



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

SPECIFICATION

MODEL: B09026-LAP-HDMI CEC-M

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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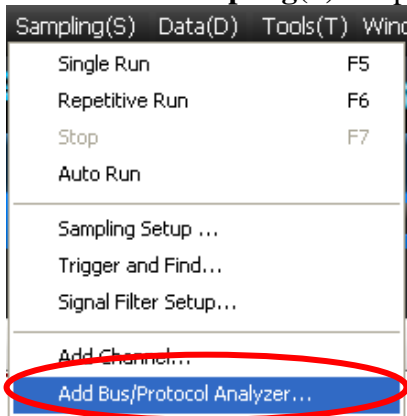
1. Software Register

Please register the software as the following steps:

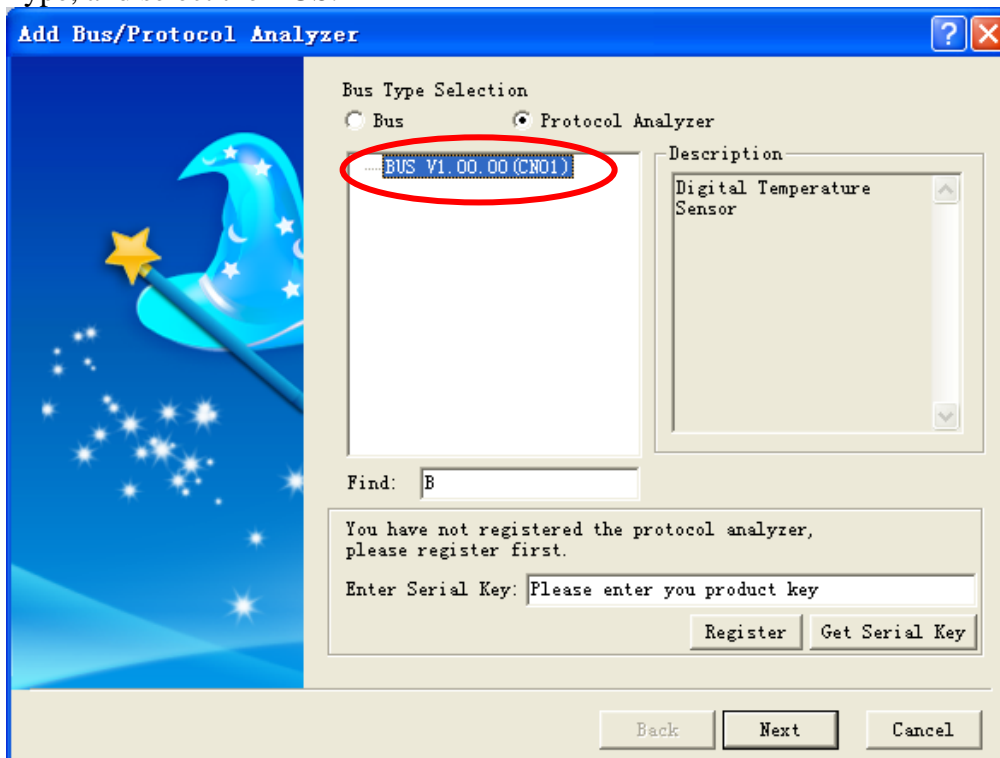
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

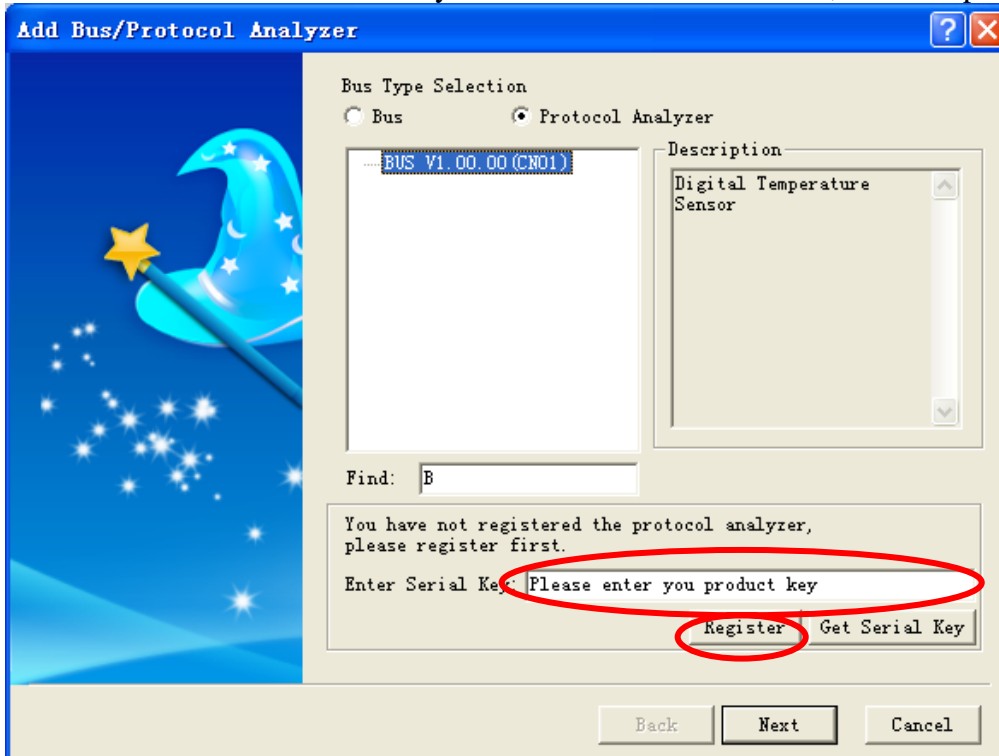
STEP 1. Open the Logic Analyzer and select the **Add Bus/Protocol Analyzer** item on the pull-down menu of the **Sampling(S)** to open the **Add Bus/Protocol Analyzer** dialog box.



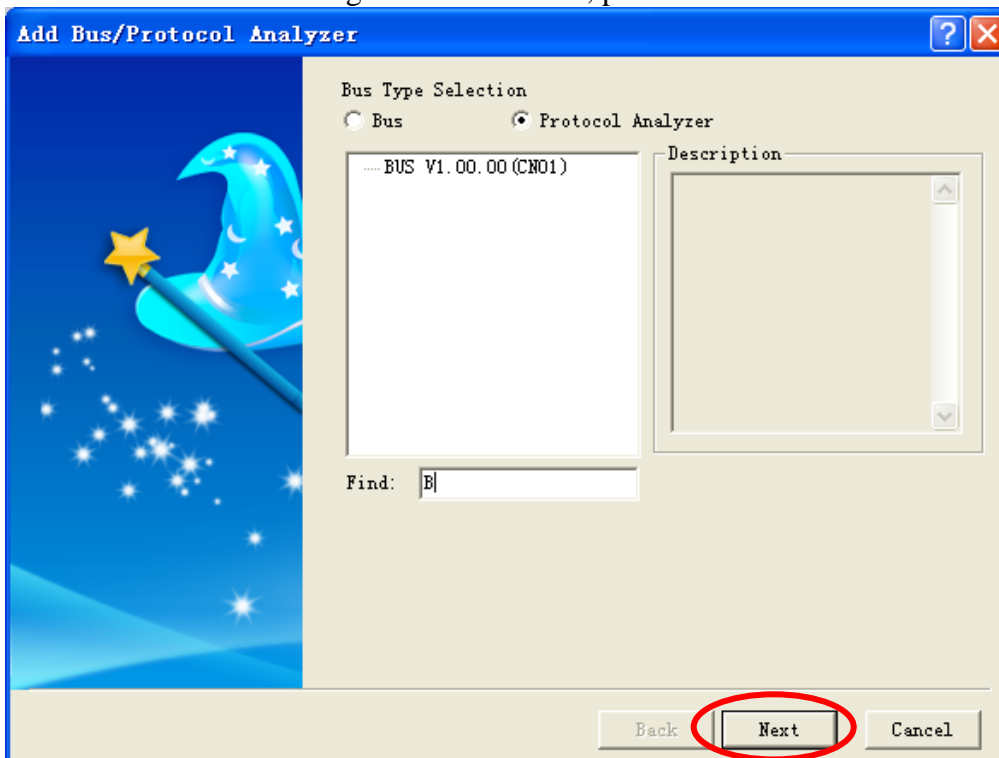
STEP 2. Select Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Other Type, and select the BUS.



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



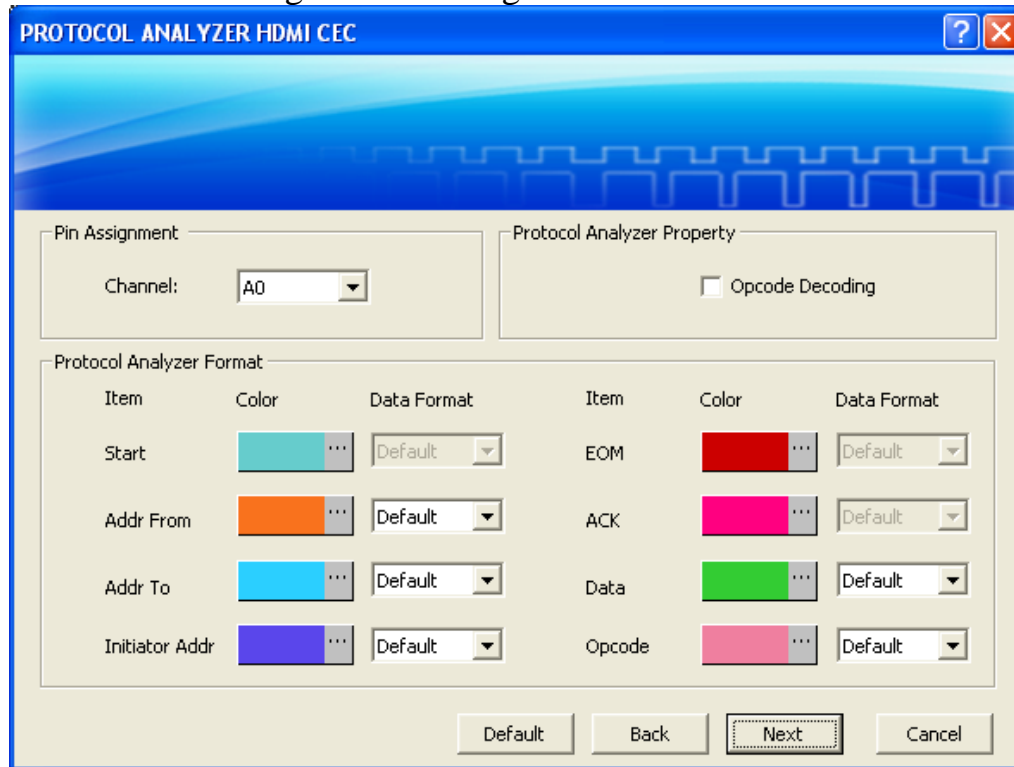
STEP 4. After the Register is successful, press the **Next**.



2. User Interface

Please refer to the below images to select options of setting HDMI CEC Module.

HDMI CEC Configuration Dialog Box



Pin Assignment:

HDMI CEC only needs one channel to decode the signals, the default is A0.

Protocol Analyzer Property:

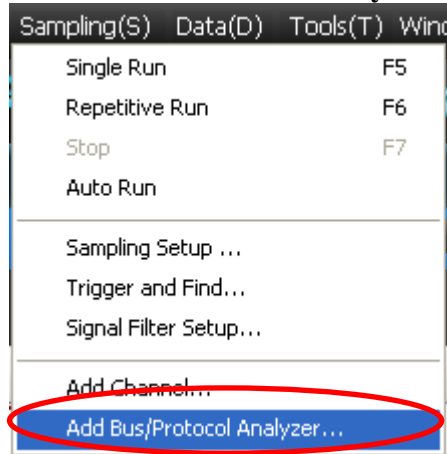
Opcode Decoding: Users can select the Opcode Decoding or not, the default is not selected.

Protocol Analyzer Format:

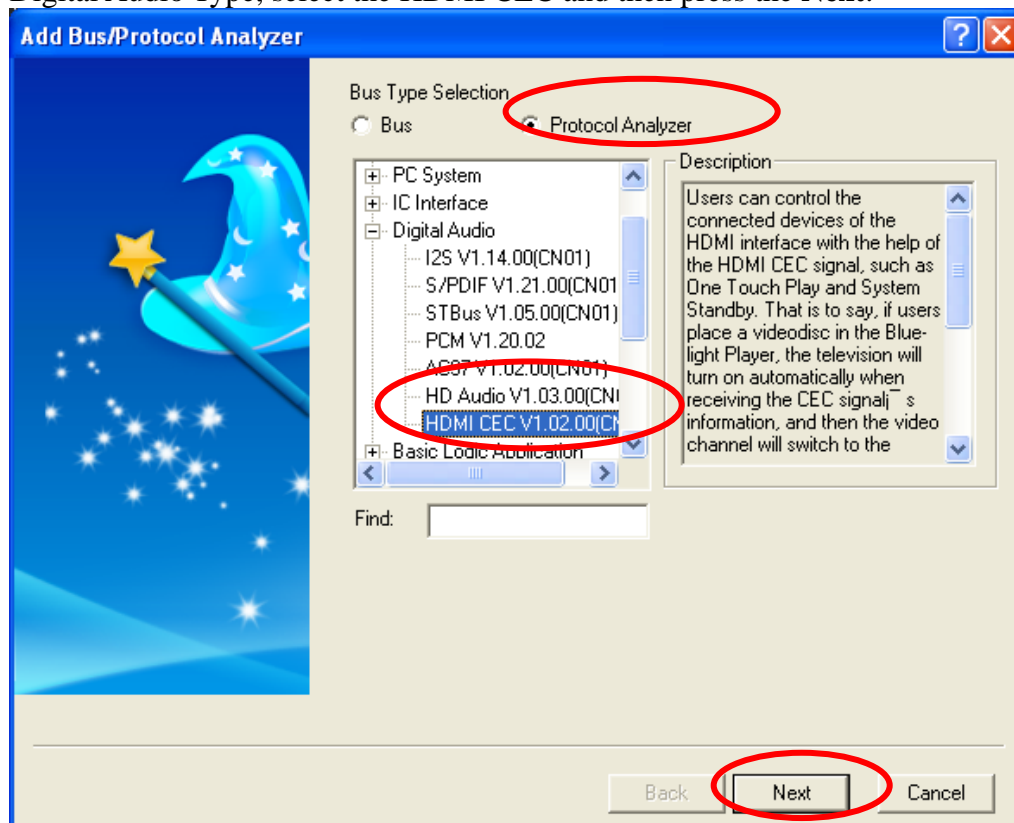
The Color of each Item can be varied as the users' requirements. The Items (Addr From, Addr To, Data, Initiator Addr and Opcode) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Formats of these Items (Addr From, Addr To, Data, Initiator Addr and Opcode) in the Waveform Display Area and Packet List are controlled by the Protocol Analyzer. The default Data Formats are controlled by the main program and the Data Formats of these items (Addr From, Addr To, Data, Initiator Addr and Opcode) are the Default.

3. Operating Instructions

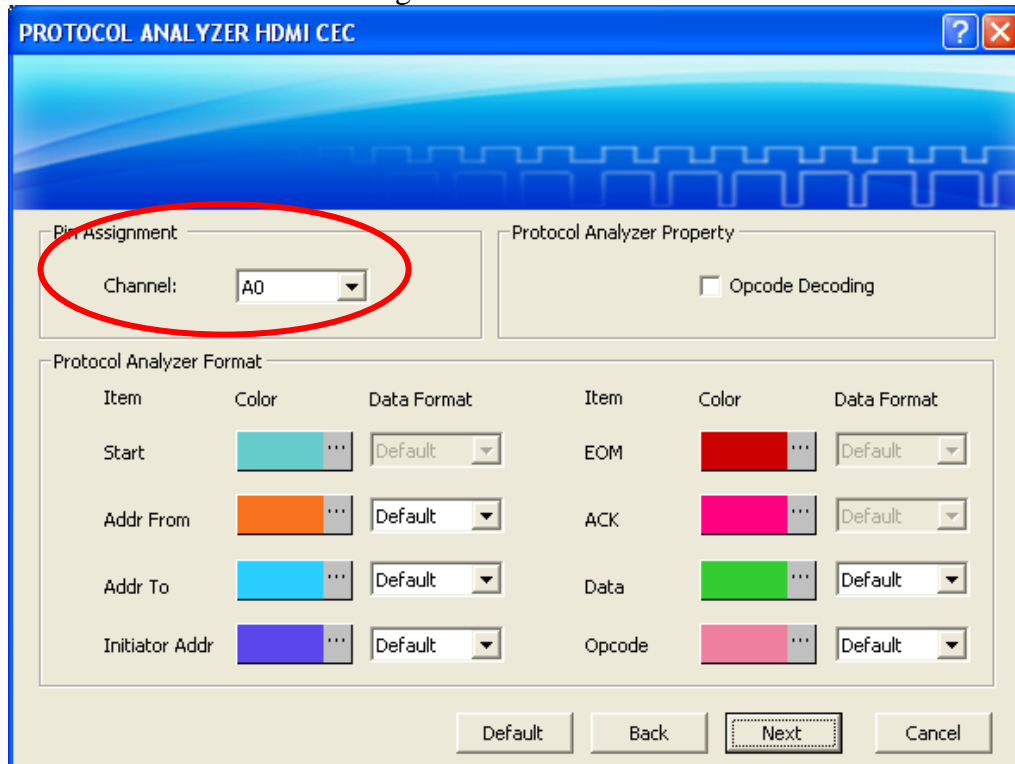
STEP 1. Select the **Add Bus/Protocol Analyzer** item on the pull-down menu of the **Sampling(S)** to open the **Add Bus/Protocol Analyzer** dialog box.



STEP 2. Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Digital Audio Type, select the HDMI CEC and then press the **Next**.



STEP 3. Set the Pin Assignment.



PROTOCOL ANALYZER HDMI CEC

Pin Assignment

Channel: A0

Protocol Analyzer Property

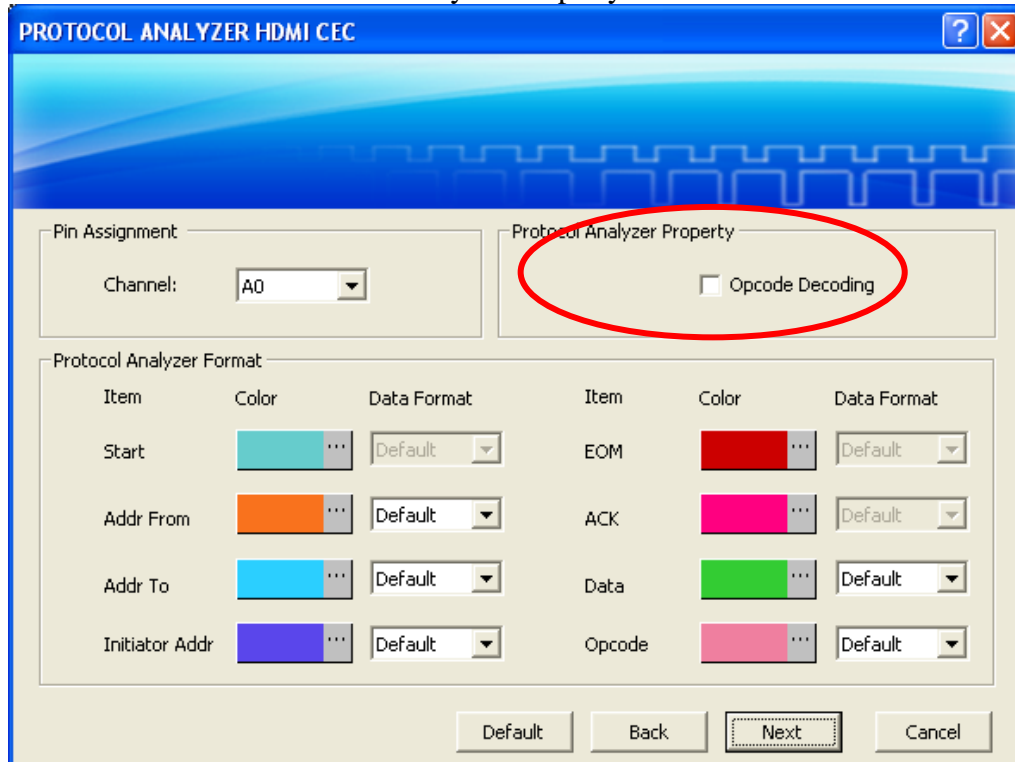
☐ Opcode Decoding

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	EOM		Default
Addr From		Default	ACK		Default
Addr To		Default	Data		Default
Initiator Addr		Default	Opcode		Default

Default Back Next Cancel

STEP 4. Set the Protocol Analyzer Property.



PROTOCOL ANALYZER HDMI CEC

Pin Assignment

Channel: A0

Protocol Analyzer Property

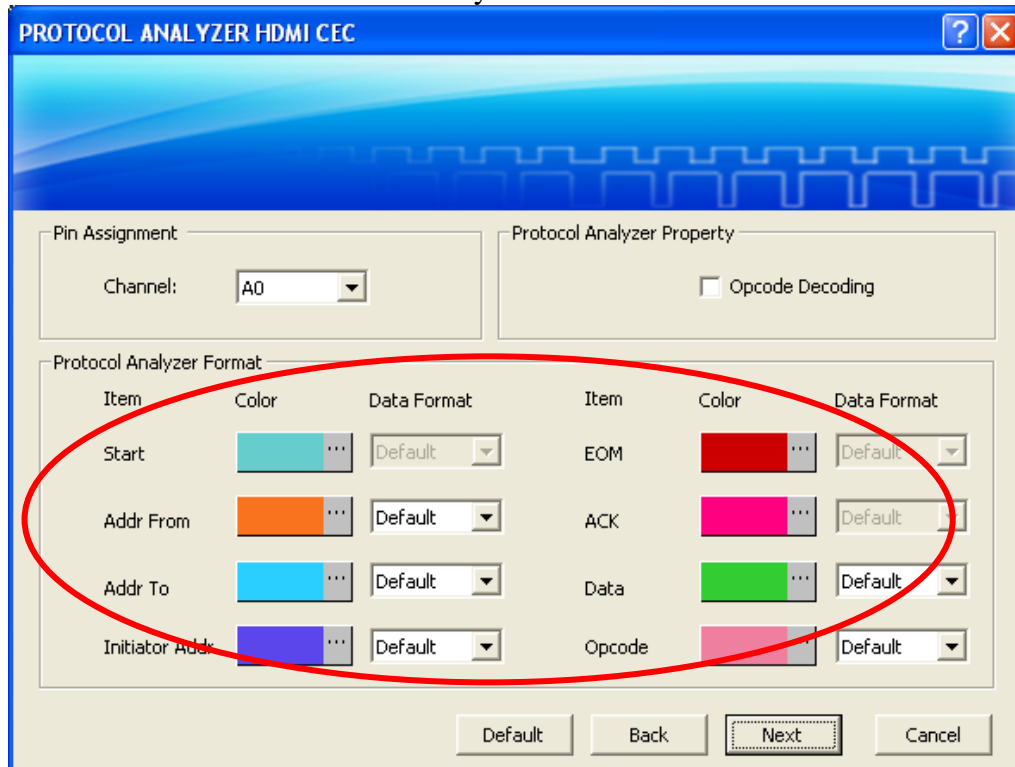
☒ Opcode Decoding

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	EOM		Default
Addr From		Default	ACK		Default
Addr To		Default	Data		Default
Initiator Addr		Default	Opcode		Default

Default Back Next Cancel

STEP 5. Set the Protocol Analyzer Format.



PROTOCOL ANALYZER HDMI CEC

Pin Assignment: Channel:

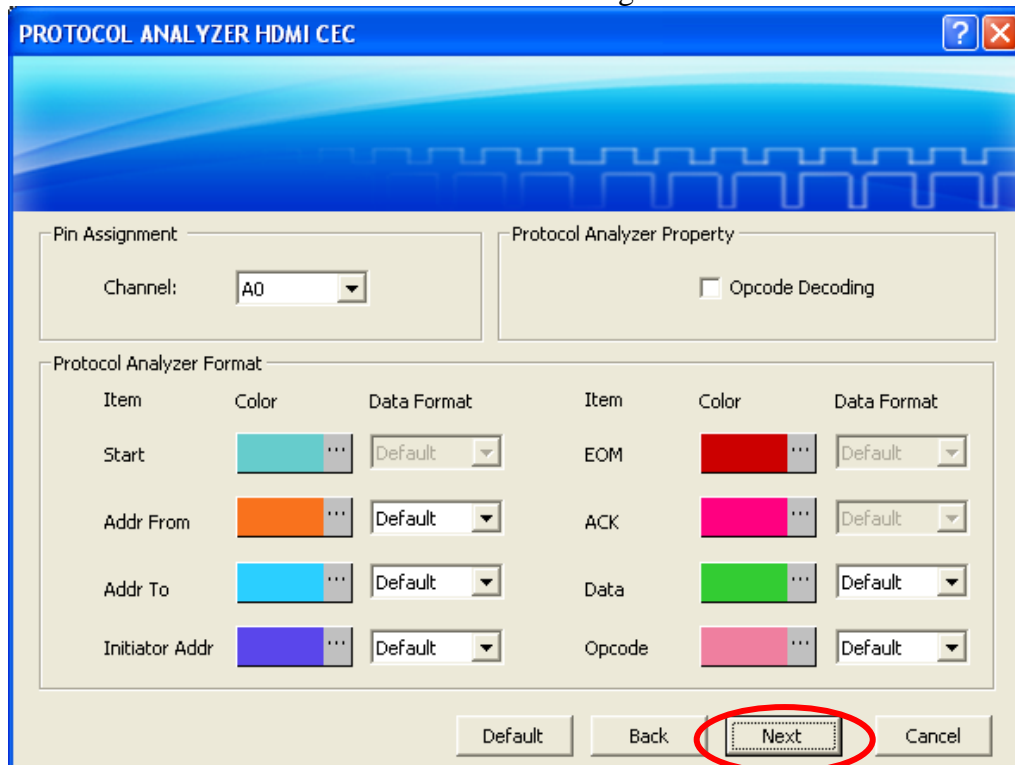
Protocol Analyzer Property: ☐ Opcode Decoding

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		<input type="text" value="Default"/>	EOM		<input type="text" value="Default"/>
Addr From		<input type="text" value="Default"/>	ACK		<input type="text" value="Default"/>
Addr To		<input type="text" value="Default"/>	Data		<input type="text" value="Default"/>
Initiator Addr		<input type="text" value="Default"/>	Opcode		<input type="text" value="Default"/>

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

STEP 6. Press the **Next** to finish all settings.



PROTOCOL ANALYZER HDMI CEC

Pin Assignment: Channel:

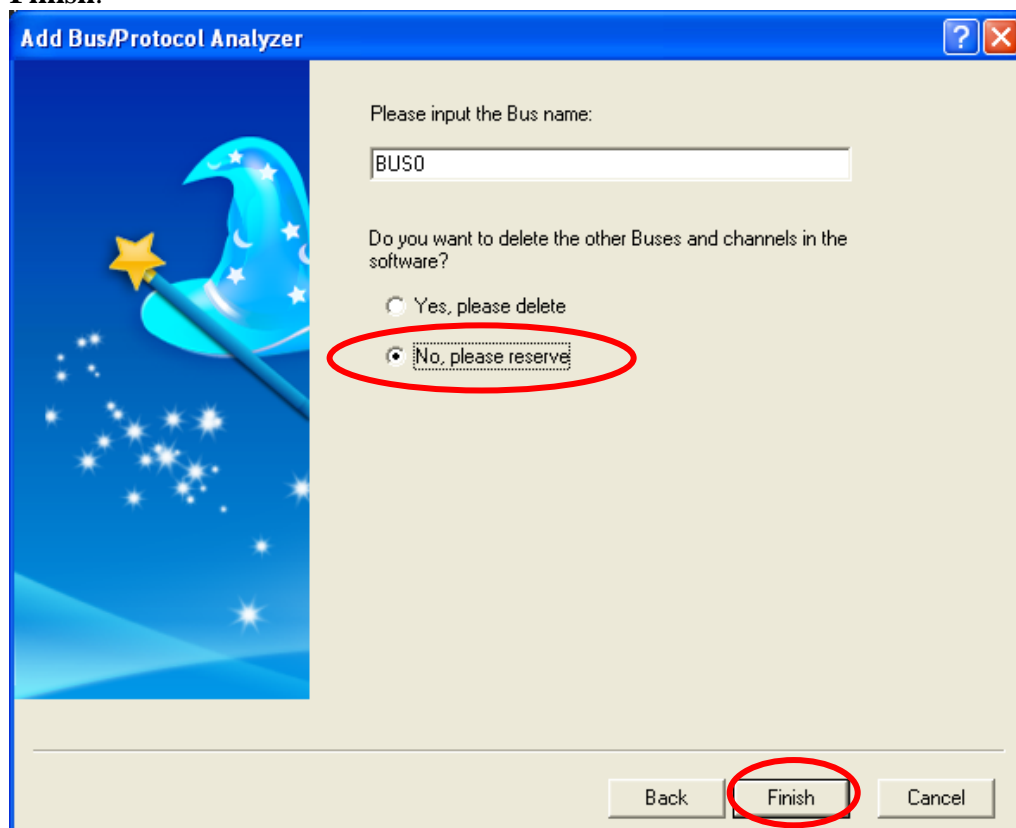
Protocol Analyzer Property: ☐ Opcode Decoding

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		<input type="text" value="Default"/>	EOM		<input type="text" value="Default"/>
Addr From		<input type="text" value="Default"/>	ACK		<input type="text" value="Default"/>
Addr To		<input type="text" value="Default"/>	Data		<input type="text" value="Default"/>
Initiator Addr		<input type="text" value="Default"/>	Opcode		<input type="text" value="Default"/>

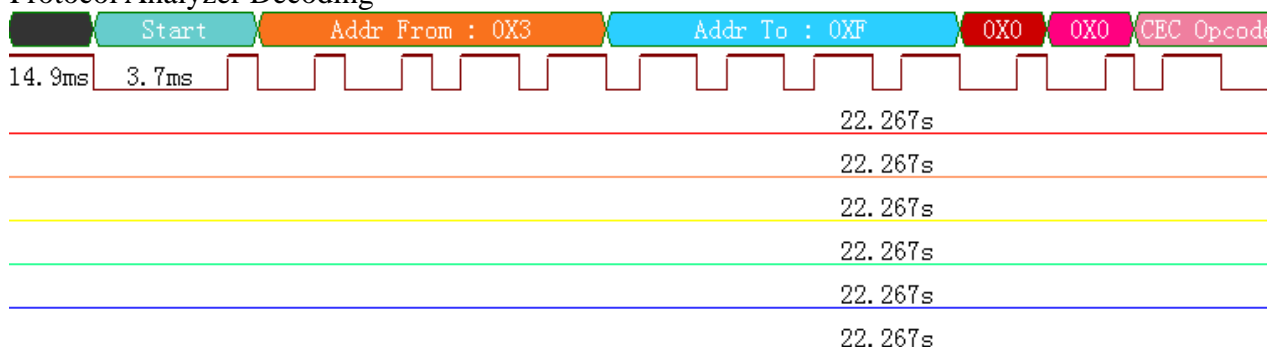
Buttons: Default, Back, **Next**, Cancel

STEP 7. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.



STEP 8. Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Either Edge; the memory depth is 2K; the sampling frequency is 10KHz (the sampling frequency should be more than 4 times higher than the signal to be tested).

Protocol Analyzer Decoding





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Packet List												
Navigator			Packet List			Statistics			Memory Analyzer			
CDC												
Packet #	Name	TimeStamp	Start	Addr From	Addr To	EOM	ACK	CEC Opcode	EOM	ACK		
1	Bus1(HDMI CEC)	14.9ms	Start	3	F	0	0	9A	1	1		
Packet #	Name	TimeStamp	Start	Addr From	Addr To	EOM	ACK	CEC Opcode	EOM	ACK		
2	Bus1(HDMI CEC)	82.5ms	Start	3	0	0	0	A0	0	0		
	Data	EOM	ACK	Data	EOM	ACK	Data	EOM	ACK	Data	EOM	ACK
	FF	0	0	DA	0	1	45	1	1			
Packet #	Name	TimeStamp	Start	Addr From	Addr To	EOM	ACK	CEC Opcode	EOM	ACK		
3	Bus1(HDMI CEC)	270.8ms	Start	3	E	0	0	16	1	1		