



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

SPECIFICATION

MODEL: B08041-LAP-MODIFIED MILLER-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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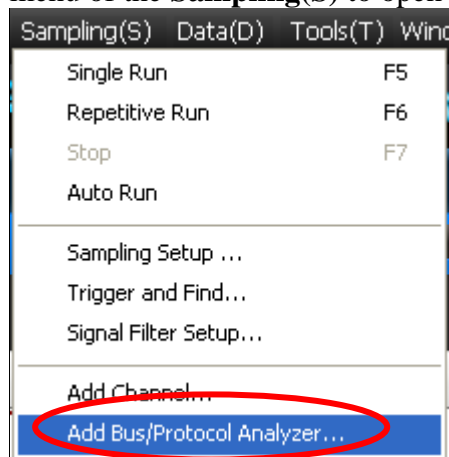
1 Software Register

Please register the software as the following steps:

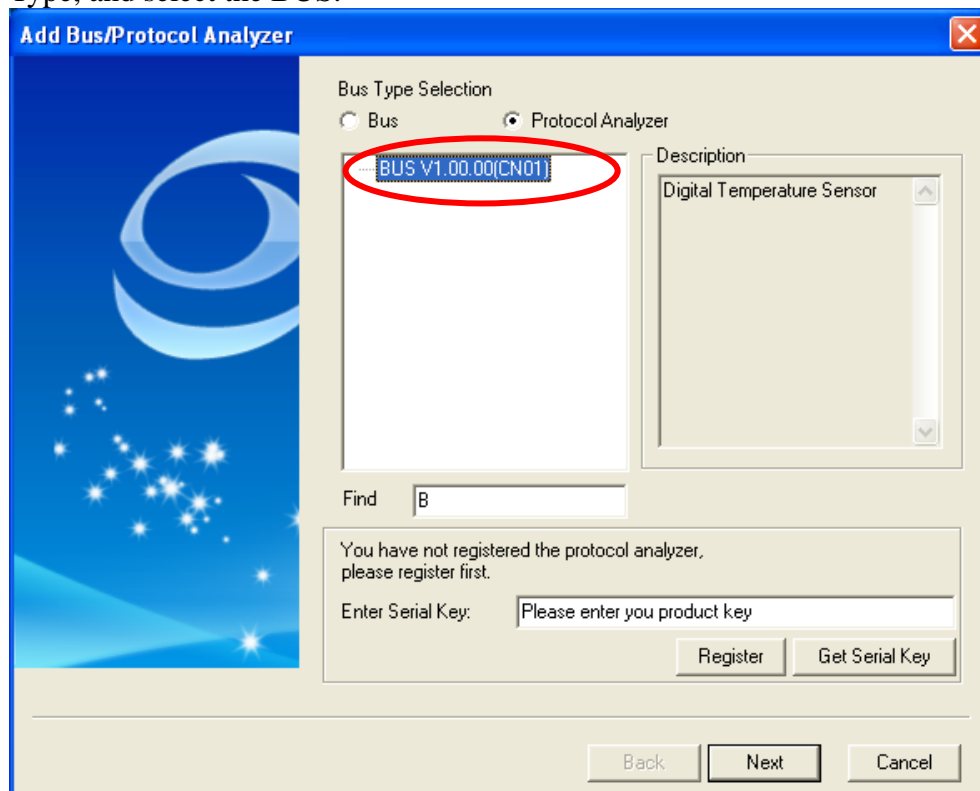
※ Remark1: The registration steps for all protocol analyzers are the same, you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

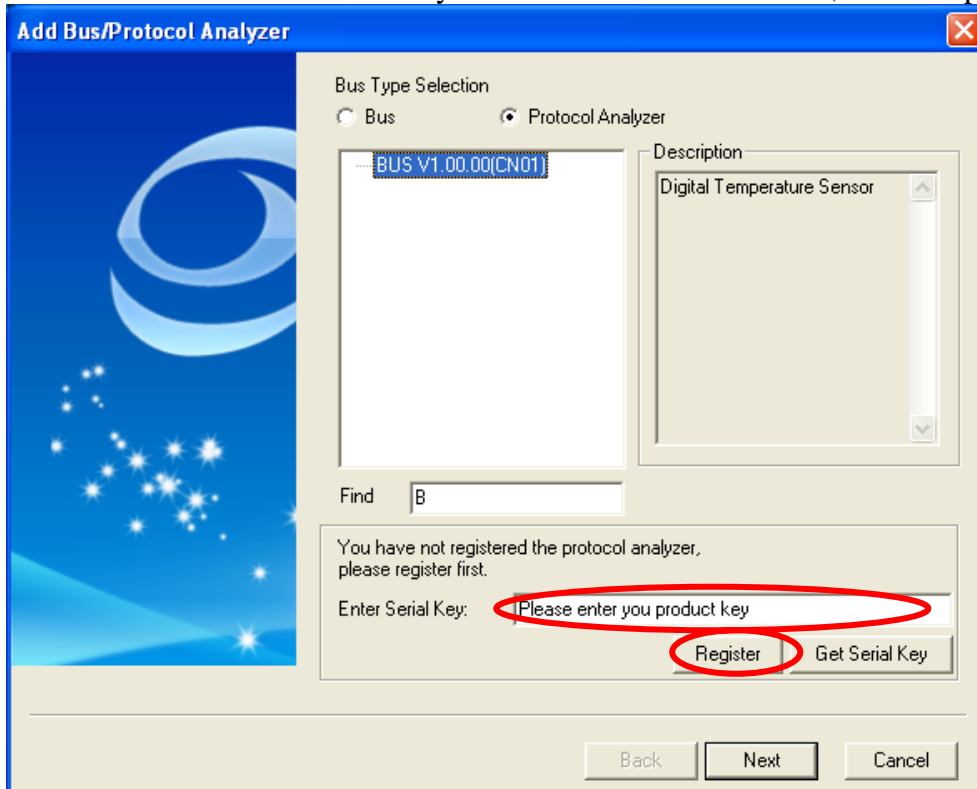


STEP 2. Select Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Other Type, and select the BUS.

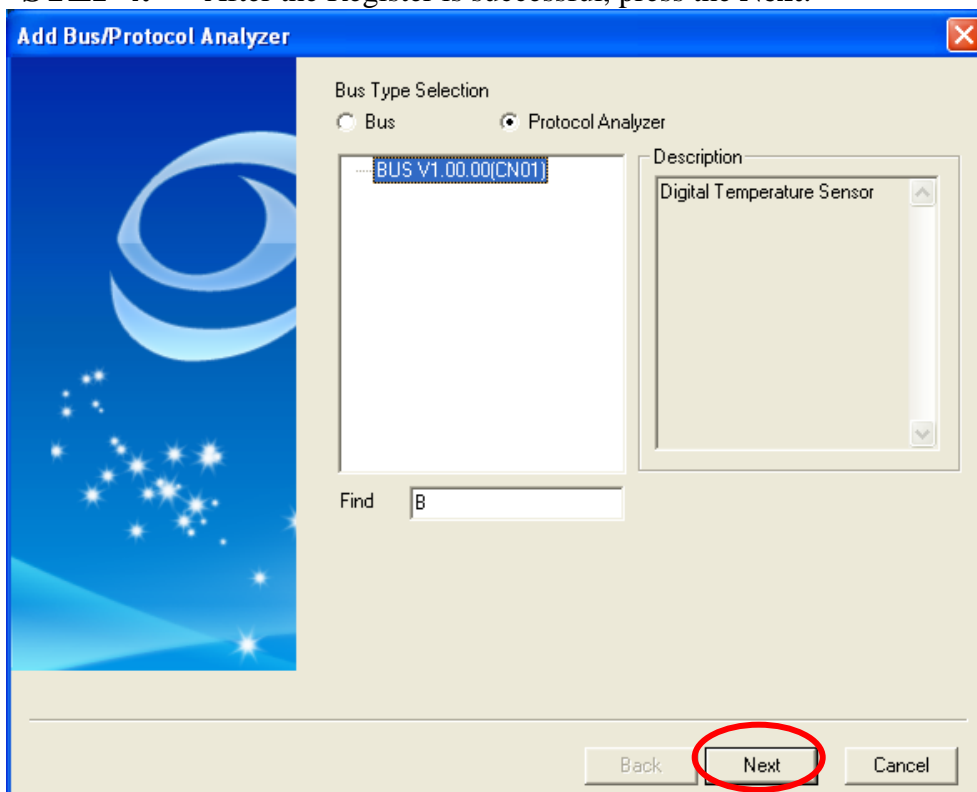




STEP 3. Enter the Serial Key of the BUS under this Model, and then press the **Register**.



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





2 User Interface

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

Pin Assignment		
Channel:	A0	

Protocol Analyzer Property	
Data Length:	8 (Min:4,Max:28)
Tolerance Error:	15%
Transmission Direction:	MSB->LSB
Start Bit:	0
Bit Clock:	9.44 us (Min:0.01,Max:655.35)
Parity Check:	None parity
Low Pulse Width:	1.89 -> 4.72 us

Protocol Analyzer Format					
Item	Color	Data Format	Item	Color	Data Format
Start	Cyan	Default	Data	Green	Default
Parity	Purple	Default	Stop	Red	Default

Buttons: Default, Back, Next, Cancel

Pin Assignment: Users can select the decoding channel by themselves.

Protocol Analyzer Property:

Data Bit: Users can set the bit of the data which is between 4 and 28.

Transmission Direction: User can set the direction as MSB->LSB or LSB->MSB, the default is MSB->LSB.

Bit Clock: Users can input the value of the Bit Clock which is between 0.01 and 655.35us by themselves.

Low Pulse Width: It can be set between 0.00 and 65535.00us; it allows the decimal fraction. The left input must be less than the right input.

Tolerance Error: There are four choices which are 5%, 10%, 15% and 20%.

Start Bit: Set the Start Bit of START as 0 or 1.

Parity Check: Users can select None parity or Odd parity or Even parity to set Parity Check.

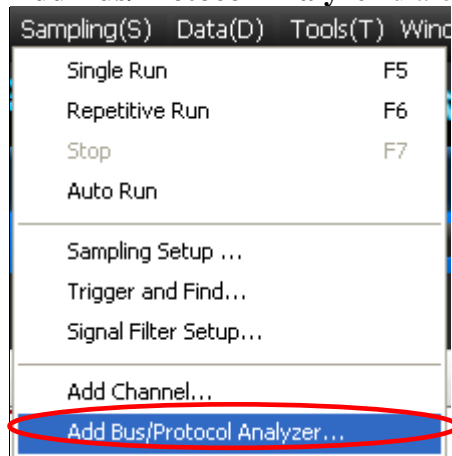
Protocol Analyzer Format:

The protocol analyzer colors can be varied by users. The Item (Data) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Format of Item (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 item (Data) is the Default.

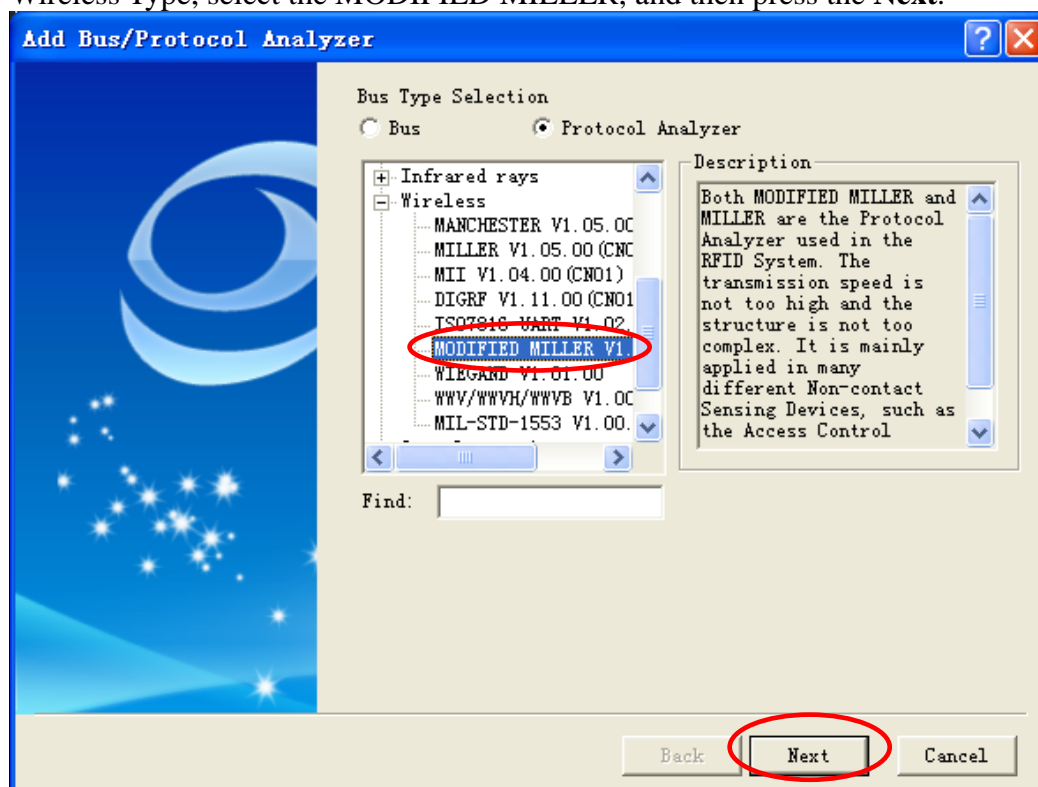


3. Operating Instructions

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 Wireless Type, select the MODIFIED MILLER, and then press the **Next**.





STEP 3. Set the Pin Assignment.

PROTOCOL ANALYZER MODIFIED MILLER

Pin Assignment

Channel: **A0**

Protocol Analyzer Property

Data Length: 8 (Min:4,Max:28) Tolerance Error: 15%

Transmission Direction: MSB->LSB Start Bit: 0

Bit Clock: 9.44 us ☐ Auto Parity Check: None parity
(Min:0.01,Max:655.35)

Low Pulse Width: 1.89 -> 4.72 us

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	Data		Default
Parity		Default	Stop		Default

Default Back Next Cancel

STEP 4. Set the Protocol Analyzer Property.

PROTOCOL ANALYZER MODIFIED MILLER

Pin Assignment

Channel: **A0**

Protocol Analyzer Property

Data Length: 8 (Min:4,Max:28) Tolerance Error: 15%

Transmission Direction: MSB->LSB Start Bit: 0

Bit Clock: 9.44 us ☐ Auto Parity Check: None parity
(Min:0.01,Max:655.35)

Low Pulse Width: 1.89 -> 4.72 us

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	Data		Default
Parity		Default	Stop		Default

Default Back Next Cancel



STEP 5. Set the Protocol Analyzer Format.

PROTOCOL ANALYZER MODIFIED MILLER

Pin Assignment
Channel: A0

Protocol Analyzer Property
Data Length: 8 (Min:4,Max:28)
Transmission Direction: MSB->LSB
Bit Clock: 9.44 us ☐ Auto (Min:0.01,Max:655.35)
Tolerance Error: 15%
Start Bit: 0
Parity Check: None parity
Low Pulse Width: 1.89 -> 4.72 us

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	Data		Default
Parity		Default	Stop		Default

Default Back Next Cancel

STEP 6. Press the Next to finish all settings.

PROTOCOL ANALYZER MODIFIED MILLER

Pin Assignment
Channel: A0

Protocol Analyzer Property
Data Length: 8 (Min:4,Max:28)
Transmission Direction: MSB->LSB
Bit Clock: 9.44 us ☐ Auto (Min:0.01,Max:655.35)
Tolerance Error: 15%
Start Bit: 0
Parity Check: None parity
Low Pulse Width: 1.89 -> 4.72 us

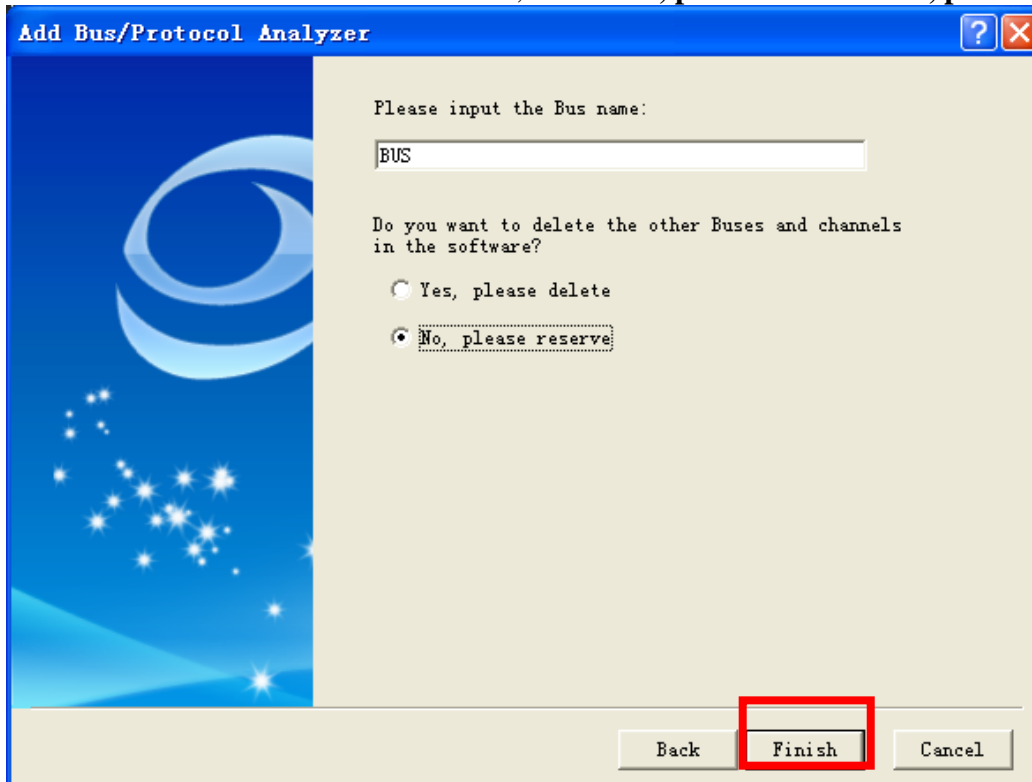
Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Start		Default	Data		Default
Parity		Default	Stop		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 Either Edge; the memory depth is 128K; the sampling frequency is 1MHz. (the sampling frequency should be more than 10 times higher than the signal to be tested.)

Protocol Analyzer Decoding

Unknown	Start_0	Data : 0X00										Stop_0	Unknown	
107us	3	7us	3	6us	3	7us	3	6us	3	6us	3	7us	3	30us
465.041ms														
465.041ms														
465.041ms														
465.041ms														
465.041ms														
465.041ms														
465.041ms														

Packet List

Packet #	Name	TimeStamp	Start_0	Data	Stop_0
1	Bus1(MODIFIED MILLER)	-3us	Start_0		
2	Bus1(MODIFIED MILLER)	7us	Start_0		
3	Bus1(MODIFIED MILLER)	16us	Start_0		
4	Bus1(MODIFIED MILLER)	30us	Start_0		
5	Bus1(MODIFIED MILLER)	77us	Start_0	04	Stop_0
6	Bus1(MODIFIED MILLER)	195us	Start_0	08	Stop_0