ZEROPLUS

The First High Precision Logic Analyzer

Creatin High Nicety Signal Measurement Analysis

[**PC-Based** **Logic Analyzer**
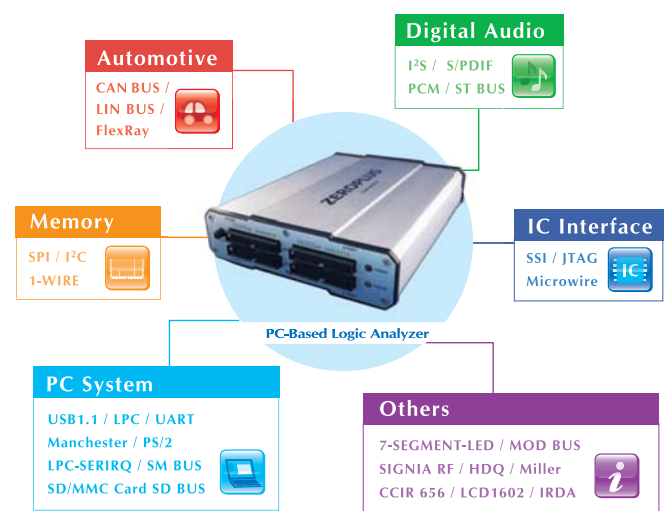LAP-B Series]

Logic Analyzer

Product Feature

Integrate data bit logic resolving project ; Save time cost effectively

- Using USB2.0 (1.1) to transmit data.
- The operating system to support computer has Window98SE/ME/ 2000/XP/Vista.
- Testing channel has 70 channel, per channel has 2K~2MBit RAM size.
- All input signals in range of 0~100MHz can use 200MHz frequency to sample, which can get 5ns high resolution.
- External Synchronous State Analysis Frequency 150MHz.
- Supplying three status signals can match with other Instrument to use, for example Oscillograph.
- Supply communication protocol I^2C, UARK, SPI, 1-Wire, HDQ, CAN BUS, UBS1.1, I^2S for analysis displaying in DATA BUS and PACKAGE LIST, in order to upgrade work efficiency; New function continues to increase.
- Supply customer with communication protocol analysis software design service, helping create best test tools.
- Firstly create data compression patent function, matching 2^{32} =4,294,967,295 time hardware compression circuit, in order to make RAM deposit much more data (TW.Pat.206912)/ (UK.Pat.2411482).
- Have the Enable, Enable Bar and Enable Delay functions which are similar to the Filter, in order to achieve sampling best (TW.Pat.271532).
- Design diversified Trigger function, in order to let user analyze waveform more handy ，for example Trigger Count, Trigger Delay, Trigger Position, Trigger Level, Trigger Page (TW.Pat.1244266).
- Better quality and Cost less is the best love of Electron Field and Science Unit.
- The software edition is auto-renewed through the wires, and you can take the new software easy to use forever.
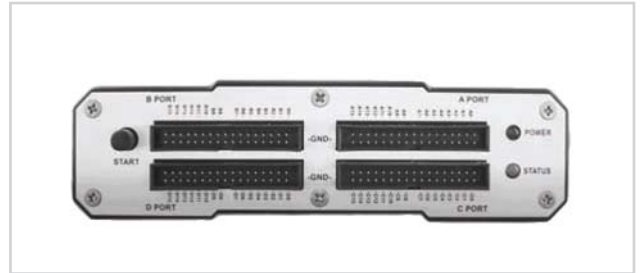
Bus Fields of Application

Automotive
CAN BUS /
LIN BUS /
FlexRay

Digital Audio
I^2S / S/PDIF
PCM / ST BUS

Memory
SPI / I^2C
1-WIRE

IC Interface
SSI / JTAG
Microwire

PC-Based Logic Analyzer

PC System
USB1.1 / LPC / UART
Manchester / PS/2
LPC-SERIRQ / SM BUS
SD/MMC Card SD BUS

Others
7-SEGMENT-LED / MOD BUS
SIGNIA RF / HDQ / Miller
CCIR 656 / LCD1602 / IRDA

LAP

LAP-B (70256) / LAP-B (702000)

Product Characteristic

■ Channel Count is added to 70CH

Channel Count is added to 70CH (Test Channel*64CH+External Trigger*3CH+External Synchronous Signal*3CH)
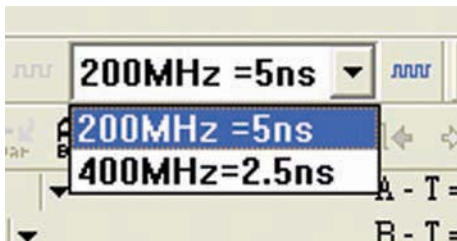

Side View (External Trigger*3CH+External Synchronous Signal*3CH)

Rear View (Text Channel*60CH)

■ The Sampling Rate is upgraded to 400MHZ
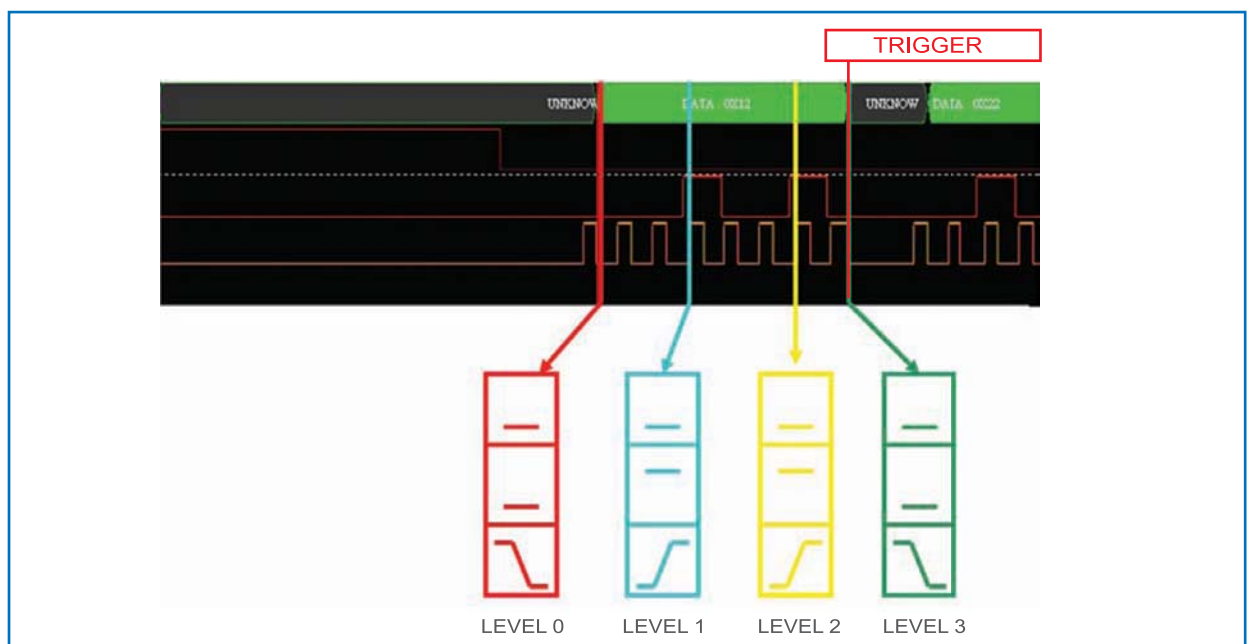

■ Compression Function

The compression rate can reach to 2^{31} (The original RAM Size is 256KB, which can memory about 549TB). All input signals in range of 0~100MHz can use 200MHz frequency to sample, which can get 5ns high resolution.
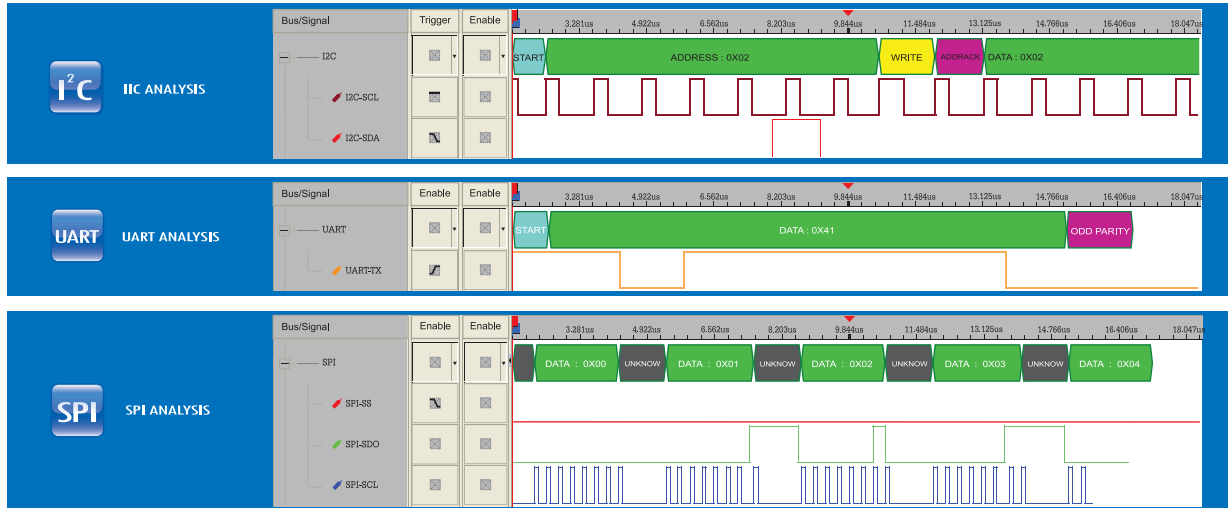
■ Trigger Function

Multi-Layer Trigger: It can set many layers trigger condition, for example one A condition, one B condition,it requires B condition to trigger when A condition has come into existence for a long time, Which is defined by user, analogically, the relationship betweenone condition and another condition

TRIGGER

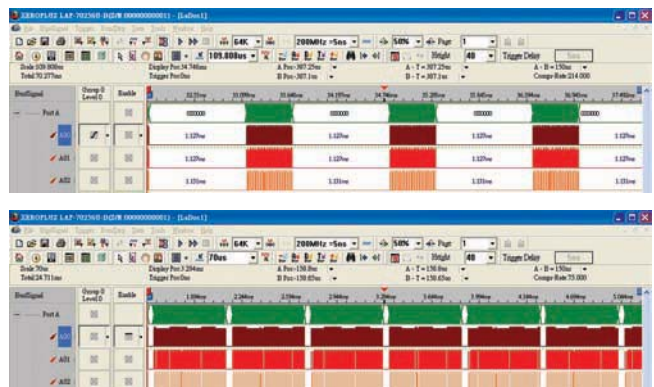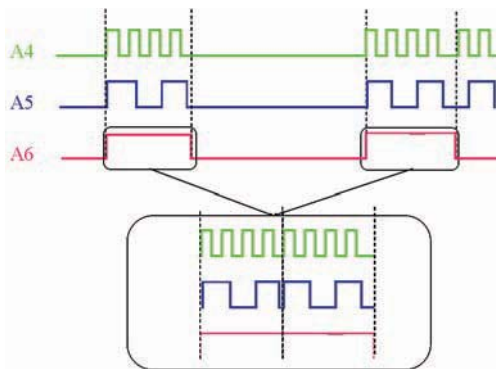LEVEL 0   LEVEL 1   LEVEL 2   LEVEL 3

Special Bus Analysis

Starting the special bus analysis function, you may hand over by LA the numerous and diverse data to decode, no longer needs to penetrate the user voluntarily analyze data, which reduces time and error rate, when engineer judges voluntarily the complicated data. Besides the provided I^{2}C, UART, SPI, 1-WIRE, HDQ, CAN BUS, USB1.1 serial signal decoding, we can provide customized serial signal analysis as your requirement, L A can demonstrate the different series signal decoding in the same triggering.
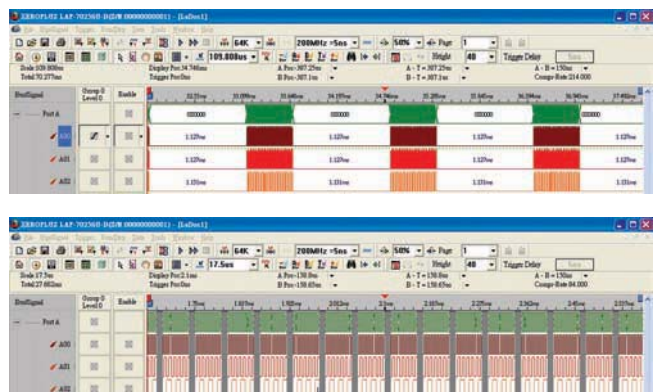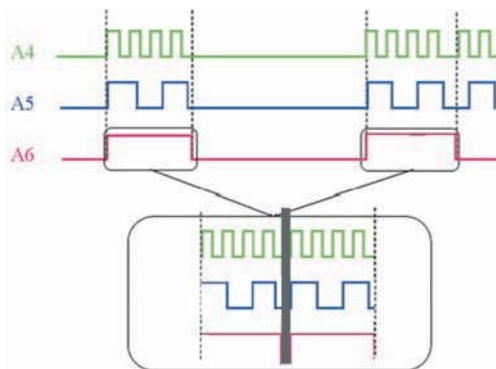

Enable delay

Waveform enable and enable delay technology can filter the unnecessary signal, in order to make use of the memory saving the valuable data and achieve the analysis optimization (TW.Pat.1271532)

Enable bar

Using Enable bar function makes the memory save the valuable signal, and save the filtered time perfectly. Enable bar can customize its width.

LAP-B Series Product Specification

Product model		LAP-B（70256）	LAP-B（702000）
Operating System		Windows	
		98SE/ME/2000/XP/Vista	
Interface		USB2.0(1.1)	
Sample rate	Internal Clock (Timing Mode)	200MHz / 400MHz*	
	External Clock (State Mode)	Max 150MHz	
Threshold Voltages	Bandwidth	100MHz	
	Working Range	-6V~+6V	
	Accuracy	±0.1V	
Memory	Memory	17.5Mbits	140Mbits
	Depth (Per Channel)	256Kbits (Max 128Kbits x 2^{32} for compression)	2Mbits (Max 1Mbits x 2^{32} for compression)
Trigger	Condition	Pattern/Edge/Wide	
	Trigger Channel	70CH	
	Pre/Post Trigger	YES	
	WaveformTrigger Width	YES	
	Trigger Level	9 Level	16 Level
	Trigger Count	1~65535	1~65535
Bus / Protocol (Keep Increasing)	I^2C / UART / SPI	Free	Free
	1-WIRE / HDQ / I^2S	Free	Free
	CAN BUS / USB 1.1	Free	Free
	PS/2	Free	Free
	Microwire	Free	Free
	SSI	Free	Free
	Manchester	Free	Free
	Lin Bus	Free	Free
	Miller	Free	Free
	7-SEGMENT LED	Free	Free
	SIGNIA RF MODULE	Option	Option
	S/PDIF	Option	Option
	LPC Bus	Option	Option
Software Functions	Operating Interface Language	Chinese (Simplified/Traditional)/English	Chinese (Simplified/Traditional)/English
	Time Base Range	5ps~10Ms	5ps~10Ms
	Vertical Sizing	1~5.5	1~5.5
	Enable Delay	YES	YES
	Data Compression	128Kbits x 2^{32}	1Mbits x 2^{32}
	Width Display	YES	
	Trigger Page	1~8192 Pages	
	Enable Bar	YES	
	Trigger Delay	YES	
	Infinite Increase Spacer Bar	YES	
	Automatic Zoom in of Spacer Bar	YES	
	Automatic Software Upgrade	YES	
	Data Range Selectable	YES	
	Data Counter	YES	
	Bus Inquiry and Counter	YES	
Phase Errors		<1.5ns	
Power		AC100~240V,50~60Hz	
Maximum Input Voltage		±30V	
Impedance		500KΩ/10pF	
Safety Certification		FCC/CE	

* When Sample rate is 400MHz,Compression and enable are disabled.