

# SPECIFICATION

**MODEL: B09028-LAP-USB 2.0-M**

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

**VERSION: V1.01**

Approver		Check	Design
GM	PM		

Customer Confirm

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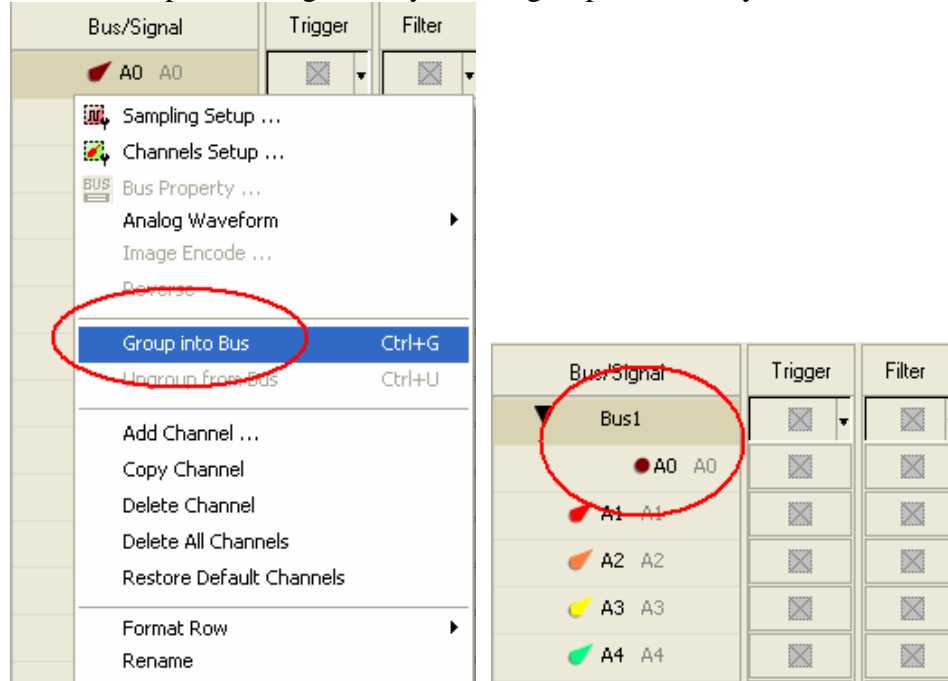
## 1. Software Registration

Please register the software as the following steps:

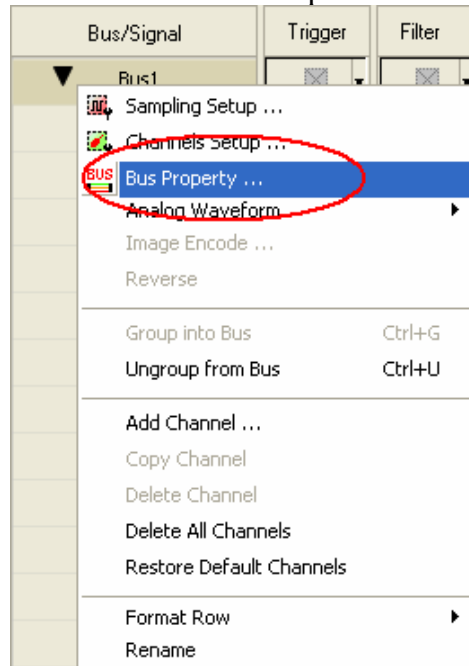
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

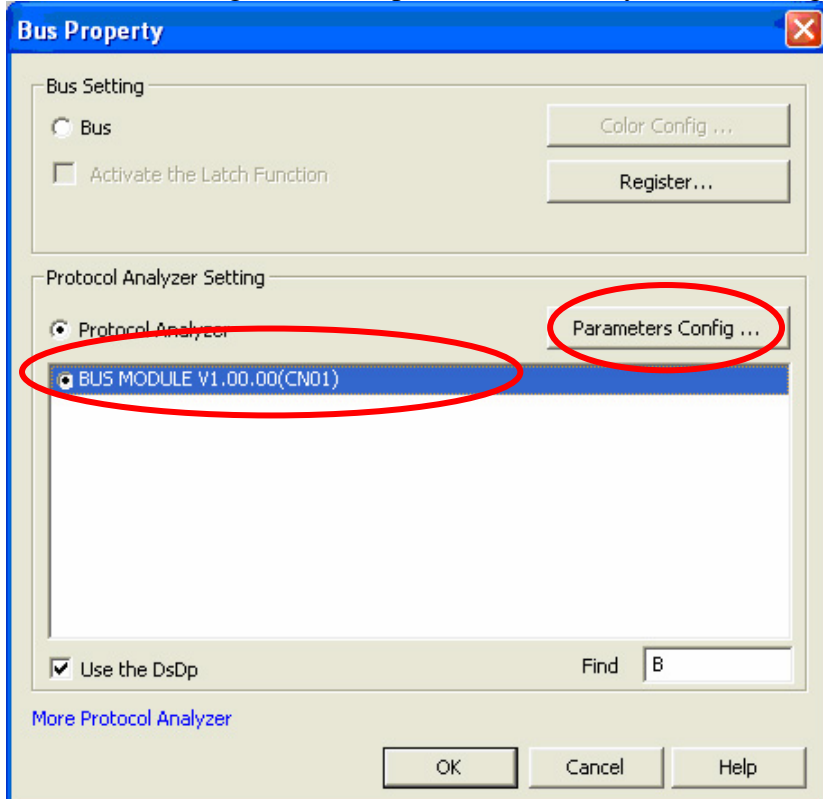
**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key**.



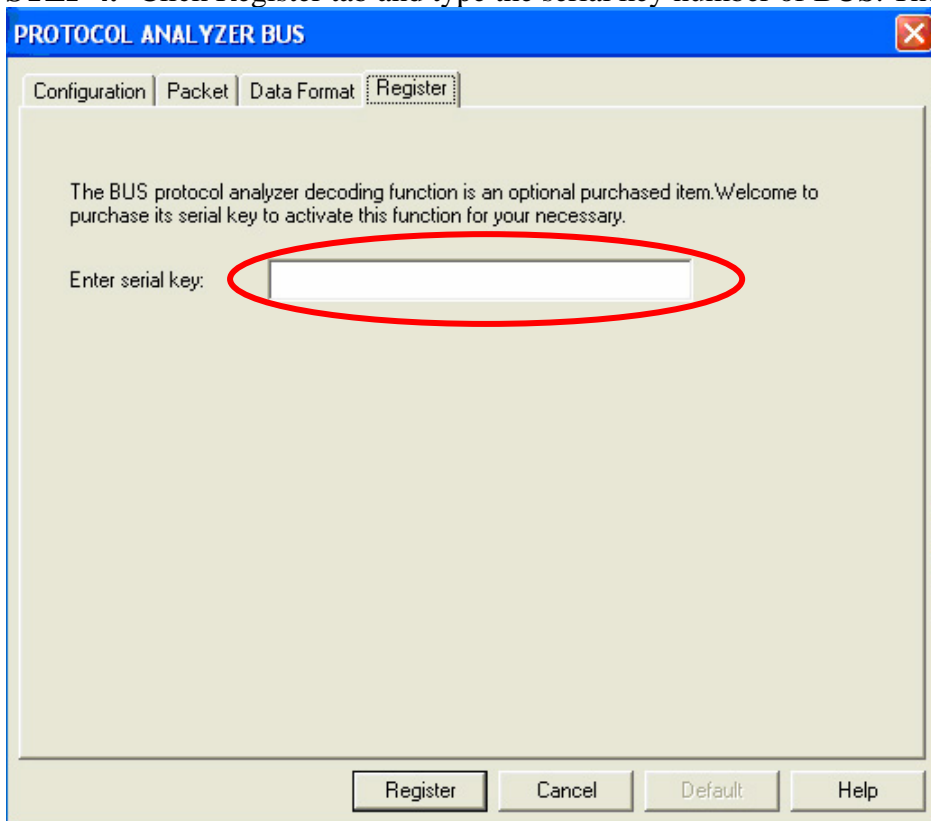
**STEP 2.** Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



**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.** Click Register tab and type the serial key number of BUS. Then click Register.



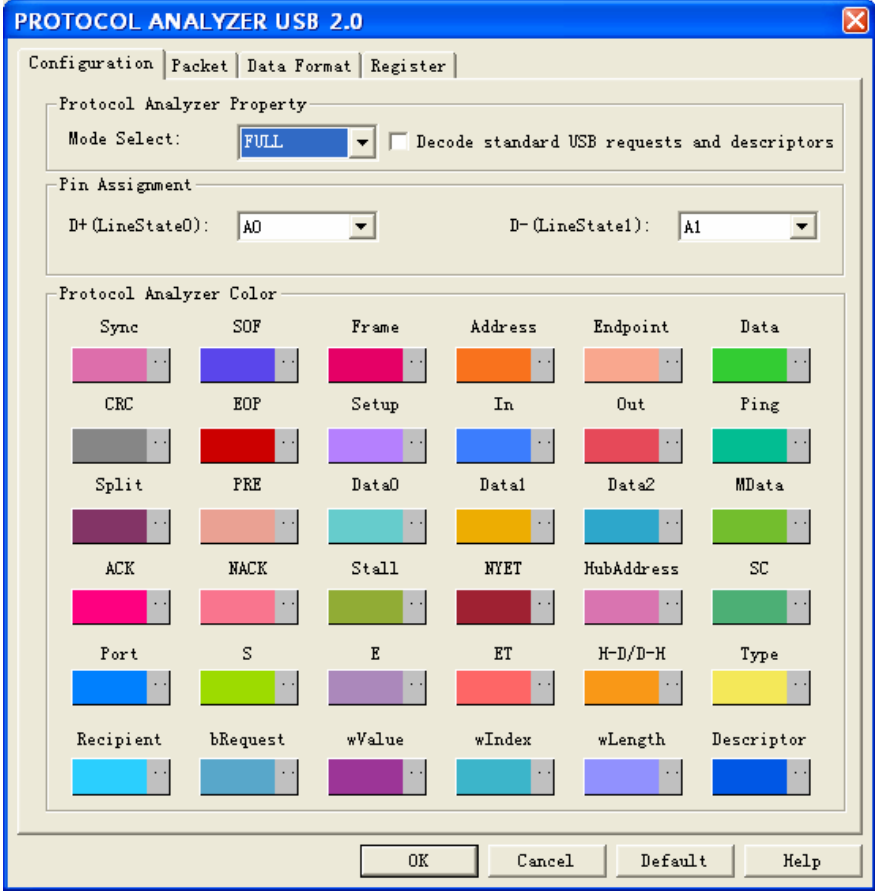
**STEP 5.** After clicking the Register button, following dialog box will appear, it denotes that the BUS has been registered successfully.



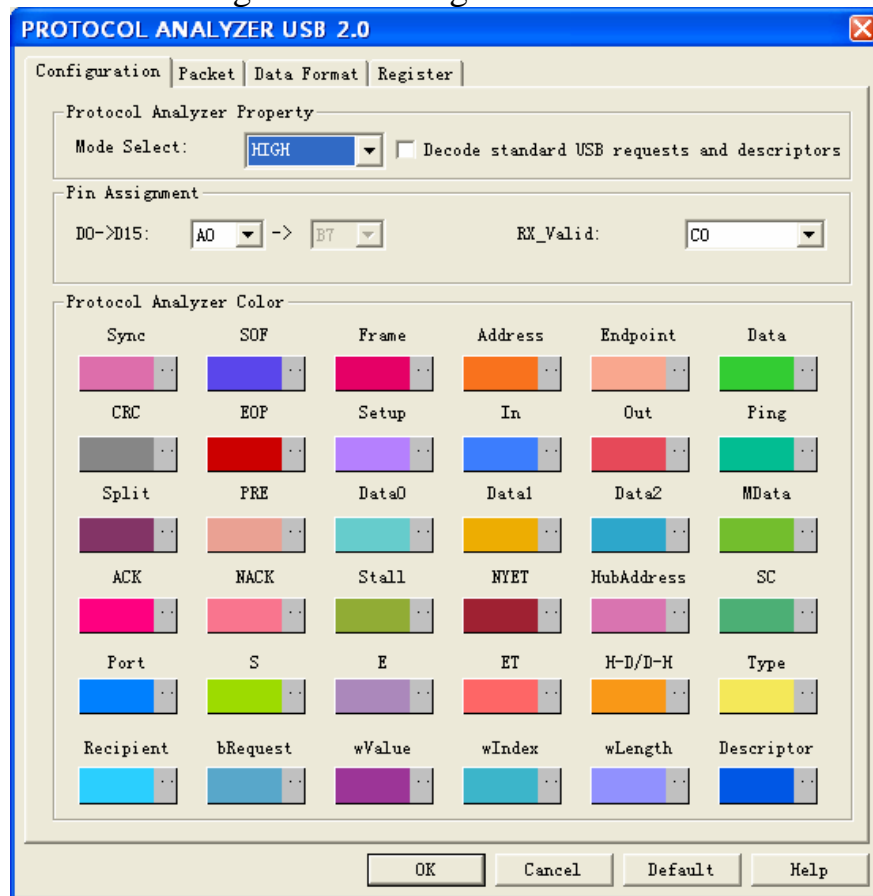
## 2. User Interface

In the configuration, please refer to below images to select options of setting **USB 2.0** module.

### USB 2.0 Configuration Dialog Box in LOW or FULL mode



## USB 2.0 Configuration Dialog Box in HIGH mode



### Mode Select:

There are three decoding modes to be selected: LOW, FULL, HIGH.

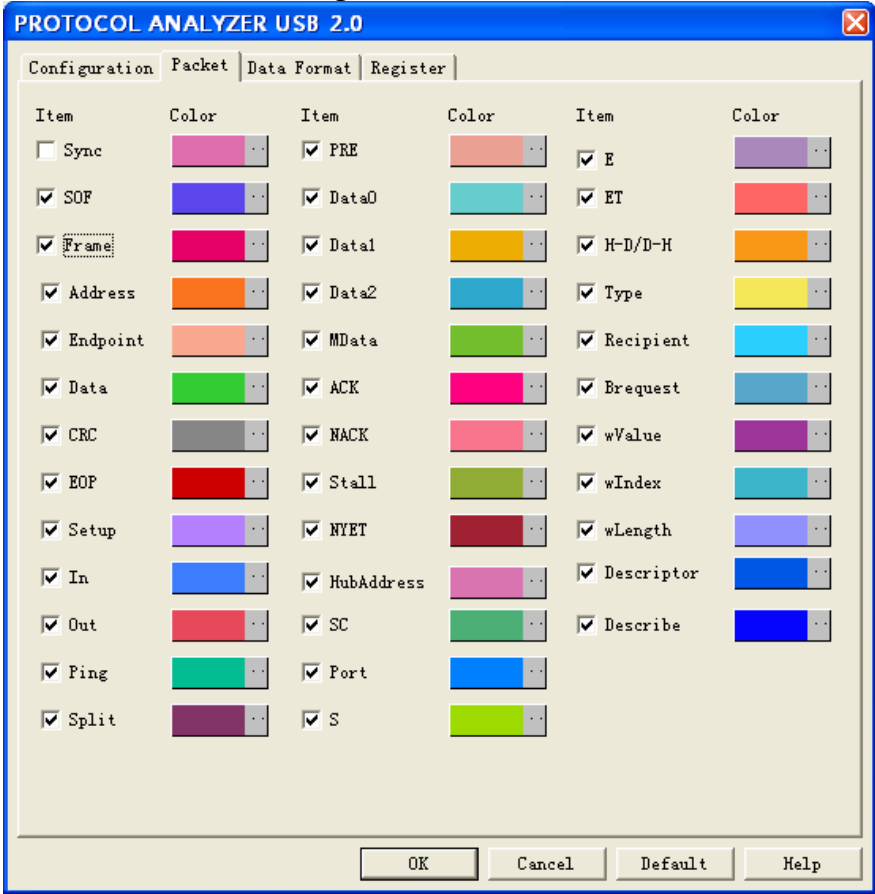
### Pin Assignment:

In Series, D+ and D- are the USB channel; in Parallel, channel D0-D15 can only be set for one time. And there is a RX\_VALID Line to arrange the order.

### Protocol Analyzer Color:

The protocol analyzer colors can be varied by users.

## USB 2.0 Packet Dialog Box



In the Packet part, users can set the items and colors as users' requirements.

## USB 2.0 Data Format Dialog Box



**PROTOCOL ANALYZER USB 2.0**

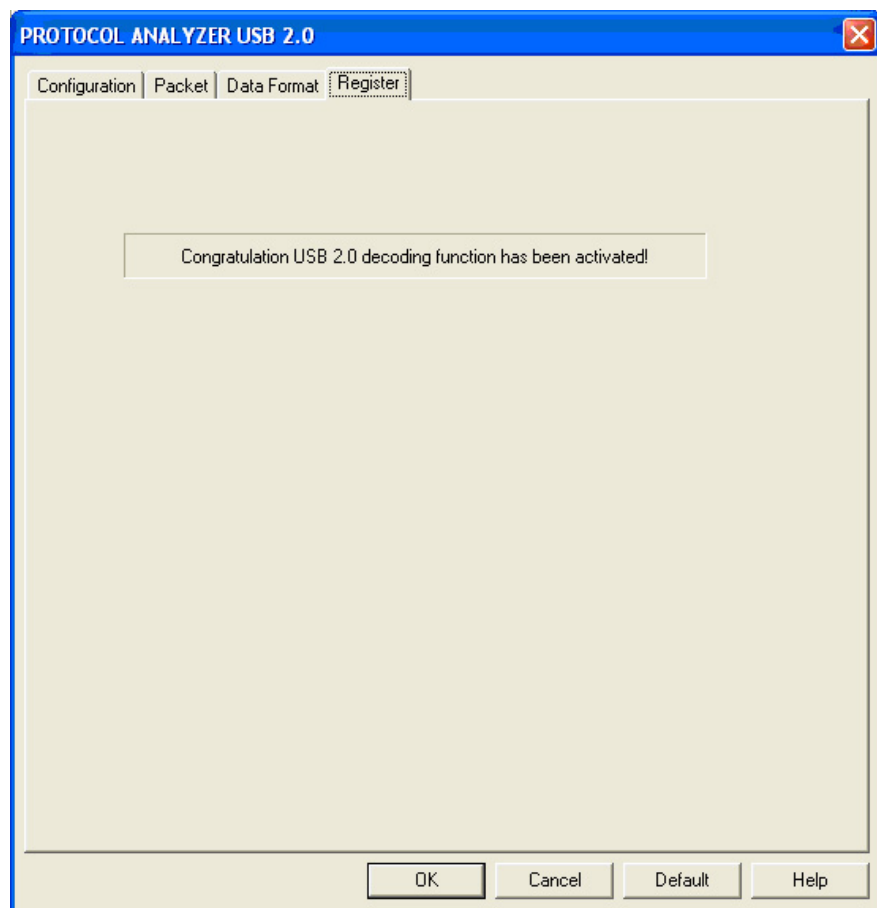
Configuration | Packet | **Data Format** | Register

Sync	Default	Data2	Default
SOF	Default	MData	Default
Frame	Default	ACK	Default
Address	Default	NACK	Default
Endpoint	Default	Stall	Default
Data	Default	NYET	Default
CRC	Default	HubAddress	Default
Setup	Default	Port	Default
In	Default	bRequest	Default
Out	Default	wValue	Default
Ping	Default	wIndex	Default
Split	Default	wLength	Default
PRE	Default		
Data0	Default		
Data1	Default		

OK Cancel Default Help

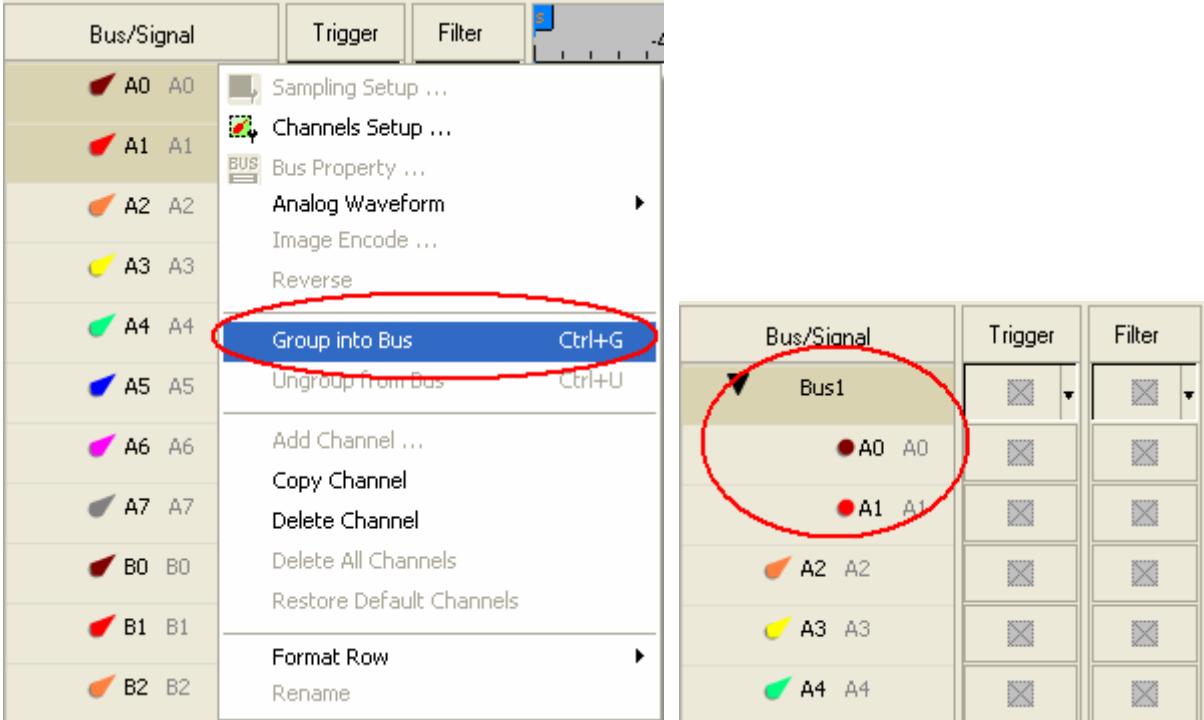
Users can set the Data Format of Sync, SOF, Frame, Address, Endpoint, Data, CRC, Setup, In, Out, Ping, Split, PRE, Data0, Data1, Data2, Mdata, ACK, NACK, Stall, NYET, Hubb, Address, Port as their requirements. When selecting the option, Activate, the data format is decided by the settings in the Protocol Analyzer; when not selecting the option, Activate, the data format is decided by the settings in the main program.

## USB 2.0 Register Dialog Box

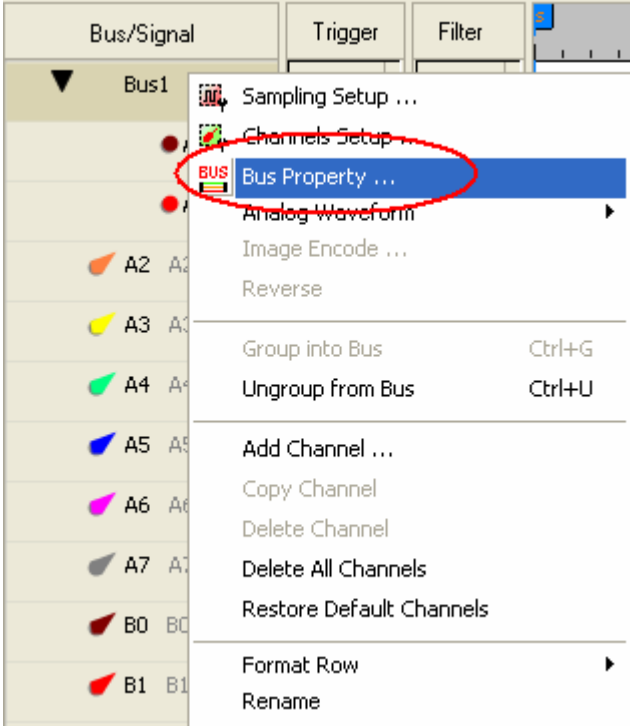


### 3. Operating Instructions

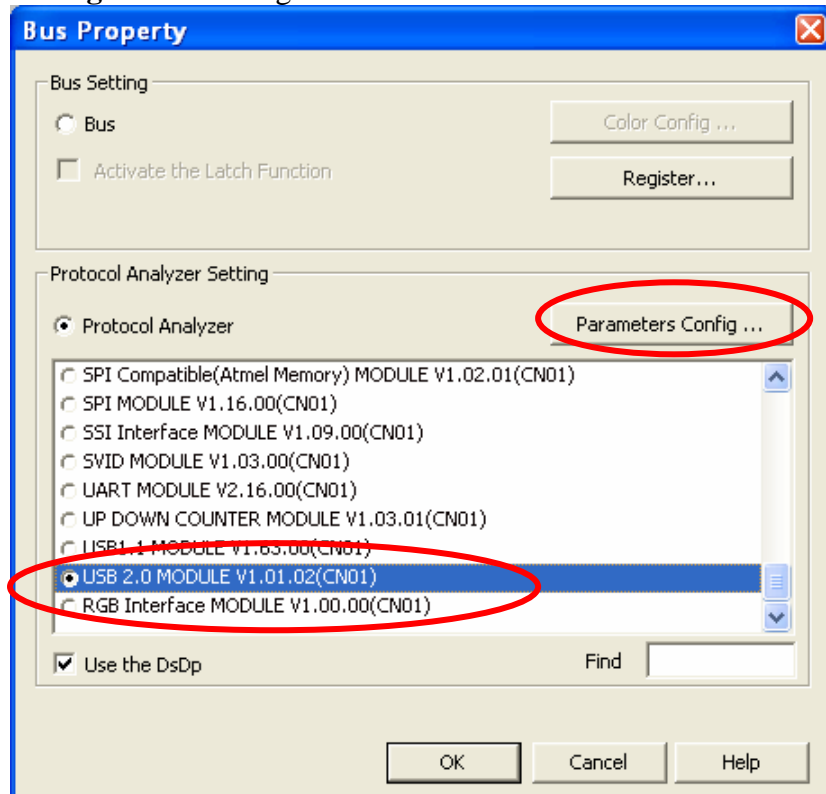
**STEP 1.** Group A0-A1 into **Bus1** by pressing the **Right Key** on the mouse. USB 2.0 needs two or more channels to decode signals, so it is necessary to group two or more channels into a Bus.



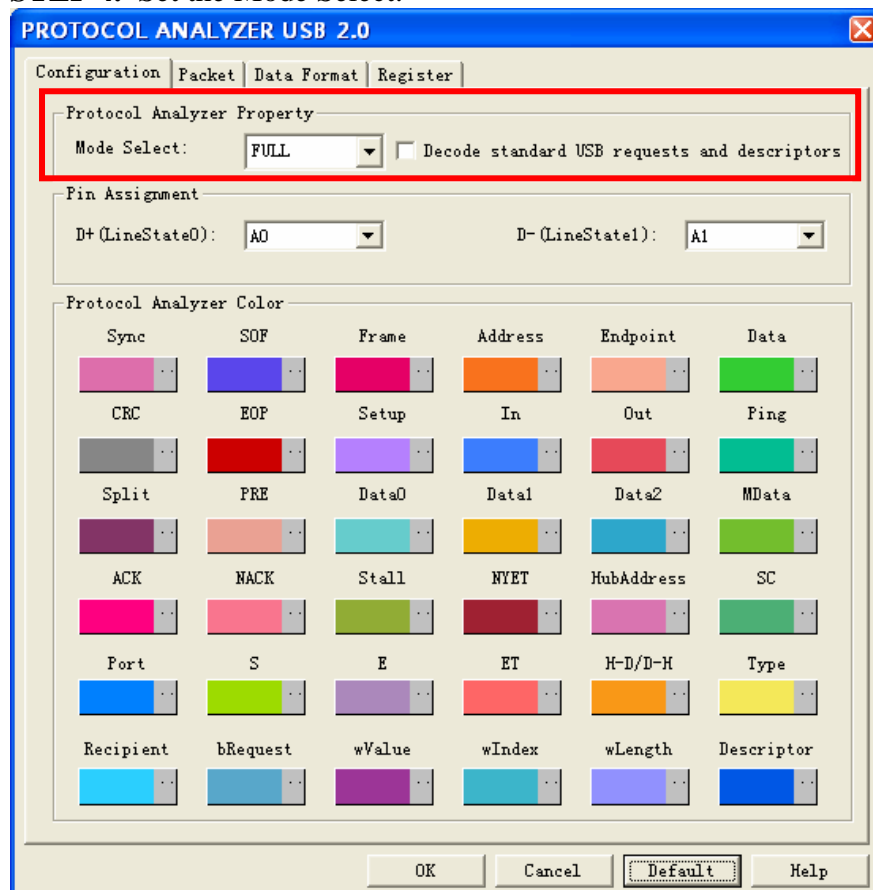
**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then press **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



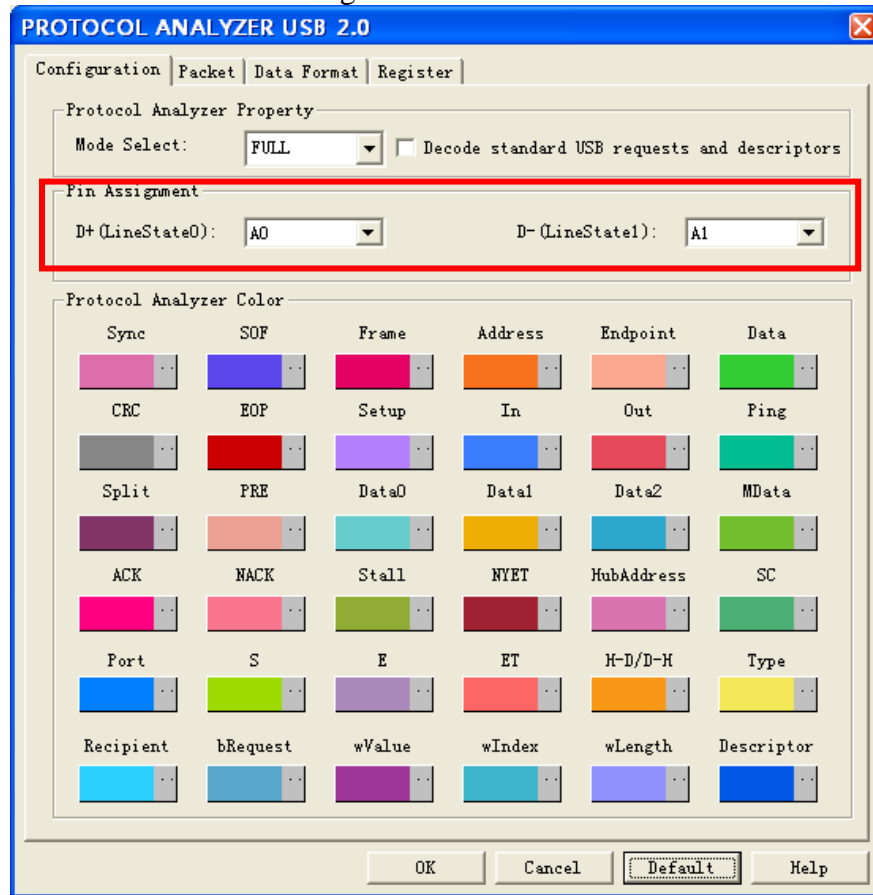
**STEP 3.** For Protocol Analyzer USB 2.0 Parameters Configuration, select Protocol Analyzer, and then choose **USB 2.0 MODULE V1.01.02(CN01)**. Next click **Parameters Configuration** to open the **Configuration** dialog box.



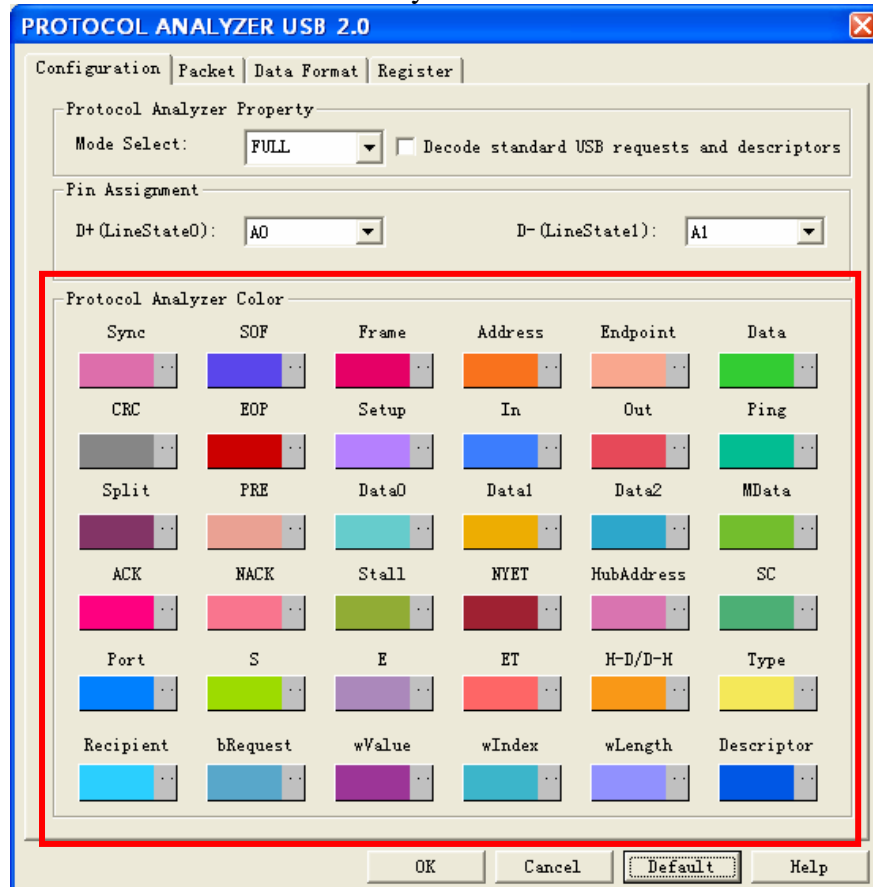
**STEP 4.** Set the Mode Select.



## STEP 5. Set the Pin Assignment.

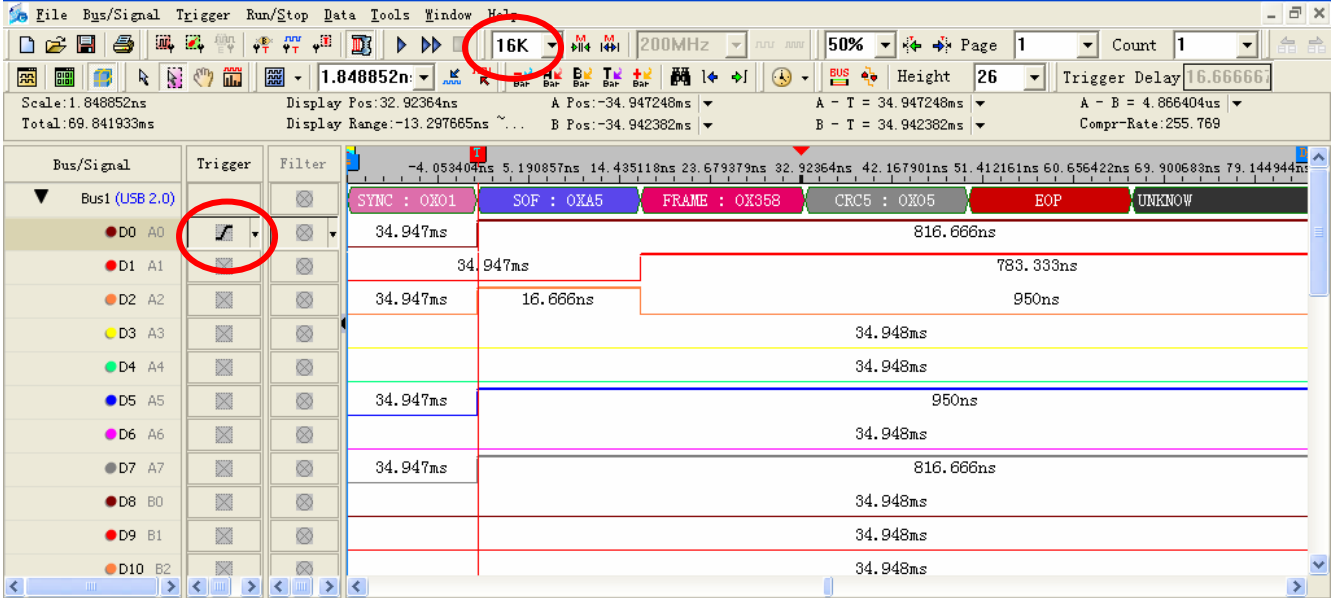


## STEP 6. Set the Protocol Analyzer Color.



**STEP 7.** Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Rising Edge; the memory depth is 16K; the external sampling frequency is 30MHz.

Protocol Analyzer Decoding



Packet List

