

SPECIFICATION

MODEL: B09012-LAP-PS/2-M

PART NO: _____

VERSION: V1.35

Approver		Check	Design
GM	PM		

Customer Confirm

Content

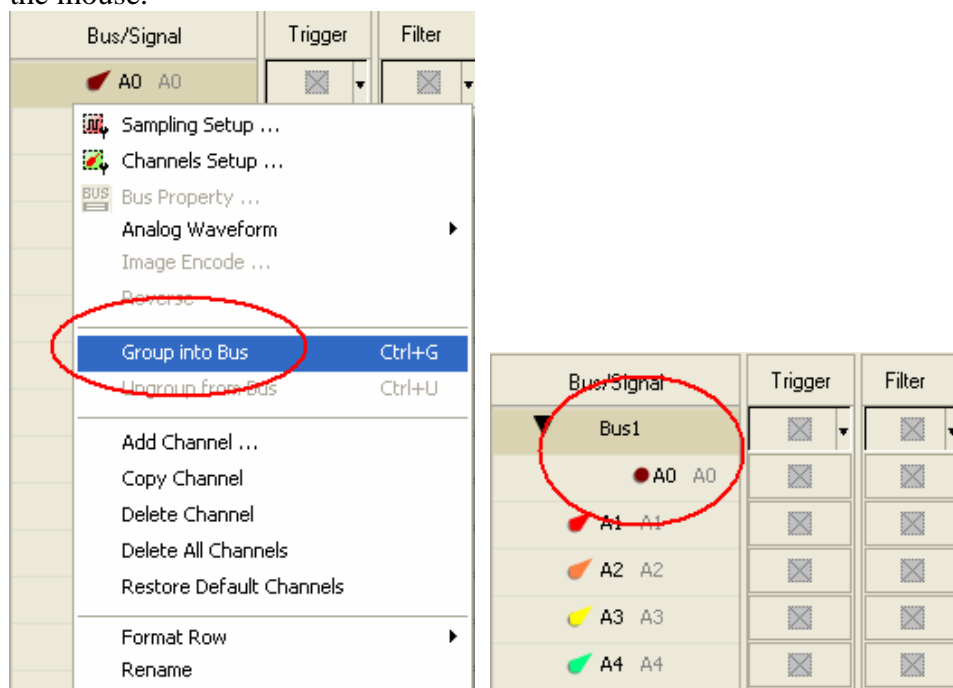
1	Software Register	4
	Please register the software as the following steps:	4
※	Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS..	4
※	Remark2: We won't 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.....	4
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1 Software Register

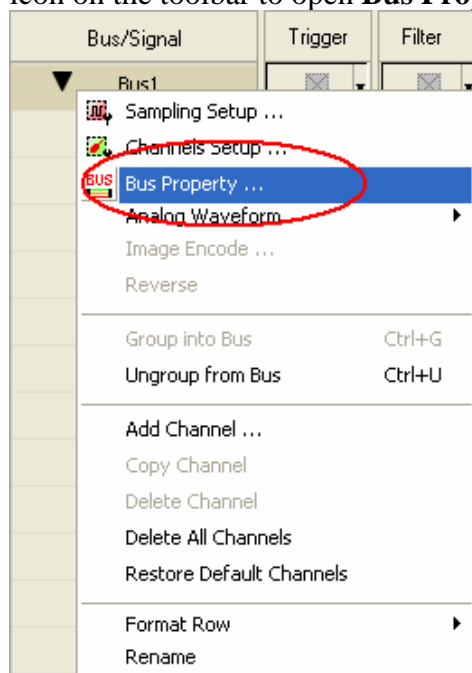
Please register the software as the following steps:

- ※ 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.

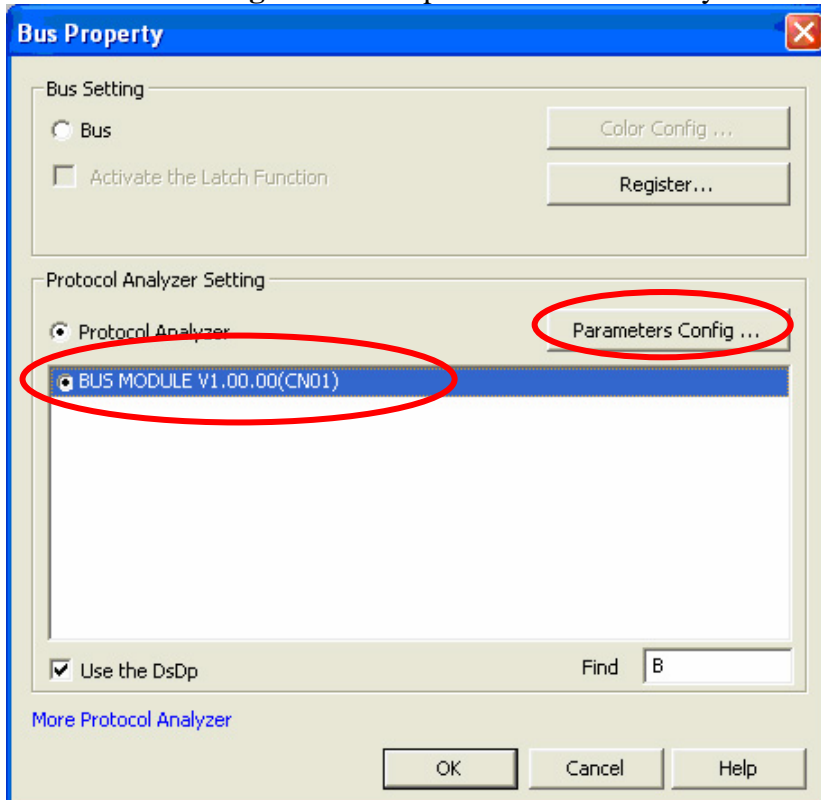
STEP 1. Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.



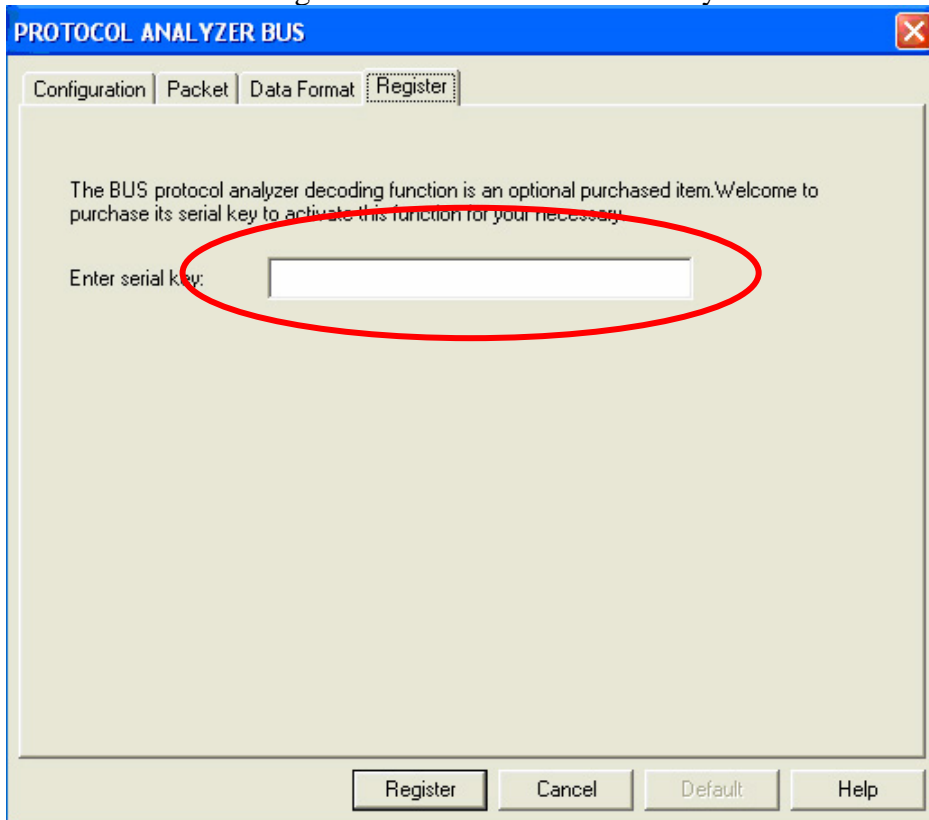
STEP 2. Select **Bus1**, and press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



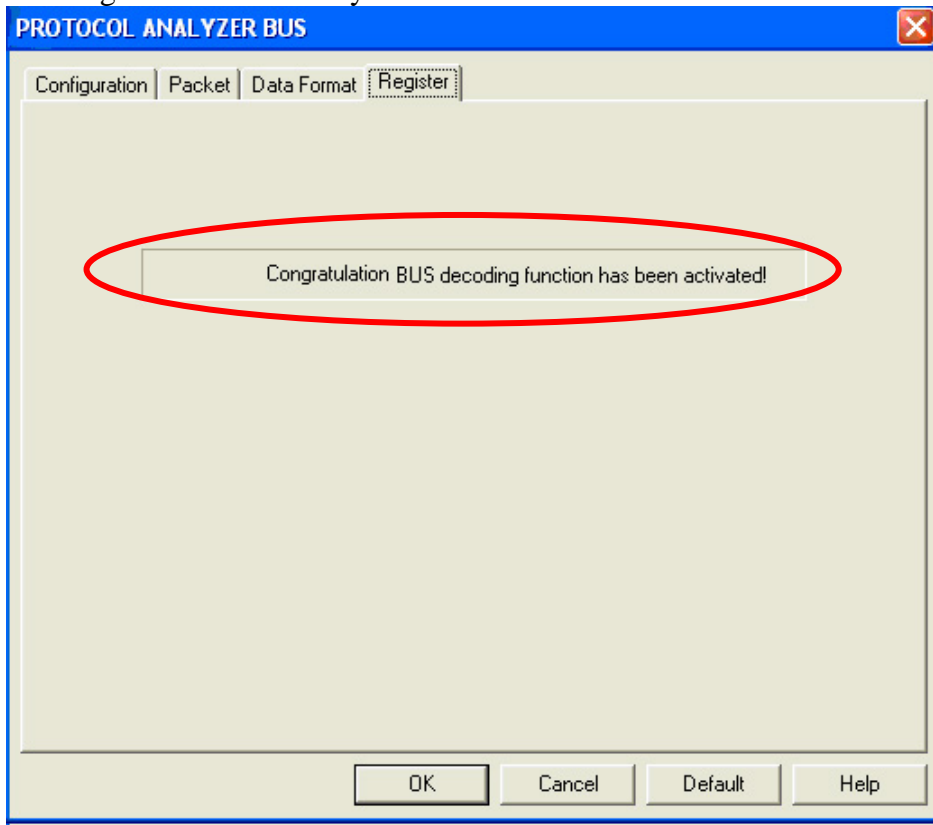
STEP 3. Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 (CN01)**. Next click **Parameters Configuration** to open the Protocol Analyzer Bus dialog box.



STEP 4. Click the Register tab and enter the serial key of the **BUS**. Then click **Register**.



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



2 User Interface

Please refer to below images to select options of setting **PS/2** Module.

PS/2 Configuration Dialog Box

PROTOCOL ANALYZER PS/2

Configuration | Timing | Packet | Data Format | Register

Pin Assignment

CLK: A0 DATA: A1

Protocol Analyzer Property

Sampling Mode of PC To Device: Rising Transmission Direction: LSB->MSB

Sampling Mode of Device To PC: Falling ☐ Device Decoding: Mouse

Max CLK Width: 50 us

Protocol Analyzer Color

Start	Data	Parity	Stop	ACK
NACK	Overflow	XY	Press	Release

OK Cancel Default Help

Pin Assignment:

CLK: It is the Clock channel, the default is A0.

DATA: It is the Data channel, the default is A1.

Protocol Analyzer Property:

Sampling Mode of PC To Device: Set the Sampling Mode to Rising or Falling, the default is Rising.

Sampling Mode of Device To PC: Set the Sampling Mode to Rising or Falling, the default is Falling.

Max CLK Width: Set the Max CLK Width in the range from 20 to 100us, the default is 50us.

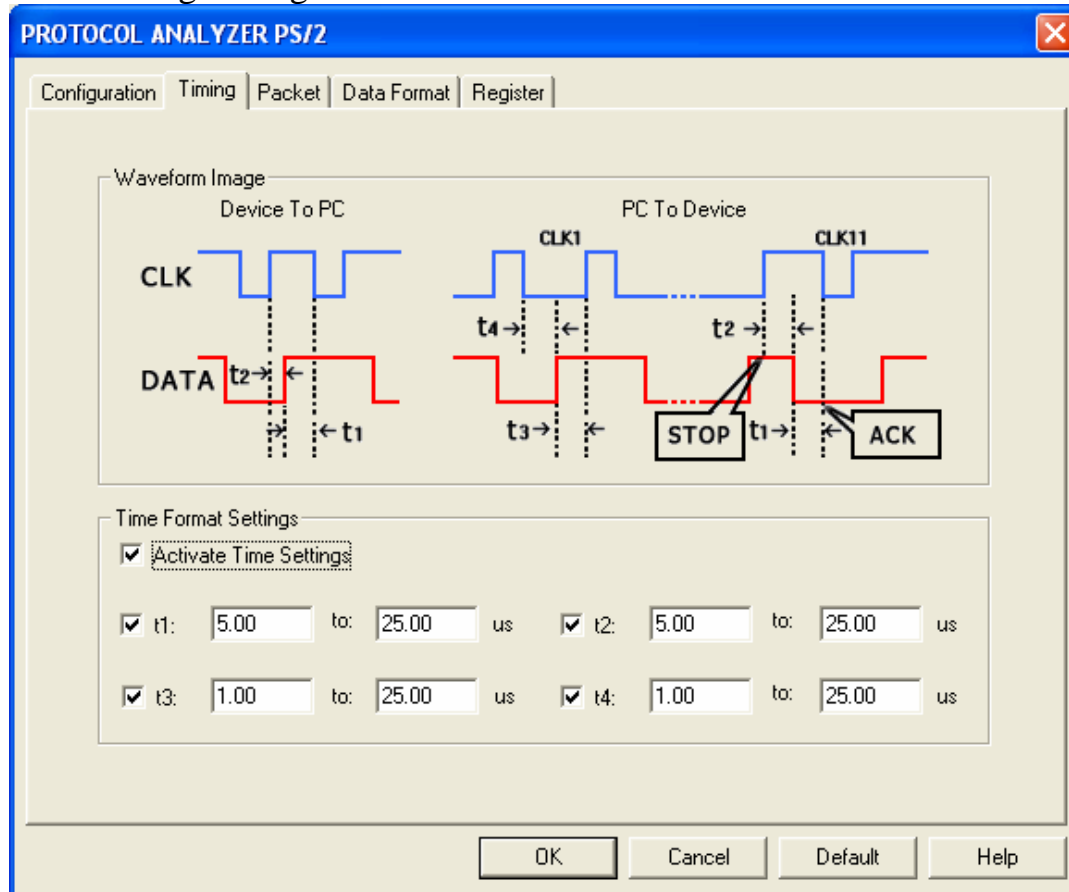
Transmission Direction: Set the Transmission Direction to LSB->MSB or MSB->LSB, the default is LSB->MSB.

Device Decoding: Set the Device Decoding to Mouse or Keyboard.

Protocol Analyzer Color:

The Protocol Analyzer Color can be varied by users.

PS/2 Timing Dialog Box



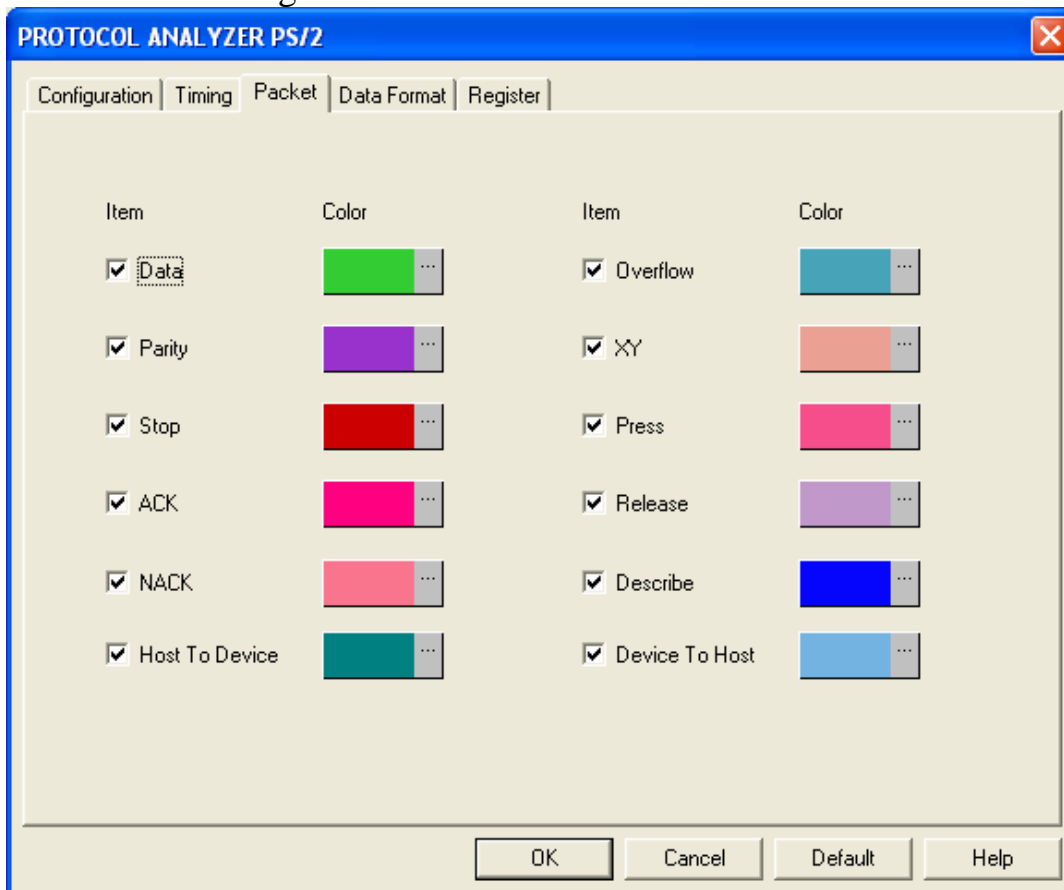
Waveform Image:

Describe for which position the set time is.

Time Format Settings:

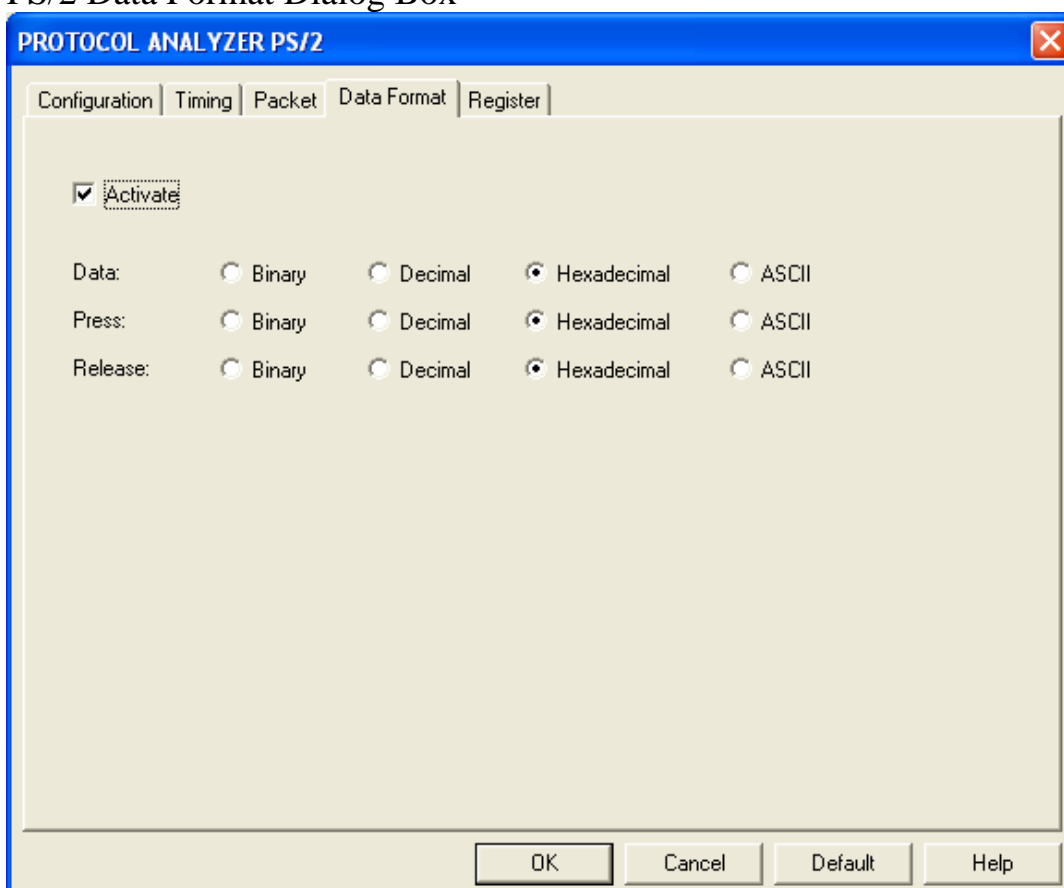
It can set the time after activating time settings. The set time will be taken as the condition of judging decoding. For example, decoding START, firstly judge whether the condition of START is set up or not, then judge whether t1 (It is from the falling edge of CLK to the either edge of DATA) and t2 (It is from the rising edge of CLK to the either edge of DATA) are in the range of time settings of t1 and t2. When both of the two conditions are coincident, the packet segment of START can come into existence. The conditions of t3 and t4 are the same with that of the t1 and t2.

PS/2 Packet Dialog Box



In the Packet dialog box, users can set the items to be displayed and colors as users' requirements.

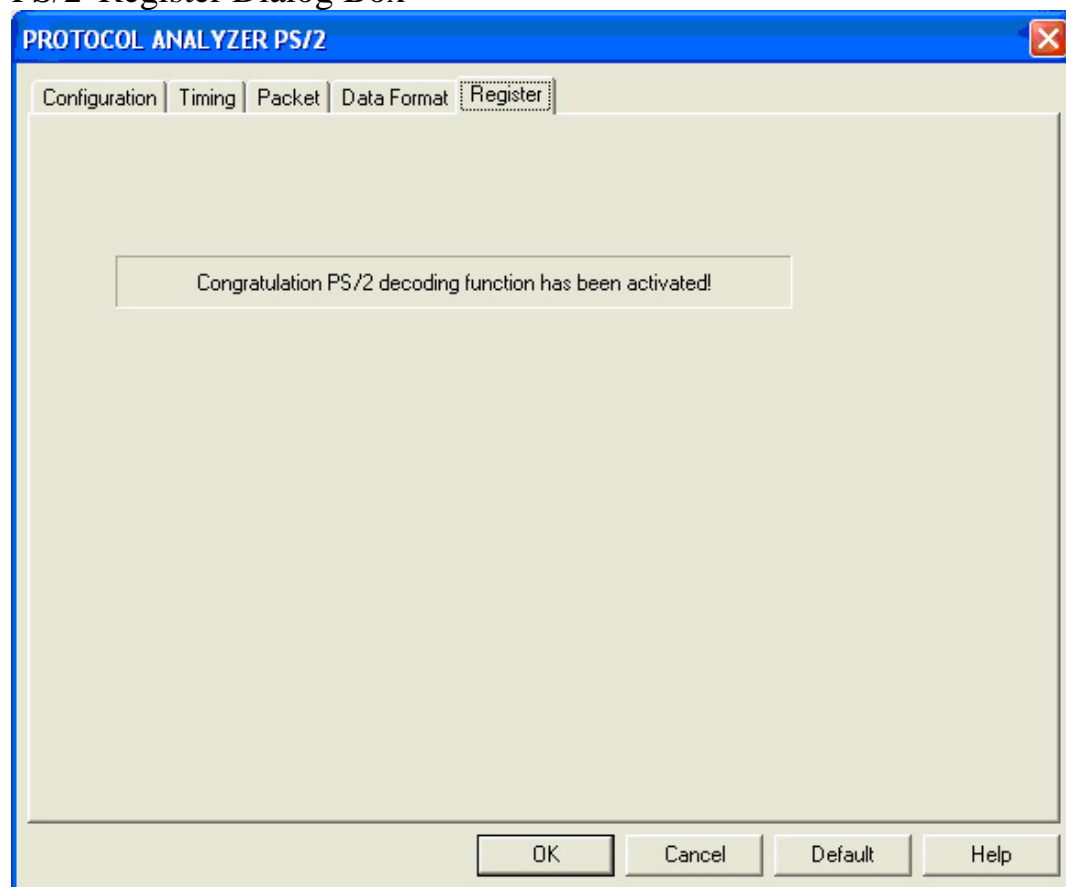
PS/2 Data Format Dialog Box



Users can set the Data Format of the Data, Press and Release as their requirements. When selecting the option,

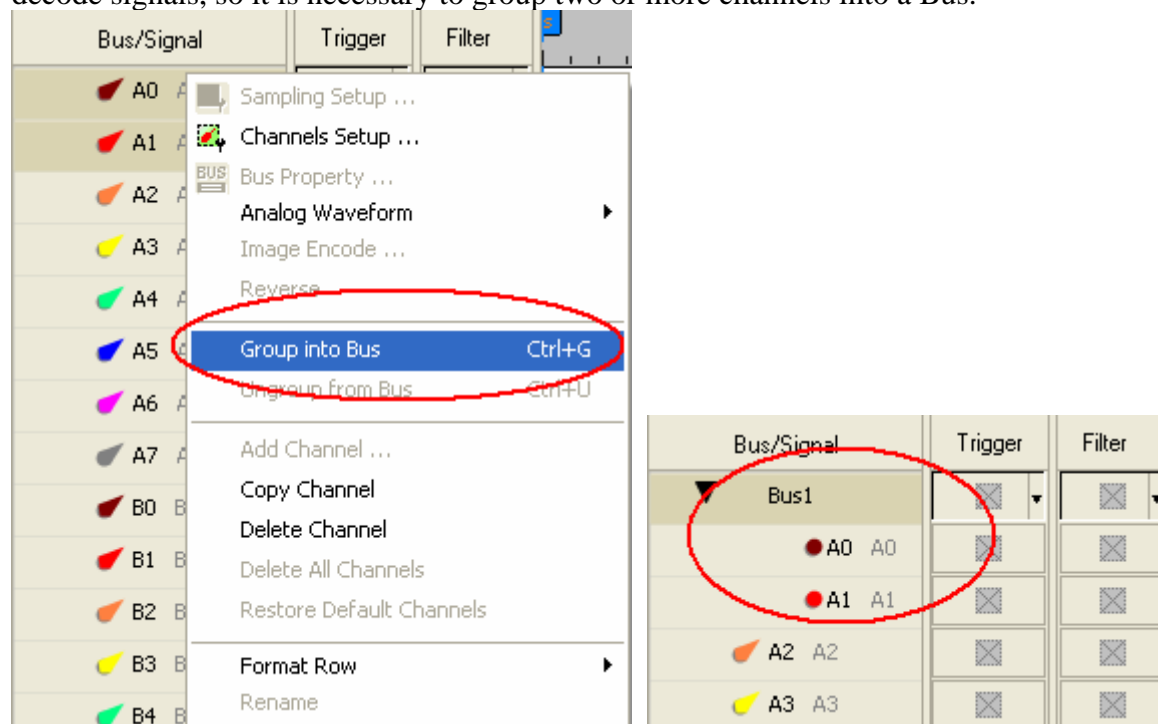
Activate, the data formats are decided by the settings in the Protocol Analyzer; when not selecting the option, Activate, the data formats are decided by the settings in the main program.

PS/2 Register Dialog Box

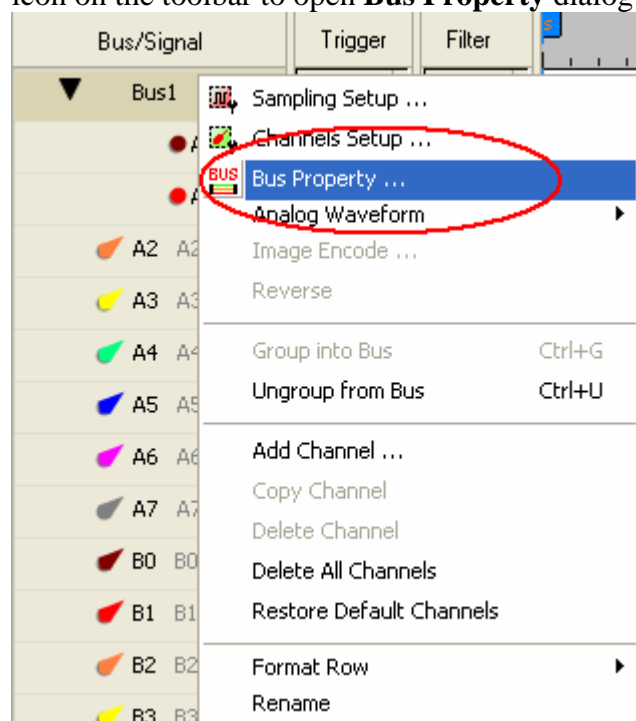


3 Operating Instructions

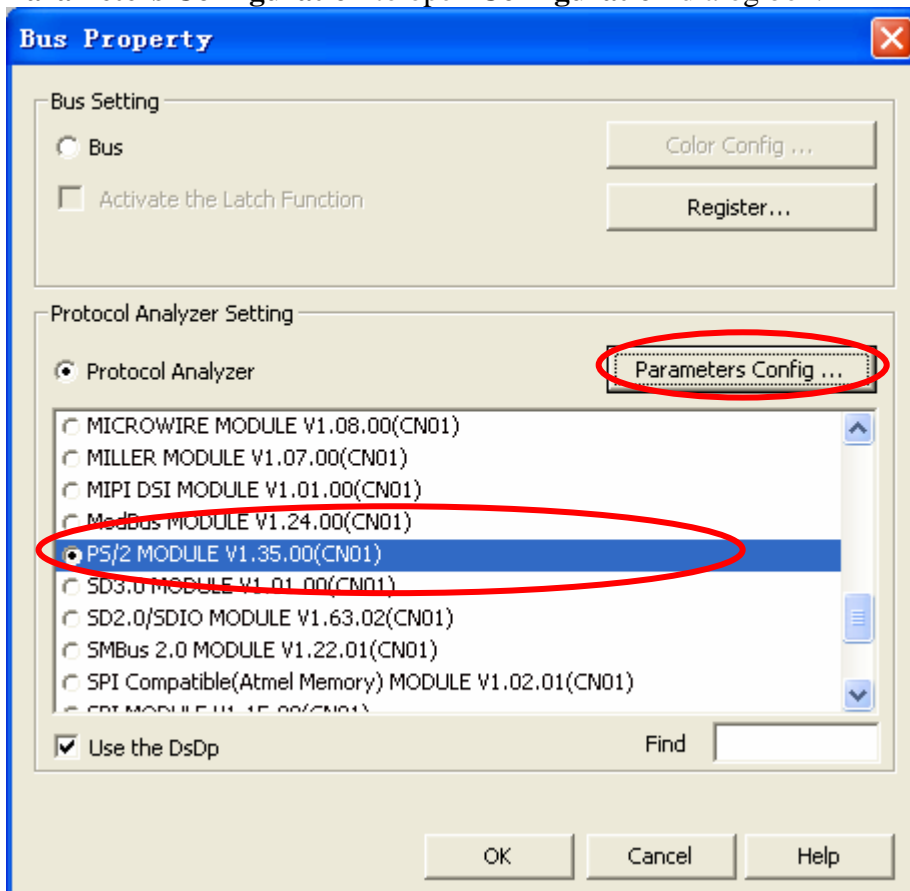
STEP 1. Group A0-A1 into **Bus1** by pressing the **Right Key** on the mouse. **PS/2** only needs two channels to decode signals, so it is necessary to group two or more channels into a Bus.



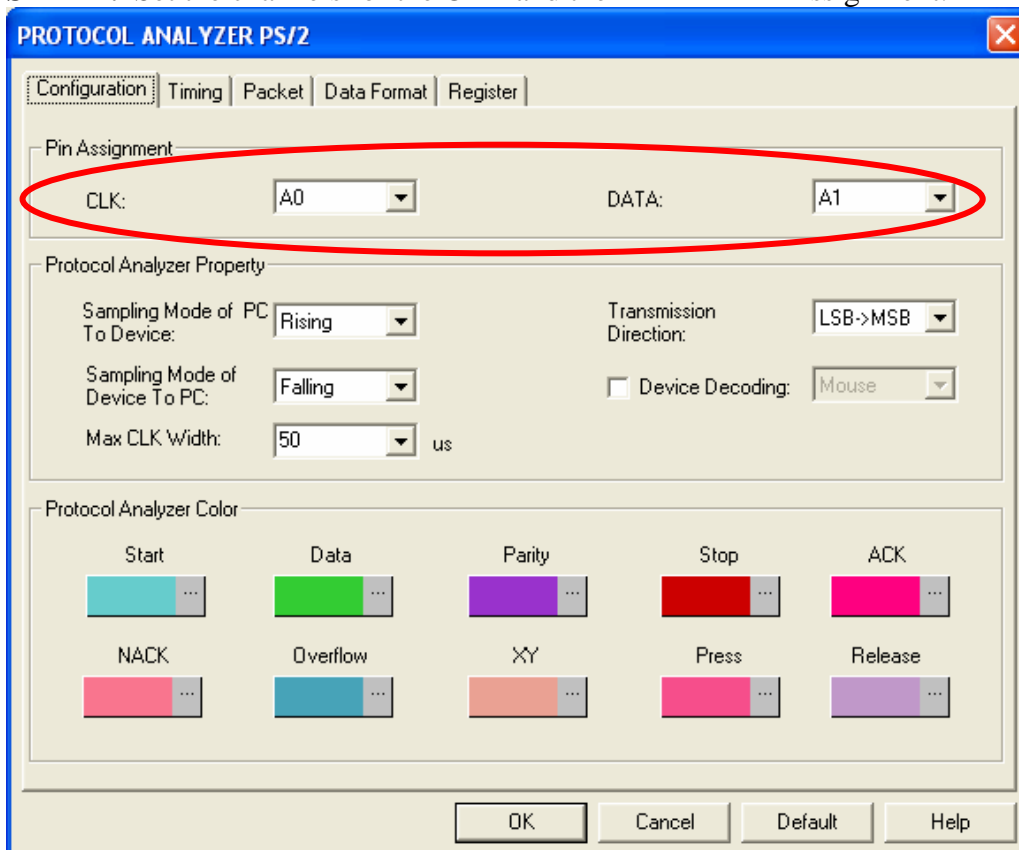
STEP 2. Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



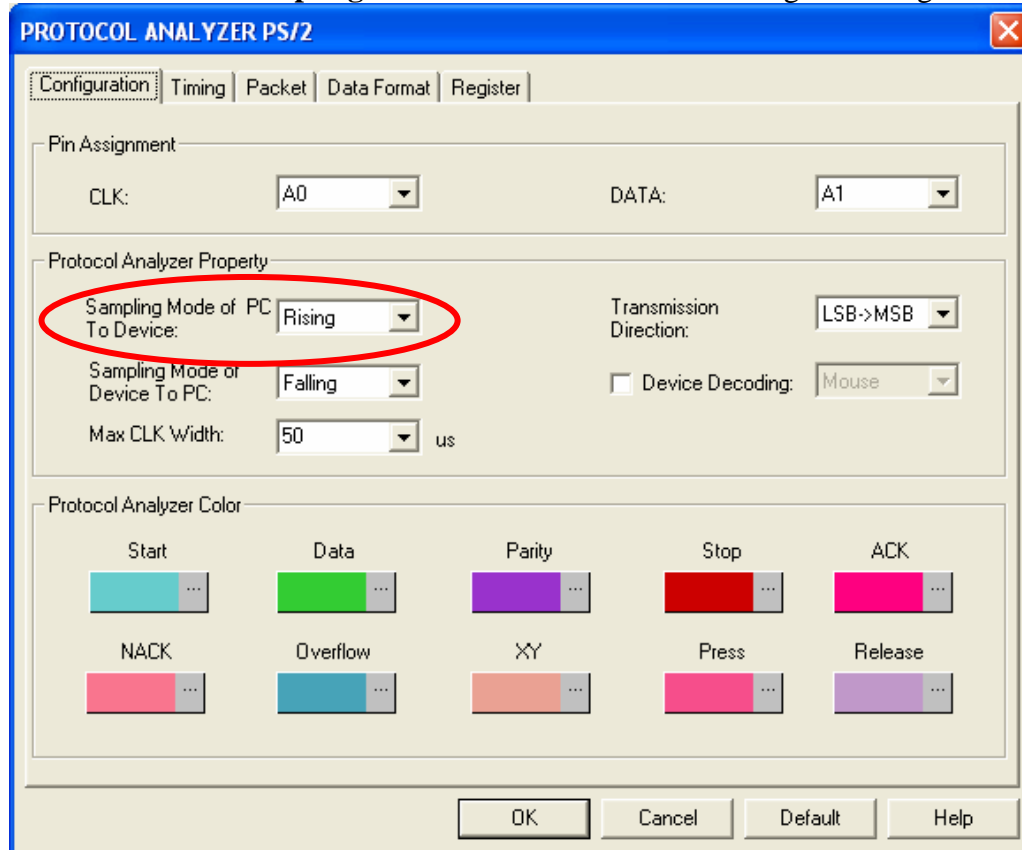
STEP 3. Select Protocol Analyzer, and then choose **PS/2 MODULE V1.35.00(CN01)**. Next click **Parameters Configuration** to open **Configuration** dialog box.



STEP 4. Set the channels for the CLK and the DATA in Pin Assignment.



STEP 5. Set the Sampling Mode of PC To Device to Rising or Falling.

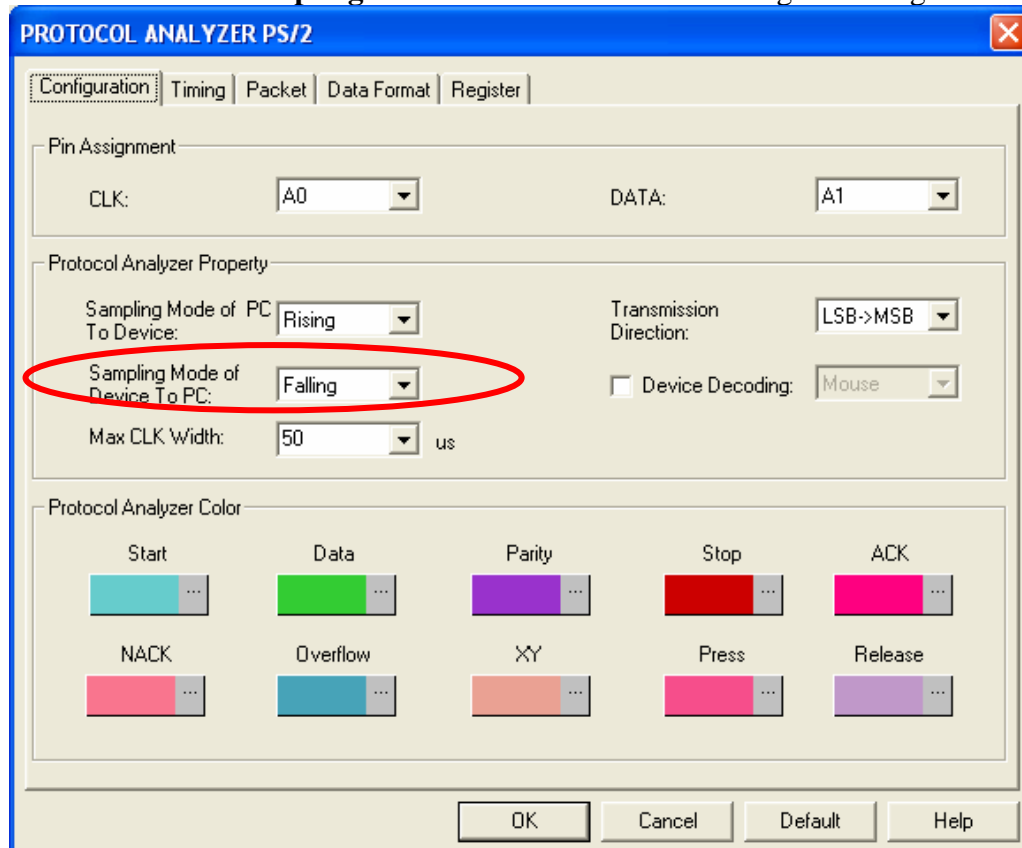


The screenshot shows the 'PROTOCOL ANALYZER PS/2' window with the 'Configuration' tab selected. The 'Pin Assignment' section shows CLK: A0 and DATA: A1. The 'Protocol Analyzer Property' section contains the following settings:

- Sampling Mode of PC To Device:** Rising (circled in red)
- Transmission Direction:** LSB->MSB
- Sampling Mode of Device To PC:** Falling
- Device Decoding:** ☐ Mouse
- Max CLK Width:** 50 us

The 'Protocol Analyzer Color' section displays color-coded boxes for Start, Data, Parity, Stop, ACK, NACK, Overflow, XY, Press, and Release. At the bottom are buttons for OK, Cancel, Default, and Help.

STEP 6. Set the Sampling Mode of Device to PC to Rising or Falling.

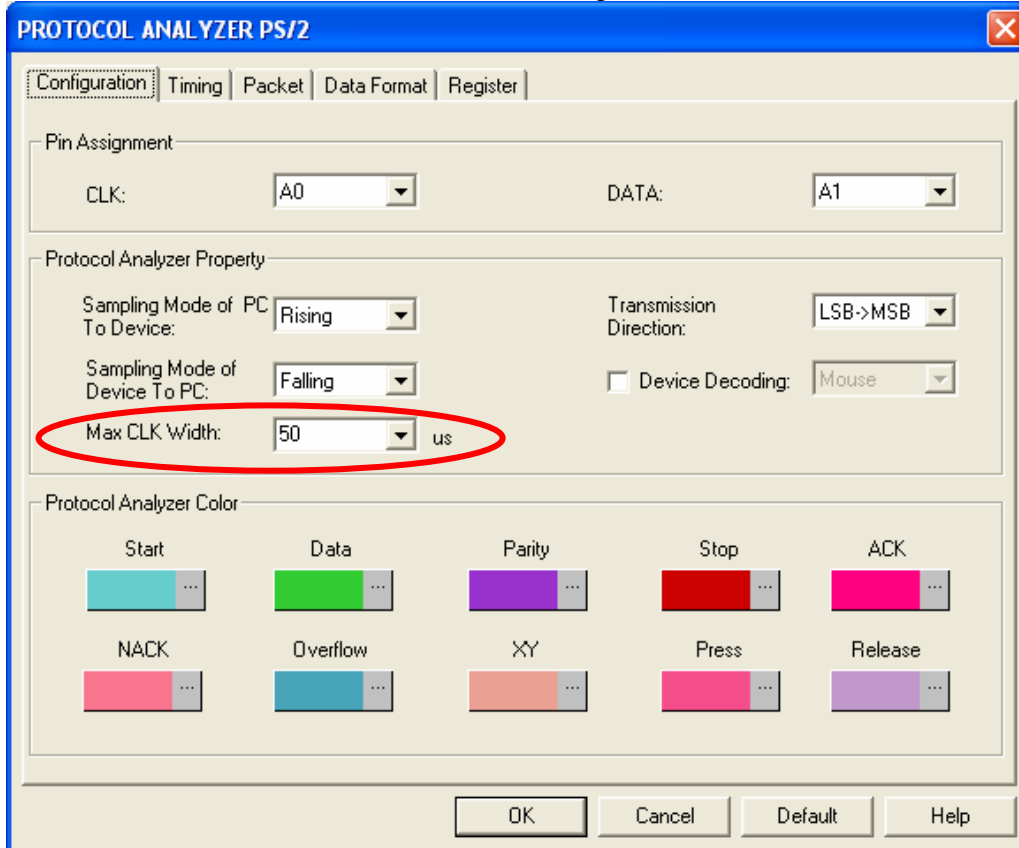


The screenshot shows the 'PROTOCOL ANALYZER PS/2' window with the 'Configuration' tab selected. The 'Pin Assignment' section shows CLK: A0 and DATA: A1. The 'Protocol Analyzer Property' section contains the following settings:

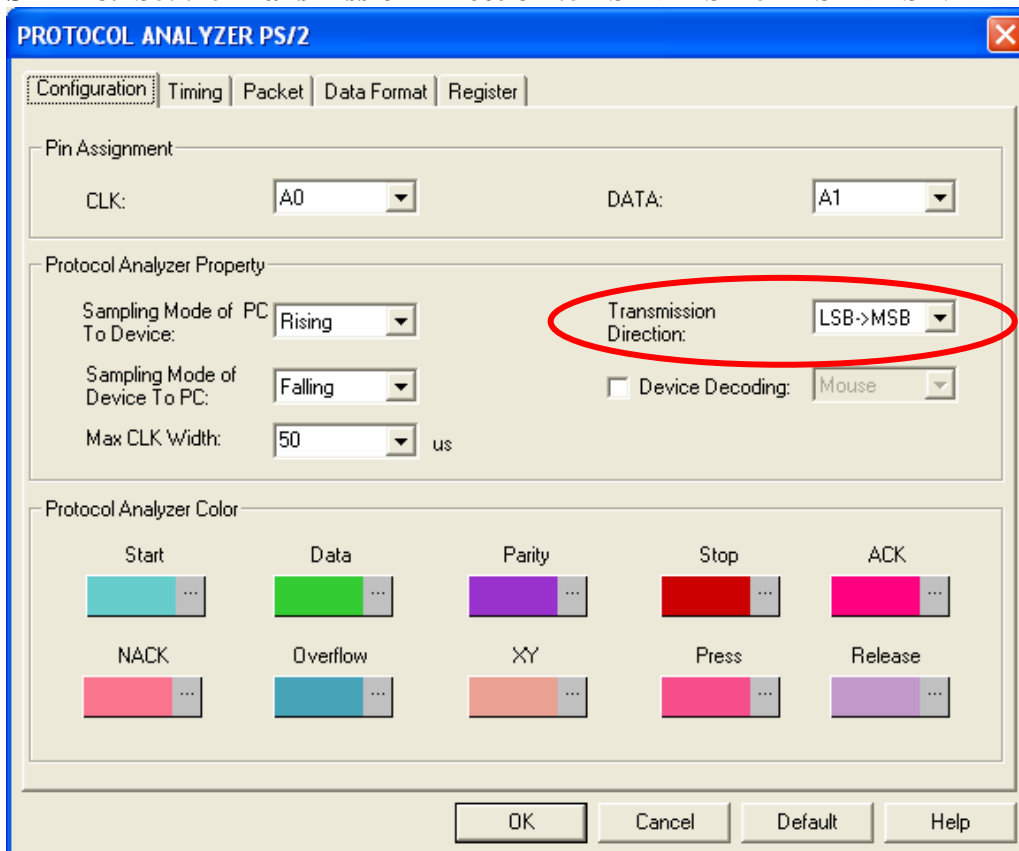
- Sampling Mode of PC To Device:** Rising
- Transmission Direction:** LSB->MSB
- Sampling Mode of Device To PC:** Falling (circled in red)
- Device Decoding:** ☐ Mouse
- Max CLK Width:** 50 us

The 'Protocol Analyzer Color' section displays color-coded boxes for Start, Data, Parity, Stop, ACK, NACK, Overflow, XY, Press, and Release. At the bottom are buttons for OK, Cancel, Default, and Help.

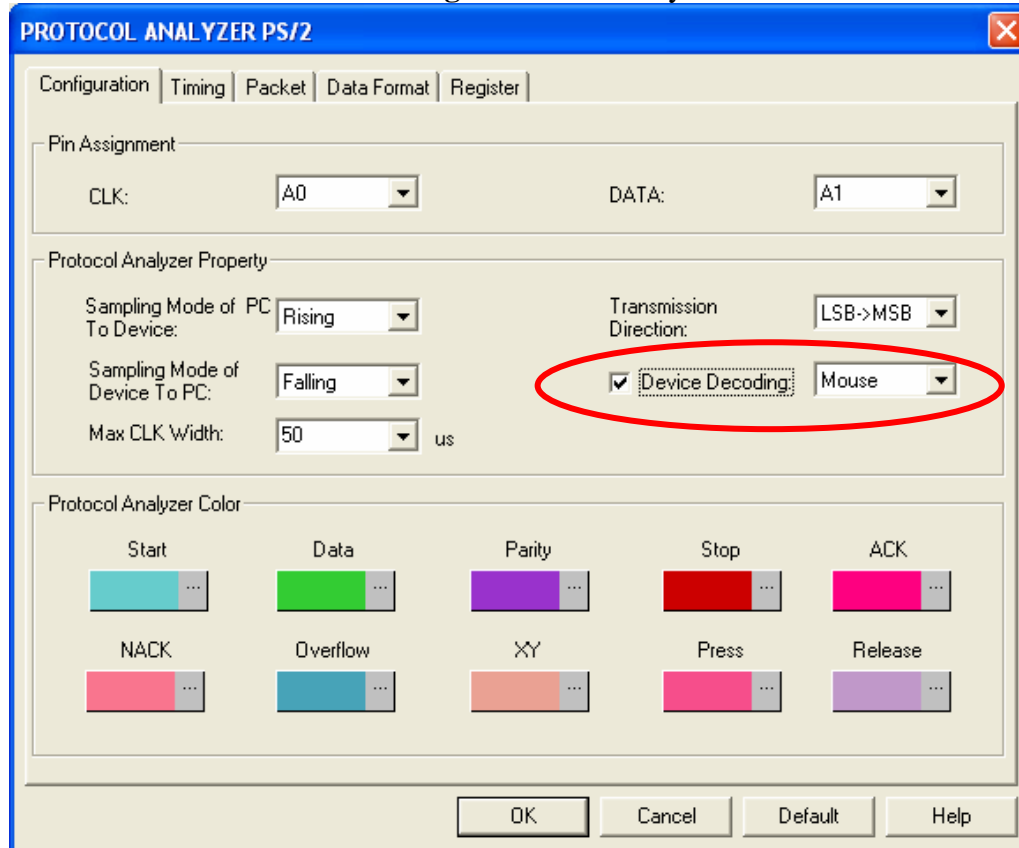
STEP 7. Set the **Max CLK Width** in the range from 20 to 100us, the default is 50us.



STEP 8. Set the **Transmission Direction** to LSB->MSB or MSB->LSB.

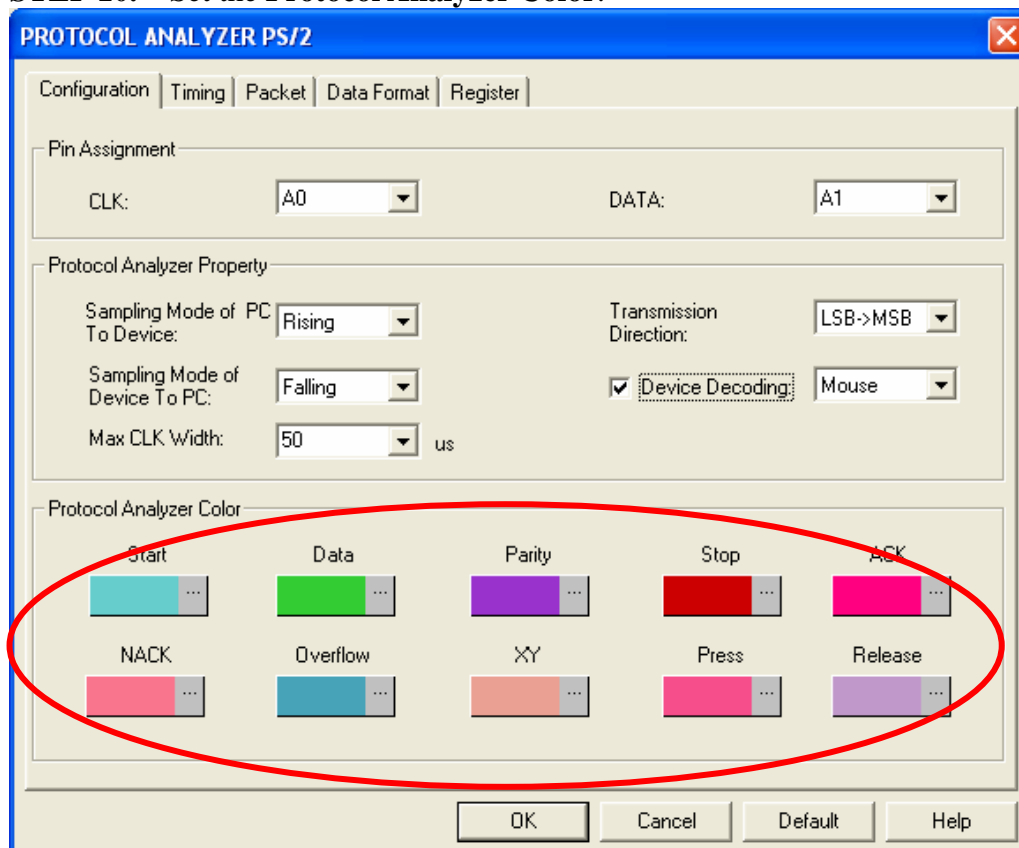


STEP 9. Set the **Device Decoding** to Mouse or Keyboard.



The screenshot shows the 'PROTOCOL ANALYZER PS/2' window with the 'Configuration' tab selected. The 'Pin Assignment' section shows CLK: A0 and DATA: A1. The 'Protocol Analyzer Property' section has 'Sampling Mode of PC To Device:' set to Rising, 'Sampling Mode of Device To PC:' set to Falling, 'Max CLK Width:' set to 50 us, 'Transmission Direction:' set to LSB->MSB, and the 'Device Decoding' checkbox checked with 'Mouse' selected in the dropdown. The 'Protocol Analyzer Color' section shows color swatches for Start, Data, Parity, Stop, ACK, NACK, Overflow, XY, Press, and Release. The bottom buttons are OK, Cancel, Default, and Help.

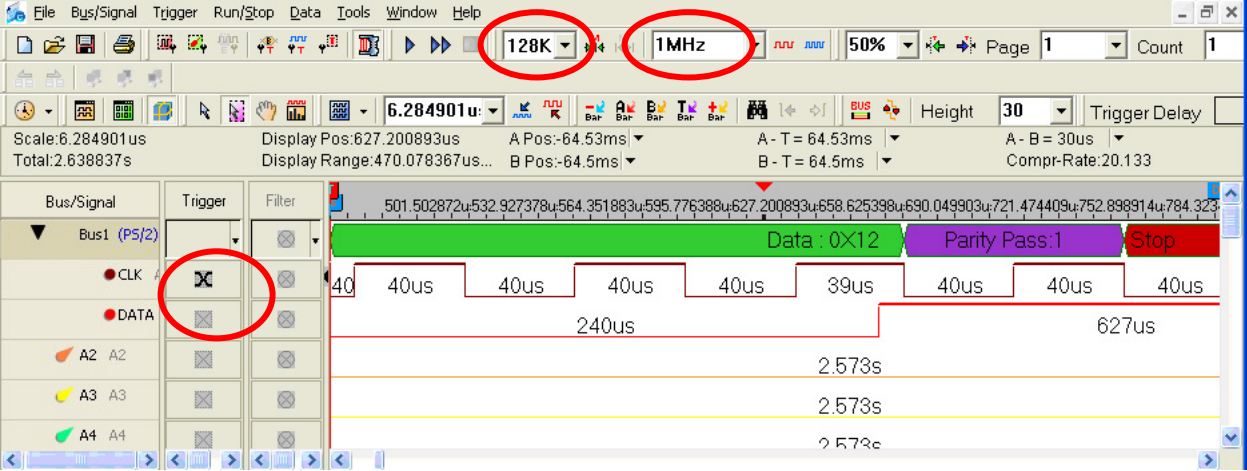
STEP 10. Set the **Protocol Analyzer Color**.



The screenshot shows the same 'PROTOCOL ANALYZER PS/2' window. In this step, the 'Device Decoding' checkbox is still checked, but the 'Protocol Analyzer Color' section is highlighted with a red circle. This section contains color swatches for Start (cyan), Data (green), Parity (purple), Stop (red), ACK (magenta), NACK (pink), Overflow (blue), XY (orange), Press (light pink), and Release (light purple). The bottom buttons are OK, Cancel, Default, and Help.

STEP 11. 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 1MHz (the sampling frequency should be more than 4 times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List

