

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

# Instrument Business Department

# SIGNIA6210 Specification

Version : V2.04



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# **1** Software Installation

Please install the software as the following steps:

Remark: 1. The installation steps for all protocol analyzers are the same; you can complete the installation by following procedures. Following is an example on how to install protocol analyzer SSI.
 Remark: 2. 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.









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#### STEP 3. Click Next.



#### **STEP 4.** Select I accept the terms in the license agreement, and then press Next.

1	Protocol Analyzer SSI - InstallShield Vizard	×
	License Agreement Please read the following license agreement carefully.	
	LICENSE ACDEEMENT	
	LICENSE AGREEMENT	3
	IMPORTANT-READ CAREFULLY : This LICENSE AGREEMENT is	
	entered into effect between ZEROPLUS Technology Co., Ltd. (hereinafter "ZER OPLUS") and Customer (Individual or Registered Company)	
	Whereas, ZEROPLUS owns a software product, including computer software as a package product for certain computer products, relevant	
	intermediary, product information, electronic file and internet on-line	~
	Idownloadable software electronic file and service, known as " ZEROPLUS	-
	I do not accept the terms in the license agreement	
Ir	< <u>B</u> ack <u>N</u> ext > Cancel	



**STEP 5.** Fill in users' information in the below dialog box and click **Next**.

🙀 Protocol Analyzer SSI - InstallShield Vizard	
Customer Information Please enter your information.	
User Name: sunshine	
Organization:	
Install this application for: Anyone who uses this computer (all users)	
Only for me (sunshine)	
< Back Next >	Cancel

## **STEP 6.** First, select **Complete** and then click **Next**.

🙀 Protocol 🗚	nalyzer SSI - InstallShield Wizard 🛛 🛛 🔀
Setup Type Choose the set	up type that best suits your needs.
Please select a	setup type.
© Complete	All program features will be installed. (Requires the most disk space.)
Cu <u>s</u> tom	Choose which program features you want installed and where they will be installed. Recommended for advanced users.
InstallShield	< <u>B</u> ack <u>N</u> ext > Cancel



#### **STEP 7.** Click Install to begin the installation.

🚰 Protocol Analyzer SSI - InstallShield Wizard 🛛 🚺
Ready to Install the Program The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Install5hield
< <u>B</u> ack Install Cancel

#### **STEP 8.** Click **Finish** to complete the installation.

🛃 Protocol Analyzer	SSI - InstallShield Vizard	×
	InstallShield Wizard Completed	
	The InstallShield Wizard has successfully installed Protocol Analyzer SSI. Click Finish to exit the wizard.	
	< Back Einish Cancel	



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# 2 User Interface

Please refer to the below images to select options of setting SIGNIA6210 MODULE.

# SIGNIA6210 Configuration dialog box

PROTOCOL ANALYZER SIGNIA	210 SETUP:Bu	s1	X	
Configuration Package Register				
Pin Assignment				
SS Pin Assignment		Data Channel		
I✓ Activate		Data Channei.		
SS Channel: A1	•	SLK Channel:	A0 💌	
Protocol Analyzer Setting Mode: MOSLCKPHA=0  Activate register decoding function				
Direction: MSB -> LSB Custom Setting				
Protocol Analyzer Color			1000500	
READ	WRITE	DATA	ADDRESS	
	· · · ·	•		
STATUS	REGISTER	COMMAND		
	0	K Cancel	Default Help	

**1. SIGNIA6210 Pin Assignment:** There are four signal channels for SIGNIA6210. Only Channel names and Channel selection marks are indicated:

SS Channel

SLK Channel

Data Channel

## 2. Protocol Analyzer Setting:

Mode: Settings are varied based on the different sampling modes:

MISO-CKPHA=0 MISO-CKPHA=1 MOSI-CKPHA=0 MOSI-CKPHA=1

**Direction:** MSB->LSB, LSB->MSB

**X** Activate register decoding function: MOSI will start activating register decoding function, if this option is selected.

## **Protocol Analyzer Color:**

Users can set the colors for READ, WRITE, DATA, ADDRESS, STATUS, REGISTER and COMMAND.



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#### **Custom Setting:**

Select Device Level: There are two choices: High or Low. Data setting: The Bit range is from 1 to 28.

SIGNIA6210 Custom Setting	s 🕑	
Select Device Level	v Bit: 8	
Virtual SS Condition Standby Time: 5 Min : 5ns	ns Ignored data bits Max : 327.675us Default	

#### Virtual SS Condition:

If SS channel is not activated, system will automatically determine the signal to set Standby Time. The standby time can be set from 5ns to 327.675us.

SIGNIA6210 Custom Setting	E	×
Select Device Level High S5 enable level = Lov Low	Bit: 8	
Virtual SS Condition Standby Time: 5 Min : 5ns	ns 🔽 Ignored data bits Max : 327.675us	OK Cancel Default



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# SIGNIA6210 MODULE Package dialog box

PROTOCOL ANALYZE	ER SIGNIA6210 SETUP:Bus1	X
Configuration Pack	tage Register	
Item	Color	
🔽 READ		
VRITE		
ADDRESS		
🔽 STATUS		
🔽 DATA		
🔽 REGISTER		
	OK Cancel Default Help	

In the package dialog box, users can vary the color of items.

## SIGNIA6210 MODULE Register dialog box

PROTOCOL ANALYZER SIGNIA6210 S	ETUP:Bus1	×			
Configuration Package Register					
- 1 - \					
Congratulation SIGNIA6210 decoding	g function has been activated!				
If you have questions about operating	software please follow the appropriate instructions				
below.Uur technical support team will b	e happy to answer any questions you have.				
>>Bu phone:	Tel:886-2-66202225				
>> Applications through EMail:	service. 202econfus.com tw				
NWebsite: http://www.zeroplus.com.tw					
Convicted 1997-2008 ZEBORI US TECHNOLOGY COLLED					
0000, igi k(0) 1001 2000 221101 2001					
	OK Cancel Default Help				

There is Zeroplus company information. If you have questions about software operations, users can contact Zeroplus by Telephone or Email.



# **3** Operating Instructions

**STEP 1.** At first, select three channels and group these unanalyzed channels into **Bus1** by pressing the **Right Key** on the mouse. Next, select **Bus1** and press **Right Key** to list menu. Click **Bus Property** to open the Bus Property dialogue box.



**STEP 2.** For Protocol Analyzer Parameters Configuration, select Protocol Analyzer, then choose **ZEROPLUS LA SIGNIA6210 MODULE V2.04**. Next, click **Parameters Configuration** to open the configuration dialog box.

Bus Property						
General Bus Setting	Color Confi A0 Rising analysis	9 •				
Protocol Analyzer Setting						
Protocol Analyzer	Parameters Co	onfig				
ZEROPLUS LA MOD MODULE V1.03     ZEROPLUS LA NEC PD6122 MODULE V1.02     ZEROPLUS LA PCM MODULE V1.02     ZEROPLUS LA PM 1.1 MODULE V1.02     ZEROPLUS LA 055 1.1 MODULE V1.05						
C ZEROPLUS LA SIGNIA6210 MODULE V2.04 C ZEROPLUS LA <u>SM 2.6 MODULE V1.06</u> C ZEROPLUS LA LCD12864 MODULE V1.03 C ZEROPLUS LA 1-WIRE MODULE V1.07						
☑ Use the DsDp	Find					
Other More Protocol Analyzer : http://www.zeroplus.com.tw						
ОК	Cancel	Help				



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STEP 3. Press Register tab to type the serial key number of SIGNIA6210 Module. Then, press Register.

PROTOCOL ANALYZER SIGNIA621	0 SETUP:Bus1	×				
Configuration Package Register						
The SIGNIA6210 protocol analyze purchase its serial key to activate the Enter serial key:	r decoding function is optional purchased item.Welcome to his function for your necessary.					
appropriate instructions below.Our possible.	estions about ordering sortware please follow the sales team will respond to your enquiry as soon as					
>> Applications through EMail:	service 2@zeroplus.com.tw					
	Service_zterplus.com.tw					
	>>website: http://www.zeropius.com.tw					
Copyright(C) 1997-2008 ZERUPLO	STECHNOLOGY CU., LTD.					
	Register Cancel Default Help					

**STEP 4.** After completing **Register**, press **Parameters Configuration** to set the parameter for Protocol Analyzer SIGNIA6210.

Bus Property	×
General Bus Setting GENERAL BUS Activate the Latch function	Color Config A0 💽 Rising analysis
Protocol Analyzer Setting	
Protocol Analyzer	Parameters Config
<ul> <li>ZEROPLUS LA MOD MODULE V1.</li> <li>ZEROPLUS LA NEC PD6122 MOD</li> <li>ZEROPLUS LA PCM MODULE V1.</li> <li>ZEROPLUS LA PM 1.1 MODULE V</li> <li>ZEROPLUS LA USB 1.1 MODULE</li> </ul>	03  OLE V1.02 02 V1.02 V1.05
ZEROPLUS LA SIGNIA6210 MOD	ULE V2.04
C ZEROPLUS LA SM 2.0 MODULE V C ZEROPLUS LA LCD12864 MODUL C ZEROPLUS LA 1-WIRE MODULE V	E V1.03 V1.07
✓ Use the DsDp	Find
Other More Protocol Analyzer : http OK	://www.zeroplus.com.tw Cancel Help



**STEP 5.** All the channels, including SS Channel, SLK Channel, and Data Channel (MISO or MOSI) must be set before starting analyzing the signal.

	PROTOCOL ANALYZER SIGNIA6210 SETUP:Bus1							
	Configuration Package Register							
	Pin Assignment							
	SS Pin Assignment							
(								
	SS Channel: A1 SLK Channel: A0							
	- Protocol Analyzer Setting							
	Mode: MOSI-CKPHA=0  Activate register decoding function							
	Direction: MSB -> LSB Custom Setting							
	Protocol Analyzer Color							
	READ WRITE DATA ADDRESS							
	STATUS REGISTER COMMAND							
	OK Cancel Default Help							

**STEP 6.** There are four Mode parameters, which are MISO-CKPHA=0, MISO-CKPHA=1, MOSI-CKPHA=0 and MOSI-CKPHA=1. Users can choose mode parameters as their requirements. Transmission directions are MSB->LSB and LSB ->MSB.

PROTOCOL ANALYZER SIGNIA	6210 SETUP:Bu	is1		×		
Configuration Package Registe	r)					
Pin Assignment SS Pin Assignment I Activate SS Channel: A1	<b>_</b>	Data Channel: SLK Channel:	A2 •			
Protocol Analyzer Setting         Mode:       MOSI-CKPHA=0         Output       Activate register decoding function         Direction:       MSB -> LSB         Custom Setting						
READ	WRITE	DATA	ADDRESS			
STATUS	REGISTER	COMMAND 				
	0	K Cancel	Default Help			
		12/14				

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liguies.						
PROTOCOL ANALYZER SIGNIA6210 SETUP:B	us1 🛛 🔀					
Configuration Package Register						
⊂ Pin Assignment						
Activate	Data Channel: 🗛					
SS Channel: A1	SLK Channel: 🗛					
Protocol Analyzer Setting						
Mode: MOSI-CKPHA=0 🖌 🔽 Acti	vate register decoding function					
Direction: MSB -> LSB	ustom Setting					
Protocol Analyzer Color						
READ WRITE	DATA ADDRESS					
STATUS REGISTER	COMMAND					
OK Cancel Default Help						

**STEP 8.** Following pictures show the completion of the protocol analyzer decoding and the package list. The Trigger condition is set as Either Edge; the Memory depth is 512K; the Sampling frequency is 50MHz.



### **Protocol Analyzer Decoding**



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### Package List

lap-	321000 <del>0</del> -	▲(S/N:00	0000-0000) -	[signa6]	[20. als]			
🕌 <u>F</u> ile B <u>u</u> s/Signal	T <u>r</u> igger	Run/ <u>S</u> top ]	Data <u>T</u> ools <u>W</u> indow	# <u>H</u> elp				- 🖻 🗙
🗋 🚅 📱 🎒 🛍	ų 🏹 🆗	ve vi	i 🔟 🕨 🖿	i <mark>≱</mark> ∛∢ 51	2k 🔻 👬 🔮	w 50MHz •	- 🛲 🤞 50%	▼ ୶ Page 1
۵ 🕢 🔝		N N (	· · · · · · · · · · · · · · · · · · ·	75ns		AN BAR BAR TA +M	. 14 AI	🐻 📴 🍖   Heigh
Trigger Delay 2	20ns 1	Font Size	9 -					
Scale:75ns		Display	Pos:6us	A P	os:-005.223ms	. 🖛	A = T = 5.223ms	<b>▼</b> ∧
Total:10.486ms		Trigger	PosiOns	ВР	os:-005.222ms	:   <del>•</del>	B = T = 5.222ms	- 🗸
Bus/Signal	Trigger	Enable	4.5us 4.87	5us 5.25us	s 5.625us (	5us 6.375us 6	5.75us 7.125us	7.5us 7.875us
Busi (SIGN	•		OX1 TX_CW : O	000 000	OX1	RESERVE		
🖌 SS AC	x							
🥖 SDA /								
🖌 CLK								
< <u>13 43</u>	<	<	<					>
× Setting Flash	Export	t Synch I	Parameter					
Package #	Na	ime	TimeStamp	WRITE	TX/RX DA		SOFTWARE_CI	NTL
1	Bus1(SIG	NIA6210)	1.24us	WRITE	TX/RX DA	TA CONTROL	0X0	
RX_DA1	TA_INVERS	SE BY	PASS_PLL_LOCK	TX_CW	BRCLK_SW	TX_DATA_IN	VERSE RESER	VE DATA
	OX0		0X1	OXO	0X1	0X1	RESER	VE 0X45
DATA DA 0X56 0X	TA DATA 67 0X78	DATA DAT 0X89 0X9	A A					
Package #	Na	ime	TimeStamp	WRITE	TX/RX DA	TA CONTROL	SOFTWARE_C	NTL
2	Bus1(SIG	iNIA6210)	24.2us		TX/RX DA	TA CONTROL		-
Ready							End!	DEMO