

# SPECIFICATION

**MODEL: B11003-LAP-CMOS IMAGE-M**

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

**VERSION :** V1.02

Approver		Check	Design
GM	PM		

Customer Confirm

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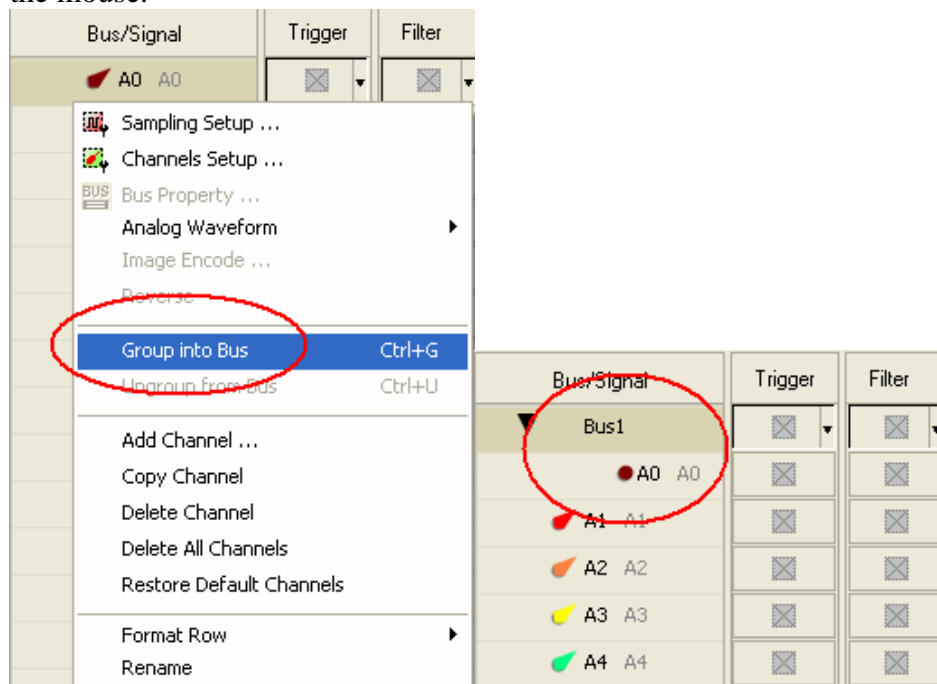
# 1 Software Register

Please register the software as the following steps:

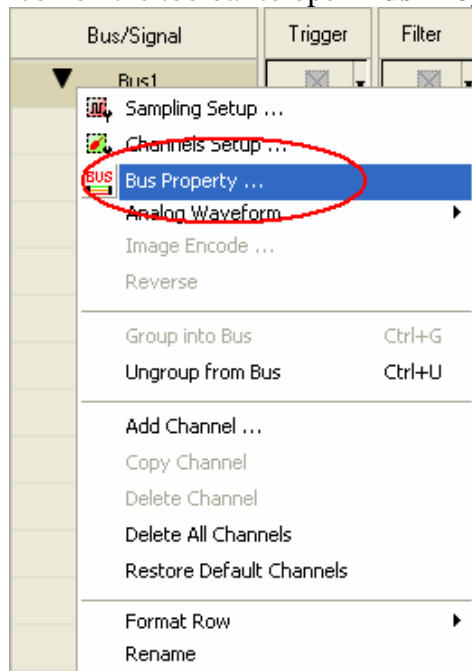
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

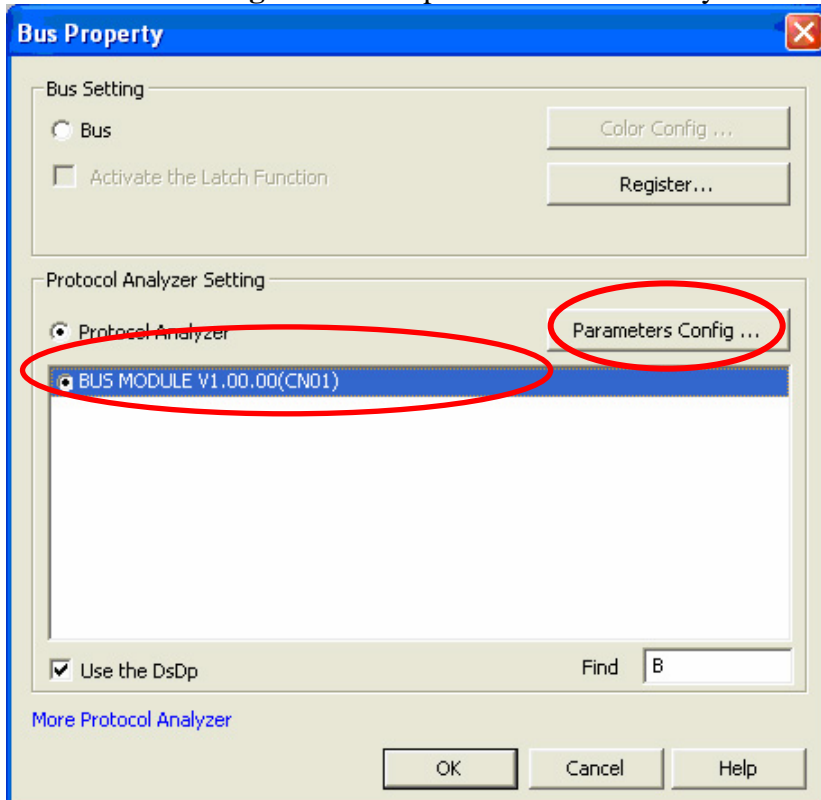
**STEP 1.** Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse.



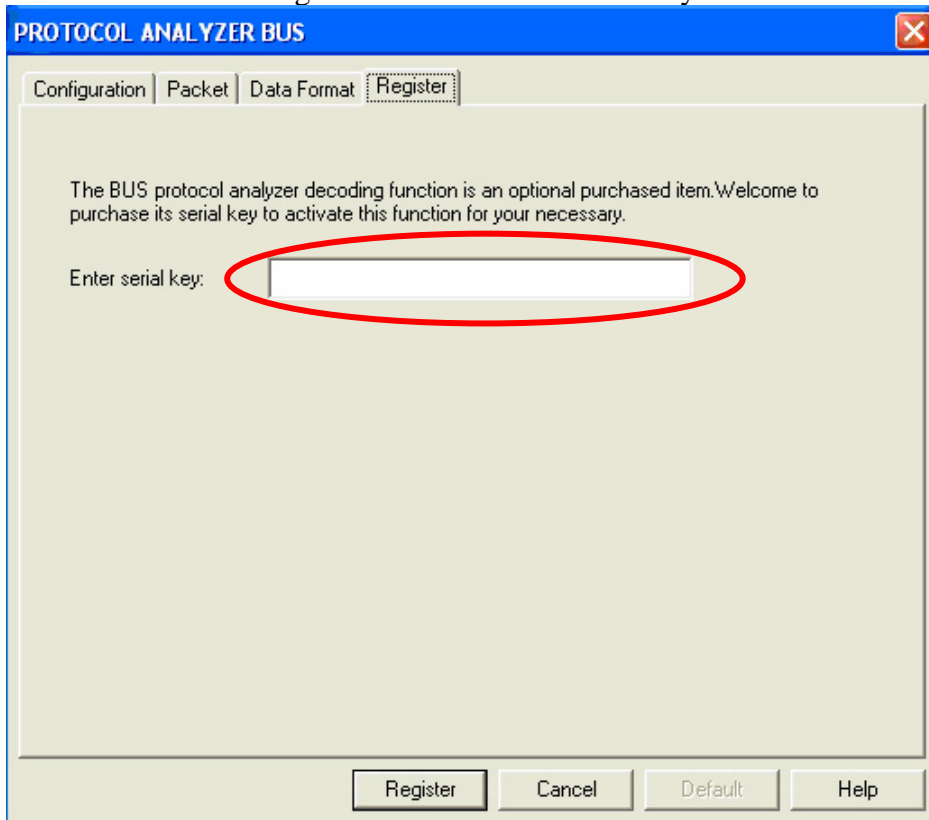
**STEP 2.** Select **Bus1**, and press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



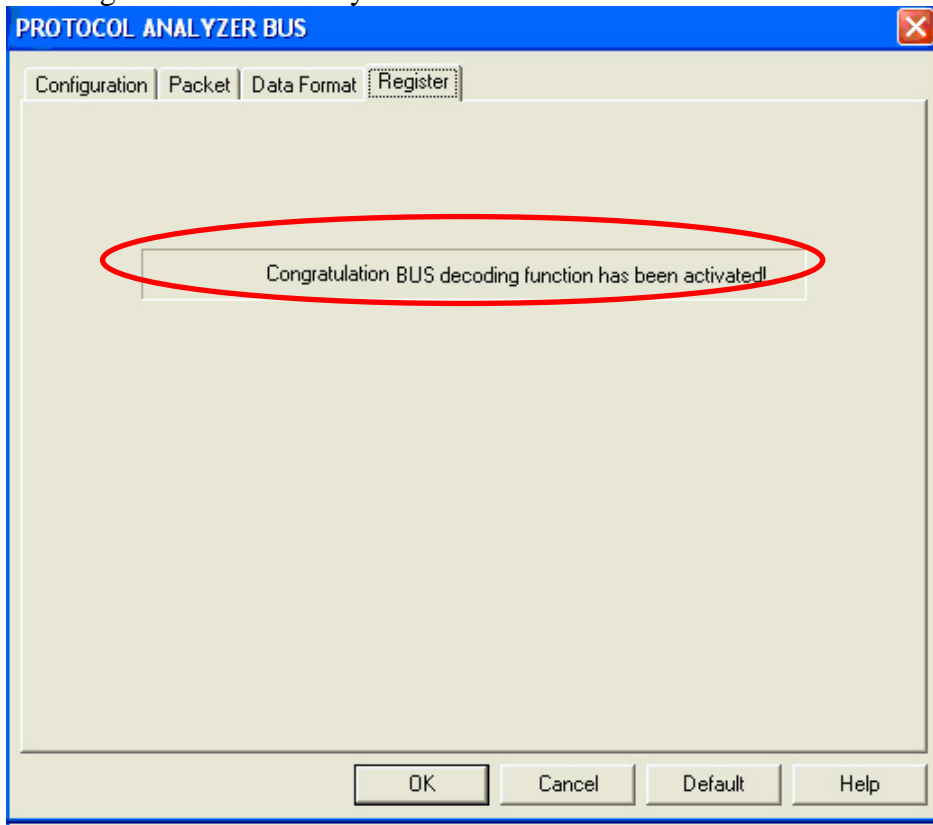
**STEP 3.** Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 (CN01)**. Next click **Parameters Configuration** to open the Protocol Analyzer Bus dialog box.



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



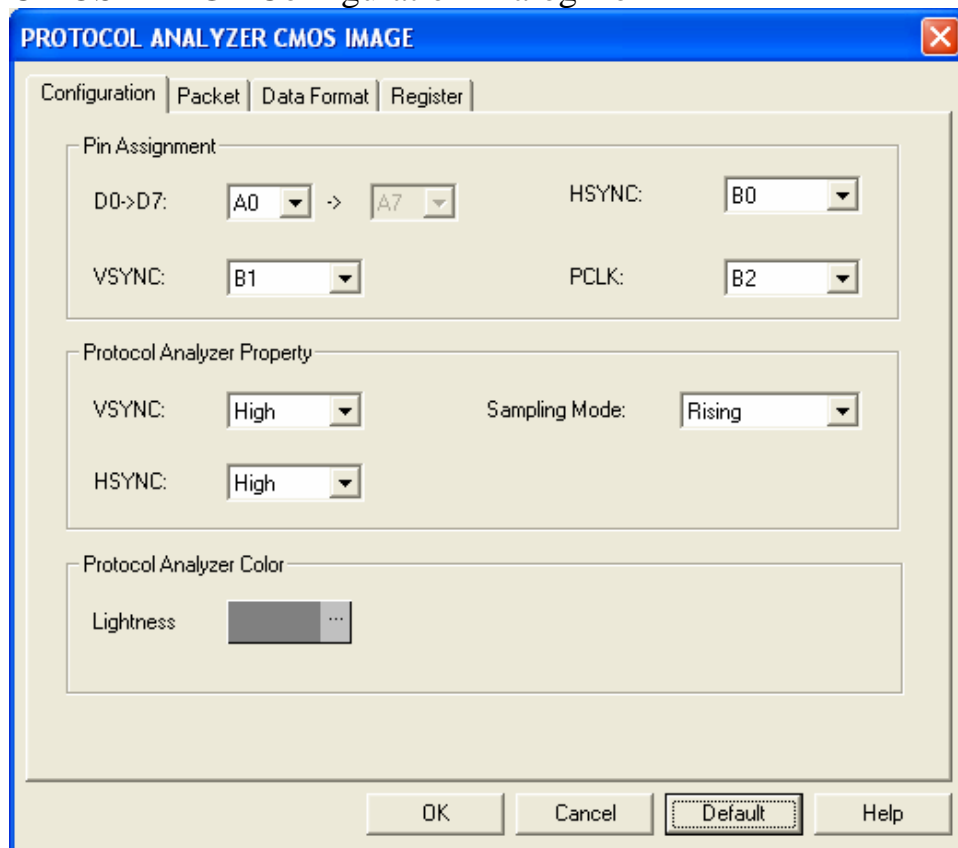
**STEP 5.** After clicking the Register button, the following dialog box will appear; it denotes that the BUS has been registered successfully.



## 2 User Interface

In the configuration, please refer to the below images to select options of setting CMOS IMAGE module.

### CMOS IMAGE Configuration Dialog Box



#### Pin Assignment:

**D0-7:** It is the Data Transmission line.

**HSYNC:** It is the Horizontal Synchronization.

**VSYNC:** It is the Vertical Synchronization.

**PCLK:** It is the Pixel Clock line.

#### Protocol Analyzer Property:

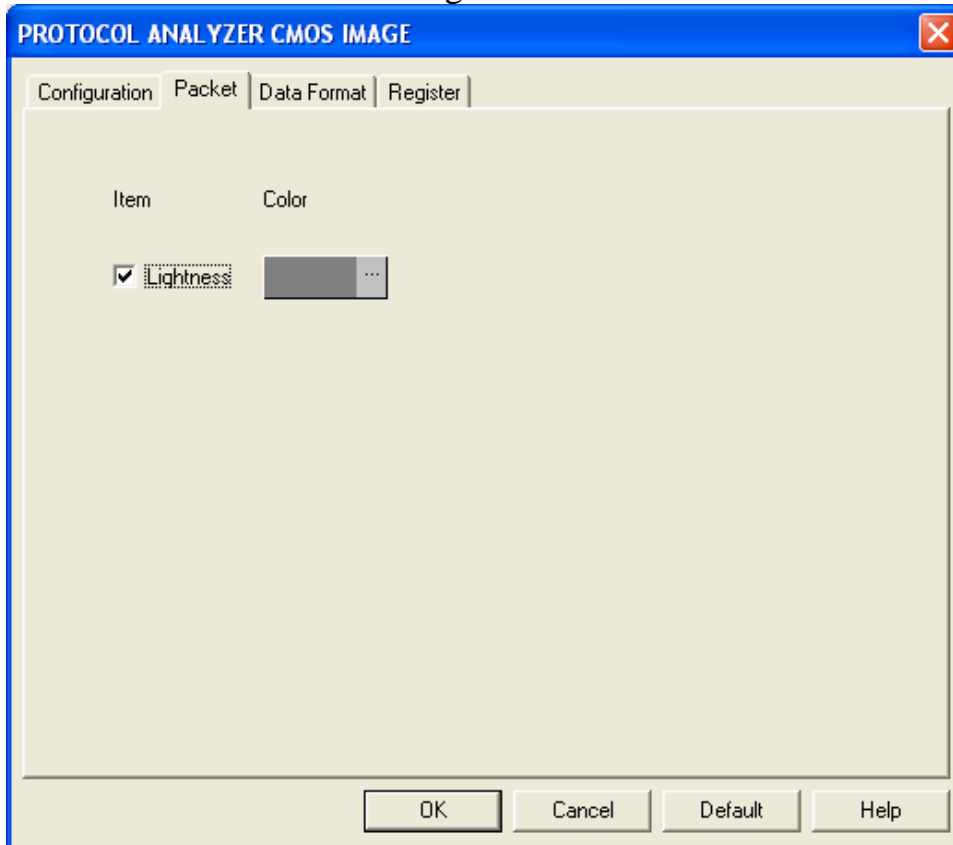
**VSYNC&HSYNC:** Users can set the effective level for VSYNC and HSYNC, their default settings are High, which means the decoding can be valid when the level is high.

**Sampling Mode:** It is Rising Edge by default.

#### Protocol Analyzer Color:

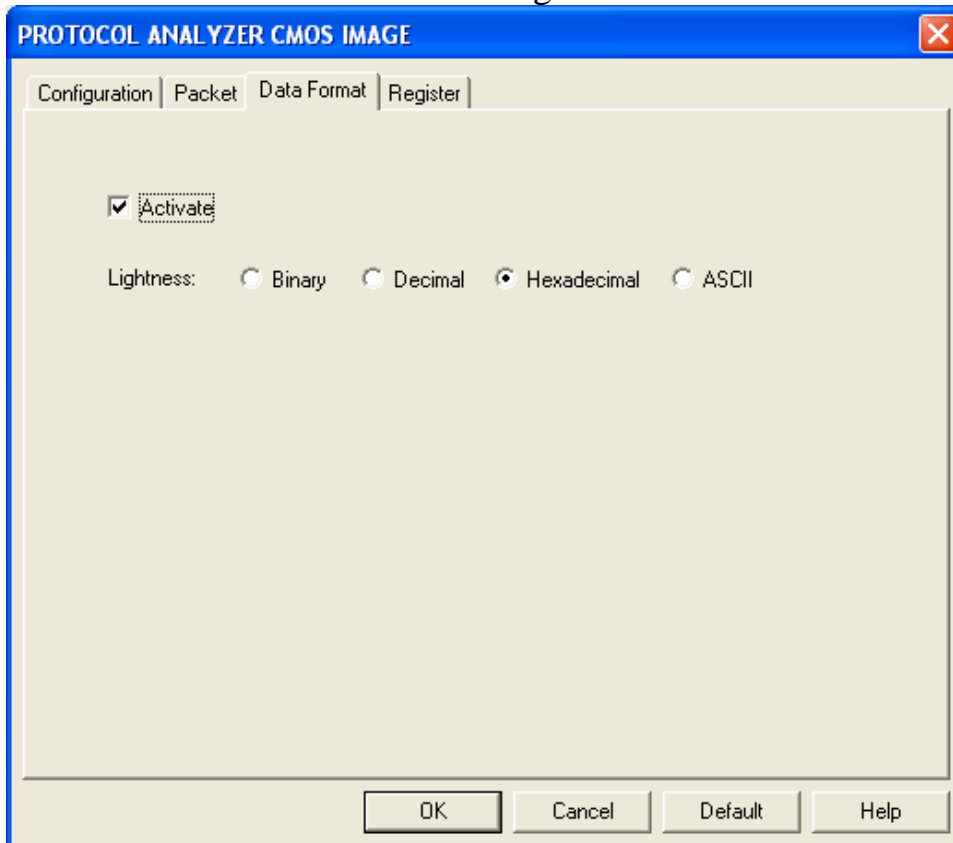
The color can be varied by users.

## CMOS IMAGE Packet Dialog Box



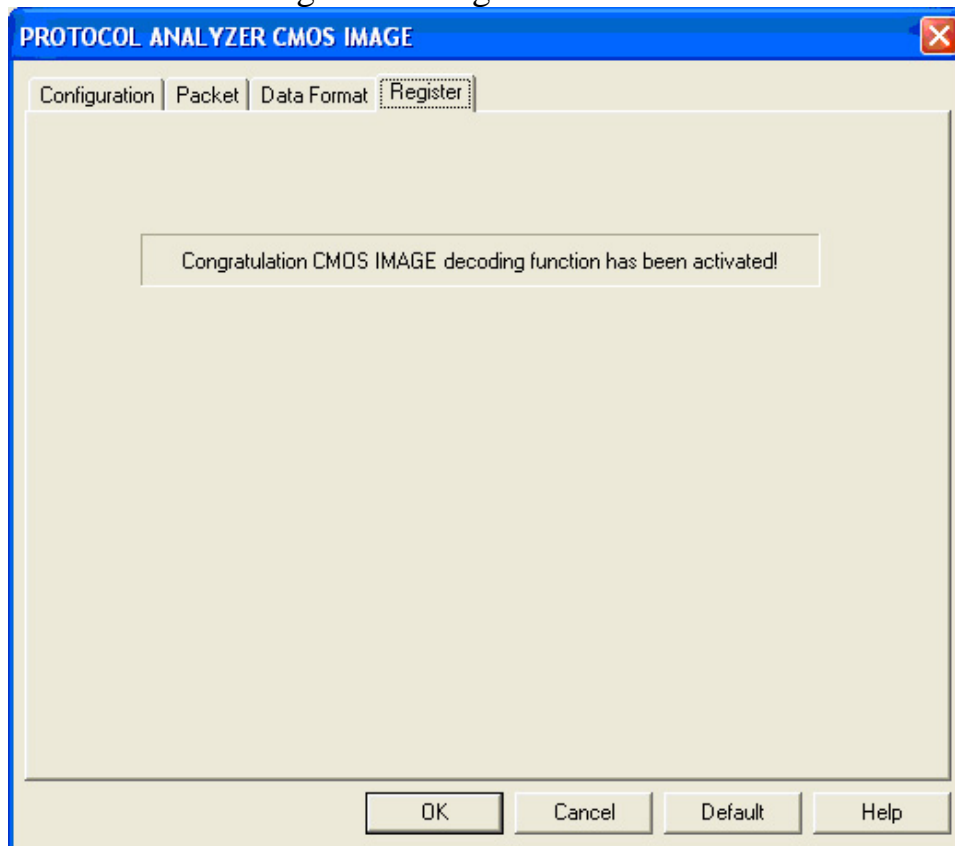
In the Packet part, users can set the item and color as users' requirements.

## CMOS IMAGE Data Format Dialog Box



Users can set the Data Format of Lightness 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.

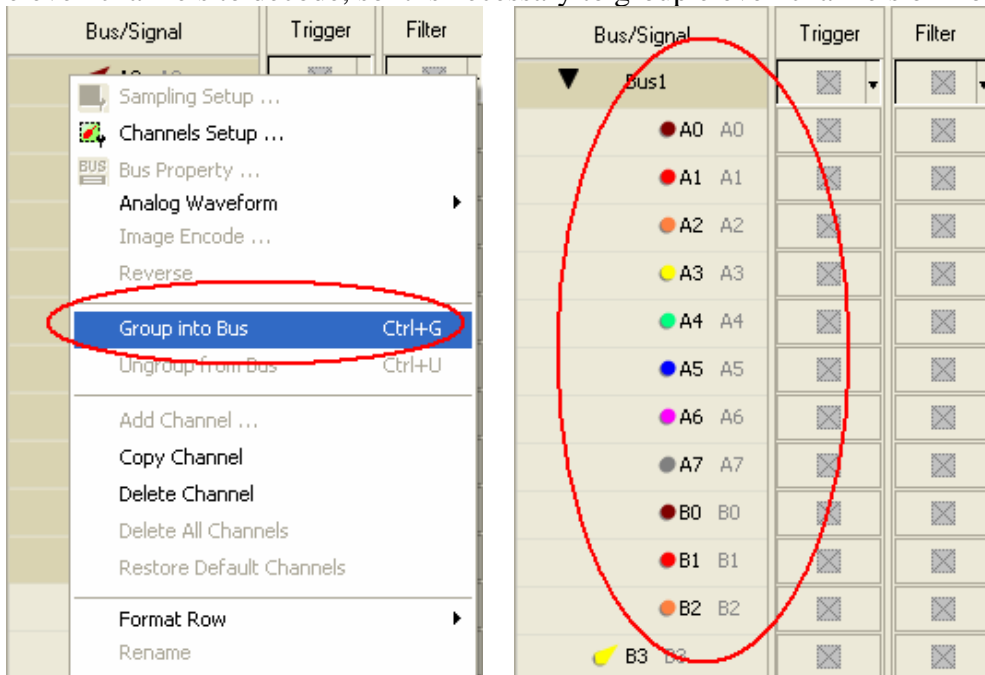
## CMOS IMAGE Register Dialog Box



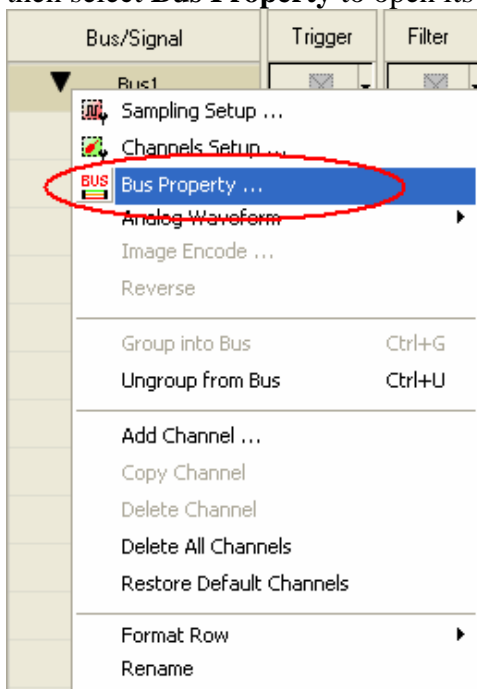


### 3 Operating Instructions

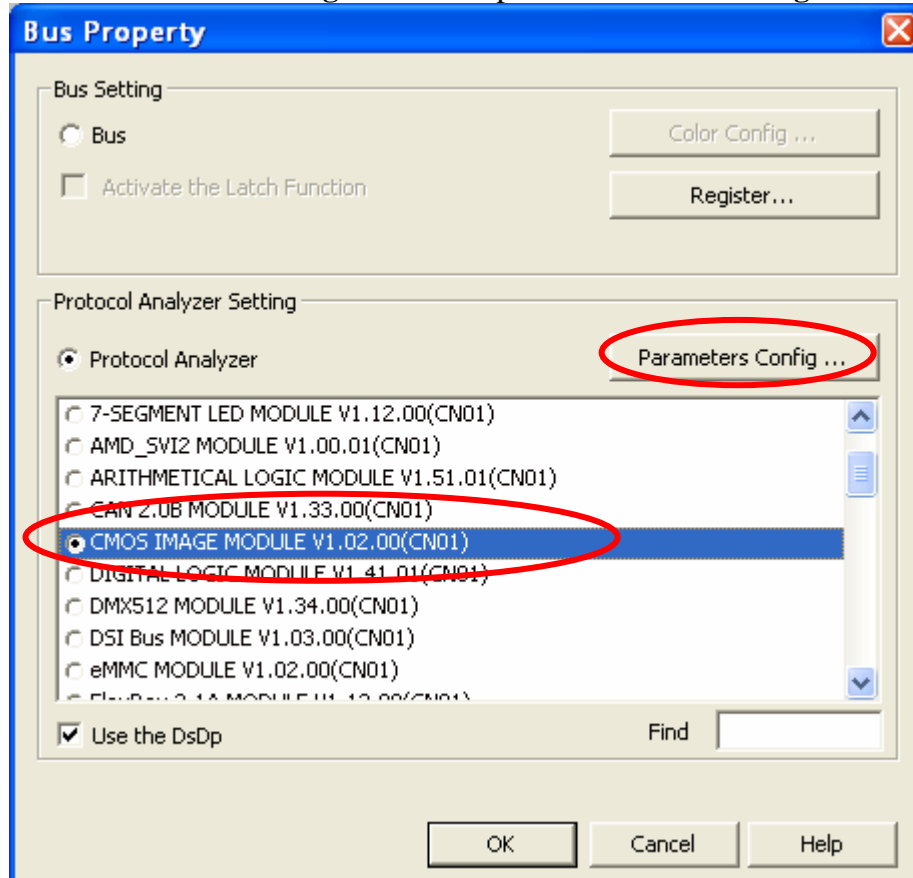
**STEP 1.** Group A0-B2 into **Bus1** by pressing the **Right Key** on the mouse. CMOS IMAGE needs eleven channels to decode, so it is necessary to group eleven channels or more into a Bus.



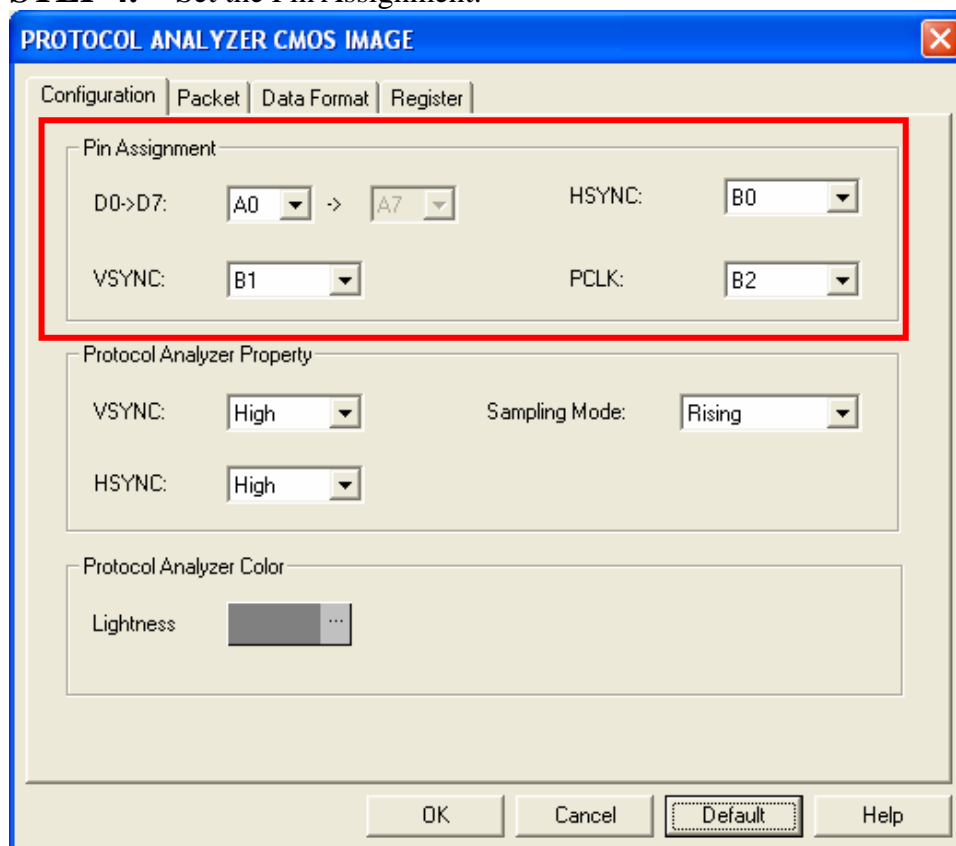
**STEP 2.** Select **Bus1**, then press **Right Key** on the mouse or click Bus icon on the toolbar to pop the menu, then select **Bus Property** to open its dialog box.



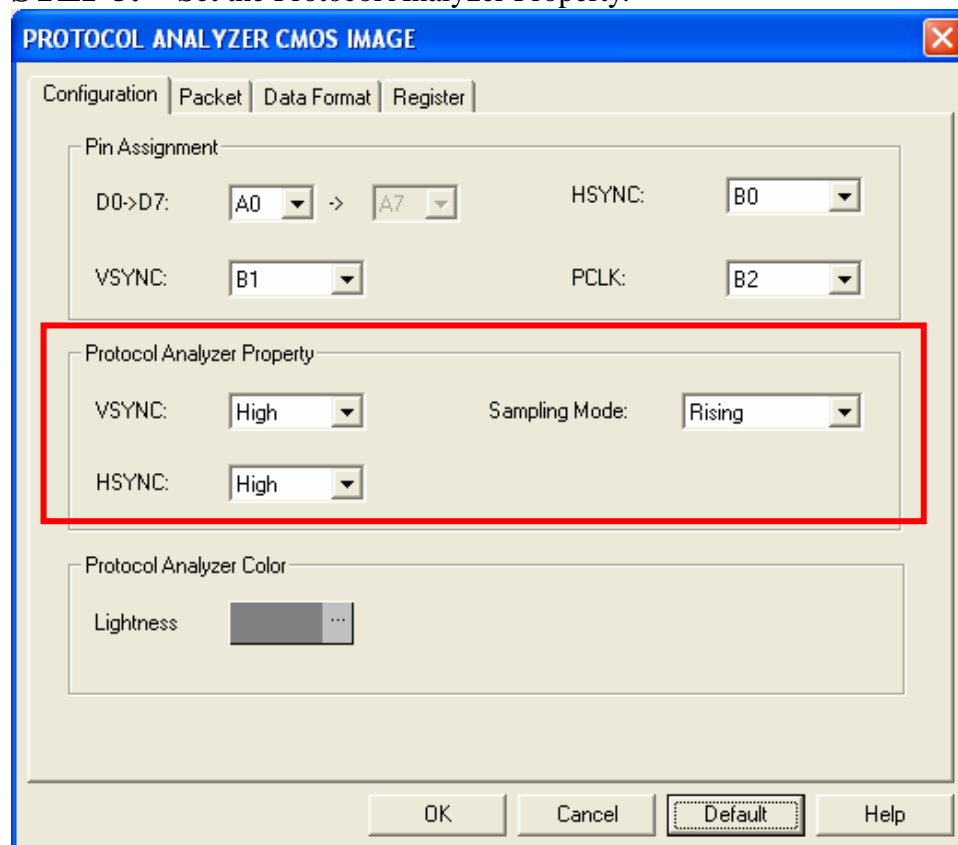
**STEP 3.** Select Protocol Analyzer, and then choose **CMOS IMAGE MODULE V1.02.00 (CN01)**. Next click **Parameters Configuration** to open **Parameters Configuration** dialog box.



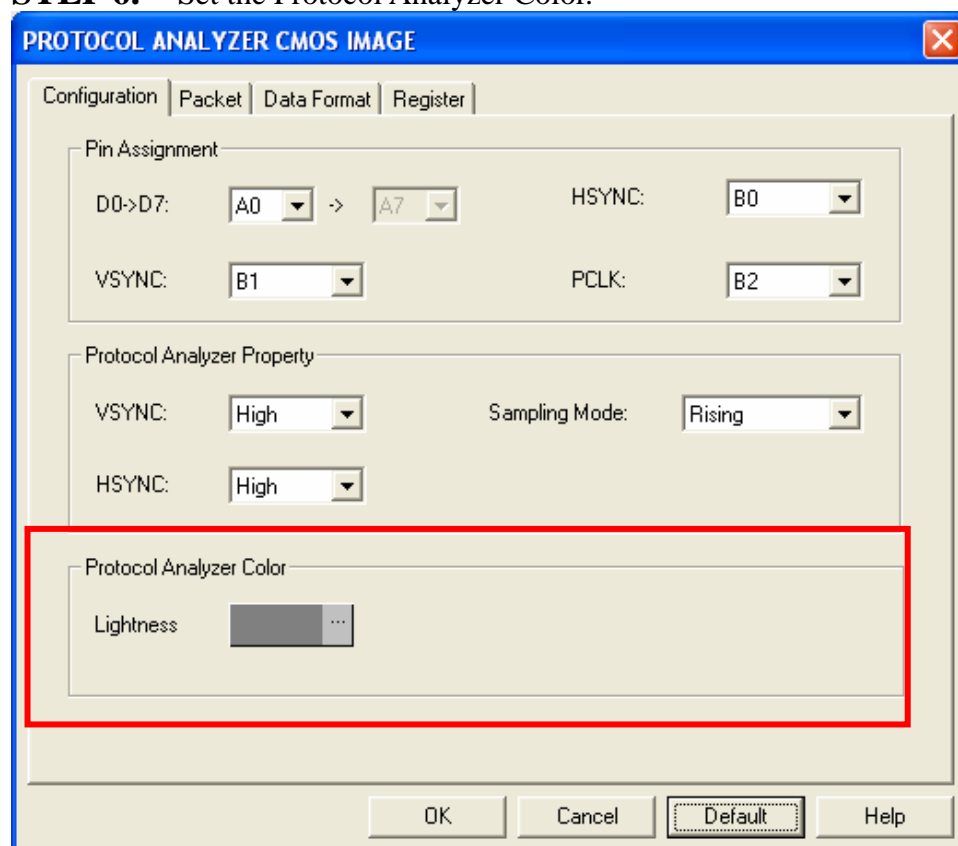
**STEP 4.** Set the Pin Assignment.



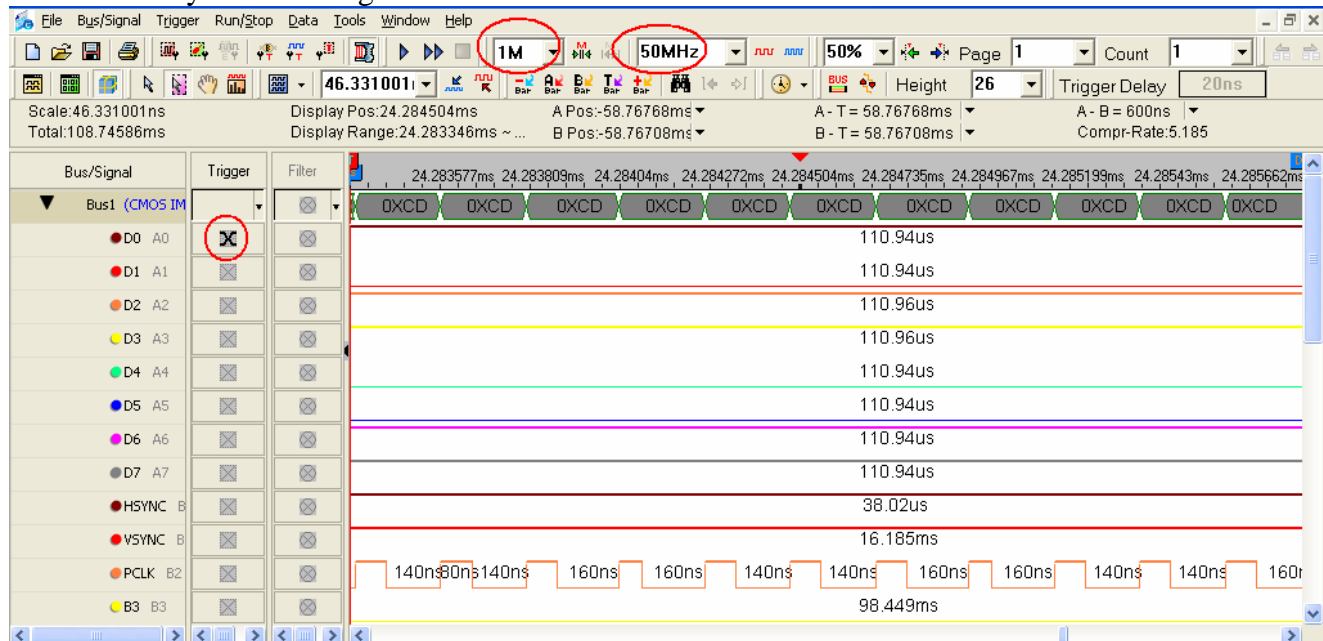
**STEP 5.** Set the Protocol Analyzer Property.



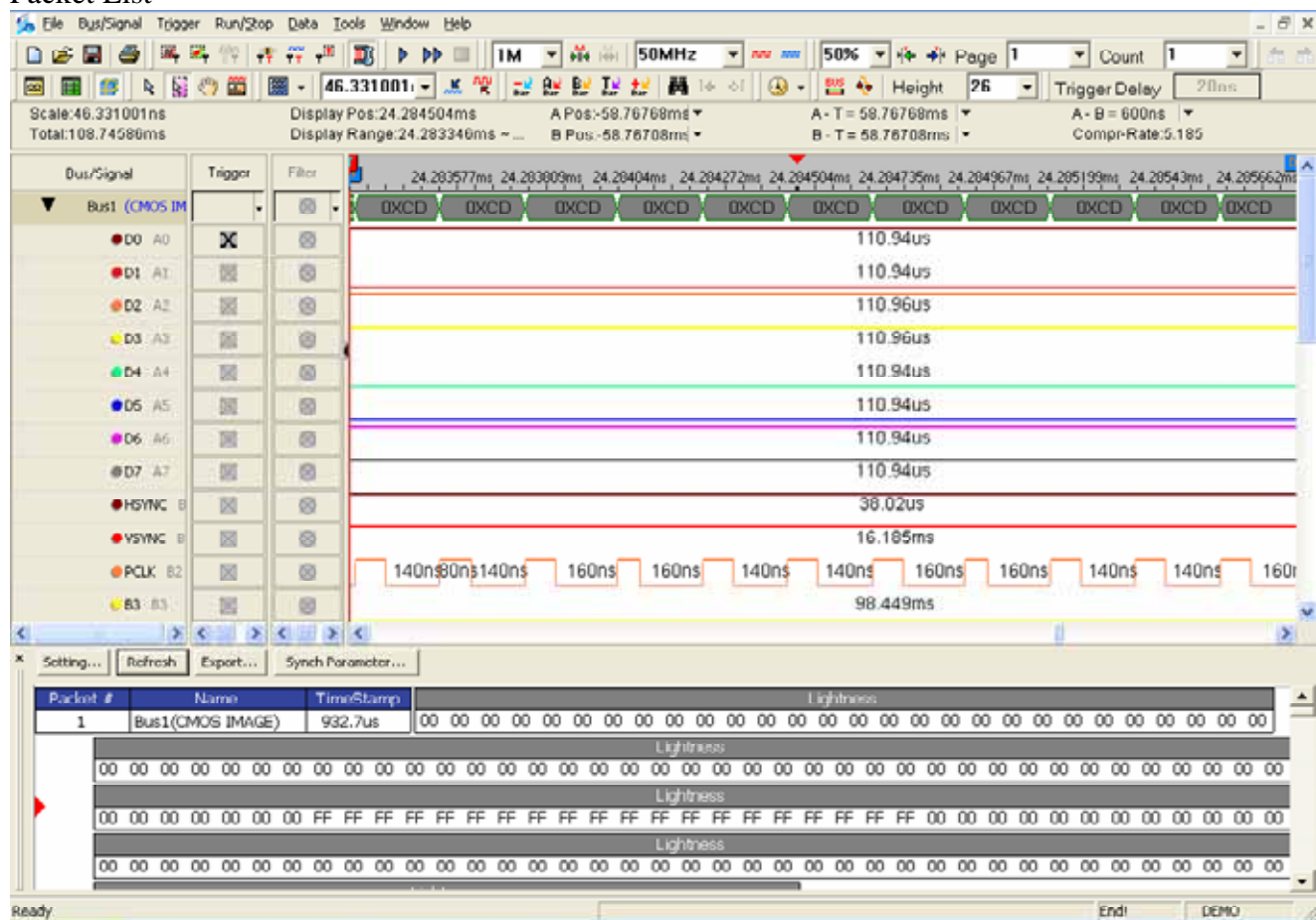
**STEP 6.** Set the Protocol Analyzer Color.



## Protocol Analyzer Decoding



## Packet List

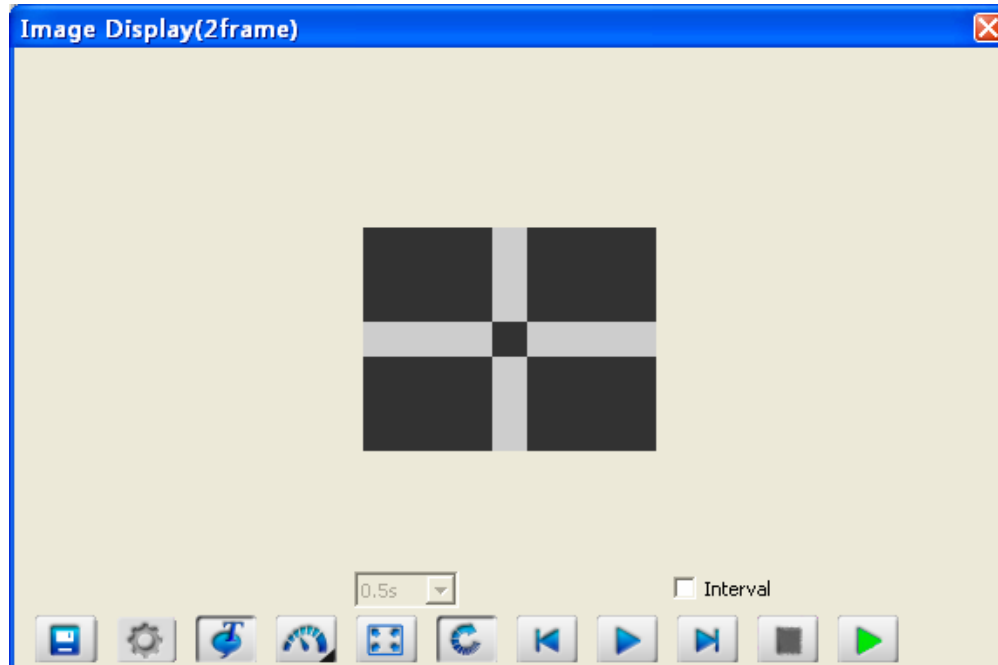


## 4. Function Description





### 4.1 Image Encode





This function can decode the data format of protocol analyzer and display the decoded data in images. (Only LAP-A, LAP-C and smart+ are supported.)

#### 4.1.1 Interface






The displayed picture consists of horizontal pixel and vertical pixel. The amount of horizontal pixel is that of PCLK in one effective HSYNC level; the amount of vertical pixel is that of HSYNC in one effective VSYNC. Picture could be got based on these pixels.

1.  **Capture:** Click this button to capture the display area and save it with the current title information(the current frame number) in formats of BMP, JPG and PNG(default).
2.  **Setup:** This function is not supported.
3.  **Display Amount:** Show the page number of current data on the right of title.
4.  **Play Speed:** These speeds are in proportion with the time bit length of data. For example, x10 indicates the speed is 1/10 of the time bit length of data. Click it to select the play speed.

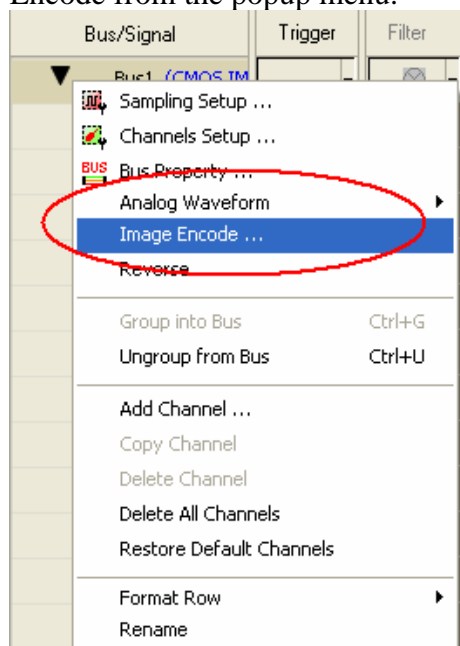
- ×10
  - ×5
  - ×2
  - √×1
  - /2
  - /5
  - /10
5.  **Full Screen:** Click it to display the picture in full screen.
6.  **Loop:** Show the data repeatedly.
7.  **Play/Pause:** Click the play button to play while it changes to the pause button, click the pause button to pause and display the current data while it changes to the play button.
8.  **Previous:** Show the previous data in default display mode, or move one grid rightward in moving

display mode.

9.  **Next:** Show the next data in default display mode, or move one grid leftward in moving display mode.
10.  **Stop:** Stop the playing. It is enabled during playing.
11.  **Run:** Click this button to capture data for one time.
12. ☐ **Interval** : If selected, the data will be captured continuously with that interval no matter the Run button is clicked or not. It is not selected by default. Its options includes: 0.5s, 1.0s, 1.5s, 2.0s, 2.5s, 3.0s, 3.5s, 4.0s, 4.5s, 5.0s.

#### 4.1.2 Operating Instructions

**STEP 1.** After decoding finished, press right key on the Bus name (Bus(CMOS IMAGE)) and select the Image Encode from the popup menu.



**STEP 2.** Click the Play button to show the images produced from data changing in the display area.

