ZEROPLUS

Zero Loss ◆ Make Plus

LAP-F1

—LOSSLESS— LONG TIME RECORD

The Zeroplus LAP-F1 Series logic analyzers offer the performance needed to debug, validate and optimize the functionality of your digital system. The LAP-F1 Series also provides a comprehensive set of signal integrity debug tool that allow you quickly isolate, identify and characterize elusive and hard-to-find problems. Add a broad range of support for today's applications, and you have the ideal tool to help you meet all the debug challenge of today's digital designs.

Amazingly Accurate and Precise

The next-generation Active Probe with ultra high speed core design significantly reduce the DUT signal distortion, providing the incomparable accurate and precise measurements.

Long Time Record

Unlike the conventional signal recording features. Zeroplus Logic Analyzer LAP-F1' s Long Time Record features 100% signal capturing for as long as your local storage allows.

Search, Statistic and Analyze

The powerful ZP-Logic software features search, statistic and analyze features for the signals you' ve recorded. Allowing users to observe and debug millions of data instantly.

Product Specifications

Product Name		LAP-F140512M	LAP-F16464M	LAP-F164256M	LAP-F164512M
Channels		40	64		
Operating System		Windows 10 (Recommended) / Windows 8.1 / Windows 7 32-bit or 64-bit			
Transmission		USB 3.0 (2.0 compatible)			
Sample Rate	Internal (Timing) - Max.	2 GHz			
	External (State) - Max.	200 MHz (Dual-edge)			
Memory	Channel Depth	512Mb	64Mb	256Mb	512Mb
	Channel Depth vs. Number of Channels (Set by software)	512M / 40CH 1G / 16CH	64M / 64CH 128M / 32CH 256M / 16CH 512M / 8CH 1G / 4CH	256M / 64CH 512M / 32CH 1G / 16CH	512M / 64CH 1G / 32CH
Trigger	Trigger Channels	40	64		
	Trigger Events	Pattern/Edge/Interval/Pulse-Width			
	Trigger Delay	YES			
	Trigger Sequence Levels	256			
	Trigger Pass	1~65535			
	Hardware Triggers	I2C, I2S, SPI, SVID, UART, CAN 2.0B			
	eMMC5.1/SD3.0 Trigger	eMMC5.1/SD3.0,Support 4CH, Maximum 32CH			
Software Functions	Languages	Traditional Chinese/Simplified Chinese/English/Japan/Korean/German			
	Waveform Zoom	YES			
	Waveform Height / Vertical scaling	YES / 1~5.5			
	Waveform Width View	YES			
	Waveform Trigger Paging	YES			
	Data Comparison	YES			
	Data statistics	YES			
	Latch Functions	YES			
	Data Record	YES - Auto Save (not real time)			
	Bus Protocol Analysis	Free support for more than 130 kinds of bus			
Phase Errors		< 3ns			
Power		AC IN 100~240V 50/60Hz, DC OUT 9V/5.55A			
Dimensions		322 x 180 x 38 (mm)			
Certifications		CE & FCC			
Special Functions	Long-Time Record (Option)	This function is used to stream samples directly to disk. Up to 64 channels can be streamed at an average rate of 300 MB/s using USB 3.0. The long-time record function can be used to acquire signals from 7 hrs and up to a month depending on the sampling setup.			

Probe Specifications

Model Name	P120LV	P300ST
Probe type	Low pressure (Standard)	eMMC (4CH_standard; 32CH_optional)
Measurable Signal Configuration	Single-Ended Bus	Single-Ended Bus
Channels (Max.)	Data 64CH	Data: 4CH / 32CH
Input Impedance / Capacitance	190Kohm ±10% 4.3pF ±2pF	
DUT Bandwidth (Max.)	120 MHz	200 MHz
Support Measurement Transmission Mode	SDR Mode	DDR Mode
Transmission rate (Max.)	120 Mbit/s	400 Mbit/s
Support General Single-Ended Bus List	1.8V CMOS,1.5V CMOS, 1.2V CMOS, (Others can be set by the User)	eMMC 5.1 Bus,1.8V CMOS, 1.5V CMOS,1.2V CMOS, Vref (Others can be set by the User)
Bus Voltage	V_{IH} : 0.6V~5V Level Signal	
Input signal level	0V~5V	
Input DC voltage (Max.)	± 10V	

Built-in Protocols

Automotive

- CAN 2.08
- DSI Bus
- LIN 2.1
- FlexRay 2.1A
- MVB
- WTB
- SENT

PC System

- FWH
- GPIB
- Low Pin Count
- LPC-SERIRQ
- LPT
- PCI
- PECI
- PS/2
- SVID
- USB 1.1
- AMD_SV12
- DDC EDID
- USB2.0
- Serial GPIO IBPI
- IDE
- USB PD 3.0

Memory

- Compact Flash 4.1
- I2C(EEPROM 24L)
- I2C(EEPROM 24LCS61/24LCS62)
- MICROWIRE(EEPROM 93C)
- SAMSUNG K9(NAND Flash)
- SPI Compatible(Atmel Memory)
- SD2.0/SDIO
- UNI/O
- eMMC
- Quad SPI
- SD3.0

Digital Audio

- AC97
- DSA Interface
- HD Audio
- HDMI CEC
- I2S
- MIDA
- PCM
- PSB Interface
- S/PDIF
- STBus
- AES_EBU
- MHL-CBUS
- MIDI
- MIPI CSI-2
- DP Aux channel 1.1

IC Interface

- 1-WIRE
- 1-Wire(Advanced)
- 3-WIRE
- BDM
- HPI
- I2C
- JTAG 2.0
- MCU-51 DECODE
- MICROWIRE
- SLE4442
- SSI Interface
- ST7669
- SPI
- Serial Wire Debug(SWD)
- UART(RS-232C/422/485)
- SPI PLUS
- MDDI
- MIPI DSI
- eSPI
- HID Over I2C

Basic Logic Application

- ARITHMETICAL LOGIC
- DIGITAL LOGIC
- JK FLIP-FLOP
- UP DOWN COUNTER

Infrared rays

- IRDA
- NEC PD6122
- Philips RC-5
- Philips RC-6
- PT2262 / PT2272

Optoelectronics

- 7-SEGMENT LED
- CCIR656
- CMOS IMAGE
- LCD12864
- LCD1602
- DALI Interface
- SCCB
- LG4572
- DMX512
- DM114/DM115
- RGB Interface
- S2Cwire/AS2Cwire
- LED Pitch Array

Power

- BMS
- HDQ
- PMBus 1.1
- SDQ
- SMBus 2.0
- QI

Wireless

- Differential Manchester
- DigRF
- ISO7816 UART
- MII
- KEELOQ Code Hopping
- MANCHESTER
- WIEGAND
- MIL-STD-1553
- SIGNIA 6210
- MODIFIED MILLER
- MILLER
- SWP
- WWV/WWVH/WWVB

Other

- DS1302
- DS18B20
- HART
- IO-Link
- KNX
- ModBus
- MODIFIED SPI
- PROFIBUS
- OPENTHERM 2.2
- SHT11
- YK-5
- Line Code
- HDLC

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