



孕龍科技股份有限公司
ZeroPlus Technology Co., Ltd.

SPECIFICATION

MODEL: B12018-RGB Interface

PART NO : _____

VERSION : V1.00

Approver		Check	Design
GM	PM		

Customer Confirm

* Please fax the file to
ZeroPlus Technology after
signing.

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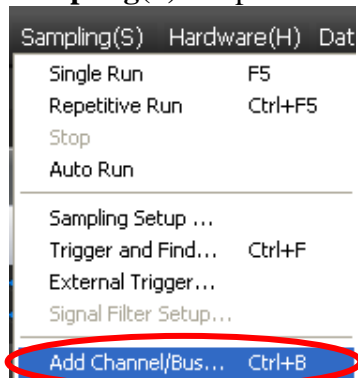
1 Software Register

Please register the software as the following steps:

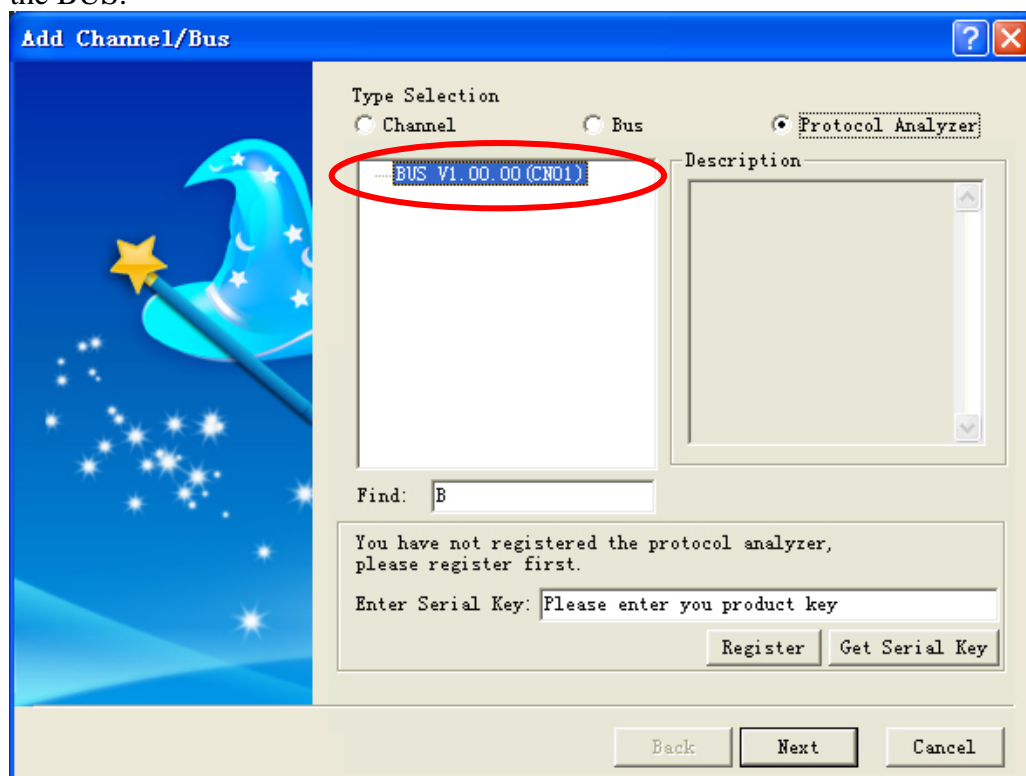
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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 select the **Add Channel/Bus** item on the pull-down menu of the **Sampling(S)** to open the **Add Channel/Bus** dialog box.



STEP 2. Select Protocol Analyzer item in the Add Channel/Bus dialog box, expand the Other Type, and select the BUS.





STEP 3. Enter the Serial Key of the BUS under this Model, and then press the **Register**.

Add Channel/Bus

Type Selection
☐ Channel ☐ Bus ☒ Protocol Analyzer

--- BUS V1.00.00 (CN01)

Description

Find: B

You have not registered the protocol analyzer,
please register first.
Enter Serial Key: Please enter you product key

Register Get Serial Key

Back Next Cancel

STEP 4. After the Register is successful, press the Next.

Add Channel/Bus

Type Selection
☐ Channel ☐ Bus ☒ Protocol Analyzer

--- BUS V1.00.00 (CN01)

Description

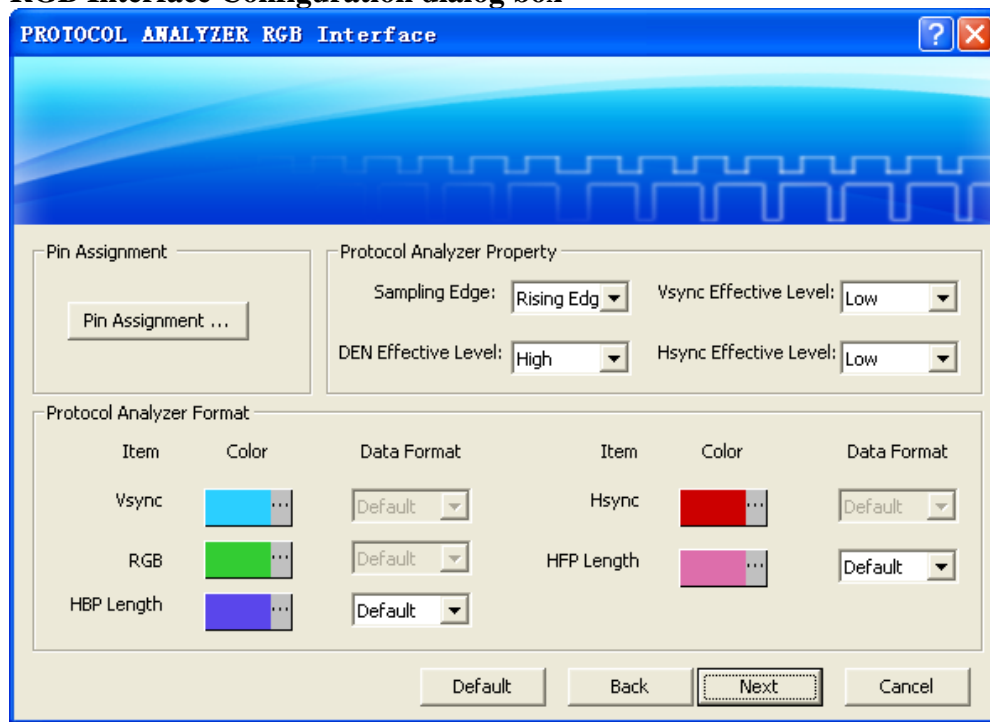
Find: B

Back Next Cancel

2 User Interface

Please refer to the below images to select options of **RGB** module.

RGB Interface Configuration dialog box



Protocol Analyzer Property:

Sampling Edge: Rising Edge and Falling Edge can be selected. It is Rising Edge by default.

DEN Effective Level: High and Low can be selected. It is High by default.

Vsync Effective Level and Hsync Effective Level: High and Low can be selected. It is Low by default.



Pin Assignment: Click “Pin Assignment” to open the following dialog box for channel settings.

The Pin Assignment dialog box is titled "Pin Assignment" and contains four sections for channel settings: Blue, Green, Red, and Other. Each section has a set of dropdown menus for pin assignment.

Channel	Pin	Assignment
Blue	D00:	A0
	D01:	A1
	D02:	A2
	D03:	A3
	D04:	A4
	D05:	A5
	D06:	A6
Green	D08:	B0
	D09:	B1
	D10:	B2
	D11:	B3
	D12:	B4
	D13:	B5
	D14:	B6
Red	D16:	C0
	D17:	C1
	D18:	C2
	D19:	C3
	D20:	C4
	D21:	C5
	D22:	C6
Other	CLK:	D0
	DEN:	D1
Other	Vsync:	D2
	Hsync:	D3

Buttons: Default, OK, Cancel

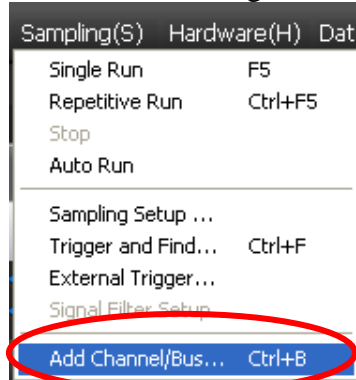
Protocol Analyzer Format:

Users can set the color of the packet as their requirements. The two items (HFP Length and HBP Length) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the data format of these items in the Waveform Display Area and Packet List is controlled by Protocol Analyzer. The default data format is controlled by main program and the data format of these two items is Default.

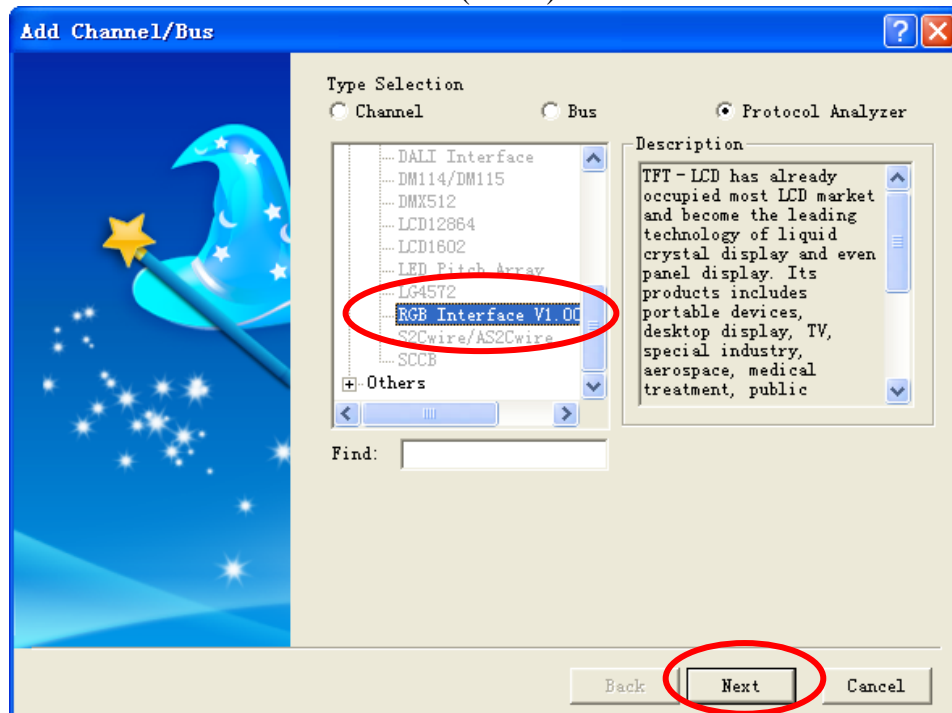


3 Operating Instructions

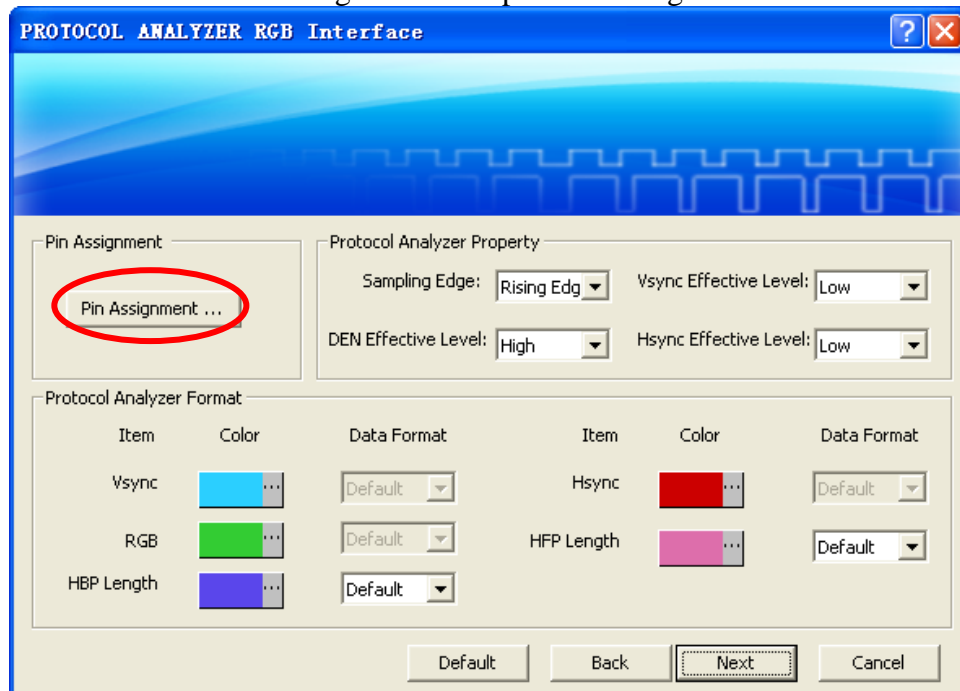
STEP 1. Select the Add Channel/Bus item on the pull-down menu of the Sampling(S) to open the Add Channel/Bus dialog box.



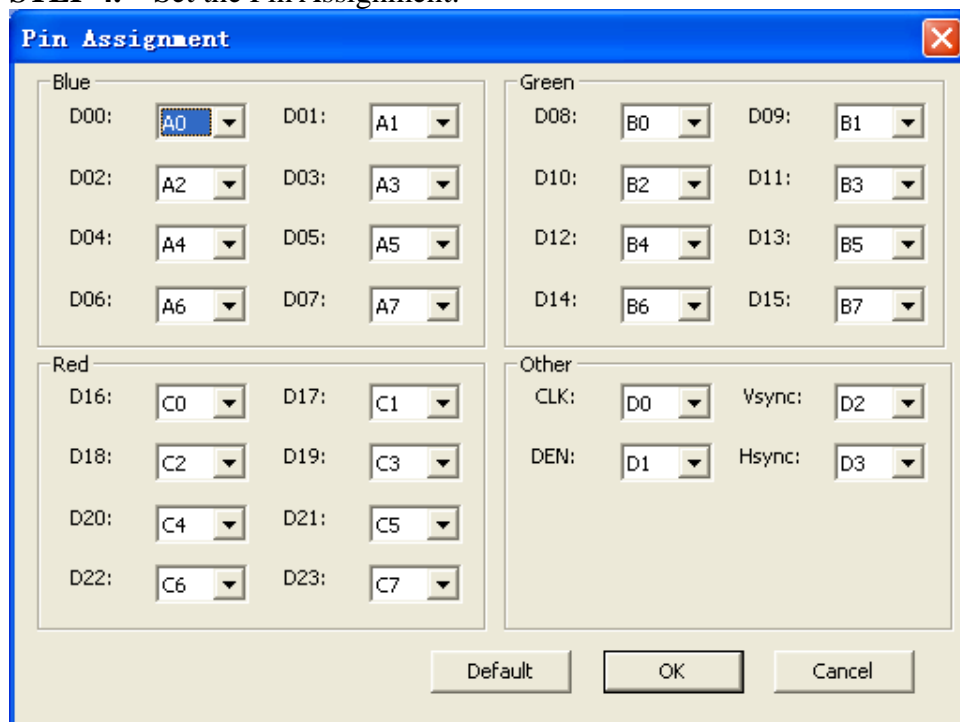
STEP 2. Select the Protocol Analyzer item in the Add Channel/Bus dialog box, expand the Optoelectronics, select the RGB Interface V1.00.00 (CN01) and then click the Next.



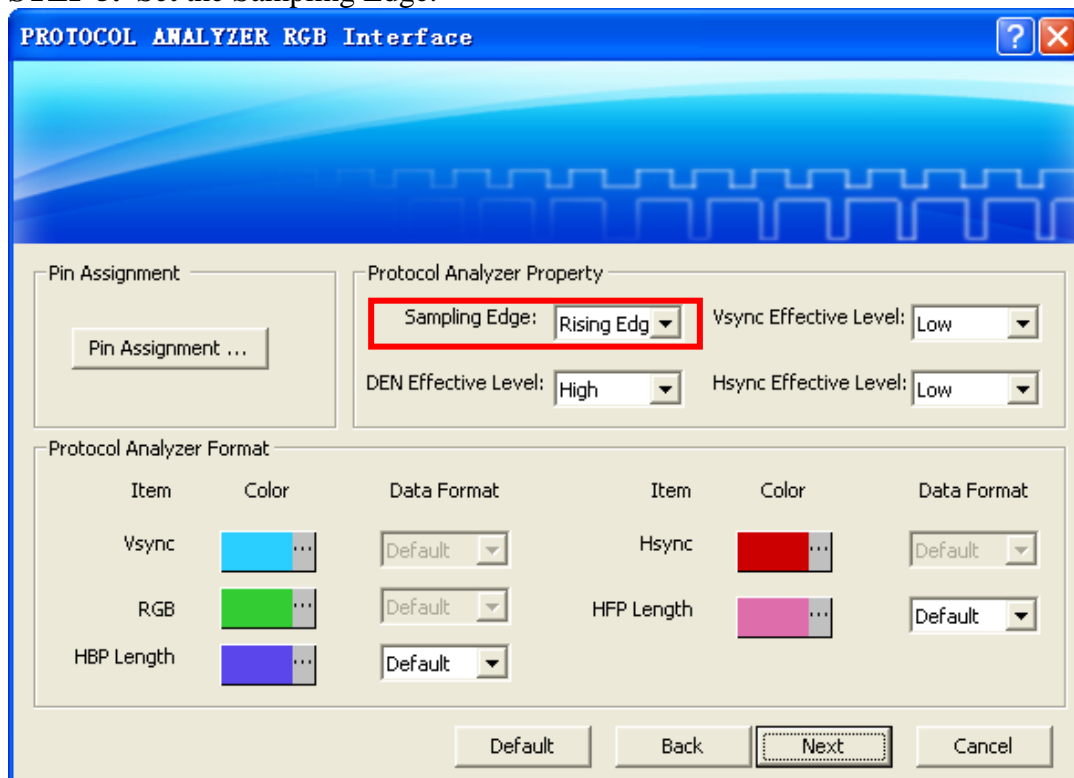
STEP 3. Click “Pin Assignment” to open the dialog box for channel settings.



STEP 4. Set the Pin Assignment.



STEP 5. Set the Sampling Edge.



PROTOCOL ANALYZER RGB Interface

Pin Assignment: Pin Assignment ...

Protocol Analyzer Property

Sampling Edge: Rising Edg Vsync Effective Level: Low

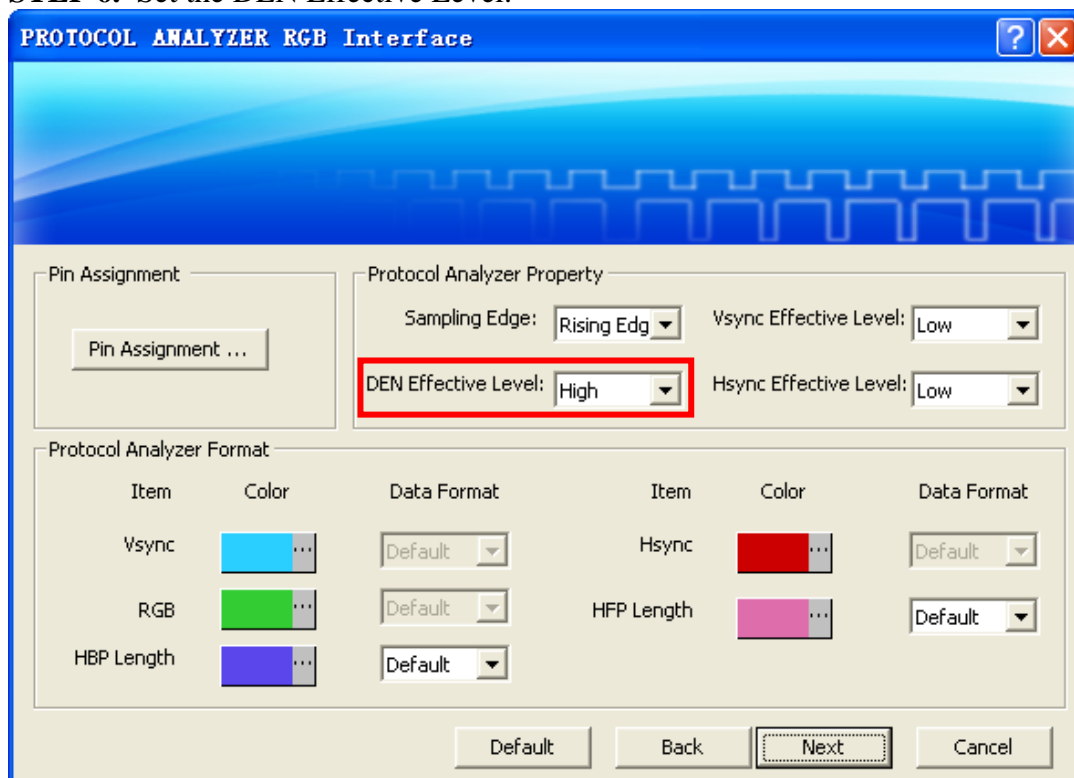
DEN Effective Level: High Hsync Effective Level: Low

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Vsync		Default	Hsync		Default
RGB		Default	HFP Length		Default
HBP Length		Default			

Default Back Next Cancel

STEP 6. Set the DEN Effective Level.



PROTOCOL ANALYZER RGB Interface

Pin Assignment: Pin Assignment ...

Protocol Analyzer Property

Sampling Edge: Rising Edg Vsync Effective Level: Low

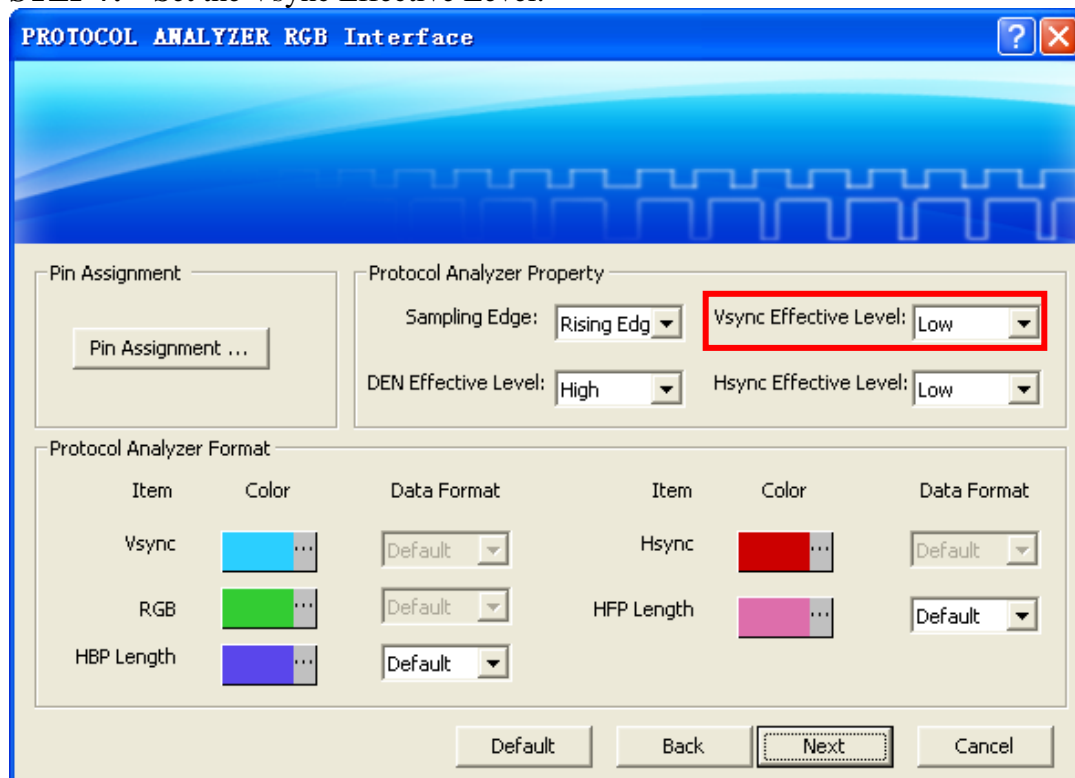
DEN Effective Level: High Hsync Effective Level: Low

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Vsync		Default	Hsync		Default
RGB		Default	HFP Length		Default
HBP Length		Default			

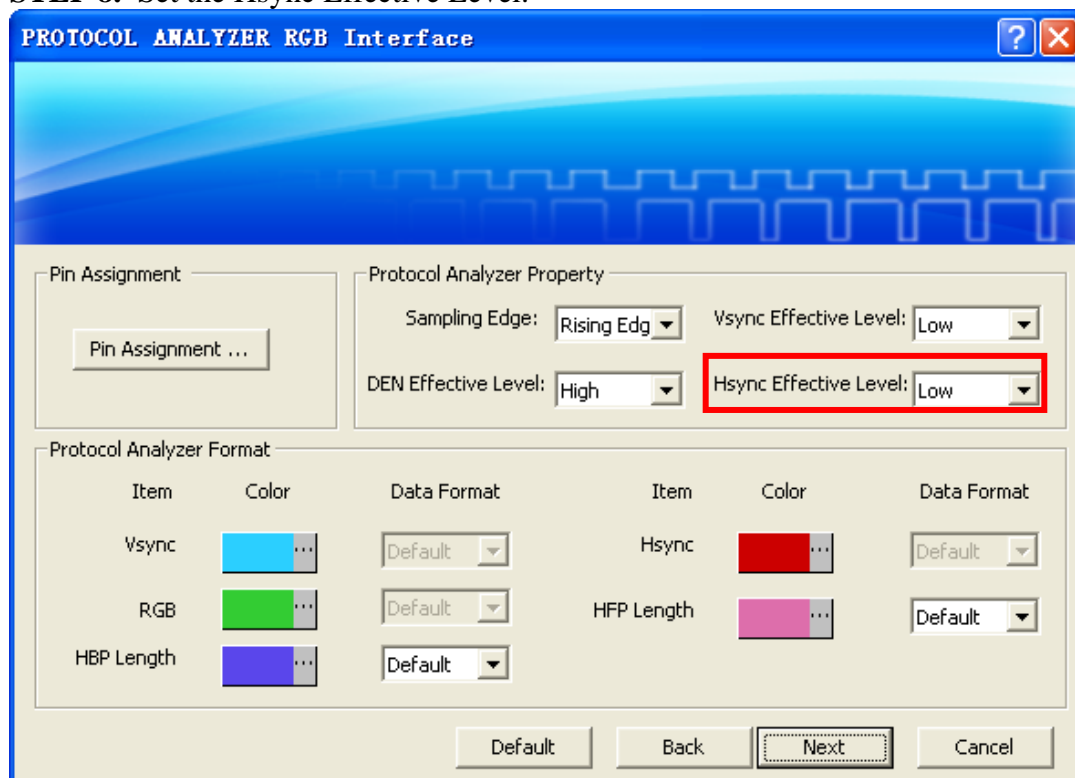
Default Back Next Cancel

STEP 7. Set the Vsync Effective Level.



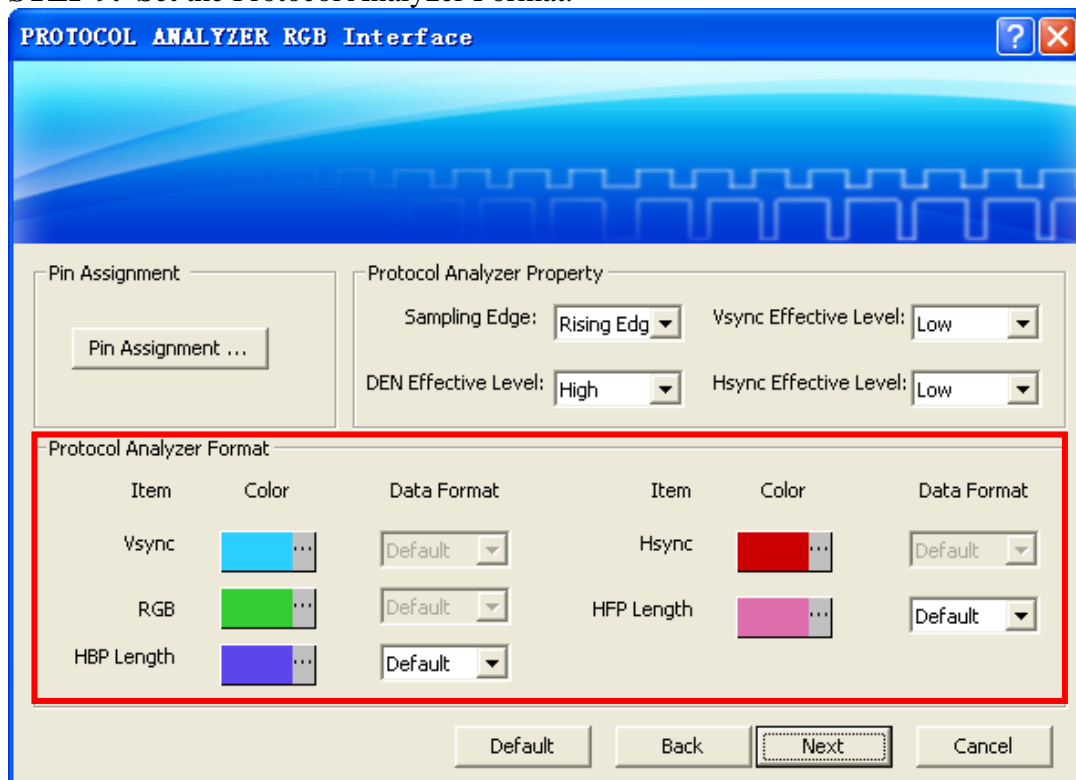
The screenshot shows the 'PROTOCOL ANALYZER RGB Interface' window. In the 'Protocol Analyzer Property' section, the 'Vsync Effective Level' dropdown is highlighted with a red box and set to 'Low'. Other settings include 'Sampling Edge' set to 'Rising Edg', 'DEN Effective Level' set to 'High', and 'Hsync Effective Level' set to 'Low'. The 'Protocol Analyzer Format' section shows color and data format settings for Vsync (cyan), RGB (green), HBP Length (purple), Hsync (red), and HFP Length (pink). Buttons at the bottom include 'Default', 'Back', 'Next', and 'Cancel'.

STEP 8. Set the Hsync Effective Level.



The screenshot shows the 'PROTOCOL ANALYZER RGB Interface' window. In the 'Protocol Analyzer Property' section, the 'Hsync Effective Level' dropdown is highlighted with a red box and set to 'Low'. Other settings include 'Sampling Edge' set to 'Rising Edg', 'Vsync Effective Level' set to 'Low', and 'DEN Effective Level' set to 'High'. The 'Protocol Analyzer Format' section shows color and data format settings for Vsync (cyan), RGB (green), HBP Length (purple), Hsync (red), and HFP Length (pink). Buttons at the bottom include 'Default', 'Back', 'Next', and 'Cancel'.

STEP 9. Set the Protocol Analyzer Format.



PROTOCOL ANALYZER RGB Interface

Pin Assignment:

Protocol Analyzer Property:

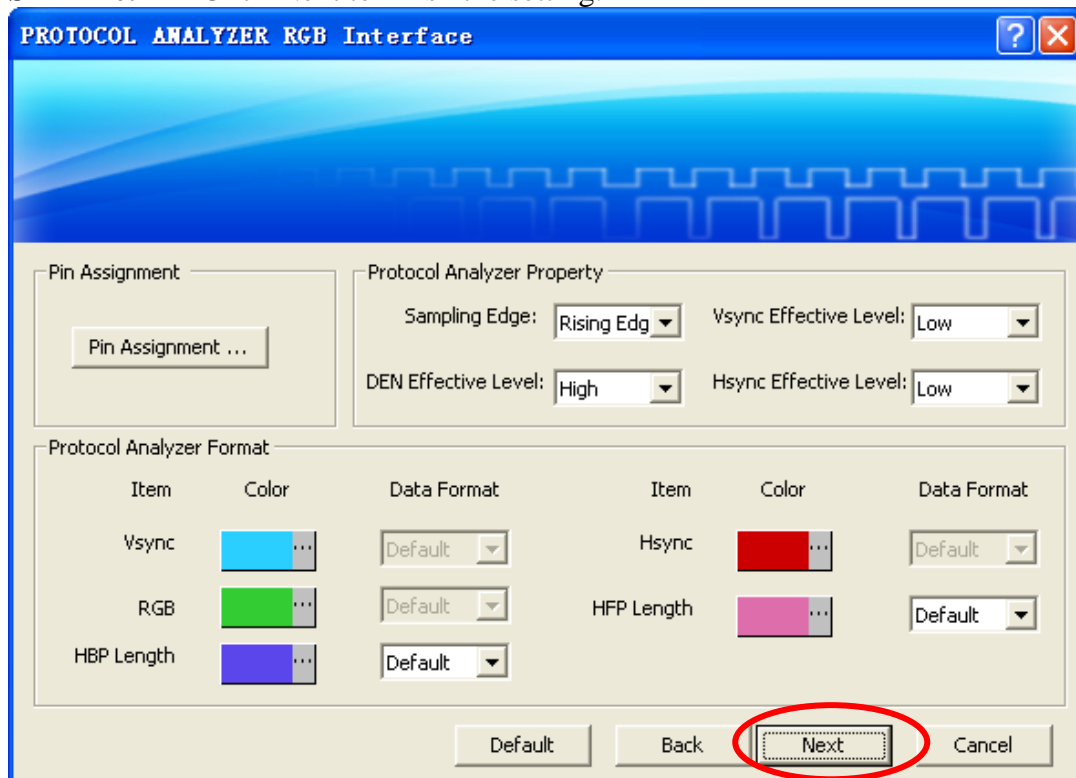
Sampling Edge: Vsync Effective Level:

DEN Effective Level: Hsync Effective Level:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Vsync		<input type="text" value="Default"/>	Hsync		<input type="text" value="Default"/>
RGB		<input type="text" value="Default"/>	HFP Length		<input type="text" value="Default"/>
HBP Length		<input type="text" value="Default"/>			

STEP 10. Click Next to finish the setting.



PROTOCOL ANALYZER RGB Interface

Pin Assignment:

Protocol Analyzer Property:

Sampling Edge: Vsync Effective Level:

DEN Effective Level: Hsync Effective Level:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Vsync		<input type="text" value="Default"/>	Hsync		<input type="text" value="Default"/>
RGB		<input type="text" value="Default"/>	HFP Length		<input type="text" value="Default"/>
HBP Length		<input type="text" value="Default"/>			



STEP 11. Please enter the Bus Name, select “Yes, please delete” or “No, please reserve” and then click Finish.

Add Channel/Bus

Please input the Bus name:

BUS0

Do you want to delete the other Buses and channels in the software?

☐ Yes, please delete

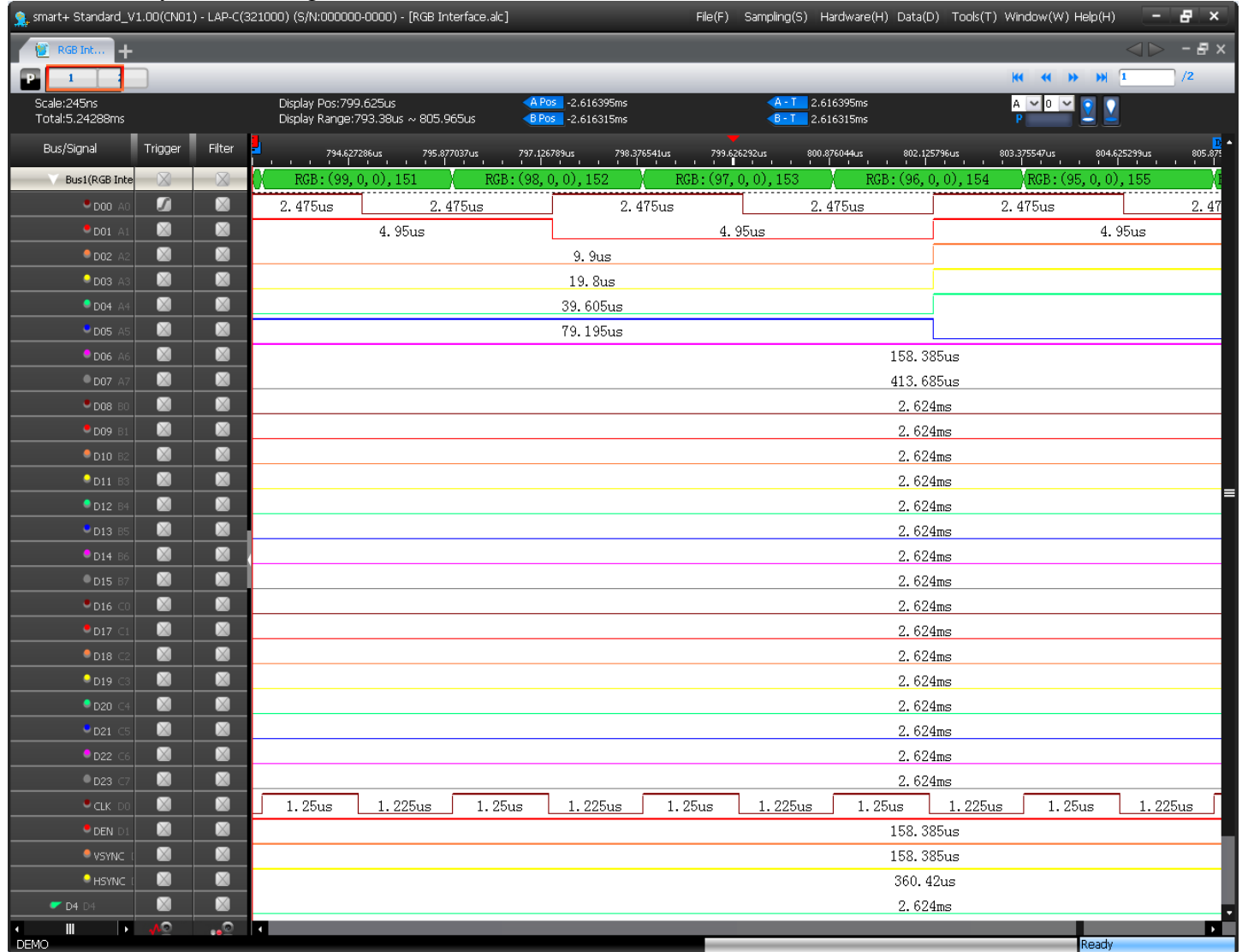
☒ No, please reserve

Back Finish Cancel



STEP 12. 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 1M and the sampling frequency is 200MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding





Packet List

