



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

SPECIFICATION

MODEL: B12015-MIPI DSI

PART NO : _____

VERSION : V1.02

Approver		Check	Design
GM	PM		

Customer Confirm

* Please fax the file to
Zeroplus Technology after
signing.

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Revision History

Revision No.	History	Page No.	Date	Reviser
V1.00	First Version	2~15	2013-01-07	Nancy
V1.01	Available in ZPP store	2-11	2013-07-15	Anderson
V1.02	Abnormal decoding is solved.	7, 11	2013-07-15	Anderson



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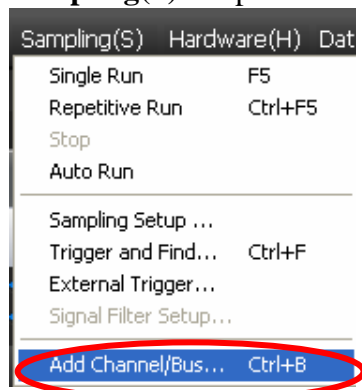
1 Software Register

Please register the software as the following steps:

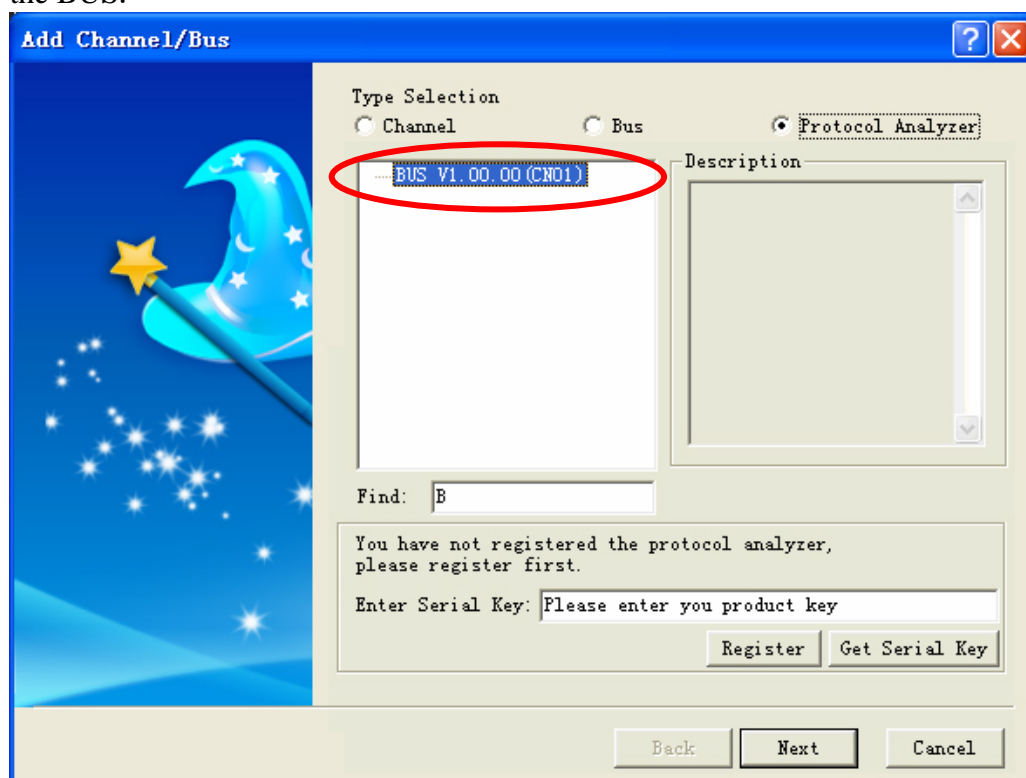
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

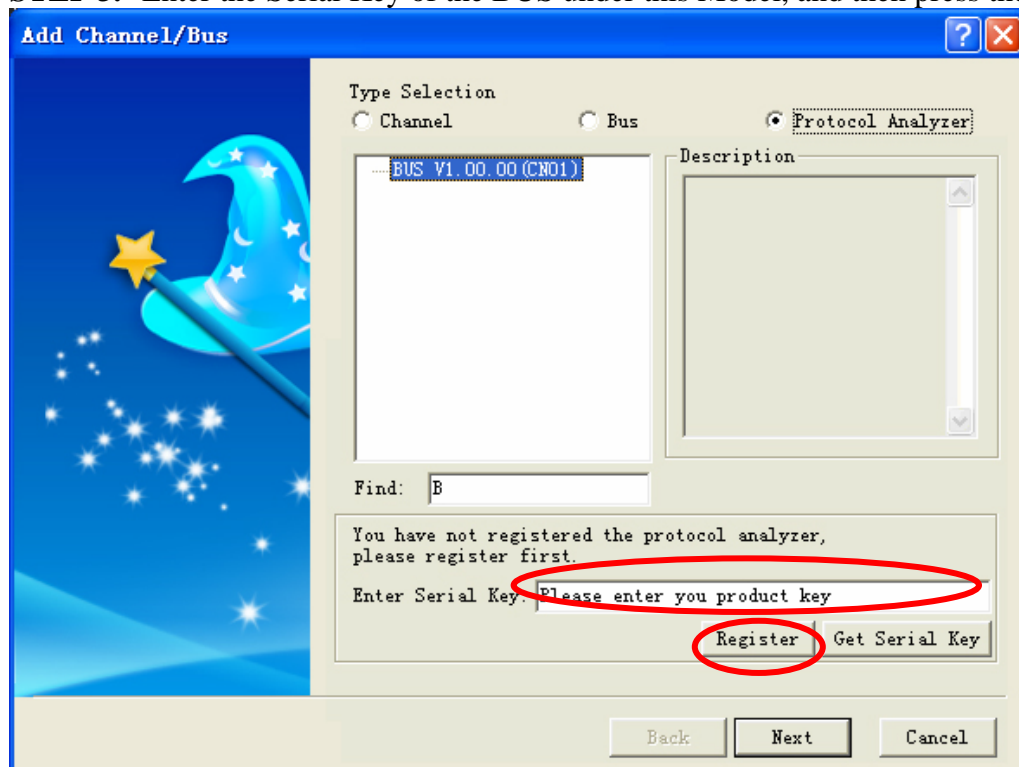
STEP 1. Open the Logic Analyzer and select the **Add Channel/Bus** item on the pull-down menu of the **Sampling(S)** to open the **Add Channel/Bus** dialog box.



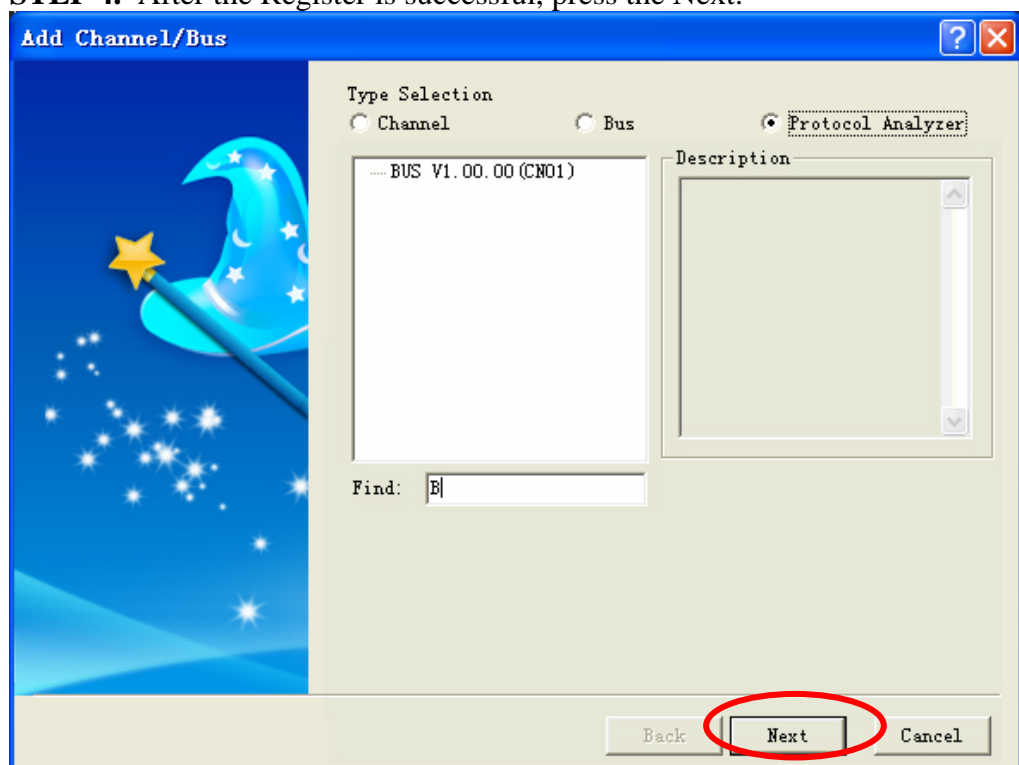
STEP 2. Select Protocol Analyzer item in the Add Channel/Bus dialog box, expand the Other Type, and select the BUS.



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



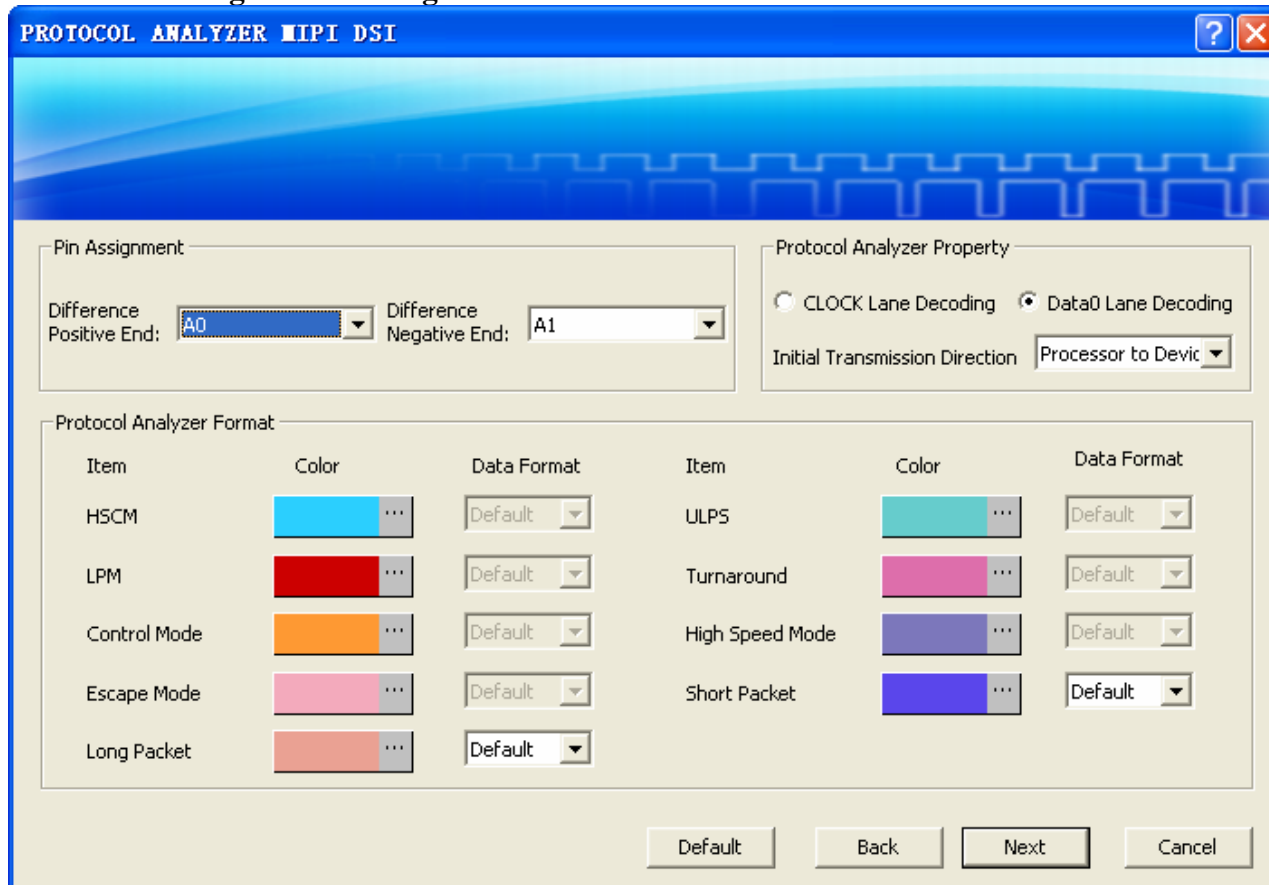
STEP 4. After the Register is successful, press the Next.



2 User Interface

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

MIPI DSI Configuration dialog box



Item	Color	Data Format	Item	Color	Data Format
HSCM		Default	ULPS		Default
LPM		Default	Turnaround		Default
Control Mode		Default	High Speed Mode		Default
Escape Mode		Default	Short Packet		Default
Long Packet		Default			

Pin Assignment:

Difference Positive End: It is the CLK+ in the Clock Lane Decoding Mode and D+ in the Data0 Lane Decoding Mode.

Difference Negative End: It is the CLK- in the Clock Lane Decoding Mode and D- in the Data0 Lane Decoding Mode.

Protocol Analyzer Property:

The MIPI DSI provides two decoding modes: Clock Lane Decoding Mode and Data0 Lane Decoding Mode to be selected.

There are two direction options: “Processor to Device” and “Device to Processor” in the Initial Transmission Direction column. It is the “Processor to Device” by default and only can be available in the Data0 Lane Decoding Mode.

Protocol Analyzer Format:

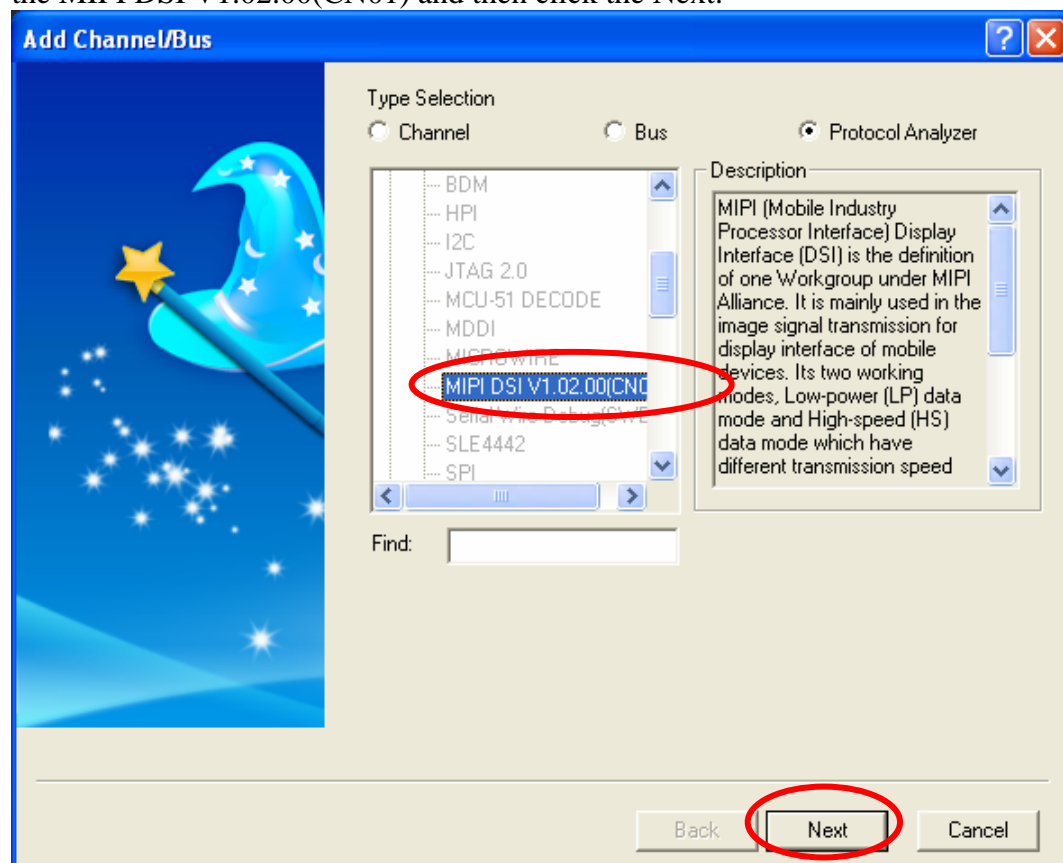
Users can set the color of the packet as their requirements. The two items (Short Packet and Long Packet) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the data format of these items in the Waveform Display Area and Packet List is controlled by Protocol Analyzer. The default data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

3. Operating Instructions

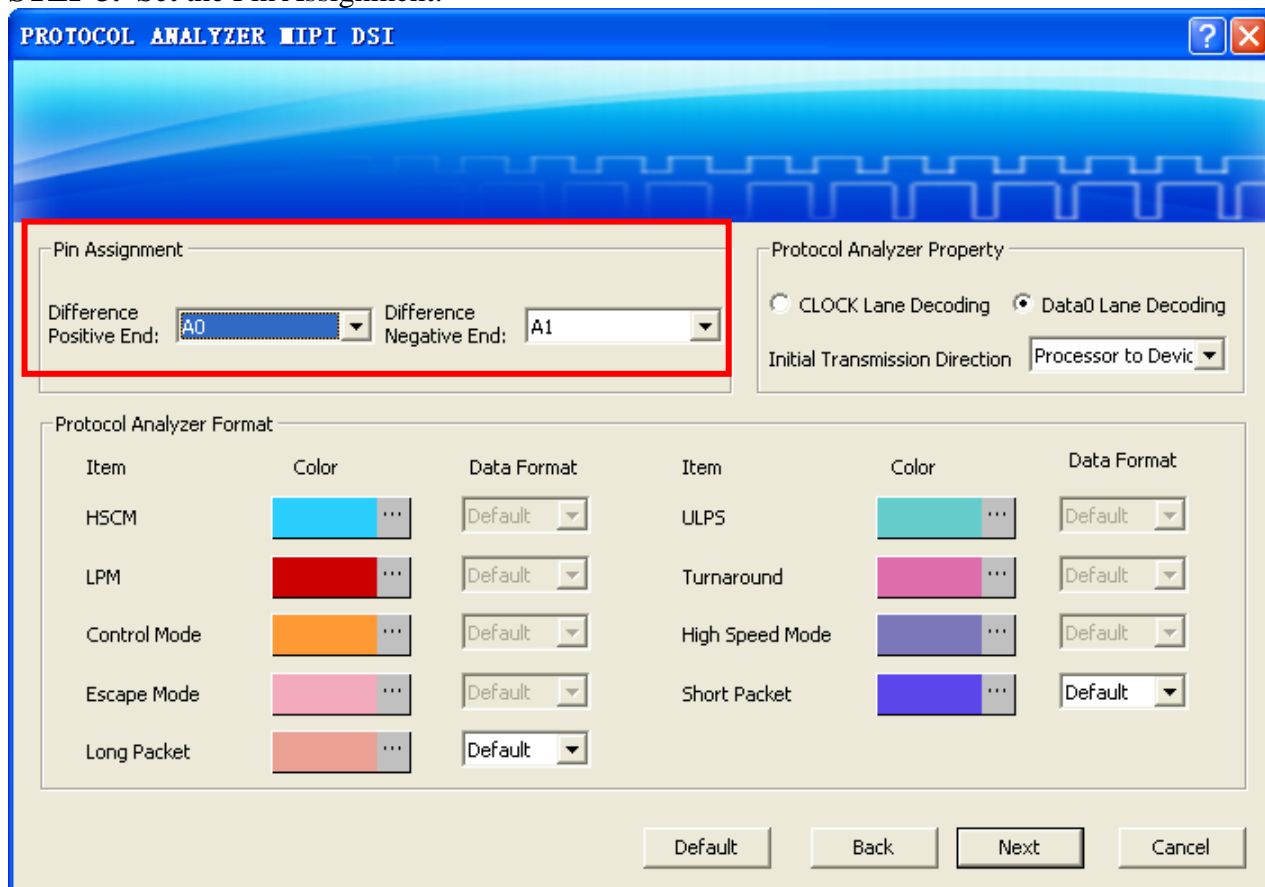
STEP 1. Select the Add Channel/Bus item on the pull-down menu of the Sampling(S) to open the Add Channel/Bus dialog box.



STEP 2. Select the Protocol Analyzer item in the Add Channel/Bus dialog box, expand the IC Interface, select the MIPI DSI V1.02.00(CN01) and then click the Next.



STEP 3. Set the Pin Assignment.



PROTOCOL ANALYZER ■ IPI DSI

Pin Assignment

Difference Positive End: Difference Negative End:

Protocol Analyzer Property

☐ CLOCK Lane Decoding ☒ Data0 Lane Decoding

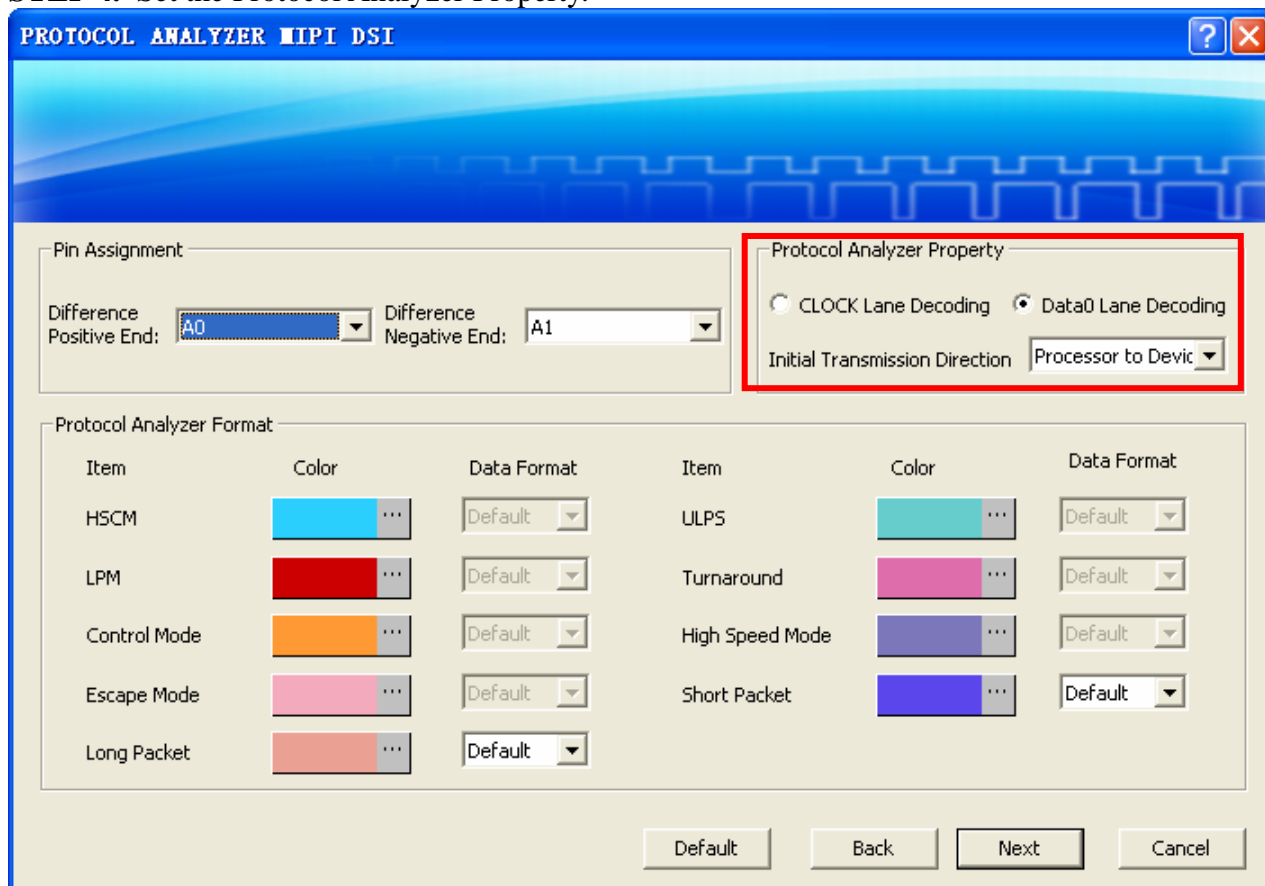
Initial Transmission Direction:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
HSCM		<input type="text" value="Default"/>	ULPS		<input type="text" value="Default"/>
LPM		<input type="text" value="Default"/>	Turnaround		<input type="text" value="Default"/>
Control Mode		<input type="text" value="Default"/>	High Speed Mode		<input type="text" value="Default"/>
Escape Mode		<input type="text" value="Default"/>	Short Packet		<input type="text" value="Default"/>
Long Packet		<input type="text" value="Default"/>			

Default Back Next Cancel

STEP 4. Set the Protocol Analyzer Property.



PROTOCOL ANALYZER ■ IPI DSI

Pin Assignment

Difference Positive End: Difference Negative End:

Protocol Analyzer Property

☐ CLOCK Lane Decoding ☒ Data0 Lane Decoding

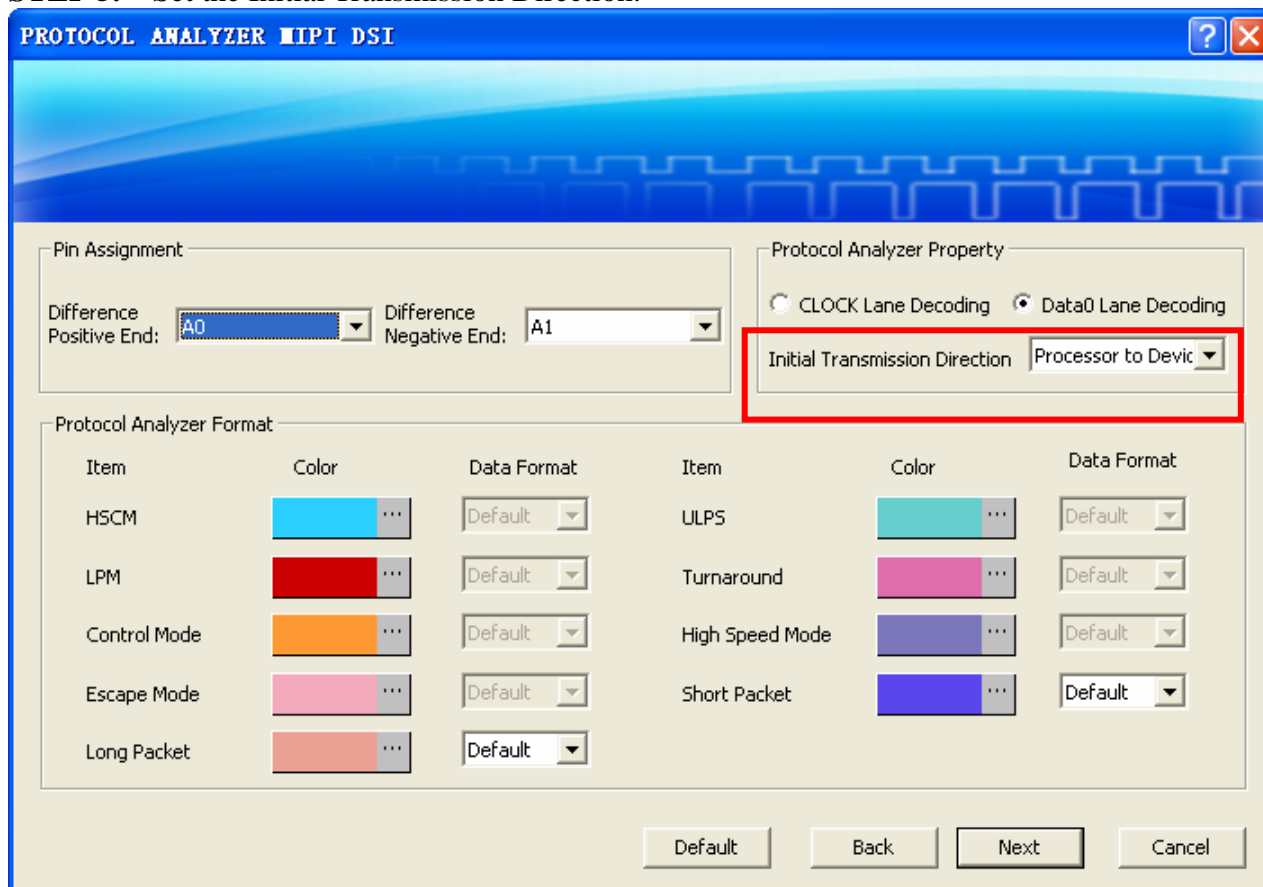
Initial Transmission Direction:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
HSCM		<input type="text" value="Default"/>	ULPS		<input type="text" value="Default"/>
LPM		<input type="text" value="Default"/>	Turnaround		<input type="text" value="Default"/>
Control Mode		<input type="text" value="Default"/>	High Speed Mode		<input type="text" value="Default"/>
Escape Mode		<input type="text" value="Default"/>	Short Packet		<input type="text" value="Default"/>
Long Packet		<input type="text" value="Default"/>			

Default Back Next Cancel

STEP 5. Set the Initial Transmission Direction.



PROTOCOL ANALYZER ■ IPI DSI

Pin Assignment

Difference Positive End: Difference Negative End:

Protocol Analyzer Property

☐ CLOCK Lane Decoding ☒ Data0 Lane Decoding

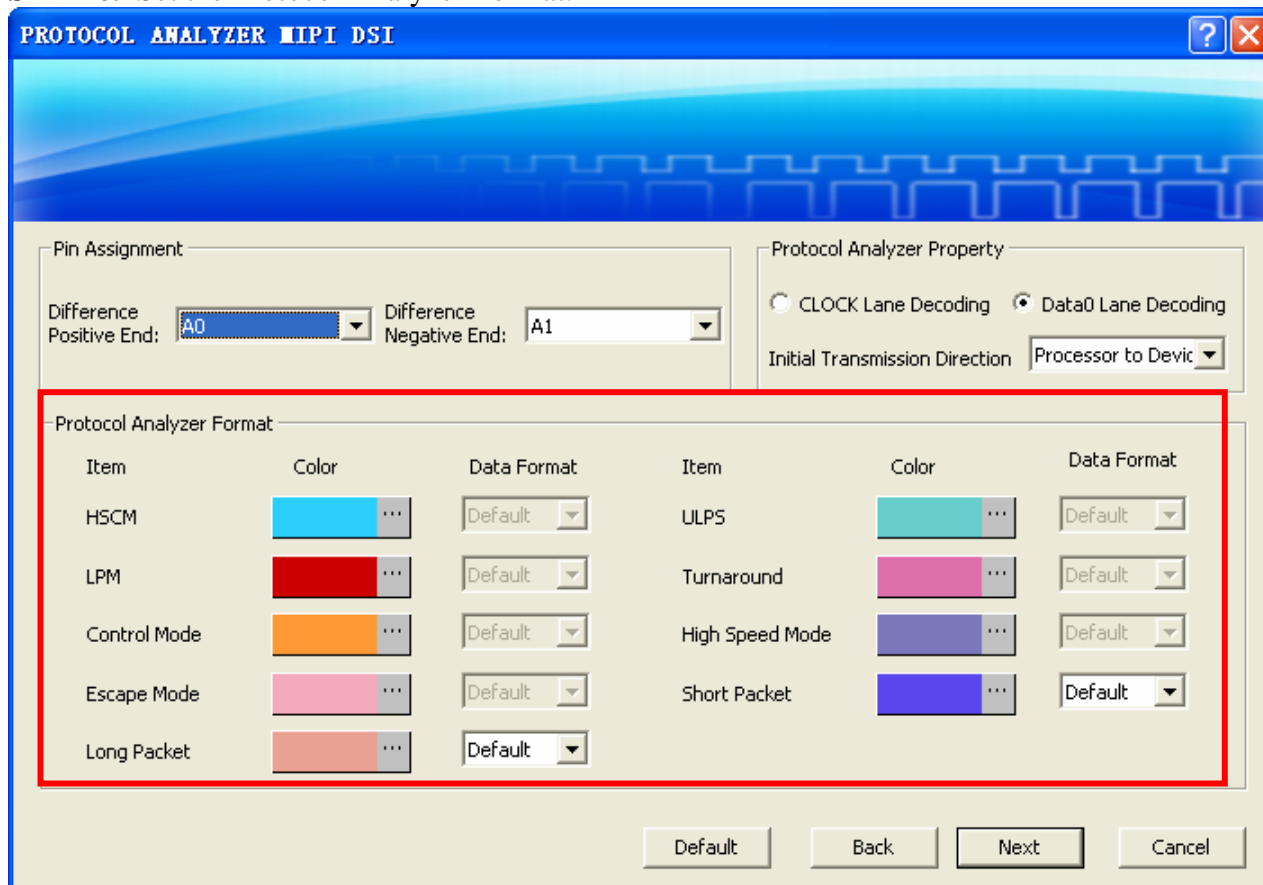
Initial Transmission Direction:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
HSCM		<input type="text" value="Default"/>	ULPS		<input type="text" value="Default"/>
LPM		<input type="text" value="Default"/>	Turnaround		<input type="text" value="Default"/>
Control Mode		<input type="text" value="Default"/>	High Speed Mode		<input type="text" value="Default"/>
Escape Mode		<input type="text" value="Default"/>	Short Packet		<input type="text" value="Default"/>
Long Packet		<input type="text" value="Default"/>			

Default Back Next Cancel

STEP 6. Set the Protocol Analyzer Format.



PROTOCOL ANALYZER ■ IPI DSI

Pin Assignment

Difference Positive End: Difference Negative End:

Protocol Analyzer Property

☐ CLOCK Lane Decoding ☒ Data0 Lane Decoding

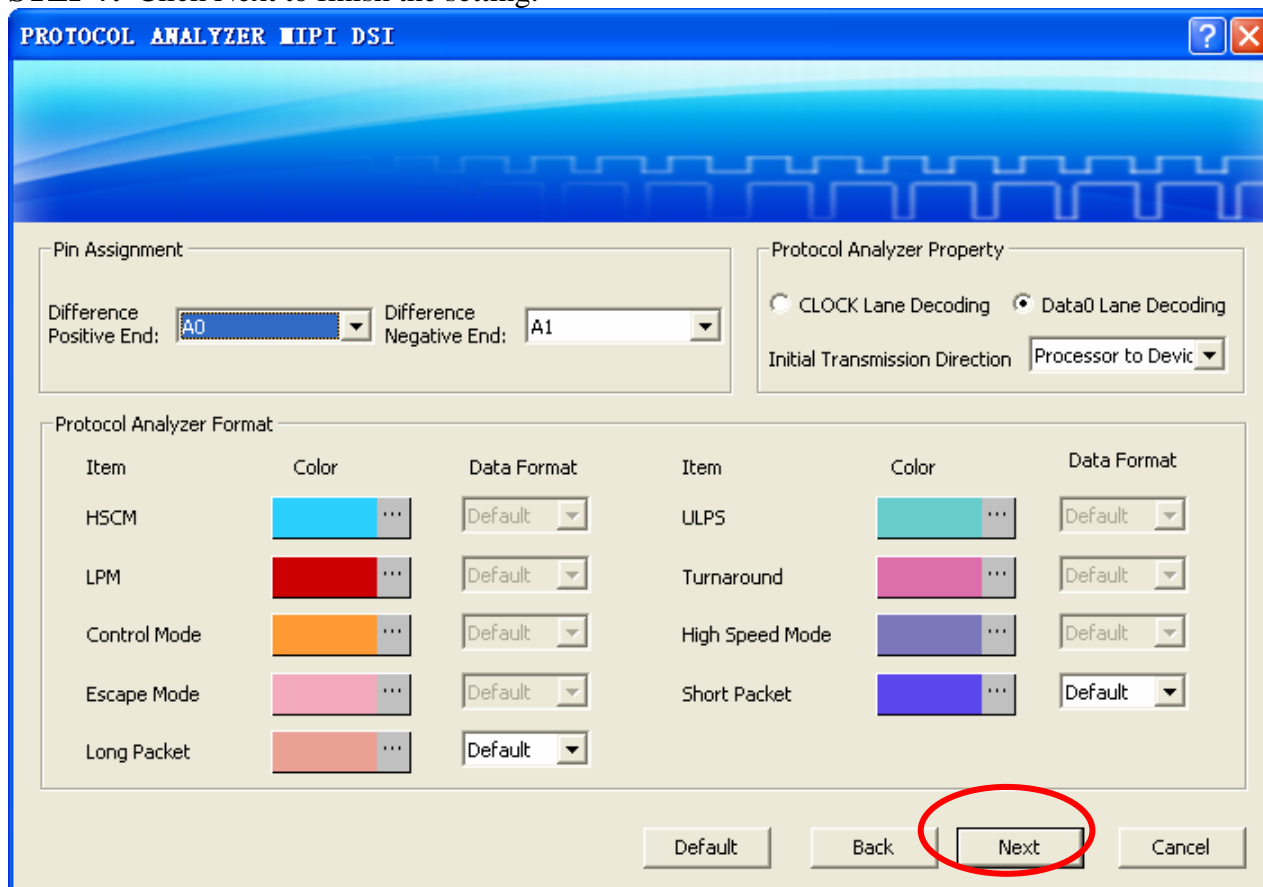
Initial Transmission Direction:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
HSCM		<input type="text" value="Default"/>	ULPS		<input type="text" value="Default"/>
LPM		<input type="text" value="Default"/>	Turnaround		<input type="text" value="Default"/>
Control Mode		<input type="text" value="Default"/>	High Speed Mode		<input type="text" value="Default"/>
Escape Mode		<input type="text" value="Default"/>	Short Packet		<input type="text" value="Default"/>
Long Packet		<input type="text" value="Default"/>			

Default Back Next Cancel

STEP 7. Click Next to finish the setting.



PROTOCOL ANALYZER ■ IPI DSI

Pin Assignment

Difference Positive End: Difference Negative End:

Protocol Analyzer Property

☐ CLOCK Lane Decoding ☒ Data0 Lane Decoding

Initial Transmission Direction:

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
HSCM		<input type="text" value="Default"/>	ULPS		<input type="text" value="Default"/>
LPM		<input type="text" value="Default"/>	Turnaround		<input type="text" value="Default"/>
Control Mode		<input type="text" value="Default"/>	High Speed Mode		<input type="text" value="Default"/>
Escape Mode		<input type="text" value="Default"/>	Short Packet		<input type="text" value="Default"/>
Long Packet		<input type="text" value="Default"/>			

Buttons: Default, Back, **Next**, Cancel

STEP 8. 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:

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

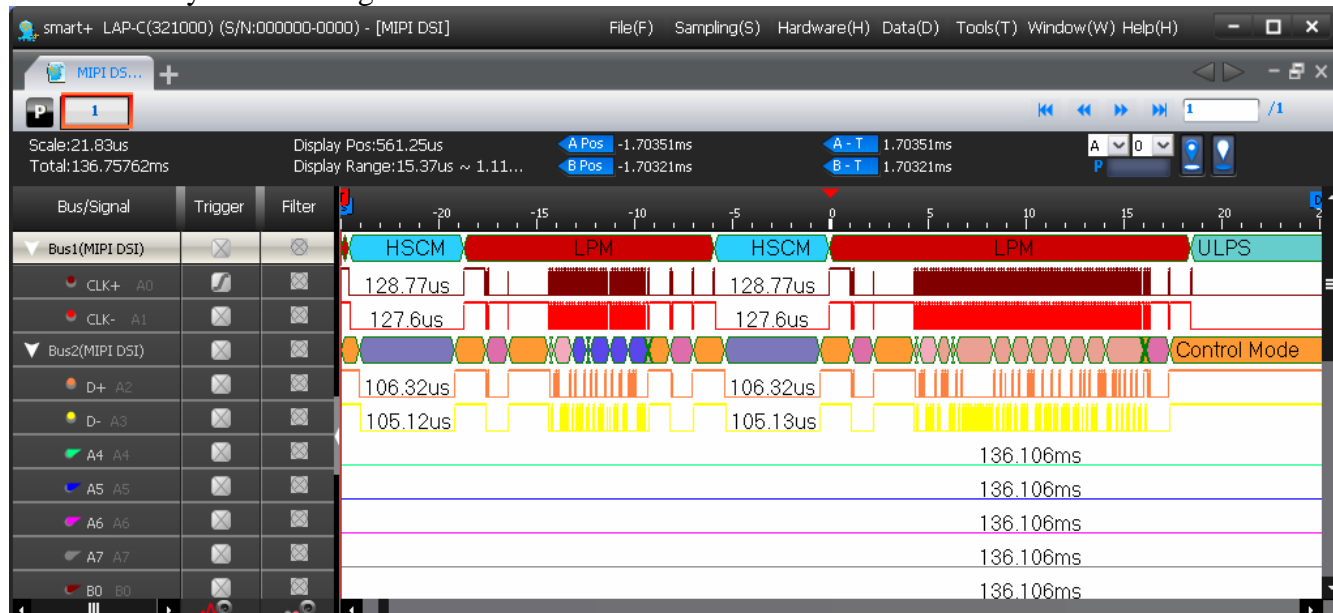
☐ Yes, please delete

☒ No, please reserve

Buttons: Back, **Finish**, Cancel

STEP 9. 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 128K and the sampling frequency is 100MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List

