

Instrument Business Department

LPC(low pin count) Specification

Version: V1.02



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1 Software Installation

Please install software by the following steps.

- Notice: The installed steps to set up all buses are the same; you can complete installation by following procedures. Below images are examples to install SSI bus.
 - **STEP 1.** Install LPC Bus Module.



STEP 2. Click "Install"





STEP 3. Click "Next"



STEP 4. Select "I accept the terms in the license agreement", and then Click "Next"

	🕼 Special Bus SSI 🛛 odule - InstallShield ¥izard	×
-	License Agreement Please read the following license agreement carefully.	4
	LICENSE AGREEMENT	-
	IMPORTANT-READ CAREFULLY : This LICENSE AGREEMENT is entered into effect between ZEROPLUS Technology Co., Ltd. (hereinafter "ZEROPLUS") 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 downloadable software. electronic file and service. known as "ZEROPLUS	•
<	I accept the terms in the license agreement Print	
	C I do not accept the terms in the license agreement	
	< <u>B</u> ack <u>N</u> ext > Cancel	



STEP 5. Fill in user Information, and then Click "Next"

🙀 Special Bus SSI Nodule - InstallShield Wizard -	×
Customer Information Please enter your information.	
User Name:	
Maikle	
Organization:	
微软中国	
Install this application for: <u>Anyone</u> who uses this computer (all users)	
Only for <u>m</u> e (Maikle)	
InstallShield	xt > Cancel

STEP 6. Select "Complete" option, and then click "Next"

🛃 Special Bus	SSI Nodule - InstallShield Nizard
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.)
C 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 Program

🙀 Special Bus SSI Bodule - InstallShield Tizard	×
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.	
InstallShield < <u>B</u> ack Cancel	

STEP 8. Click "Finish" to complete the installation

🙀 Special Bus SSI Nodule - InstallShield Nizard	×
InstallShield Wizard Completed	
The InstallShield Wizard has successfully installed Special Bus SSI Module. Click Finish to exit the wizard.	
< Back Finish Cancel	



2 User Interface

In the configuration, please refer to image below to select options of setting LPC.

LPC Setup Dialog Box



LPC:

LCLK: It is a clock channel and , its frequency is 33MHZ. The default is AO. LFRAME: It is Start/Stop channel and its default is as A1 LAD[3]: The highest bit of data signal and its default is A2. LAD[2]: B2 bit of the data signal and its default is A3. LAD[1]: B2 bit of the data signal and its default is A4. LAD[0]: B2 bit of the data signal and its default is A5.

Bus Property:

Sampling Mode: Two options are listed, falling and rising. The default is Falling.

Data Follow:

Two directions are listed, Downstream and Upstream. The default is Upstream.



LPC Packet Dialog Box

SPECIAL BUS LPC SETUP	:Busl		×
Configure Packet Item	Register		
Item	Color		
🔽 Start		SIZE/MSIZE	
🔽 DATA		CHANNEL	
TAR		STOP	
SYNC		CYCT-DIR	·
IDSEL		🔽 Describe	·
ADDR			
	OK	Cancel Default	Help

Package colors can be varied by user.

LPC Register Dialog Box

SPECIAL BUS LPC SETUP:Bus1		×
Configure Packet Item Register		
Free use of the Analy LPC	2	
-		
If you have questions about operati	ing software please follow the appropriate	
questions you have.	apport team will be happy to answer any	
N Prostance	7.1.002_0_000005	
<pre>// by phone:</pre>	1e1:000-2-002U2225	
>> Applications through EMail:	service_2@zeroplus.com.tw	
>> Website:	http://www.zeroplus.com.tw	
Copyright(C) 1997-2007 ZEROPLUS TEC	CHNOLOGY CO;LTD	
0K	Cancel Default Help	

There is Zeroplus company information written. If users have question about software operations, please contact Zeroplus by Telephone or Email.



3 Operating Instructions

Bus/Signal Trigger Enable F / AO ĂD . \boxtimes 题 A1 A2 12 A3 \mathbb{X} 44 122 45 Sampling Setup A6 🛃 Channels Setup ... SUS Bus Property / A7 Bus/Signal Trigger Enable / BO Group into Bus Ctrl+G Bus1 Ing 6 B1 X / AO AC Add Signal ø B2 X 🥖 🗛 👗 Copy Signal **B**3 Delete Signal 🥖 A2 🗚 B4 Delete All Signals A3 A Restore Default Signals / B5 A4 A Format Row . / B6 Rename X 🥖 A5 🔥 / B7

STEP 1. At first, group the unanalyzed channels into bus1.

STEP 2. Select **Bus1**,and then press the **Right Key** on the mouse to list menu, next click "**Bus Property**" to open Bus Property Dialog Box





STEP 3. For Special Bus Parameter Configuration, select Special Bus. Then, choose **ZEROPLUS LA LPC V1.00 (Internal Build)**. Next click "**Parameters Configuration**" to open the configure dialogue box.

Bus Property	×						
General Bus Setting							
C GENERAL BUS	Color Config						
Special Bus Setting							
SPECIAL BUS	Parameters Config						
 ZEROPLUS LA SPIPISIMA MODULE ZEROPLUS LA SSI MODULE V1.01(II ZEROPLUS LA UART MODULE V1.02 ZEROPLUS LA USB MODULE V1.00(In ZEROPLUS LA SD MODULE V1.00(In ZEROPLUS LA SD MODULE V1.00(In ZEROPLUS LA Miller MODULE V1.00(I) ZEROPLUS LA LIN MODULE V1.00(I) ZEROPLUS LA LIN MODULE V1.00(I) 	Internal Build) 2 hernal 0.2) (Inernal 0.1) (Inernal V1.0) internal V0.1) Inernal Build)						
Use the DsDp							
Other More Module: http://www.zeroplus.com.tw							
ОК	Cancel Help						



STEP 4. Setting for Bus 1

SPE	SPECIAL BUS LPC SETUP:Bus1								×	
C	Configuration Package Register									
	-LPC									
	LCLK:	AO	-	LAD[3]:	A2	•	LAD[1]:	A4		
	LFRAME:	A1	•	LAD[2]:	A3	•	LAD[0]:	A5	7	
	-Bus Proper	ty								
	Sampling	Mode:	FALLING	•	Data	a Follow:	Γ	Upstream	•	
	-Bus Color-									
	Start			DATA			TAR			
	SYNC			IDSEL			ADDR			
	SIZE/MSIZE		• • •	CHANNEL			STOP			
	CYCT-DIR									
				OK		Cancel	Defau	1t	Help	

STEP 5. For "Bus Property", choose Sampling Mode either falling or rising. Then, choose the Data Follow or remain its default Upstream.

SPE	CIAL BUS L	PC SET	UP : Bus1						_	x
Co	Configuration Package Register									
	LPC									
	LCLK:	A0	•	LAD[3]:	A2	•	LAD[1]:	A4	•	
	LFRAME:	A1	-	LAD[2]:	A3	•	LAD[0]:	A5	•	
	-Bus Proper	ty —								
	Sampling	Mode:	FALLING	•	Dat	a Follow:	U	lpstream	\geq	
	-Bus Color-									
	Start			DATA			TAR			
	SYNC			IDSEL			ADDR		• • • •	
	SIZE/MSIZE		• • • •	CHANNEL		• • •	STOP		• • • •	
	CYCT-DIR									
				OK		Cancel	Defaul	.t	Help	



Following picture shows that the completion of bus decoding. The conditions are set as that Sampling mode is Rising, Memory depth is 32KB and Sampling Frequency is 200MHz and the compression is activated.

STROTINS LAP-3210	100V A (S	/#:000000-0000) - (LPCC	#id. ជ.រ]		_D×
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	10 m	生 出 生 国 マ マ	144 32K + Hit 10 200MHz	• • • 50% • • Fage	1 · Court 1 ·
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- 🖌 🕹 As	242	0			
- / KS M	10	00	2 k 17		

Following picture shows the package list and waveforms displaying.

ZEROPLUS LAP-	3210000-8.0	s/m 00000	0-0000) - (T.PCC ia l	म् । स्र					-	
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Scale 751. 284KHr		lispl	ey Fos 7. 98Tes	A Pes 102	685us 🖛	A - T - 8 74	XHz +	K = 3 = 310	. 899Hz 👻	1
Total: 40.321ax	(500 365ns)	Trigg	er Pax Ons	1 Prs - 000.	.116nz +	1 · I = 321.	00630z +	ComportRate:	246.101	
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