



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

# SPECIFICATION

**MODEL: B11004-LAP-BDM-M**

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

**VERSION :** V1.00

Approver		Check	Design
GM	PM		

Customer Confirm

\* Please fax the file to  
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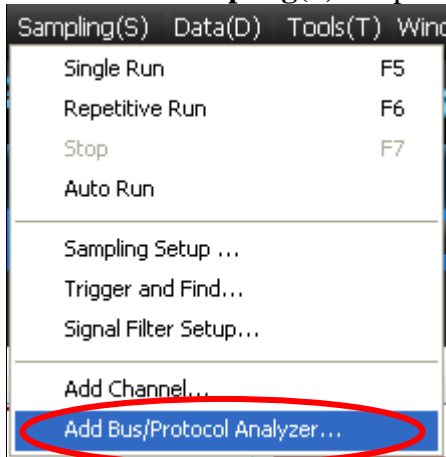
## 1 Software Register

Please register the software as the following steps:

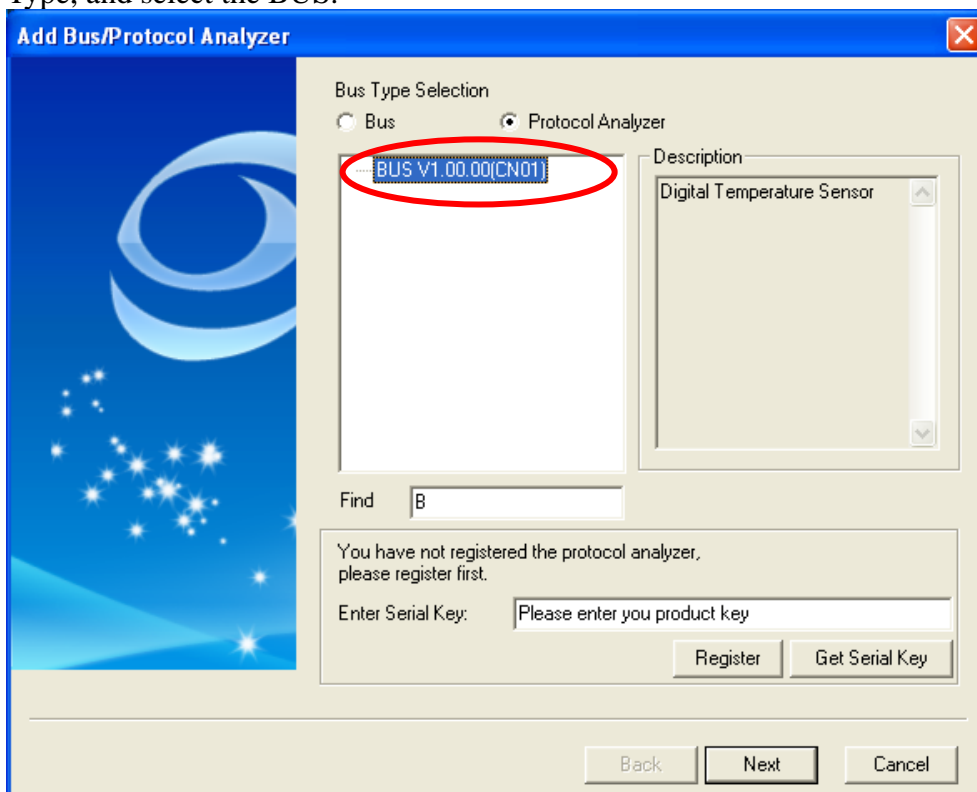
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

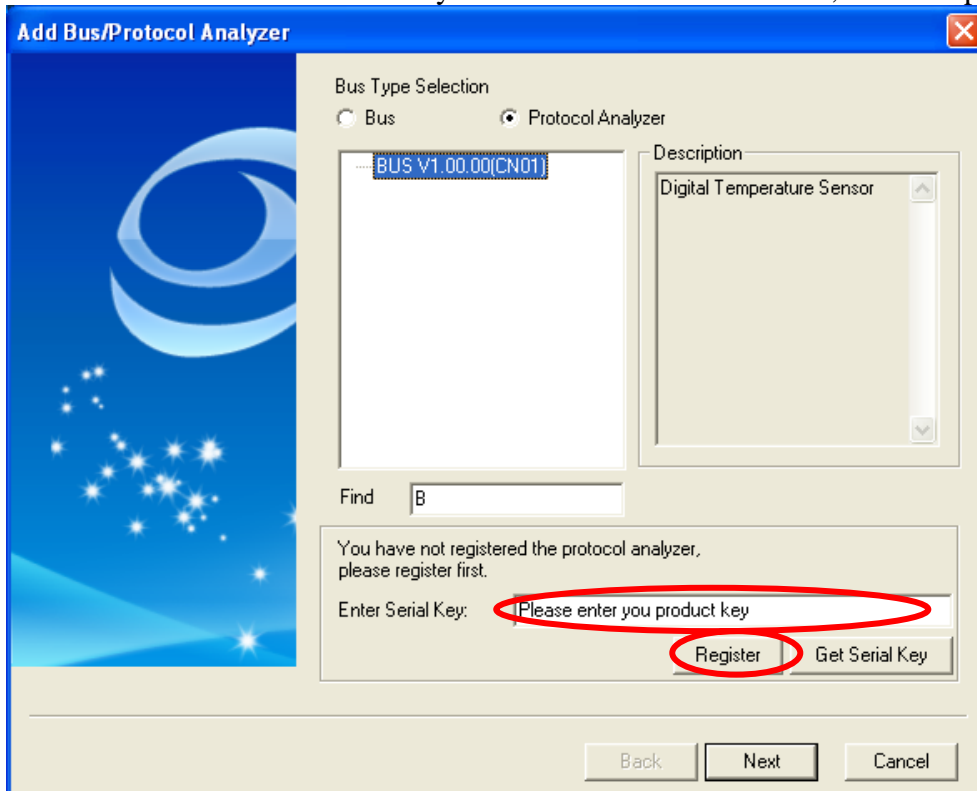


**STEP 2.** Select Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Other Type, and select the BUS.

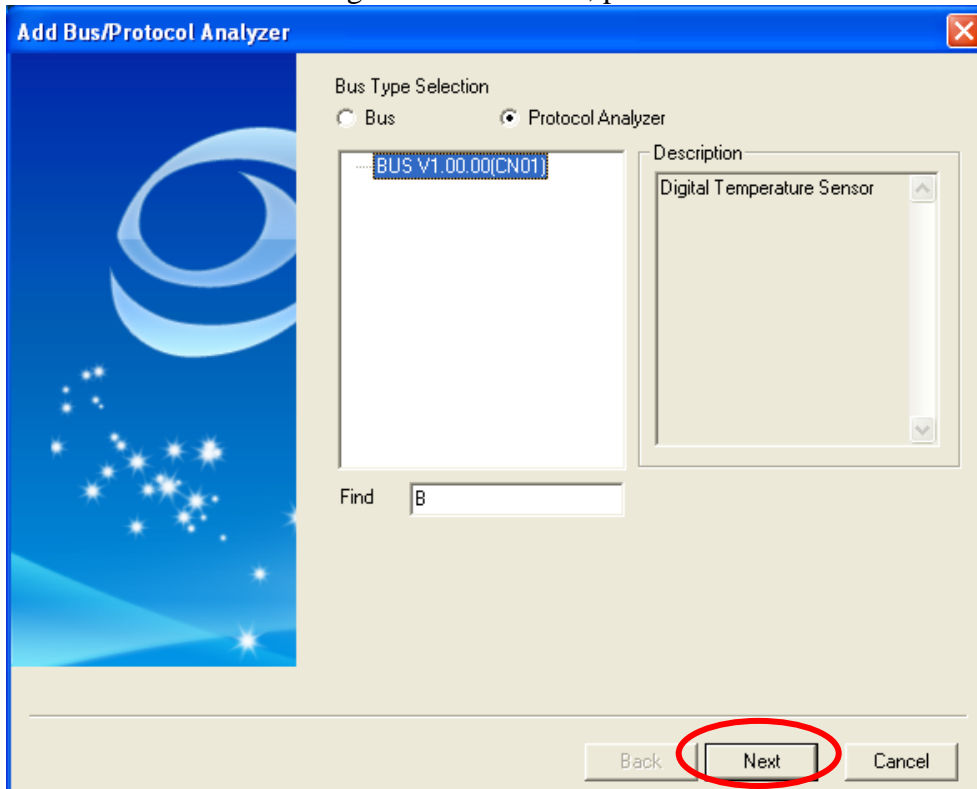




**STEP 3.** Enter the Serial Key of the BUS under this Model, and then press the **Register**.



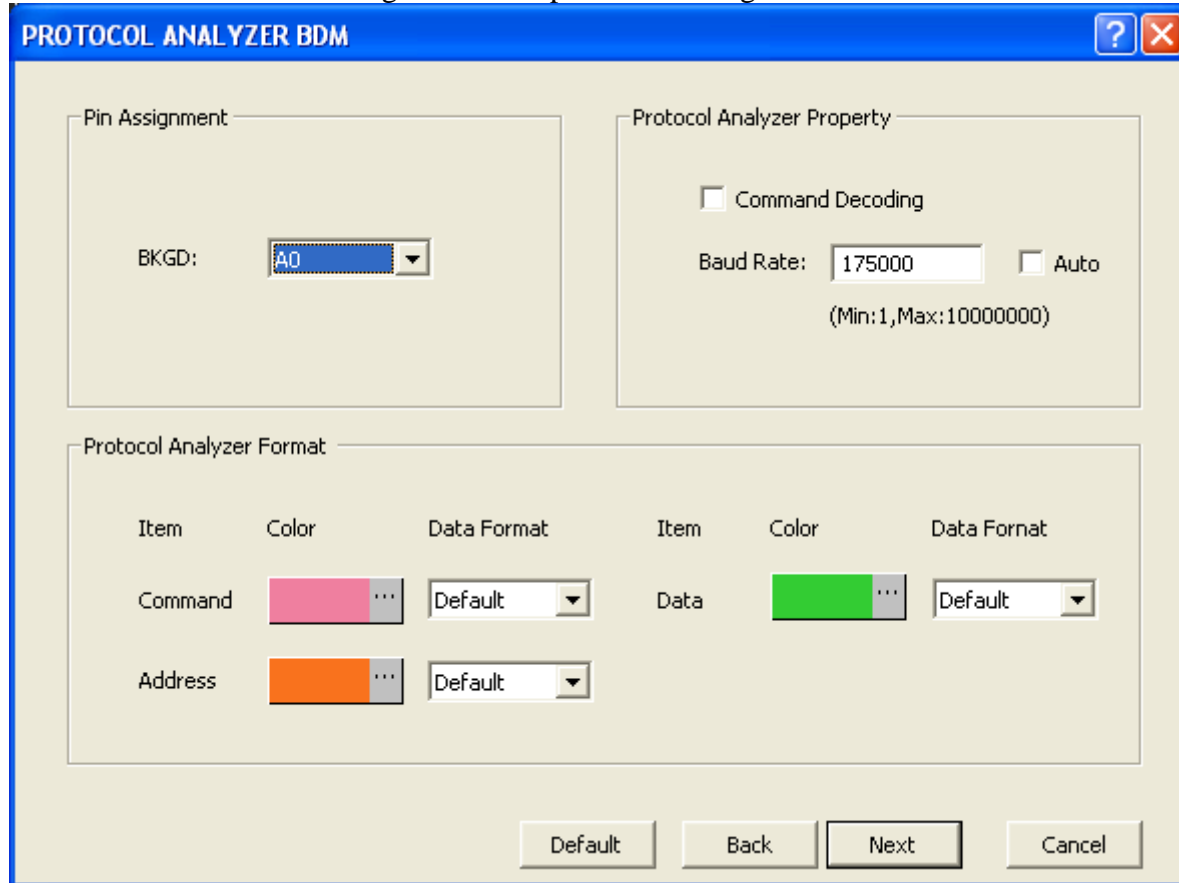
**STEP 4.** After the Register is successful, press the **Next**.





## 2 User Interface

Please refer to the below image to select options of setting BDM Module.



### Pin Assignment:

**BKGD:** It is the Background Debug Mode channel.

### Protocol Analyzer Settings:

**Command Decoding:** If this item is selected, the Protocol Analyzer will start to decode according to the Hardware Command or Firmware Command.

**Baud Rate:** According to the **Baud Rate**, the Protocol Analyzer can calculate the length of every Bit and set the data judgement point.

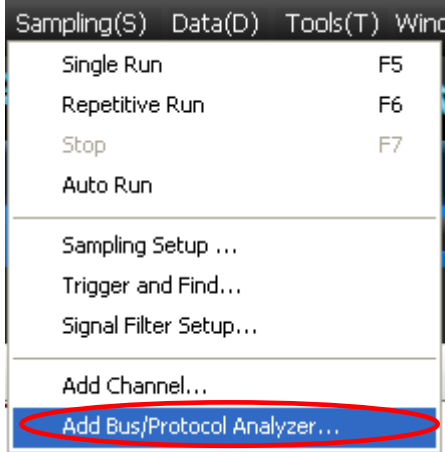
**Auto:** If this item is selected, the Protocol Analyzer will calculate the **Baud Rate** automatically according to the width between every falling edge.

**Protocol Analyzer Format:** Users can set the color of the packet as their requirements. The Items (Command, Address, Data) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Format of the Items (Command, Address, Data) in the Waveform Display Area and Packet List is controlled by the Protocol Analyzer. The default Data Format is controlled by the main program and the Data Format of the Item is the Default.

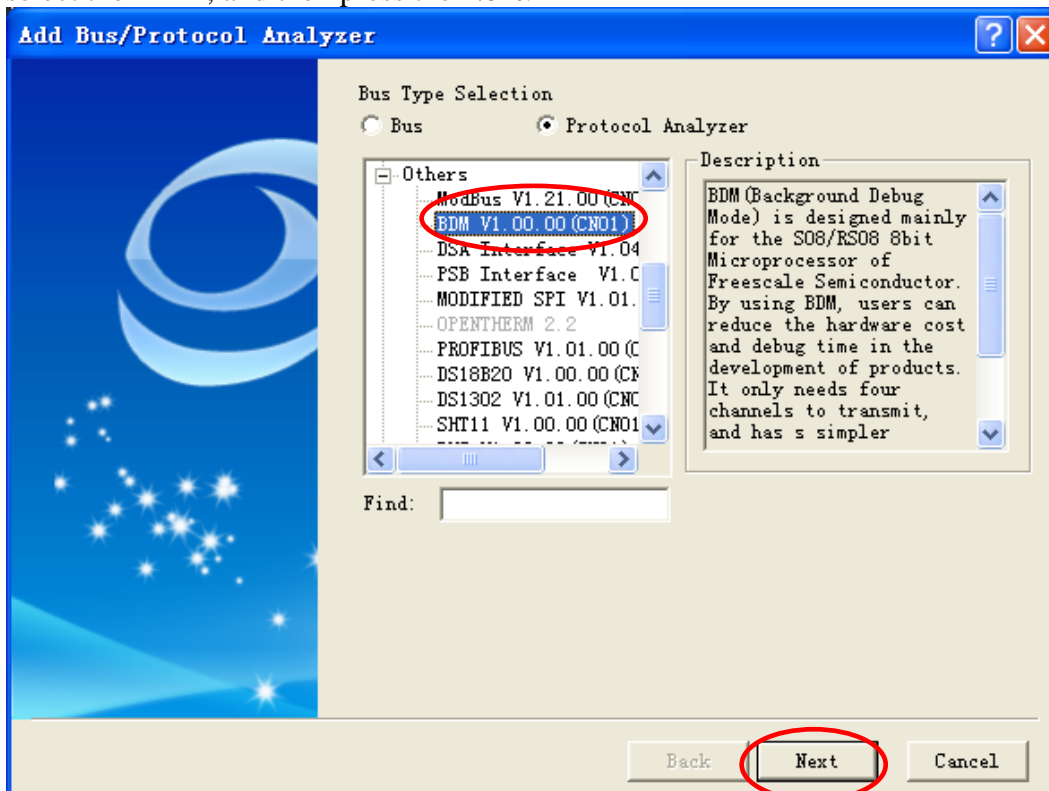


### 3. Operating Instructions

**STEP 1.** Select the **Add Bus/Protocol Analyzer** item on the pulldown 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 **Others**, select the **BDM**, and then press the **Next**.





### STEP 3. Set the Pin Assignment.

**PROTOCOL ANALYZER BDM**

**Pin Assignment**

BKGD: A0

**Protocol Analyzer Property**

☐ Command Decoding

Baud Rate: 175000 ☐ Auto  
(Min:1,Max:10000000)

**Protocol Analyzer Format**

Item	Color	Data Format	Item	Color	Data Format
Command		Default	Data		Default
Address		Default			

Default Back Next Cancel

### STEP 4. Set the Protocol Analyzer Property.

**PROTOCOL ANALYZER BDM**

**Pin Assignment**

BKGD: A0

**Protocol Analyzer Property**

☐ Command Decoding

Baud Rate: 175000 ☐ Auto  
(Min:1,Max:10000000)

**Protocol Analyzer Format**

Item	Color	Data Format	Item	Color	Data Format
Command		Default	Data		Default
Address		Default			

Default Back Next Cancel



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

PROTOCOL ANALYZER BDM

Pin Assignment

BKGD: A0

Protocol Analyzer Property

☐ Command Decoding

Baud Rate: 175000 ☐ Auto  
(Min:1,Max:10000000)

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Command	Pink	Default	Data	Green	Default
Address	Orange	Default			

Default Back Next Cancel

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

PROTOCOL ANALYZER BDM

Pin Assignment

BKGD: A0

Protocol Analyzer Property

☐ Command Decoding

Baud Rate: 175000 ☐ Auto  
(Min:1,Max:10000000)

Protocol Analyzer Format

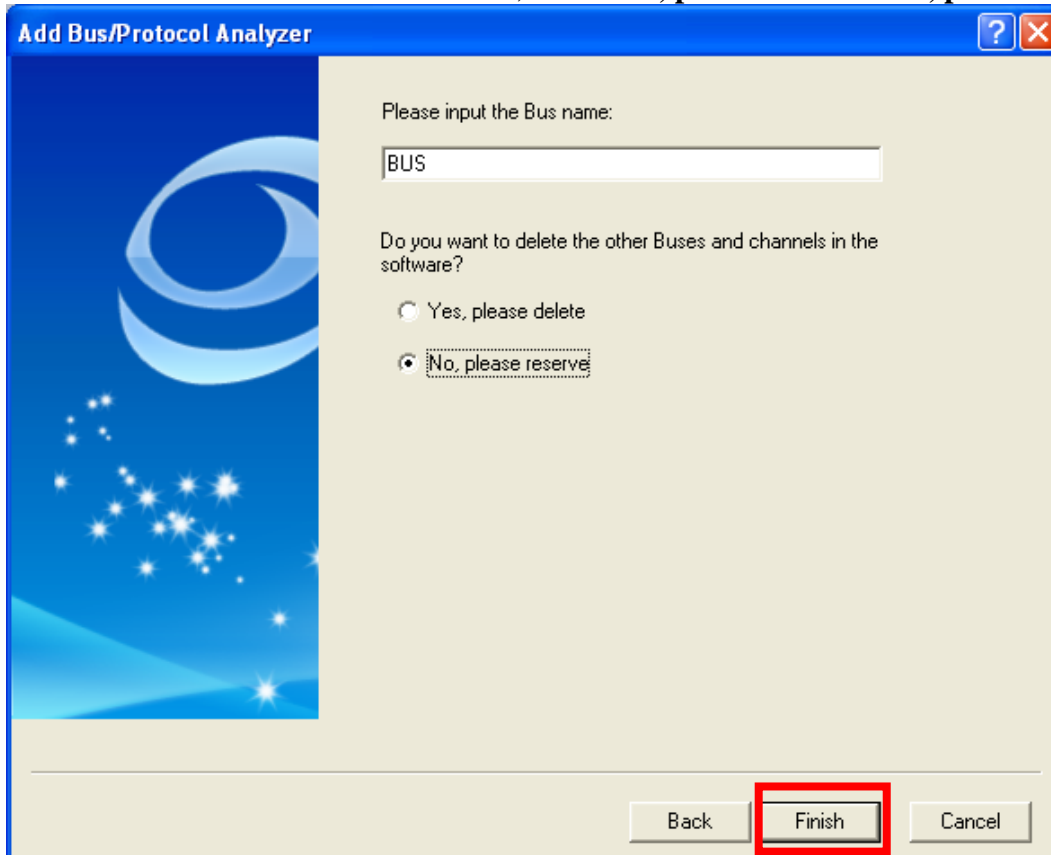
Item	Color	Data Format	Item	Color	Data Format
Command	Pink	Default	Data	Green	Default
Address	Orange	Default			

Default Back Next Cancel



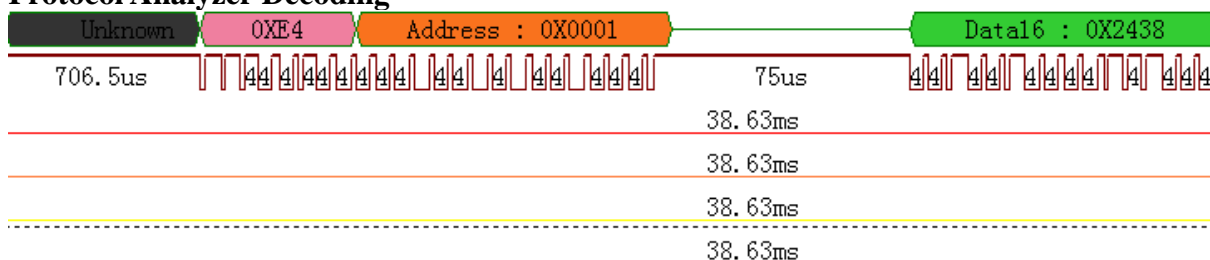


**STEP 7.** Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.



**STEP 8.** Following pictures show the completion of the protocol analyzer decoding and packet list. The trigger condition is set as Rising Edge; the memory depth is 128K; the sampling frequency is 2MHz. (the sampling frequency should be more than 8 times higher than the signal to be tested.)





### Protocol Analyzer Decoding



### Packet List

Packet List

NavigatorPacket ListStatisticsMemory Analyzer?



Packet #	Name	TimeStamp	Background
1	Bus1(BDM)	-0.0015ms	90

Packet #	Name	TimeStamp	Read BD Byte	Address	Data
2	Bus1(BDM)	0.749ms	E4	0001	18BYTES

Packet #	Name	TimeStamp	Status	Data
3	Bus1(BDM)	1.7525ms	E4	2BYTES

Packet #	Name	TimeStamp	Read BD Word	Address	Data
4	Bus1(BDM)	2.756ms	EC	0102	18BYTES