



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

SPECIFICATION

MODEL: 034-LAP-MII-M

PART NO: _____

VERSION: V1.07

Approver		Check	Design
GM	PM		

Customer Confirm

*Please fax the file to Zeroplus Technology after signing.

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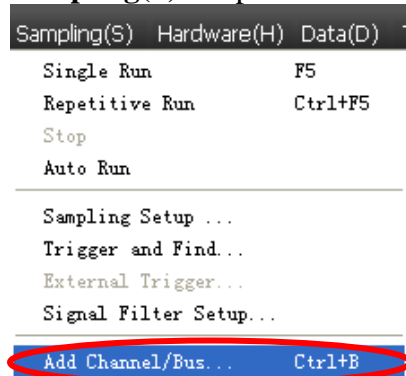
1 Software Register

Please register the software as the following steps:

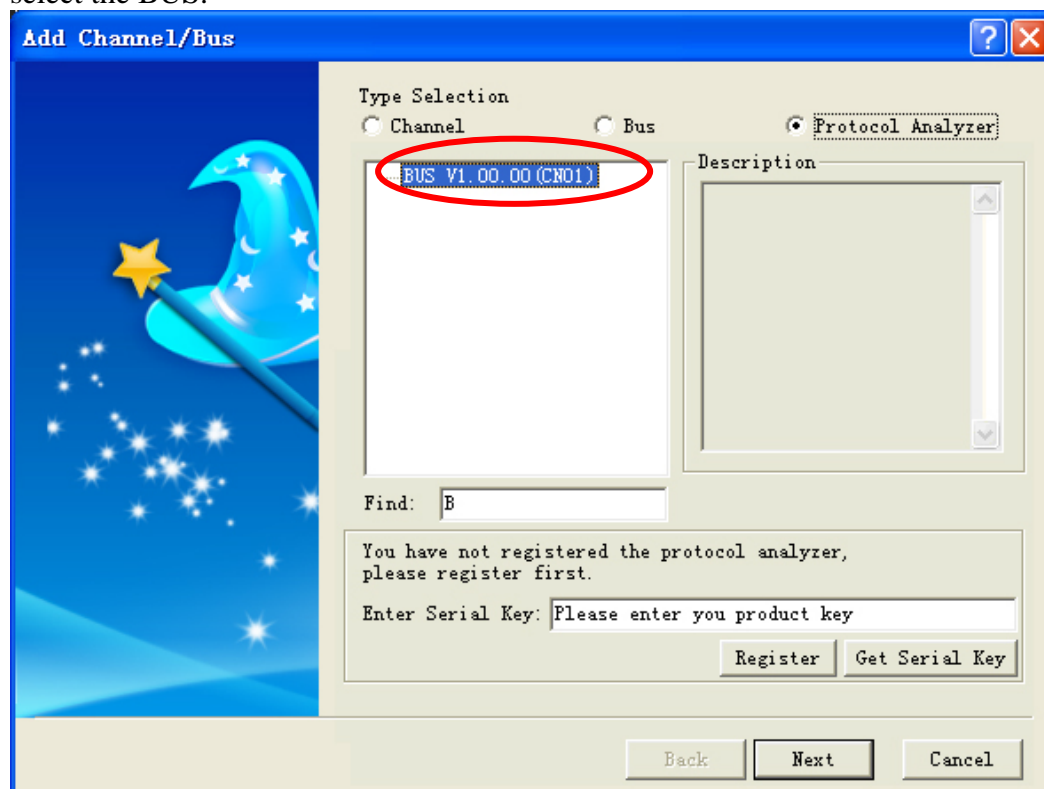
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

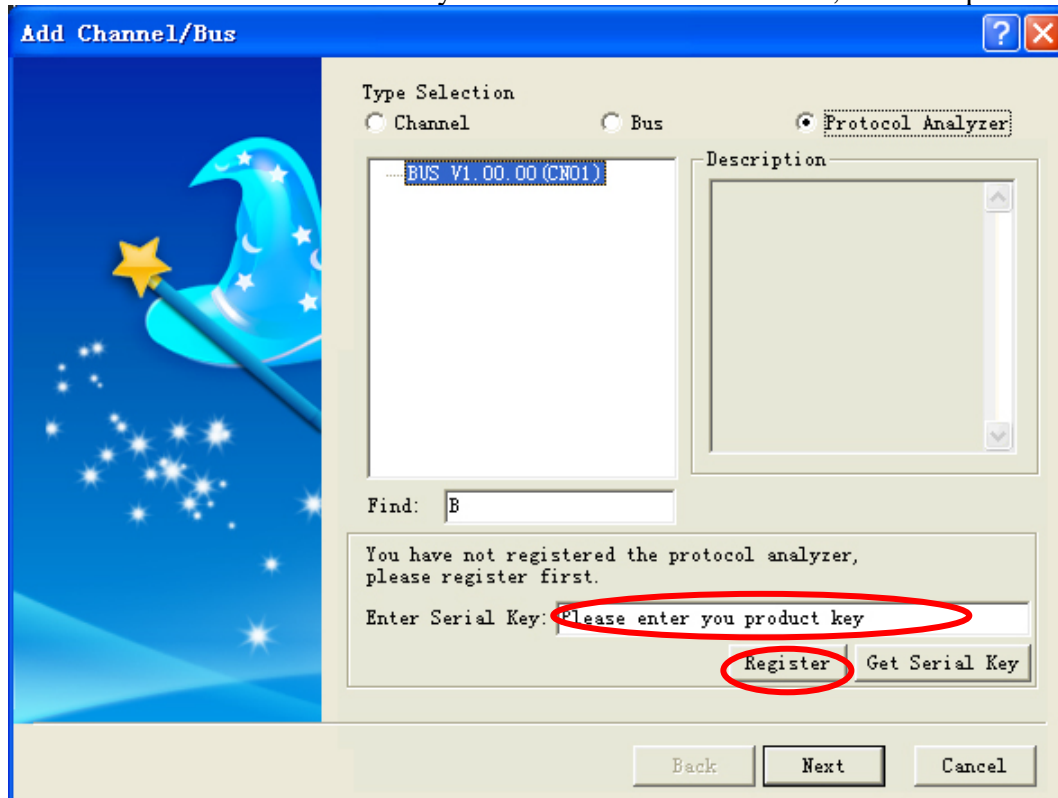
STEP 1. Open the Logic Analyzer and select the **Add Channel/Bus** item on the pull-down menu of the **Sampling(S)** to open the **Add Channel/Bus** dialog box.



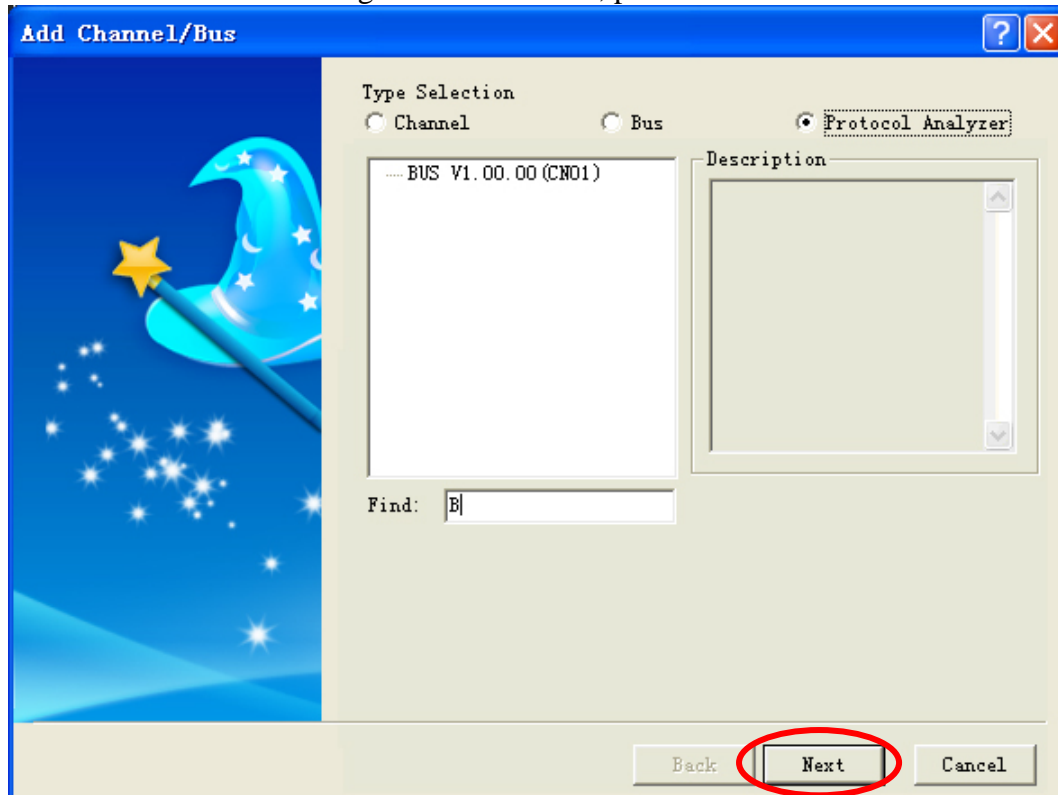
STEP 2. Select Protocol Analyzer item in the Add Channel/Bus dialog box, expand the other Type, and select the BUS.



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

In the Configuration dialog box, please refer to the below images to do settings of **MII** Module.

MII Configuration dialog box

Mode Selection:

Mode Selection: Set the Mode to SMI, MII Transport Mode, MII Receive Mode, RMII Transport Mode or RMII Receive Mode. When the different Mode is selected, the different dialog box will appear.

Protocol Analyzer Property:

PREAMBLE: It is only available for the SMI mode. When it is selected, it can be set in the range from 32 to 255 bit.

Sampling Mode: When the MII Mode or RMII Mode is selected, it can be set to Rising or Falling.

Data Bit: When the MII Transport Mode or MII Receive Mode is selected, it can be set to 4 bit or 8 bit. The Data Bit can't be set in the RMII Mode, and the fixed value is 8bit.

Pin Assignment:

In the SMI Mode, it needs two lines (MDC and MDIO) to decode the signals;

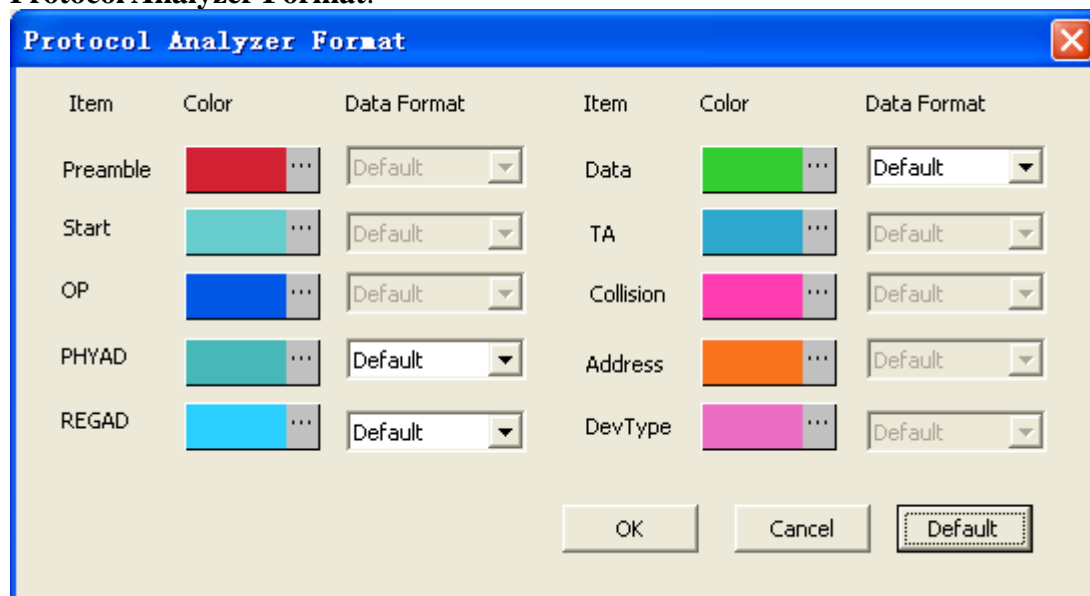
In the MII Transport Mode, it needs eight lines (CLK, EN, ER, COL, and D0~D3) to decode the signals;

In the MII Receive Mode, it needs seven lines (CLK, ER, DV, and D0~D3) to decode the signals.

In the RMII Transport Mode, it needs six lines (CLK, EN, ER, COL, D0~D1) to decode the signals;

In the RMII Receive Mode, it needs five lines (CLK, DV, ER, D0~D1) to decode the signals.

Protocol Analyzer Format:



The dialog box titled "Protocol Analyzer Format" contains two columns of settings. Each row represents a protocol item with a color selection button (a colored square followed by three dots) and a data format dropdown menu. The items and their default colors are: Preamble (red), Start (light blue), OP (blue), PHYAD (teal), REGAD (cyan), Data (green), TA (light blue), Collision (magenta), Address (orange), and DevType (pink). All data format dropdowns are currently set to "Default". At the bottom right, there are three buttons: "OK", "Cancel", and "Default".

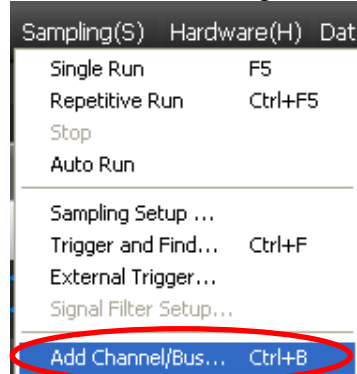
Item	Color	Data Format	Item	Color	Data Format
Preamble	[Red]	Default	Data	[Green]	Default
Start	[Light Blue]	Default	TA	[Light Blue]	Default
OP	[Blue]	Default	Collision	[Magenta]	Default
PHYAD	[Teal]	Default	Address	[Orange]	Default
REGAD	[Cyan]	Default	DevType	[Pink]	Default

Buttons: OK, Cancel, Default

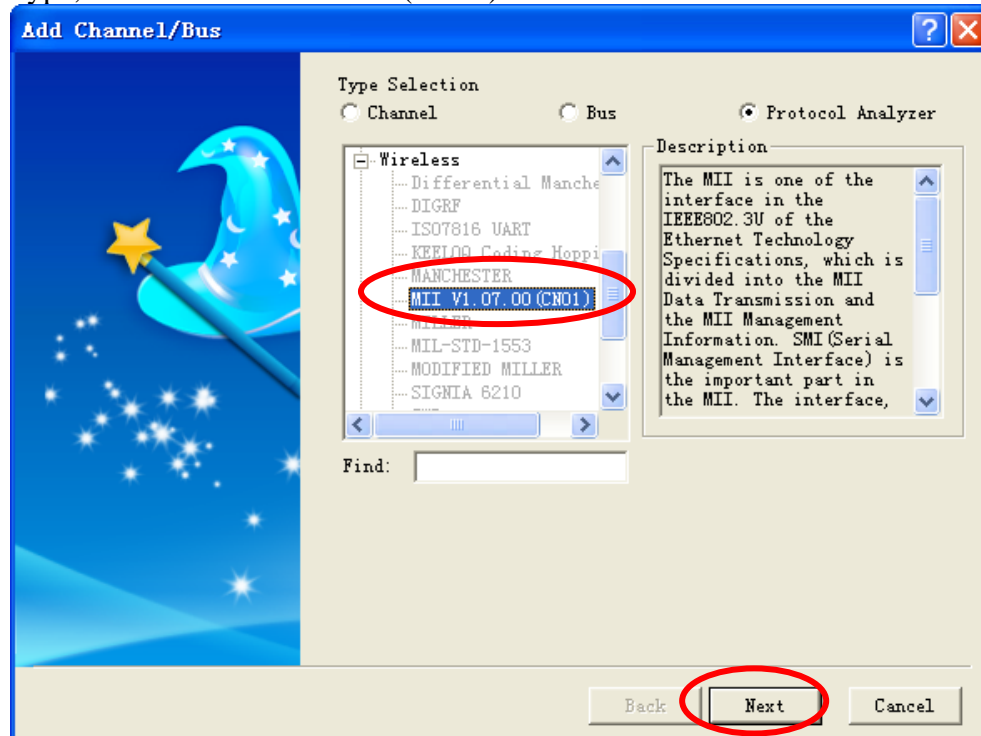
Press the **Settings** button to open the Protocol Analyzer Format dialog box. The color of each item can be varied as the users' requirements. The items (PHYAD, REGAD and Data) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the data format of these three items in the Waveform Display 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 three items is the 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 Wireless Type, select the MII V1.07.00 (CN01) and then click the **Next**.





STEP 3. Set the Mode Selection.

PROTOCOL ANALYZER III

Mode Selection: SMI

Protocol Analyzer Format: Settings...

Protocol Analyzer Property

☒ PREAMBLE: 32 bit (Min:32,Max:255) Sampling Mode: Falling Note:Sampling edge setting of data Data Bit: 4bit

Pin Assignment

MDC: A0 MDIO: A1

CLK: A0 EN: A1 ER: A2

COL: A3 D3: A4 D2: A5

D1: A6 D0: A7

Default Back Next Cancel

STEP 4. Set the PREAMBLE in the range from 32 to 255 bit in the SMI Mode.

PROTOCOL ANALYZER III

Mode Selection: SMI

Protocol Analyzer Format: Settings...

Protocol Analyzer Property

☒ PREAMBLE: 32 bit (Min:32,Max:255) Sampling Mode: Falling Note:Sampling edge setting of data Data Bit: 4bit

Pin Assignment

MDC: A0 MDIO: A1

CLK: A0 EN: A1 ER: A2

COL: A3 D3: A4 D2: A5

D1: A6 D0: A7

Default Back Next Cancel



STEP 5. Set the Sampling Mode.

PROTOCOL ANALYZER MII

Mode Selection: SMI

Protocol Analyzer Format: Settings...

Protocol Analyzer Property

☒ PREAMBLE: 32 bit (Min:32,Max:255)

Sampling Mode: Falling Note: Sampling edge setting of data

Data Bit: 4bit

Pin Assignment

MDC: A0 MDIO: A1

CLK: A0 EN: A1 ER: A2

COL: A3 D3: A4 D2: A5

D1: A6 D0: A7

Default Back Next Cancel

STEP 6. Set the Data Bit in the MII Transport Mode or MII Receive Mode.

PROTOCOL ANALYZER MII

Mode Selection: MII Transport Mode

Protocol Analyzer Format: Settings...

Protocol Analyzer Property

☒ PREAMBLE: 32 bit (Min:32,Max:255)

Sampling Mode: Rising

Data Bit: 4bit

Pin Assignment

MDC: A0 MDIO: A1

CLK: A0 EN: A1 ER: A2

COL: A3 D3: A4 D2: A5

D1: A6 D0: A7

Default Back Next Cancel



STEP 7. Set the Pin Assignment.

PROTOCOL ANALYZER MII

Mode Selection: **MII Transport M**

Protocol Analyzer Property

☒ PREAMBLE: 32 bit (Min:32,Max:255) Sampling Mode: Rising Data Bit: 4bit

Pin Assignment

MDC:	A0	MDIO:	A1		
CLK:	A0	EN:	A1	ER:	A2
COL:	A3	D3:	A4	D2:	A5
D1:	A6	D0:	A7		

Default Back Next Cancel

STEP 8. Press the **Settings** to open the Protocol Analyzer Format dialog box, and then set the color of each item and the data format of the items (PHYAD, REGAD and Data).

Protocol Analyzer Format

Item	Color	Data Format	Item	Color	Data Format
Preamble	Red	Default	Data	Green	Default
Start	Cyan	Default	TA	Blue	Default
OP	Blue	Default	Collision	Pink	Default
PHYAD	Teal	Default	Address	Orange	Default
REGAD	Light Blue	Default	DevType	Purple	Default

OK Cancel Default



STEP 9. Click **Next** to finish the settings.

PROTOCOL ANALYZER III

Mode Selection: **MII Transport**

Protocol Analyzer Format: **Settings...**

Protocol Analyzer Property

☒ PREAMBLE: **32** bit (Min:32,Max:255) Sampling Mode: **Rising** Data Bit: **4bit**

Pin Assignment

MDC: **A0** MDIO: **A1**

CLK: **A0** EN: **A1** ER: **A2**

COL: **A3** D3: **A4** D2: **A5**

D1: **A6** D0: **A7**

Next

STEP 10. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.

Add Channel/Bus

Please input the Bus name:

BUS0

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

☐ Yes, please delete

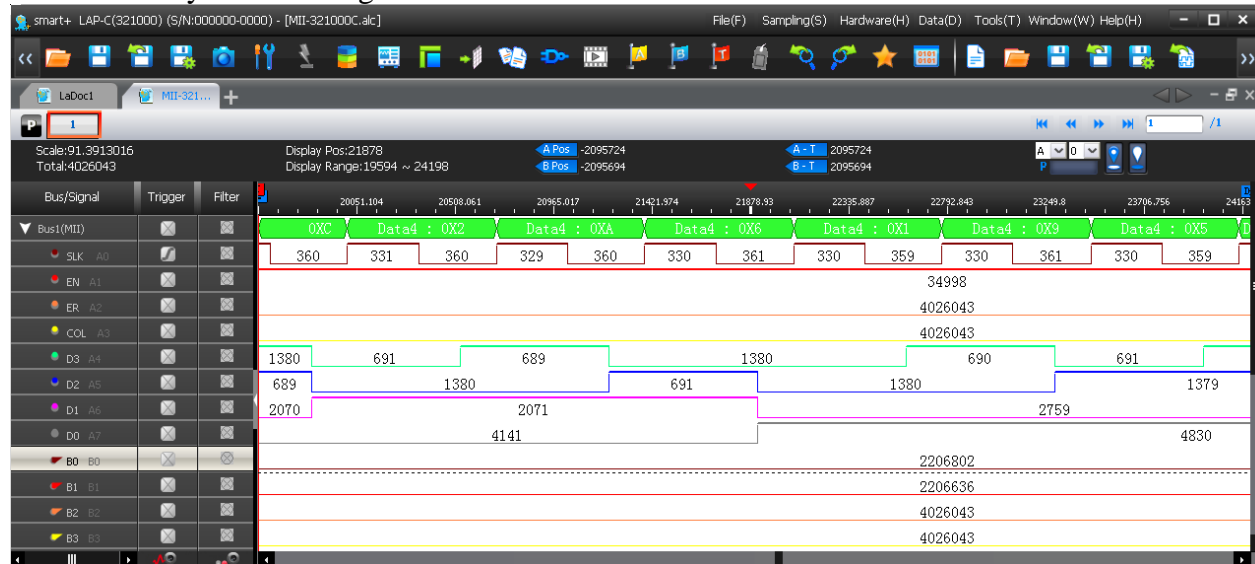
☒ **No, please reserve**

Finish



STEP 11. Following pictures show the completion of the protocol analyzer decoding and the packet list. The Trigger condition is set as Rising Edge; the Memory depth is 16K; the Sampling frequency is 80MHz (the sampling frequency should be more than eight times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List

