SPECIFICATION

MODEL: B12011-LED Pitch Array

PART NO: _____

VERSION: V1.02

Approver		Check	Design
GM	PM		

Customer Confirm

Content

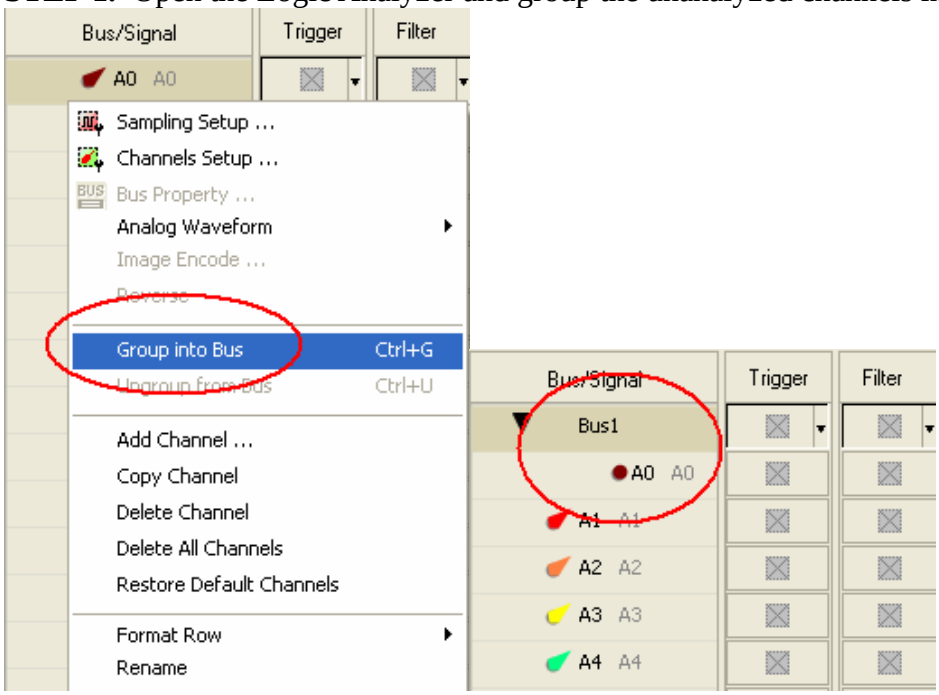
1 Software Register

Please register the software as the following steps:

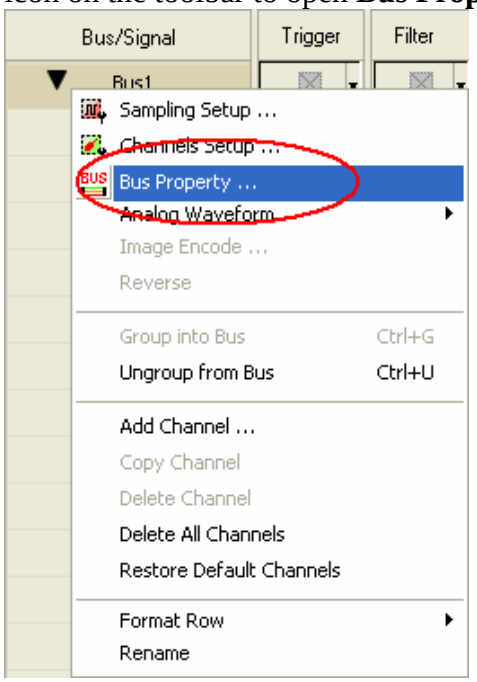
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

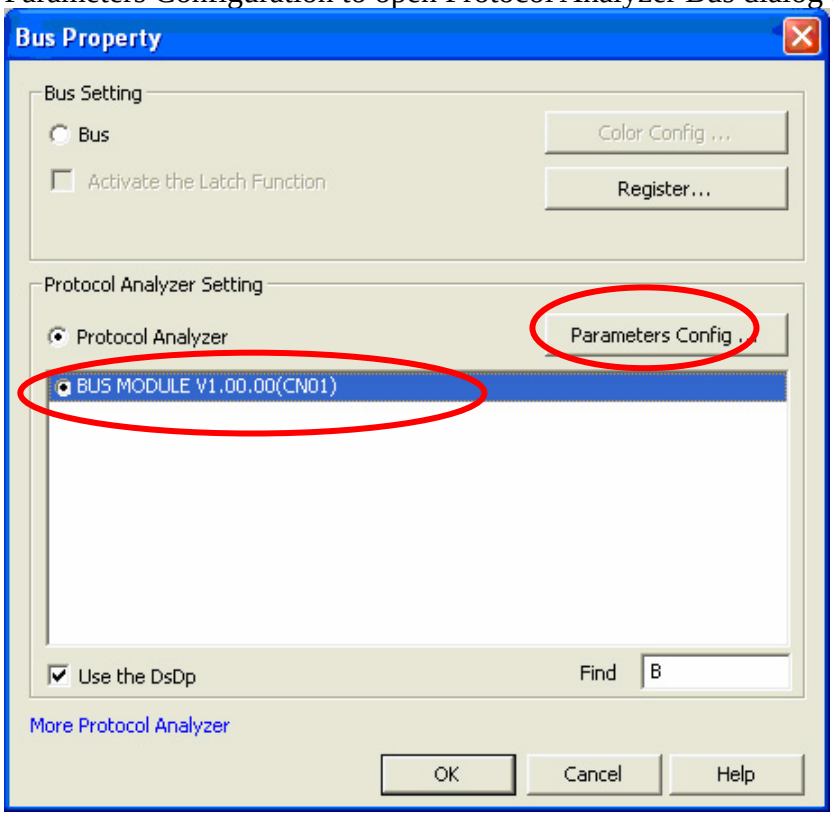
STEP 1. Open the Logic Analyzer and group the unanalyzed channels into **Bus1** by pressing the **Right Key**.



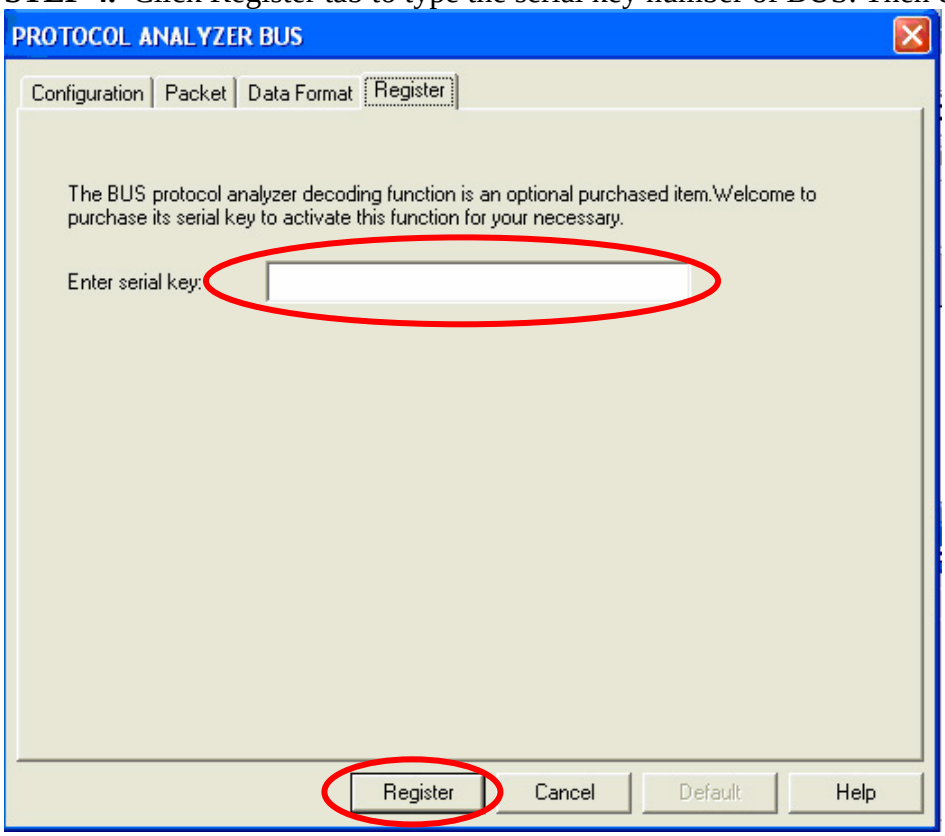
STEP 2. Select **Bus 1**, then press **Right Key** on the mouse to list the menu, then click **Bus Property** or **Bus** icon on the toolbar to open **Bus Property** dialog box.



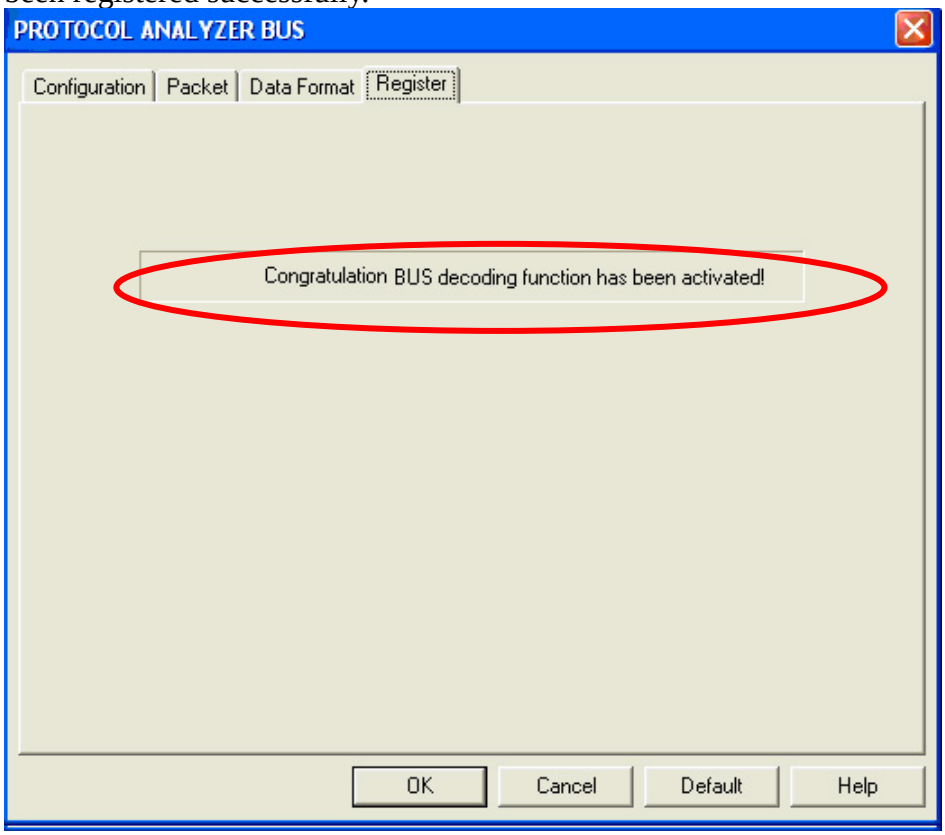
STEP 3. Select the Protocol Analyzer, and then choose **BUS MODULE V1.00.00 CN01)**. Next click Parameters Configuration to open Protocol Analyzer Bus dialog box.



STEP 4. Click Register tab to type the serial key number of BUS. Then click Register.



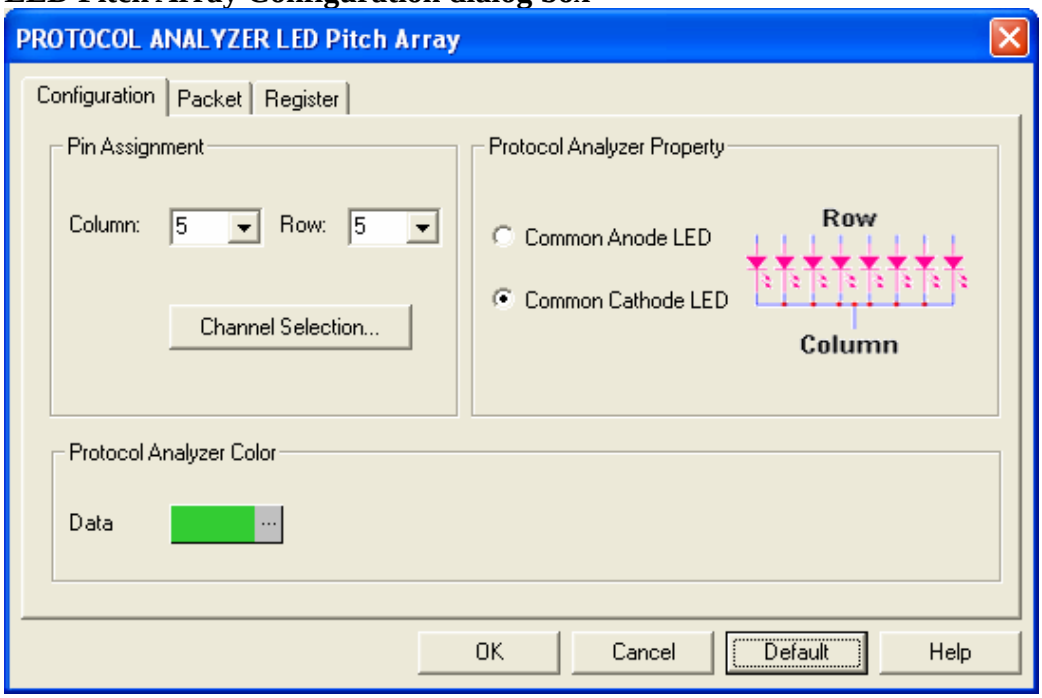
STEP 5. After clicking the Register button, following dialog box will appear, it denotes that the BUS has been registered successfully.



2 User Interface

Please refer to the below images to do settings of **LED Pitch Array** module.

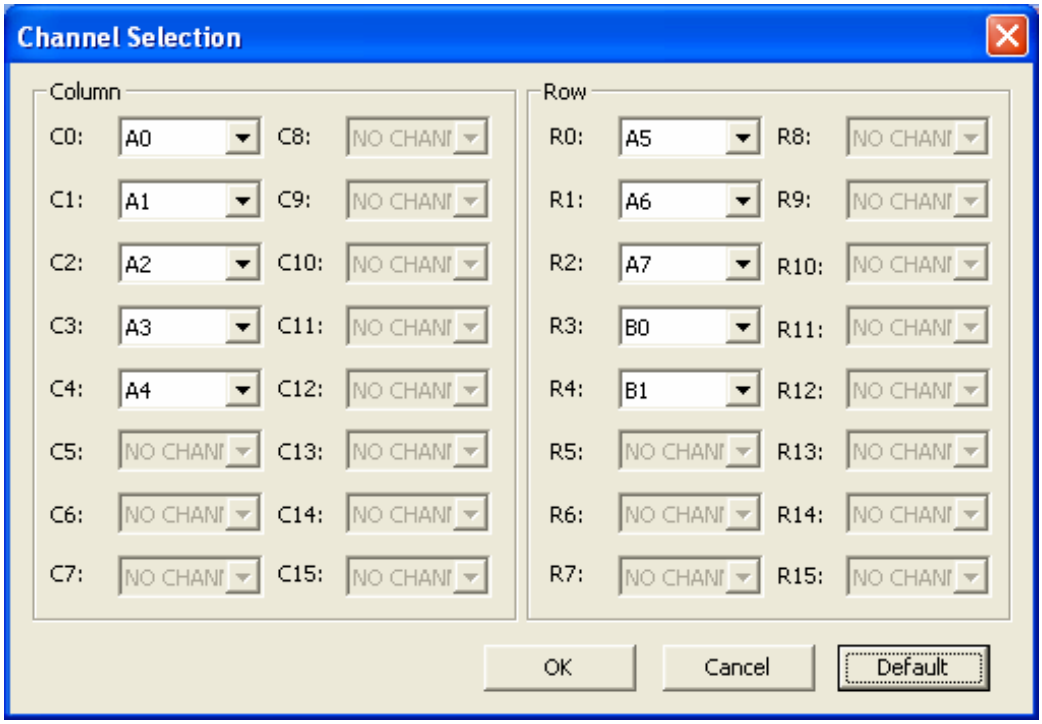
LED Pitch Array Configuration dialog box



Pin Assignment

The number of Column and Row can be set between 0 and 16. By default they share equal allocation of Bus channels, but the number of Row will be 1 more than that of Column if the quantity of Bus channel is an odd number.

Channel Selection

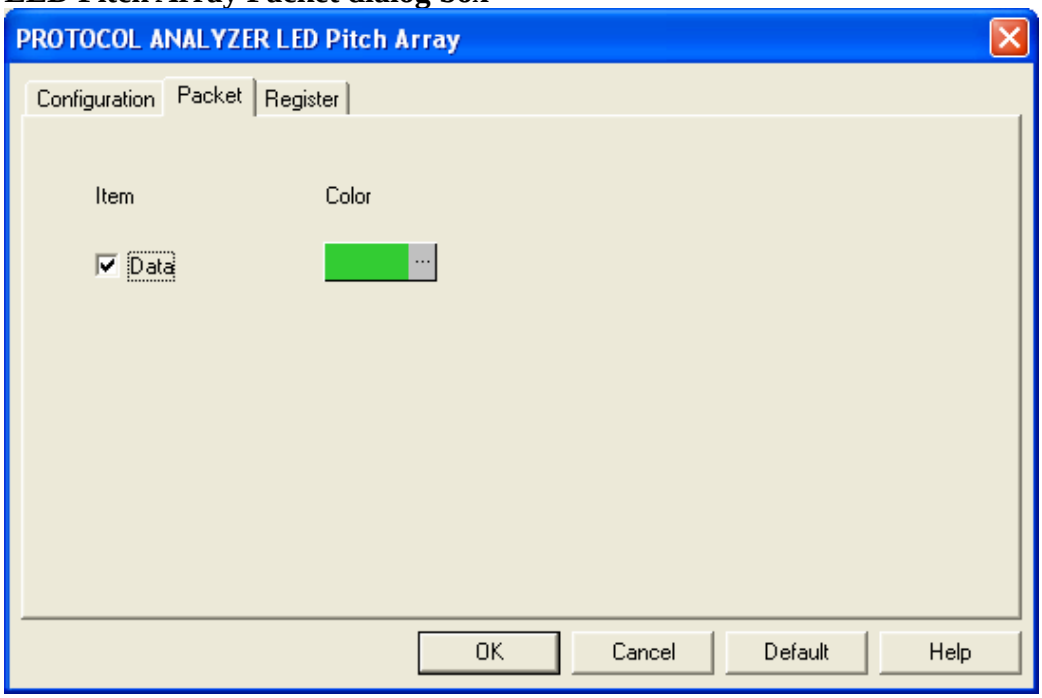


After set the channel quantity of Column and Row, users can click ‘Channel Selection’ to select channels for Column and Row. For example, if the channel quantity of Column and Row are both 4, then on the interface of ‘Channel Selection’ only 4 channels are available for Column and Row, the other channels are disable.

Protocol Analyzer Property
Users can select ‘Common Anode LED’ or ‘Common Cathode LED’; it is ‘Common Cathode LED’ by default.

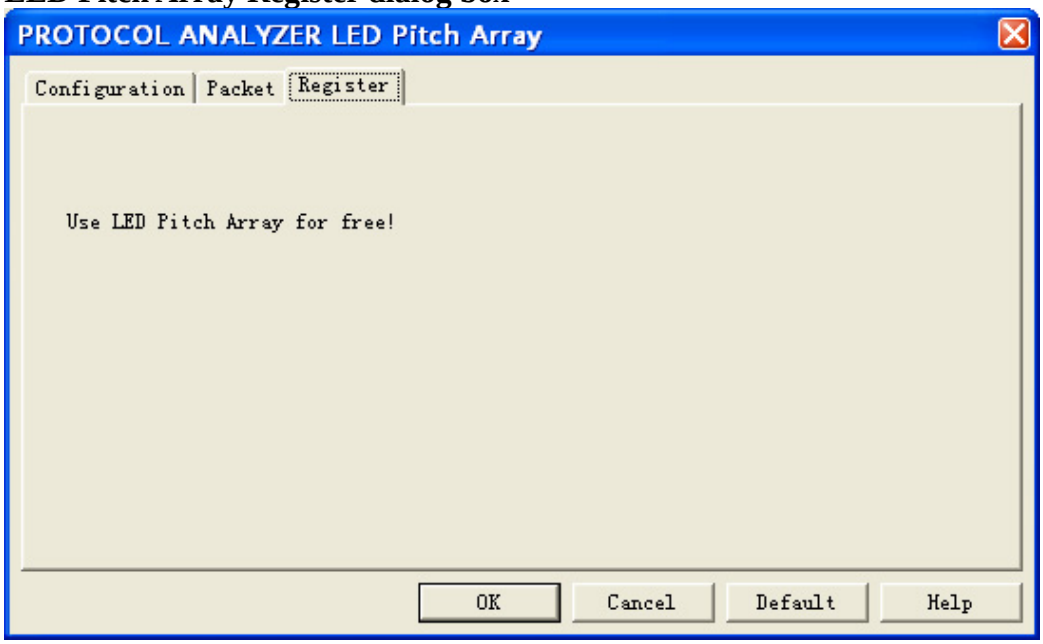
Protocol Analyzer Color
The color can be varied by users.

LED Pitch Array Packet dialog box



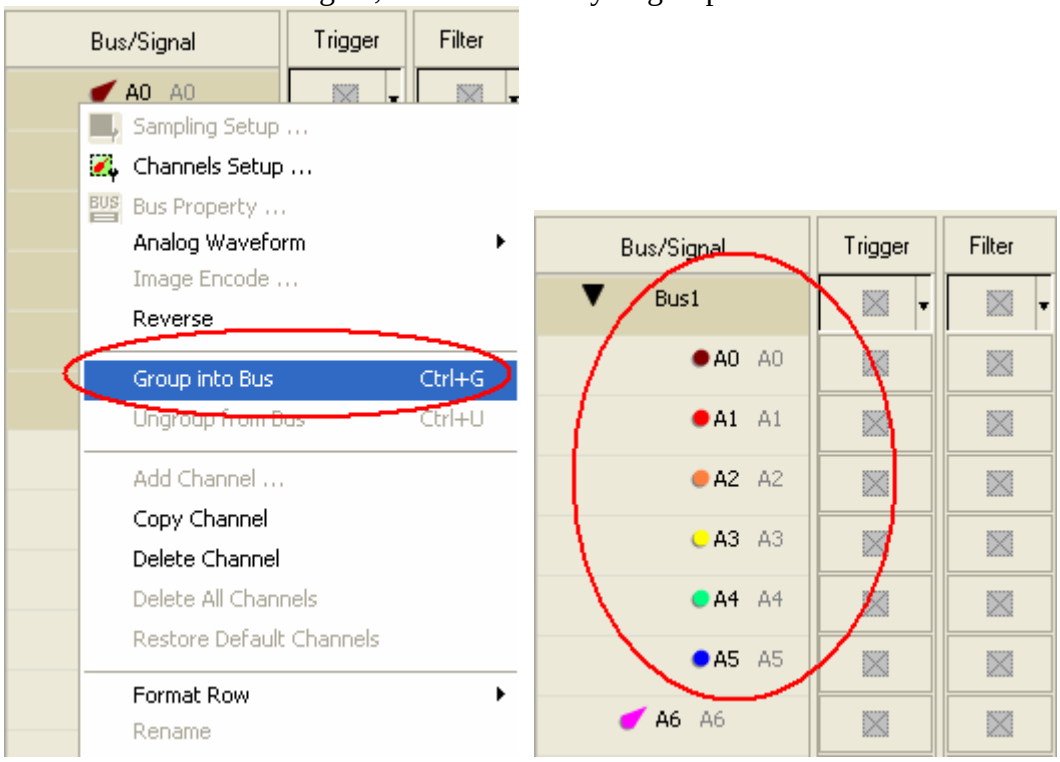
In the Packet part, users can select the item to be displayed and the color as their requirements.

LED Pitch Array Register dialog box

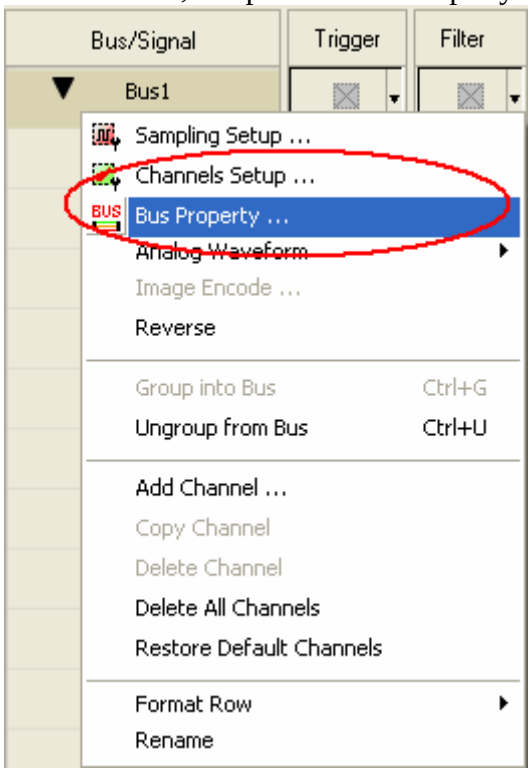


3 Operating Instructions

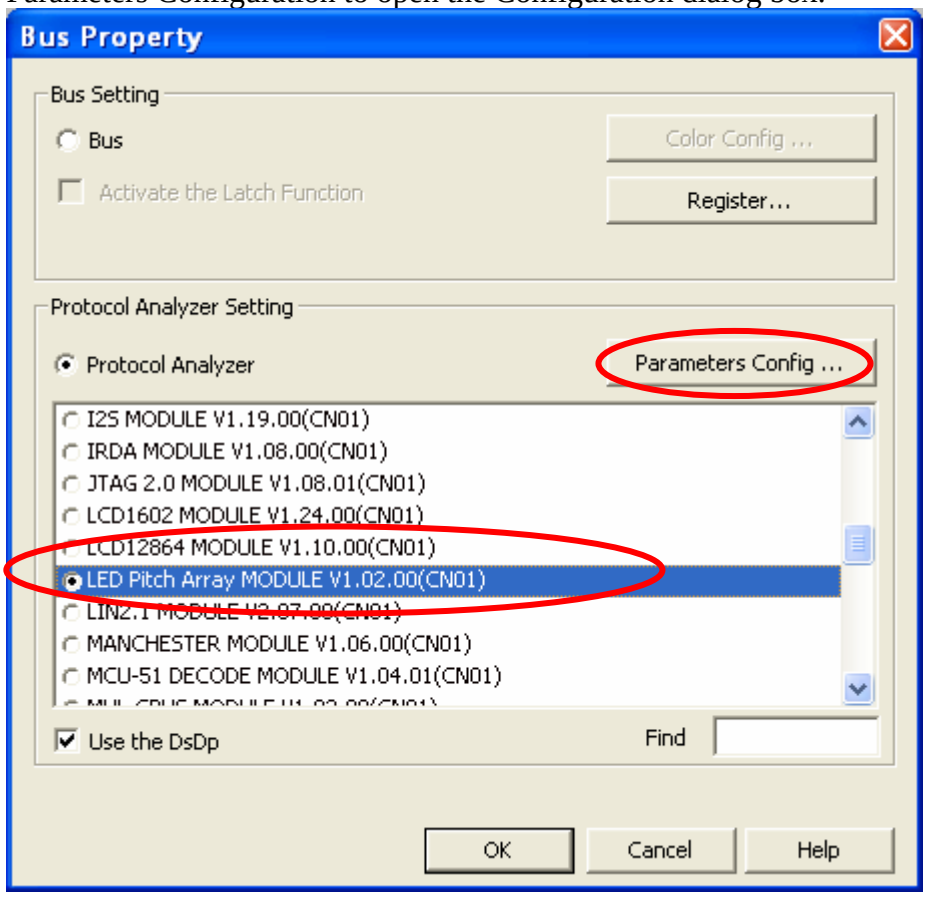
STEP 1. Group A0-A5 into Bus1 by pressing the Right Key on the mouse. LED Pitch Array needs at least one channel to decode signal, so it is necessary to group one or more channels into the Bus.



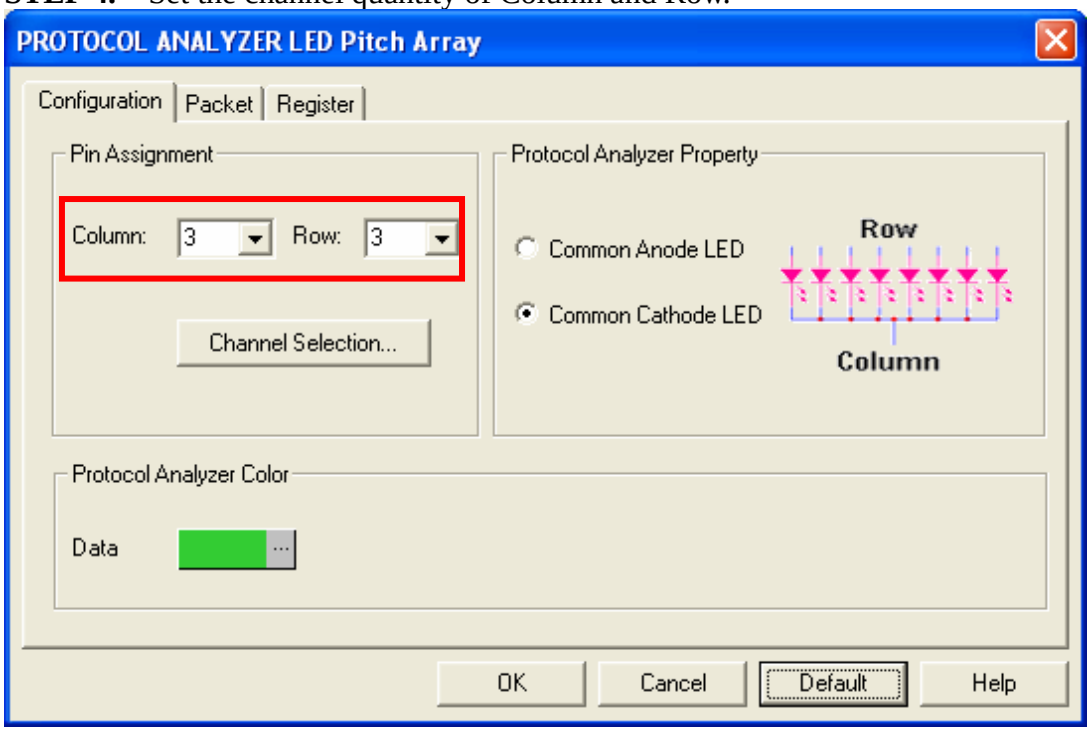
STEP 2. Select Bus1, press right key and select Bus Property from the popped menu, or click the Bus icon on the toolbar, to open the Bus Property dialog box.



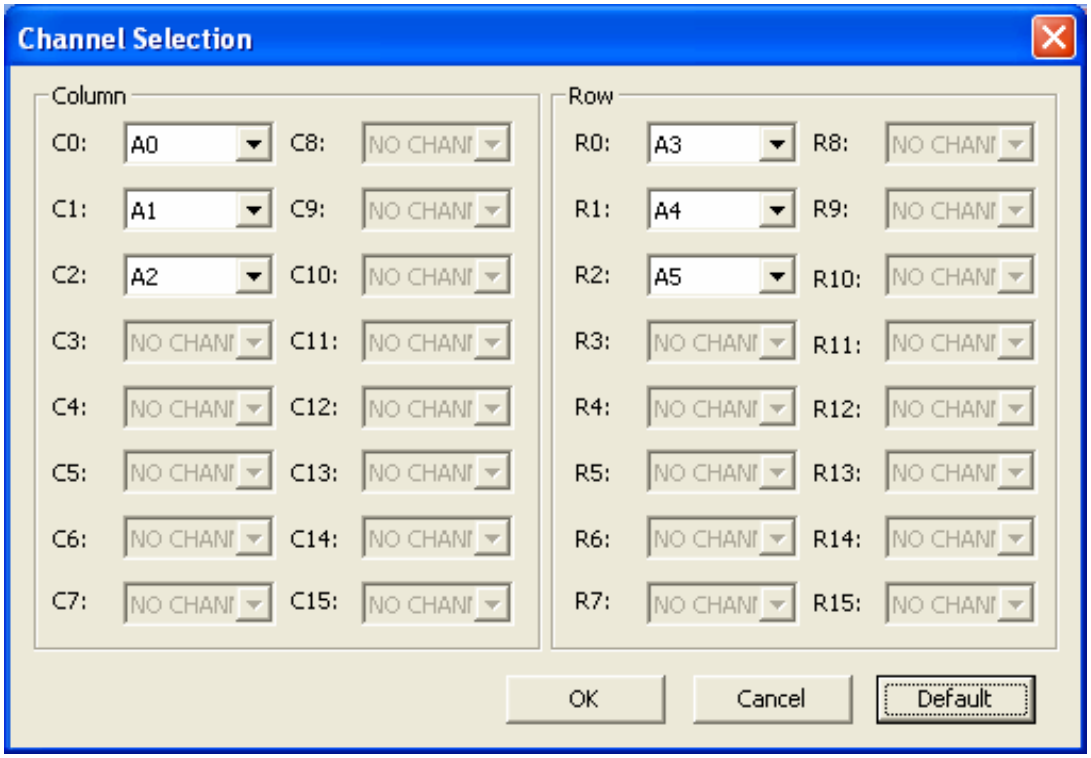
STEP 3. Select Protocol Analyzer, and select LED Pitch Array MODULE V1.02.00(CN01). Then click Parameters Configuration to open the Configuration dialog box.



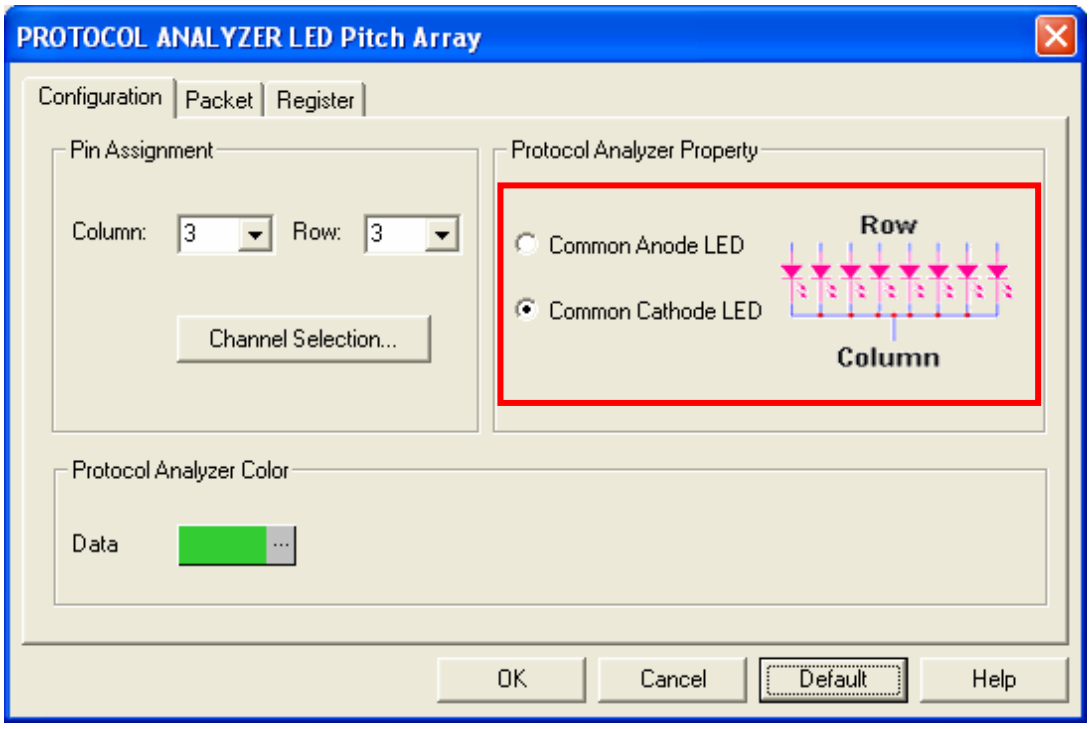
STEP 4. Set the channel quantity of Column and Row.



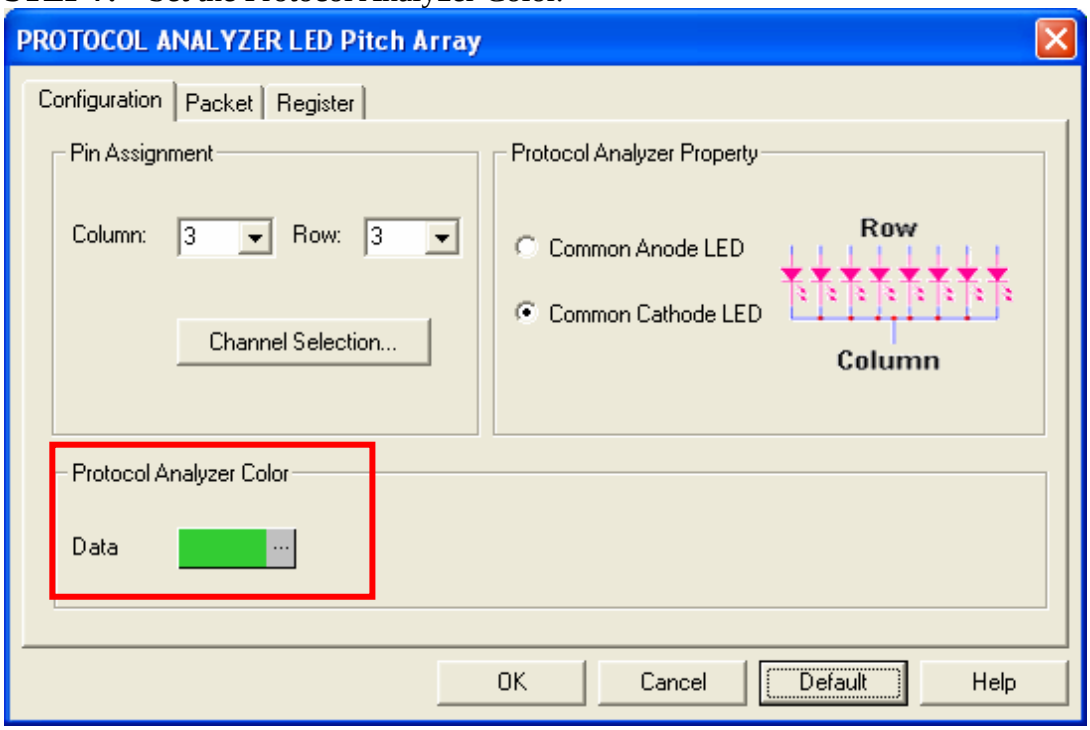
STEP 5. Select channels for Column and Row.



STEP 6. Select ‘Common Anode LED’ or ‘Common Cathode LED’.

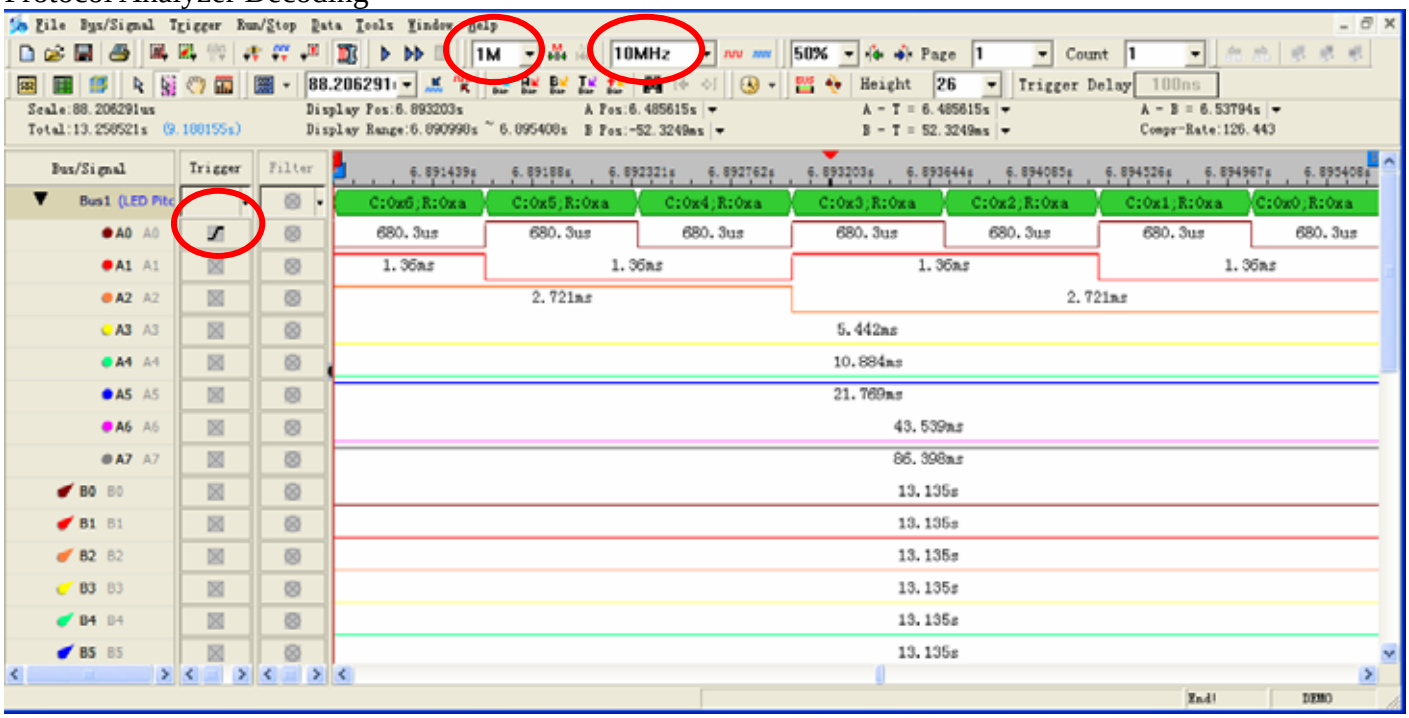


STEP 7. Set the Protocol Analyzer Color.

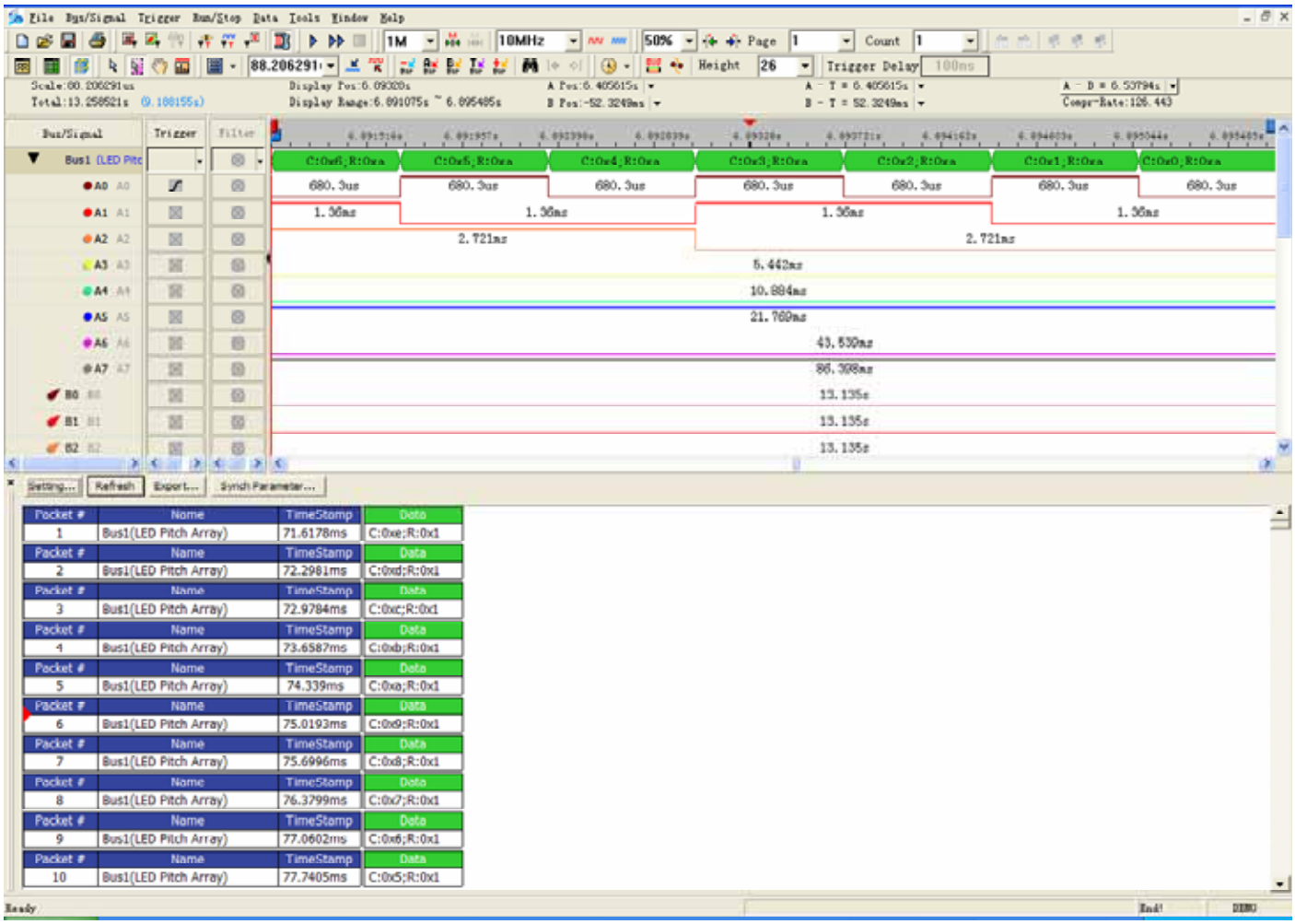


STEP 8. Following pictures show the completion of the protocol analyzer decoding and the packet list. The trigger condition is set as Rising Edge, the memory depth is 1M and the sampling frequency is 10MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List



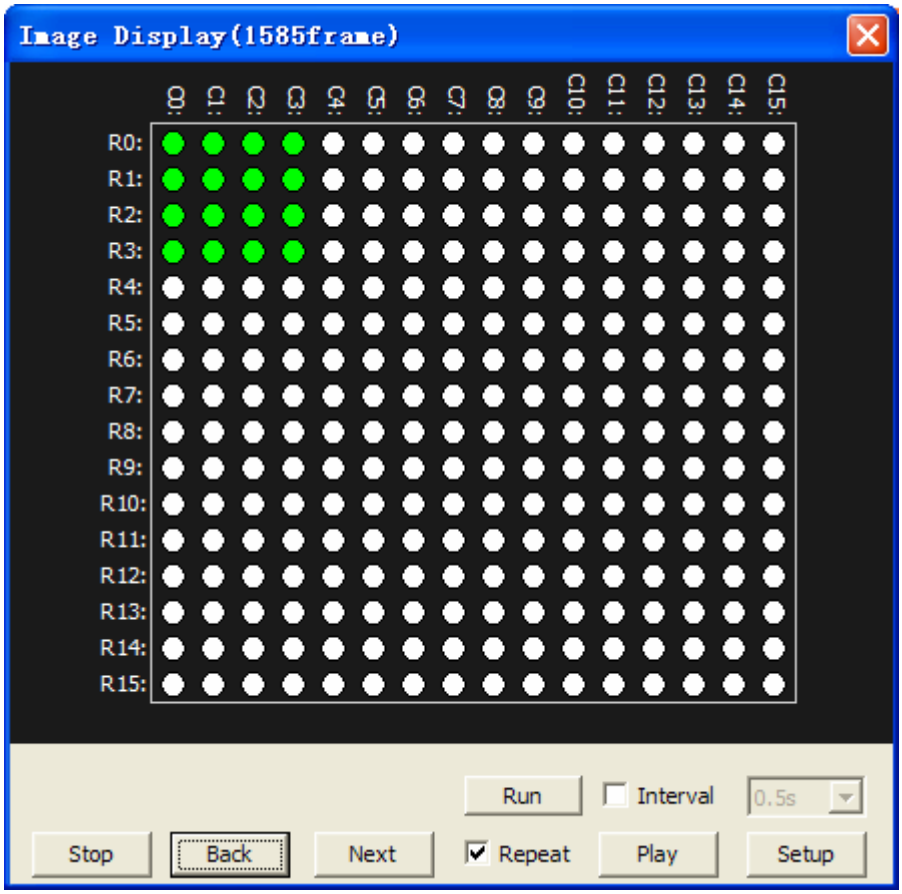
Packet #	Name	TimeStamp	Data
1	Bus1(LED Pitch Array)	71.6178ms	C:0xe;R:0x1
2	Bus1(LED Pitch Array)	72.2981ms	C:0xd;R:0x1
3	Bus1(LED Pitch Array)	72.9784ms	C:0xc;R:0x1
4	Bus1(LED Pitch Array)	73.6587ms	C:0xb;R:0x1
5	Bus1(LED Pitch Array)	74.339ms	C:0xa;R:0x1
6	Bus1(LED Pitch Array)	75.0193ms	C:0x9;R:0x1
7	Bus1(LED Pitch Array)	75.6996ms	C:0x8;R:0x1
8	Bus1(LED Pitch Array)	76.3799ms	C:0x7;R:0x1
9	Bus1(LED Pitch Array)	77.0602ms	C:0x6;R:0x1
10	Bus1(LED Pitch Array)	77.7405ms	C:0x5;R:0x1

4 Function Description

4.1 Image Encode

The Image Encode function can decode the data format of Bus/Protocol Analyzer and display the decoding data of Bus with an image.(This function is only supported by LAP-A, LAP-C and smart+**.)**

4.1.1 Interface



As the screen above shows, it displays a 16*16 dot array, which includes rows and columns.

Run: Click the Run button to capture signals.

Interval: It is a duration between the moment of completing this capturing and the start time of next capturing, if selected, the signals will be captured repeatedly and continuously unless the Run button is pressed. It is not activated by default. If activated, the interval time can be set to 0.5s, 1.0s, 1.5s, 2.0s, 2.5s, 3.0s, 3.5s, 4.0s, 4.5s or 5.0s, and it is 0.5s by default.

Stop: If this button is pressed, all data will return to initialization. It will replay only when the Play button is pressed.

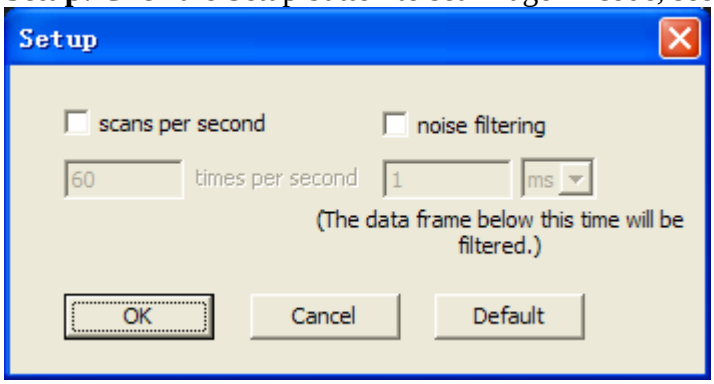
Back: If set to the default display, it will return to the last data; if set to the mobile display, it will move one grid towards right.

Next: If set to the default display, it will display the next data; if set to the mobile display, it will move one grid towards left.

Repeat: Display the data of Bus repeatedly.

Play: If pressed, this button will turn into the Pause button, and the interface will display the data of Bus in order.

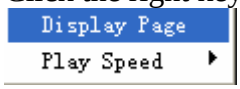
Setup: Click the Setup button to set Image Encode, see below:



scans per second: It means the image refreshment rate per second. The values can be input between 1 and 80, if the value you input is beyond the range, a prompt dialog box will popup and display the message of "Please input an integer between 1 and 80." It is 60 by default, and this function is not activated by default.

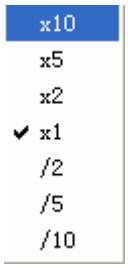
noise filtering: Activating the noise filtering option helps filter the data below the setting time. The edit box is used to input the time value, whose range is limited between 1 and 10; if the time value you input is beyond the range, a prompt dialog box will popup and display the message of "Please input an integer between 1 and10.". It is 1 by default. Composite box is used to select the unit of data, such as "ms", "us" and "ns", and the default is ms. This function is not activated by default.

Click the right key on the mouse at the display area of Image Encode, the following menu will popup.



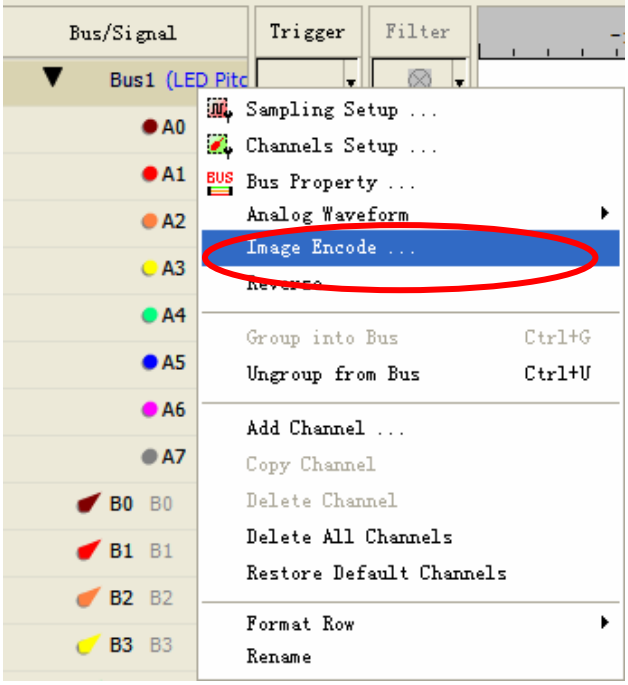
Display Page: The page No. of the current data (the data displayed at the right) is displayed at the right of the dialog box's title, and it it activated by default.

Play Speed: The options on the following menu represent the proportionate relationship between play speed and time bit length of data. If x10 is selected, the time bit length of data is ten times as much as play speed.



4.1.2 Operating Instructions

STEP 1. After decoding the Bus/Protocol Analyzer, click the right key on the mouse at the place of Bus 1 (LED Pitch Array) and click Image Encode on the popup menu.



STEP 2. Interface of Image Encode.