



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

# SPECIFICATION

**MODEL: B11008-BMS**

**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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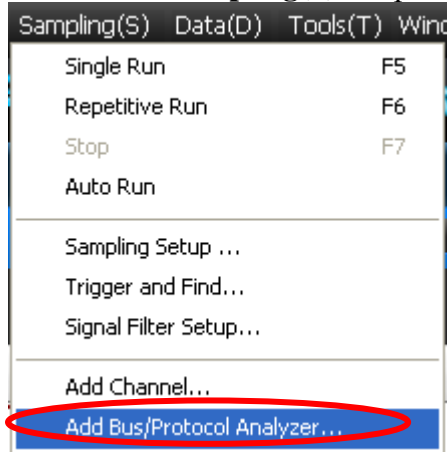
## 1 Software Register

Please register the software as the following steps:

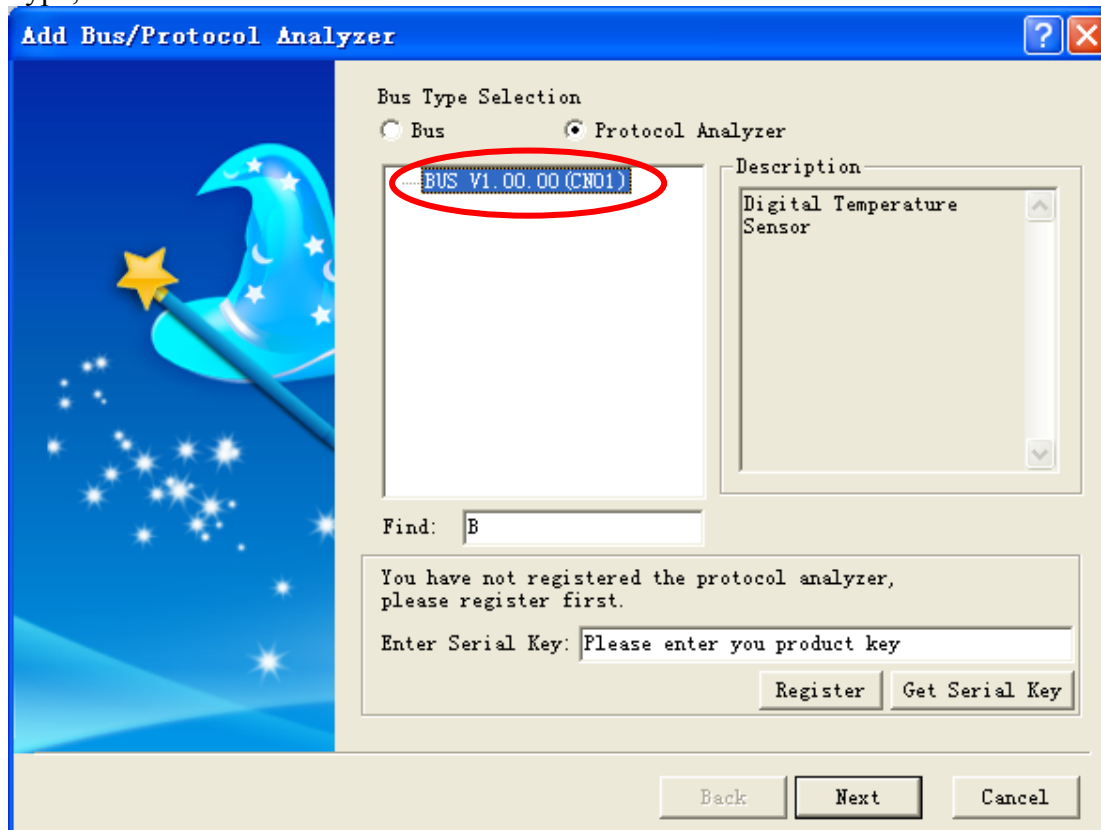
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

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

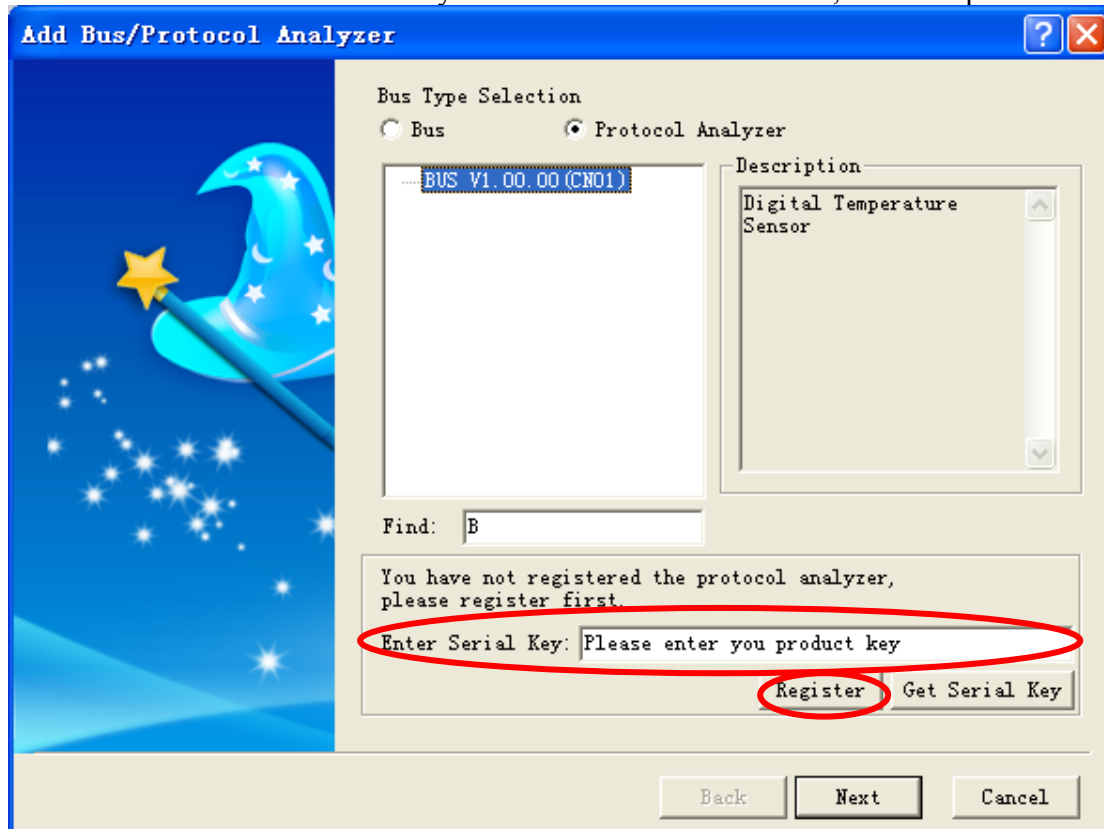


**STEP 2.** Select Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Other Type, and select the BUS.

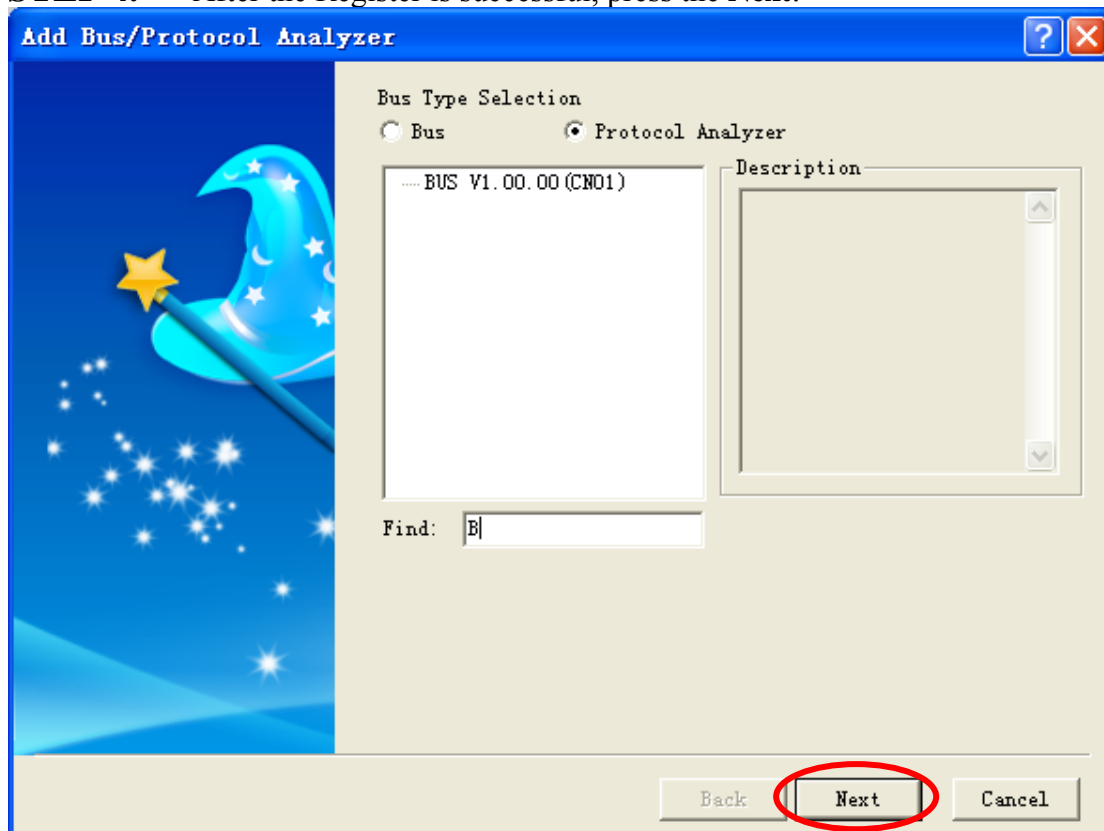




**STEP 3.** Enter the Serial Key of the BUS under this Model, and then press the **Register**.



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





## 2 User Interface

Please refer to the below images to select options of setting **BMS Module**.

Pin Assignment		
Channel:	A0	

Protocol Analyzer Property		
Baud Rate:	250000	<input type="checkbox"/> Auto
(Min:1bps,Max:10Mbps)		
<input type="checkbox"/> Data Reverse Decoding		

Protocol Analyzer Format					
Item	Color	Data Format	Item	Color	Data Format
Start		Default	SPN		Default
Priority		Default	CRC		Default
PGN		Default	ACK		Default
Source Address		Default	NACK		Default
Control		Default	End		Default

Buttons: Default, Back, Next, Cancel

### Pin Assignment:

Channel: It uses one channel based on CAN 2.0B to decode.

### Protocol Analyzer Property:

**Baud Rate:** Users can input the value from 1 bps to 10Mbps, they also can select from the pull-down menu, which has 10000, 20000, 40000, 50000, 80000, 100000, 125000, 200000, 250000, 400000, 500000, 666000, 800000, 1000000bps.

**Auto:** The operating steps are as below.

1. Delete the first part and the last part before calculating.
2. Find the shortest Tmin and the number of  $(1 \sim 1.5) \times T_{min}$  from start to end to mark with N1. If the  $N1 \leq 0$ , the baud rate is 1. It will find 20 segments, the total is N1 and the average is  $T/N1$ . If there is not enough 20, it will record the factual number, the average is also  $T/N1$ .
3. The baud rate is  $1/(T/N1) = N1/T$ .

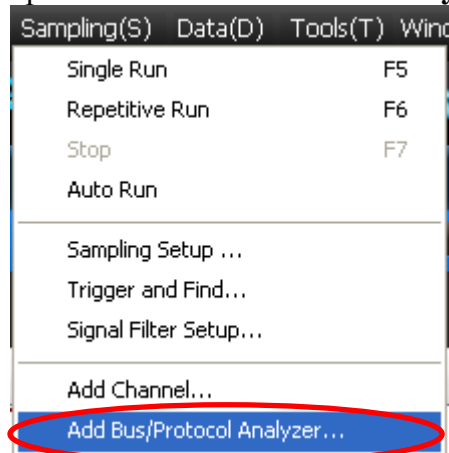
**Data Reverse Decoding:** All lines should be reversed, which means it will decode the Low as High and the High as Low in the decoding.

### Protocol Analyzer Format:

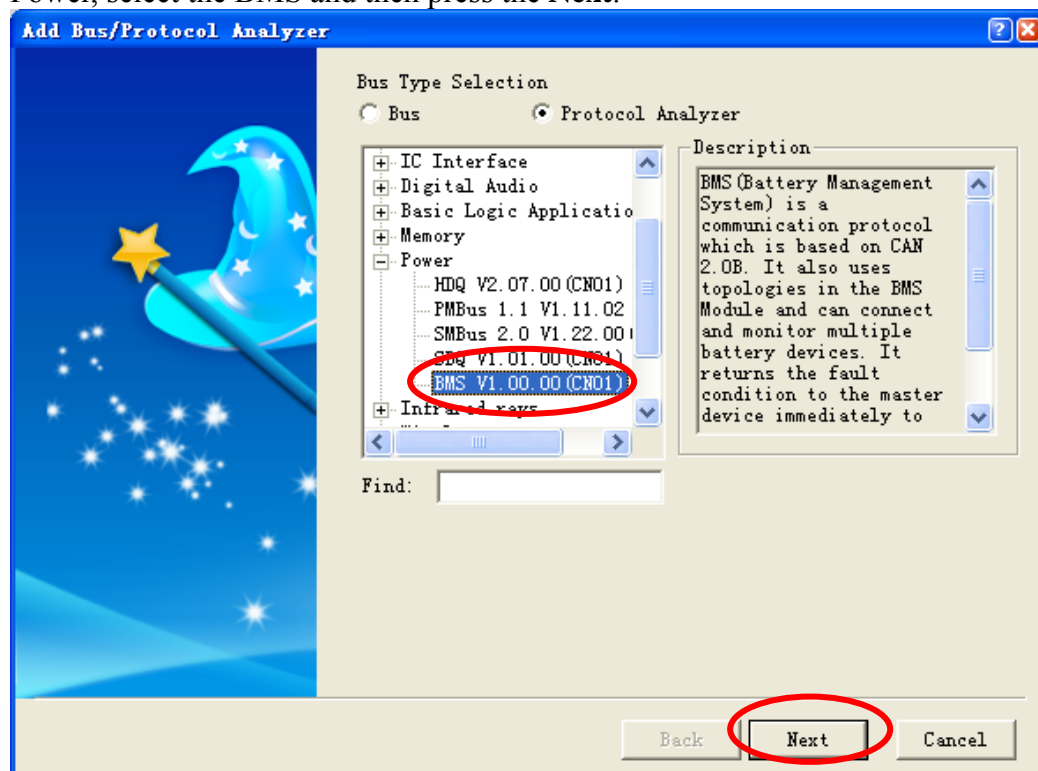
The Color of each Item can be varied as the users' requirements. The Items (Priority, PGN, Source Address, SPN, CRC) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Format of these Items in the Waveform Display Area and Packet List is controlled by the Protocol Analyzer. The default Data Format is controlled by the main program and the Data Format of these items is 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 Power, select the BMS and then press the **Next**.





### STEP 3. Set the Pin Assignment.

**PROTOCOL ANALYZER BMS**

Pin Assignment

Channel: A0

Protocol Analyzer Property

Baud Rate: 250000 ☐ Auto ☐ Data Reverse Decoding  
(Min:1bps,Max:10Mbps)

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	SPN		Default
Priority		Default	CRC		Default
PGN		Default	ACK		Default
Source Address		Default	NACK		Default
Control		Default	End		Default

Default Back Next Cancel

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

**PROTOCOL ANALYZER BMS**

Pin Assignment

Channel: A0

Protocol Analyzer Property

Baud Rate: 250000 ☒ Auto ☐ Data Reverse Decoding  
(Min:1bps,Max:10Mbps)

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	SPN		Default
Priority		Default	CRC		Default
PGN		Default	ACK		Default
Source Address		Default	NACK		Default
Control		Default	End		Default

Default Back Next Cancel



## STEP 5. Set the Protocol Analyzer Format.

The screenshot shows the 'PROTOCOL ANALYZER BMS' window. The 'Pin Assignment' section has 'Channel' set to 'A0'. The 'Protocol Analyzer Property' section has 'Baud Rate' set to '250000', 'Auto' checked, and 'Data Reverse Decoding' unchecked. The 'Protocol Analyzer Format' section is highlighted with a red box and contains a table with two columns of items, each with a color selection and a 'Data Format' dropdown set to 'Default'.

Item	Color	Data Format	Item	Color	Data Format
Start		Default	SPN		Default
Priority		Default	CRC		Default
PGN		Default	ACK		Default
Source Address		Default	NACK		Default
Control		Default	End		Default

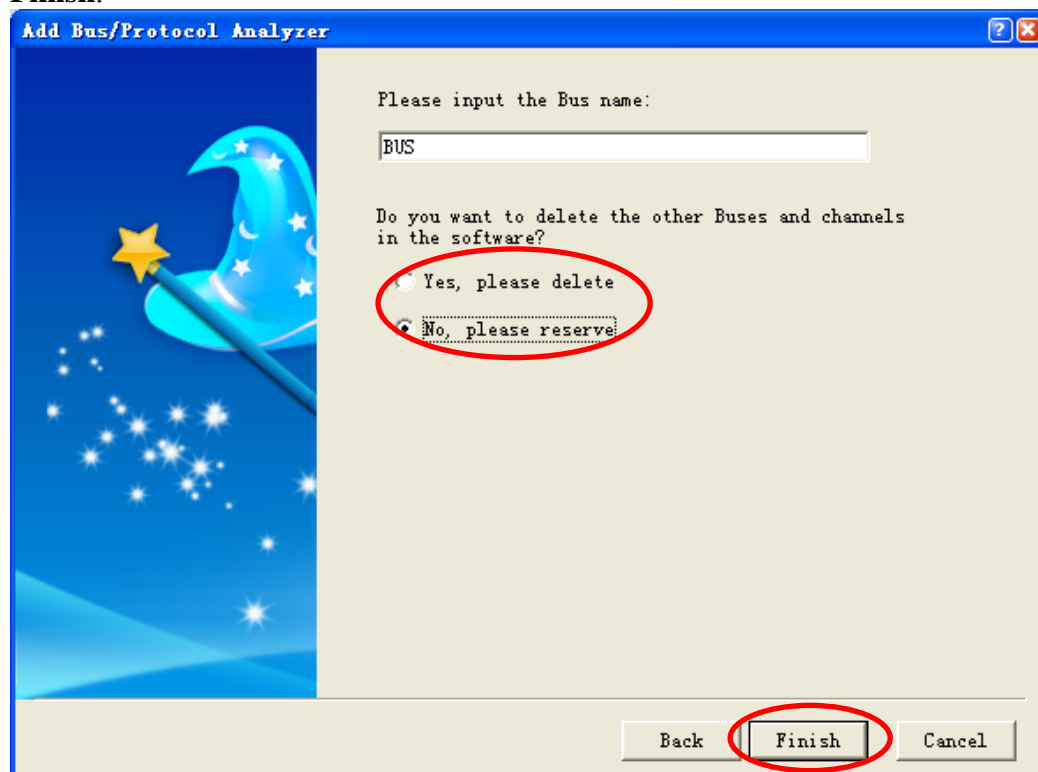
Buttons at the bottom: Default, Back, Next, Cancel.

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

This screenshot is identical to the previous one, but the 'Next' button at the bottom of the 'Protocol Analyzer Format' section is highlighted with a red circle.



**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 the packet list. The Trigger condition is set as Either Edge; the Memory depth is 2K; the sampling frequency is 1MHz. (the sampling frequency should be more than 4 times higher than the signal to be tested).

#### Protocol Analyzer Decoding

Unknown	Start	Priority : 0X6	CRM : 0X000100
1. 023ms	4us	8us	21us
1. 023ms	4us	8us	21us
1. 023ms	4us	8us	21us
			2. 048ms
			2. 048ms
			2. 048ms
			2. 048ms
			2. 048ms

#### Packet List

Packet #	Name	TimeStamp	Priority	CRM	CCS	RTR	RB	DLC	SPN2560	SPN2561	SPN2562	SPN2563
1	BUS(BMS)	0ms	6	000100	E5	0	0	8	01	00	00	01
	SPN2564	CRC15	ACK	DESCRIBE								
	6807288A	1A08	ACK	Shake Hands								