



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

SPECIFICATION

**MODEL: B09020-LAP-SAMSUNG K9 (NAND
Flash)-M**

PART NO : _____

VERSION : V1.01

Approver		Check	Design
GM	PM		

Customer Confirm

* Please fax the file to
ZeroPlus Technology after
signing.

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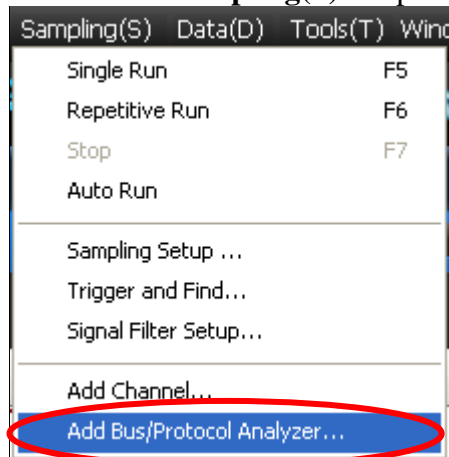
1 Software Register

Please register the software as the following steps:

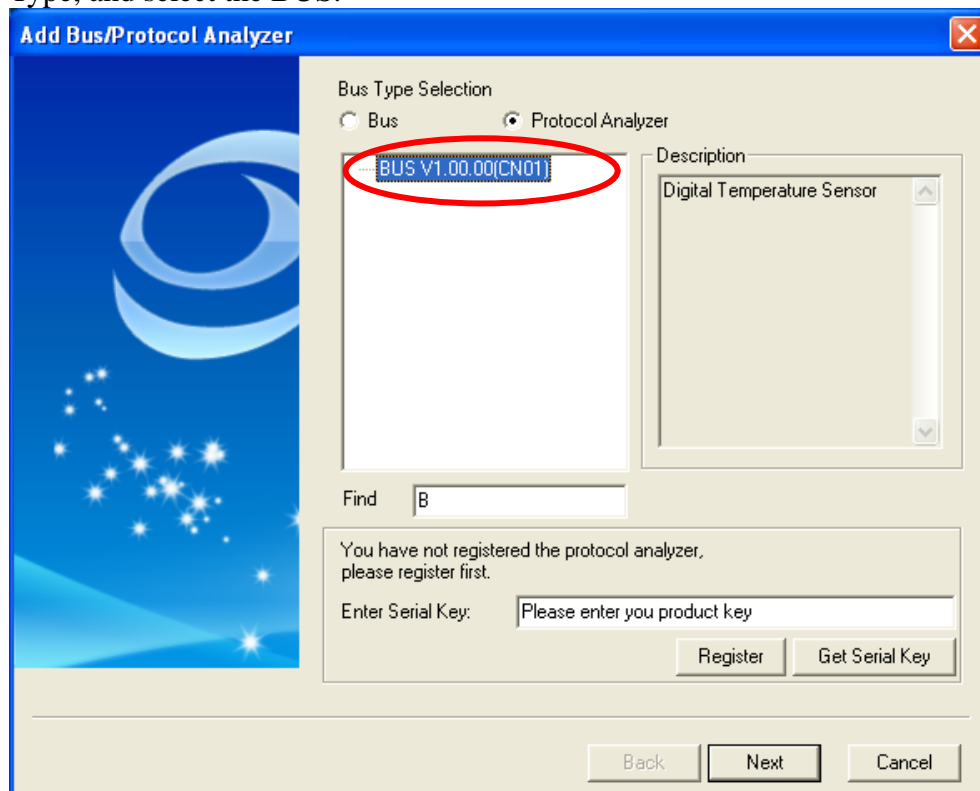
※ Remark1: The registration steps for all protocol analyzers are the same; you can complete the registration by following procedures. Following is an example on how to register the Protocol Analyzer BUS.

※ 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.

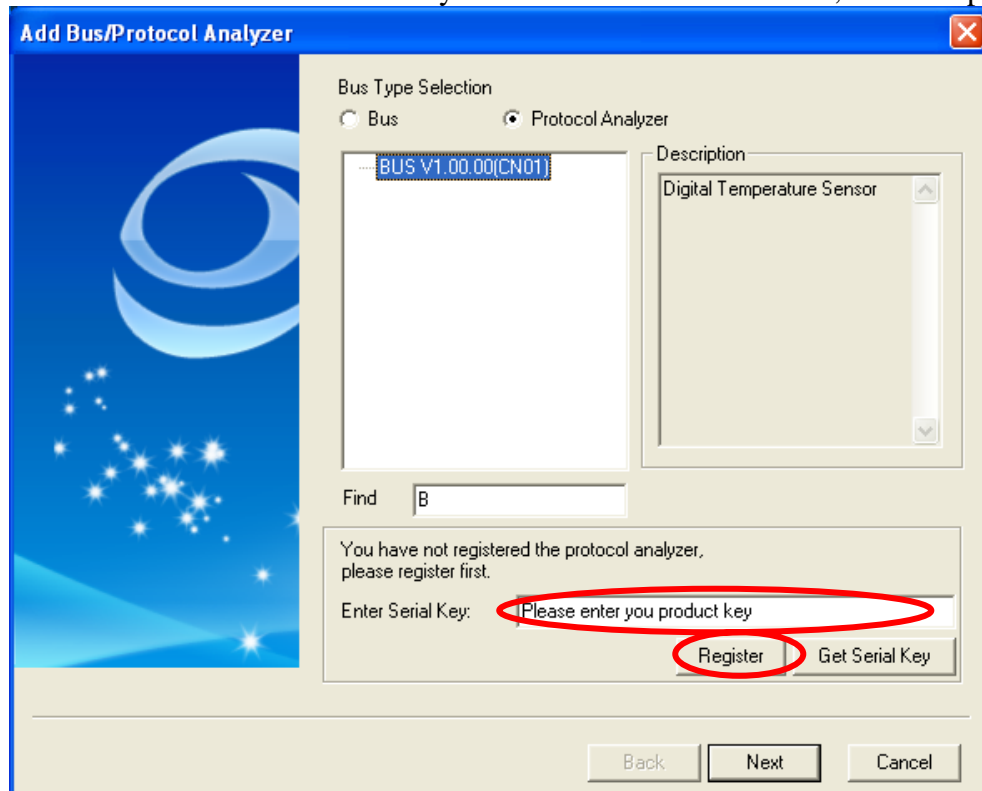


STEP 2. Select Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the Other Type, and select the BUS.

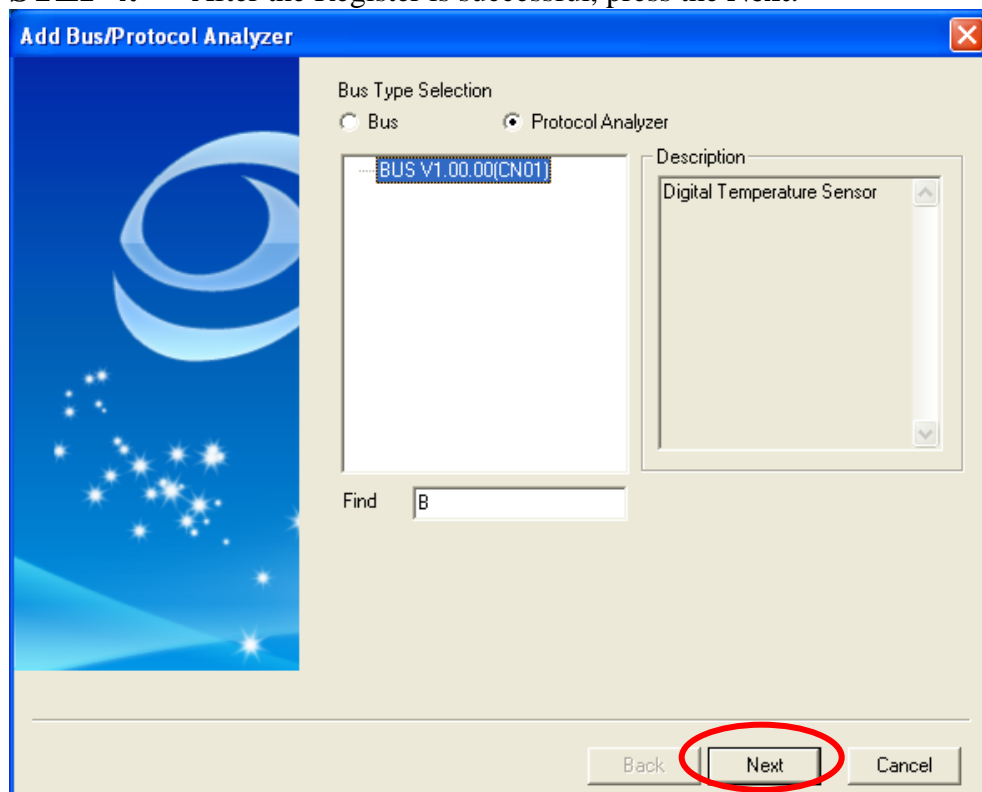




STEP 3. Enter the Serial Key of the BUS under this Model, and then press the **Register**.



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





2 User Interface

Please refer to the below image to select options of setting SAMSUNG K9 (NAND Flash) Module.

PROTOCOL ANALYZER SAMSUNG K9(NAND Flash)

Pin Assignment

D0-->D7: A0 --> A7 CLE: B0

☒ D8-->D15: A8 --> A15 ALE: B1

☐ /CE1: B5 R/B1: B6 /RE: B2

☐ /CE2: B7 R/B2: B8 /WE: B3

☐ /CE3: B9 R/B3: B10 /WP: B4

☐ /CE4: B11 R/B4: B12

Protocol Analyzer Format

Settings...

Default Back Next Cancel

Pin Assignment: It needs 15 channels to decode at least.

D0→D7, CLE, ALE, /RE, /WE, /WP, /CE1, R/B1 are must be selected.

D8→D15,/CE2, /CE3, /CE4 can be selected as users' requirements.

R/B2, R/B3, R/B4, these three items' activation is matched with /CE2, /CE3, /CE4 respectively.

Protocol Analyzer Format: Users can set the color of the packet as their requirements. The Items (Command, Address, Data out, Data In) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Format of the Items (Command, Address, Data Out, Data In) 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.

Protocol Analyzer Format

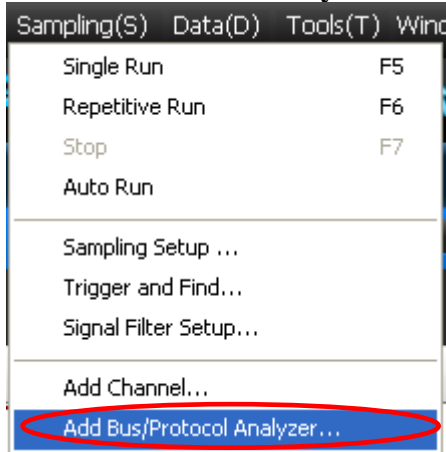
Item	Color	Data Format	Item	Color	Data Format
Command		Default	Protect		Default
Address		Default	Data Out		Default
Busy		Default	Data In		Default

OK Cancel Default

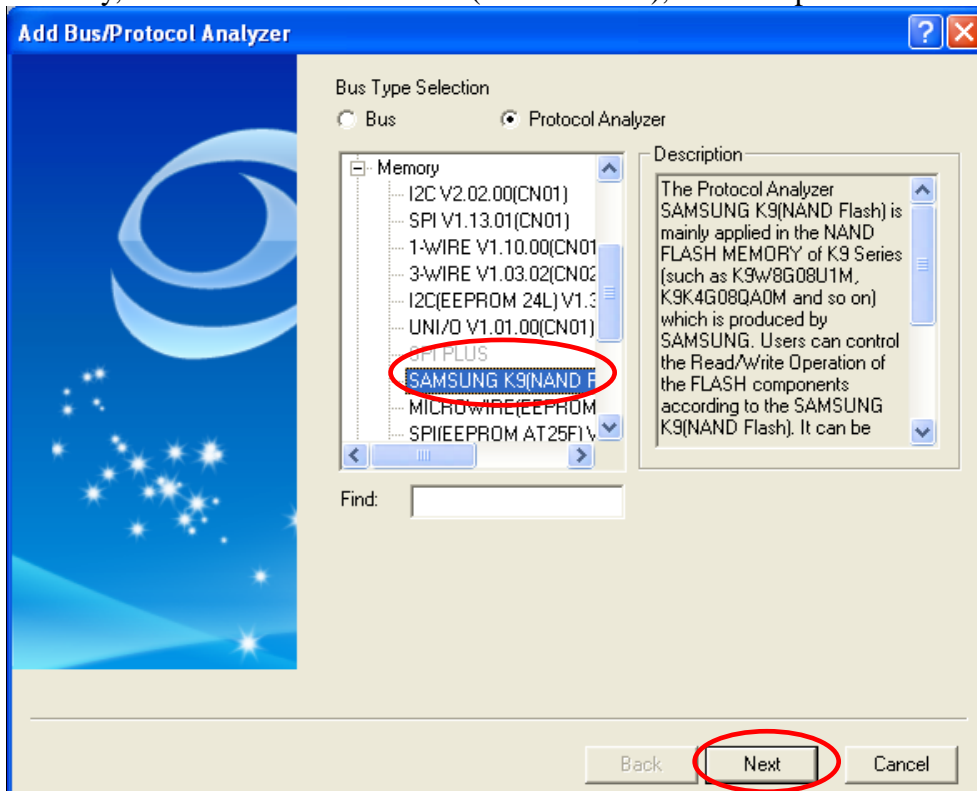


3. Operating Instructions

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 Memory, select the SAMSUNG K9 (NAND Flash), and then press the **Next**.





STEP 3. Set the Pin Assignment.

PROTOCOL ANALYZER SAMSUNG K9(NAND Flash)

Pin Assignment

D0->D7:	A0	-->	A7	CLE:	B0
<input checked="" type="checkbox"/> D8->D15:	A8	-->	A15	ALE:	B1
/CE1:	B5	R/B1:	B6	/RE:	B2
<input type="checkbox"/> /CE2:	B7	R/B2:	B8	/WE:	B3
<input type="checkbox"/> /CE3:	B9	R/B3:	B10	/WP:	B4
<input type="checkbox"/> /CE4:	B11	R/B4:	B12		

Protocol Analyzer Format

Settings...

Default Back Next Cancel

STEP 4. Click the Settings to set the Protocol Analyzer Format.

PROTOCOL ANALYZER SAMSUNG K9(NAND Flash)

Pin Assignment

D0->D7:	A0	-->	A7	CLE:	B0
<input checked="" type="checkbox"/> D8->D15:	A8	-->	A15	ALE:	B1
/CE1:	B5	R/B1:	B6	/RE:	B2
<input type="checkbox"/> /CE2:	B7	R/B2:	B8	/WE:	B3
<input type="checkbox"/> /CE3:	B9	R/B3:	B10	/WP:	B4
<input type="checkbox"/> /CE4:	B11	R/B4:	B12		

Protocol Analyzer Format

Settings...

Default Back Next Cancel



STEP 5. Press the **Next** to finish all settings.

PROTOCOL ANALYZER SAMSUNG K9(NAND Flash)

Pin Assignment

D0-->D7: A0 --> A7 CLE: B0

☒ D8-->D15: A8 --> A15 ALE: B1

/CE1: B5 R/B1: B6 /RE: B2

☐ /CE2: B7 R/B2: B8 /WE: B3

☐ /CE3: B9 R/B3: B10 /WP: B4

☐ /CE4: B11 R/B4: B12

Protocol Analyzer Format

Settings...

Default Back **Next** Cancel

STEP 6. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.

Add Bus/Protocol Analyzer

Please input the Bus name:

BUS

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

☐ Yes, please delete

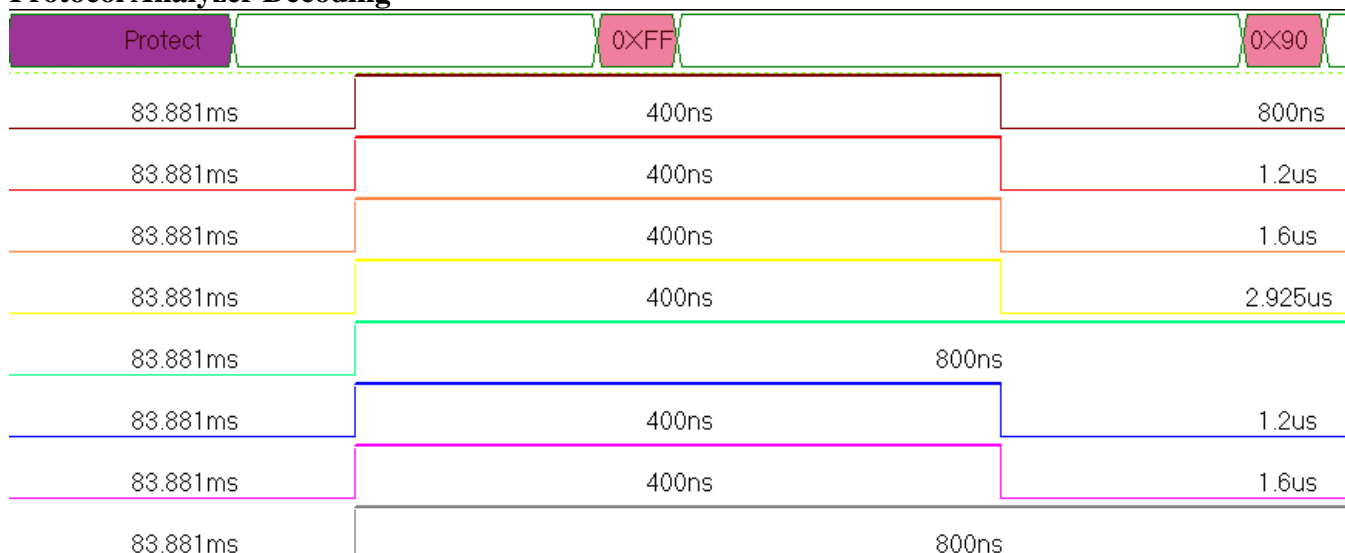
☒ No, please reserve

Back **Finish** Cancel



STEP 7. 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 200MHz. (the sampling frequency should be more than 8 times higher than the signal to be tested.)

Protocol Analyzer Decoding



Packet List

Navigator

Packet List

Statistics

Memory Analyzer

Packet #	Name	TimeStamp	Protect							
1	Bus1(SAMSUNG K9(NAND Flash))	-3.0252ms	Protect							
Packet #	Name	TimeStamp	Reset1							
2	Bus1(SAMSUNG K9(NAND Flash))	0.00015ms	FF							
Packet #	Name	TimeStamp	Read Id1							
3	Bus1(SAMSUNG K9(NAND Flash))	0.00055ms	90							
Packet #	Name	TimeStamp	Read1	Address1	Address1	Address1	Address1	Command1	Busy	Data8 Out1
4	Bus1(SAMSUNG K9(NAND Flash))	0.00095ms	00	01	23	45	67	30	Busy	BA

Ready

End!

DEMO