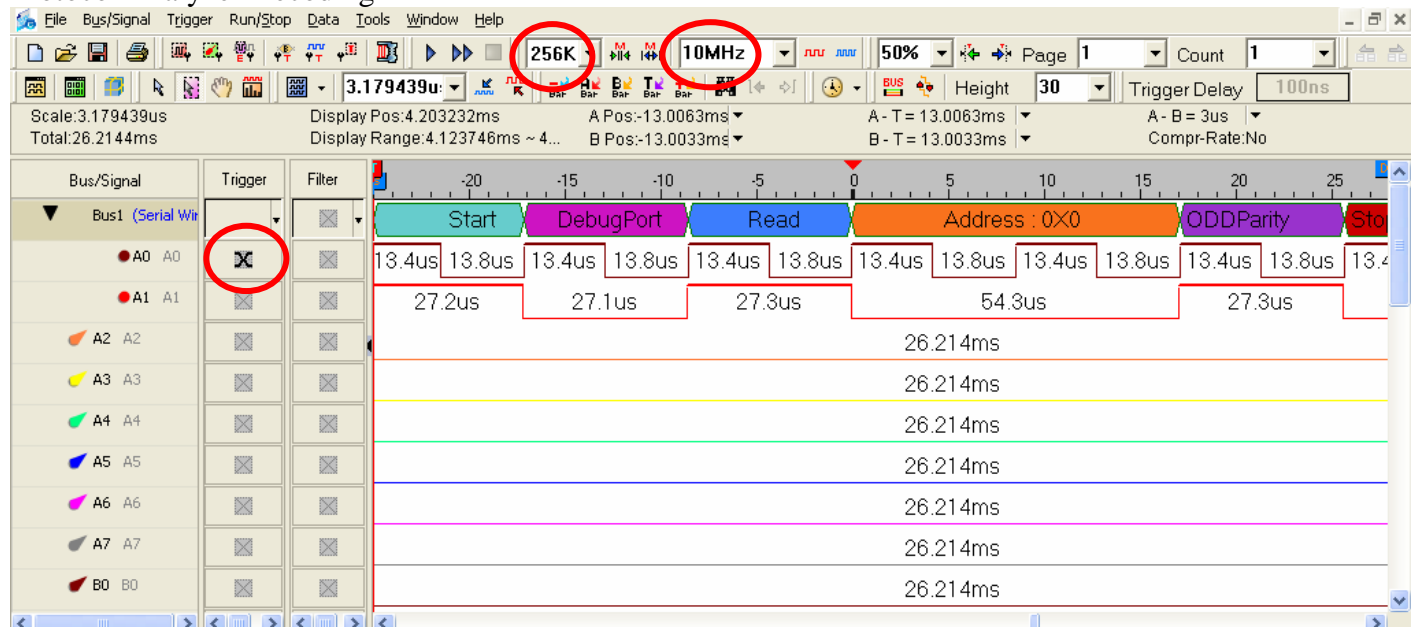


## STEP 9. Set the Protocol Analyzer Color.



**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 256K and the sampling frequency is 10MHz (the sampling frequency should be more than four times higher than the signal to be tested).

## Protocol Analyzer Decoding



Packet List

