AZ-Delivery

Logic Analyzer
Datasheet

Contents:

1. Features

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- » USB attached
- » Edge and Pulse width triggering
- » Powerful and easy to use software
- » Deep sample buffers
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- » Four data export formats: CSV, Binary, VCD and MATLAB
- » Cross platform software: Windows, Linux and OSX

2. Description

Logic Analyzer is an 8 channel logic analyzer with each input dual purposed for digital data recording. The device connects to a PC over USB port and uses the Saleae Logic Software to record and view signals.

It operates by sampling a digital input connected to a device under test (DUT) at a high sample rate. These samples are recorded to a sample buffer, and at the end of the capture, the buffer is displayed in the software for review.

These devices are great for debugging embedded applications. In the most common case, a developer working on firmware for a microcontroller will write a code to communicate with another component, possibly using protocols like One-Wire, UART (USART), I2C (TWI) or SPI. To verify the functionality or to diagnose errors in the firmware, a logic analyzer is connected to the digital I/O pins used for communication and records the activity during testing. The recording is then show on the PC so the user can view the actual behavior of the firmware, and compare that with the expected behavior to narrow down and identify the source of the issue, or to verify that the operation is correct.

3. Specifications

- » 8 digital channels
- » 2 GND connectors
- » 24 Msps digital sampling rate
- » Recording length limited by available RAM and density of recorded data
- » Status LED

4. Electrical Characteristics

» Maximum input voltage: -25V to +25V

» Operating temperature: 0°C to 70°C

» Input Impedance: 1MΩ ; 10pF

» Digital Sampling Rates: 100***, 50***, 40***, 25, 20, 10, 8, 5, 4, 2, 1 Msps

» Digital Logic Threshold: V IL +0.6V; V IH +1.2V

» Common Supported Logic Standards: +5.0V, +3.3V, +2.5V, +1.8V,

» Digital Bandwidth: 24MHz

» PC Connection

USB 2.0 High Speed

Notes:

*   Planned sample rates

**   Bandwidth when sampling at 10Msps

*** 100Msps digital on up to 3 channels, 50Msps on up to 6 channels, 40Msps on up to 7 channels

5. Pin Configuration

Like on the device image (image below)

USB

8 Channel Pins and 2 Ground Pins

6. System Requirements

Supported Operating Systems:

- » Windows XP (x32),
- » Windows Vista (x32/x64),
- » Windows 7 (x32/x64),
- » Windows 8 (x32/x64),
- » Windows 8.1 (x32/x64),
- » OSX 10.7+,
- » Ubuntu Linux 12.04.2+ (x32/x64)

USB 2.0 high speed ports are required.

The Saleae Logic Software can be downloaded from the Saleae website:
https://www.saleae.com/downloads