USB Logic Analyzer Debugger 24MHz 8Channel



• Description

This is a kind of fine quality USB logic analyzer, equipped with 8 channels, can gather at the same time, so as to signal analyze, such as UART. The logic for each channel sampling speed up to 24M/s. You can have a try.

Features:

8 channels can gather at the same time, so as to signal analyze, such as UART. The logic for each channel sampling speed up to 24M/s. General applications around 10M, enough to cope with a variety ofoccasions. Large quantity sample collection, strong and powerful. Equipped with overpressure protection, for safety working. Sampling rate can be set as below: 24MHz, 16MHz, 12MHz, 8MHz, 4MHz, 2MHz, 1MHz, 500KHz, 250KHz, 200KHz, 100KHz, 50KHz, 25KHz. Data upload real time, with depth collection, far from practical need. Support WIN7(32 and 64), 2K, XP, LINUX.

Specifications:

Name: USB Logic Analyzer Item size: 50 * 28 * 14mm / 1.97 * 1.10 * 0.55in Item weight: 50g / 1.76ounce Package size: 100 * 50 * 50mm / 3.94 * 1.97 * 1.97in Package weight: 50g / 1.76ounce

Package list:

- 1 * Logic Analyzer
- 1 * USB Cable
- 1 * Harness

Experimental objectives:

1. Learn to use logic analyzer to collect common protocol signals;

2. Learn how to analyze protocol data;

Hardware preparation:

- 1. Logic Analyzer
- 2. Circuit board (it doesn't matter what model it is, as long as it can run normally)

1. Software installation and interface introduction

When you buy it, the store will give you a data package. Find the host computer software and install the corresponding installation package according to your computer system. After the installation is complete, the interface will be as shown below. When there is no logic analyzer, it will display Disconnected. There are 8 channels on the left. When using it, select the corresponding channel according to the hardware connection to configure. The middle part is the area that displays our logic waveform, and the right side is to add some protocol data formats. Data analysis area.



The following is an introduction to these areas one by one. You can skip them if you know how to use them.

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After connecting to the logic analyzer, you can see that it is connected. Next, click the red box at label 1, and the following configuration items will appear. The default is 24M, which can be left unchanged. You can also select the required sampling rate, which is mainly related to your communication rate and must be greater than your communication rate. 3 is the acquisition period, which is how long you want to collect the waveform, which is the same as the storage depth of the oscilloscope.



This is the setting for each channel. The first item is the waveform amplitude ratio. I adjusted different ratios for channels 0, 1, and 2, and the effect is like this. The one at 3 is to eliminate burrs, and generally the default is fine. I haven't studied this function either.

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			▼ Decoded Protocols

This is the trigger mode selection, rising edge, falling edge, double edge, which is mainly related to the protocol signal. For example, when the serial port receives data, the start bit is a low level, so it can be configured as a falling edge trigger.

Saleae Logic 1.2.18 - [Connected] Options			▼ - □ ×	
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	Save capture		Ctrl+S	2
	Export data Ctrl+E		Ctrl+E	
	Display radi	x cii & Hex Bin	Dec Hex	3
	Save screenshot / region		Ctrl+l	+
	Capture	Window	Region	
	Destination	Save to file	Clipboard	
	Preferences			
	Check for updates (This is version 1.2.18)			cols 🌣
	User's guide			
	Give feedback / Report issue		Embeded小飞哥	

Click on label 1, there are some configuration options in the drop-down menu, 2 is to save the collected waveform data, which will be introduced in detail later, 3 is the displayed data format, choose according

to your needs, 4 is the user guide, you can listen to me or check the official website instructions, which are in English and may not be easy to open.



Click on the Annotations option to increase the number of groups for measuring level time. Two groups are measured here, which is similar to the markings on an oscilloscope for measuring time. It is easy to understand when you associate it with an oscilloscope.

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Click the Analyzers option, which contains many protocols, including commonly used serial ports, SPI, IIC, CAN, etc., which can all be measured.



This is the protocol parsing part, which will be discussed in detail later. I will not elaborate here. This is the basic introduction of the interface. I have only introduced several commonly used functions. There are still some functions that I have not introduced. Please forgive me if I am wrong.