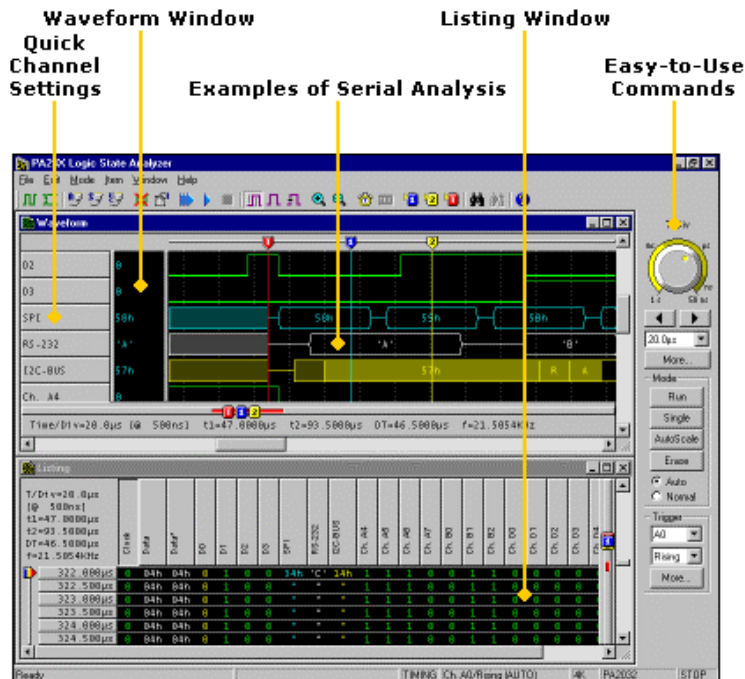


PA4032A - Logic State Analyzer



The Analyzers' User Interface

Overview

PA4032A Logic State Analyzer, in combination with a standard personal computer, provide a full featured, high-performance tool for the troubleshooting and performance verification of digital circuits. A logic analyzer is the digital counterpart of an analog oscilloscope. It allows a number of digital input signals to be sampled and stored sequentially in a high-speed memory or buffer. A logic analyzer can also recognize a condition, or sequence of conditions, on the input data and use that combination of events to trigger data storage. The information acquired is displayed as oscilloscope-like waveforms or as list of numbers representing a sequence of logic states. PA4032A Logic State Analyzer is very compact and communicate with the PC through the parallel port.

PA4032A Features

Number of channels	32 Channels, 128K Samples per Channel
Sampling rate	40 MSa/s
Serial connection	Parallel Port, Serial Analysis (RS-232, SPI, I2C-Bus)
Additional Features	Timing/State Mode , Advanced Triggers
User Interface	Windows 9x/Me/2000/NT User Interface
Dimensions	190 x 100 x 40 mm
Power Supply	9-18 V DC, 1000 mA

Accessories Included in the Basic Configuration

237-00131	Logic Analyzer 16-Channel Cable
237-00132	12V AC/DC Switching Power Adapter
237-00139	ISA Bus Bidirectional LPT Port
237-00136	SMD Grabbers (17 pcs)

Other optional Accessories

237-00137	SMD Grabber
237-00133	Communication DLL

Deep Acquisition Memory

With their 128K Samples of acquisition memory per channel, PA4032A Logic State Analyzer is the best choice where large amount of data need to be acquired and analyzed.

Data Acquisition Modes

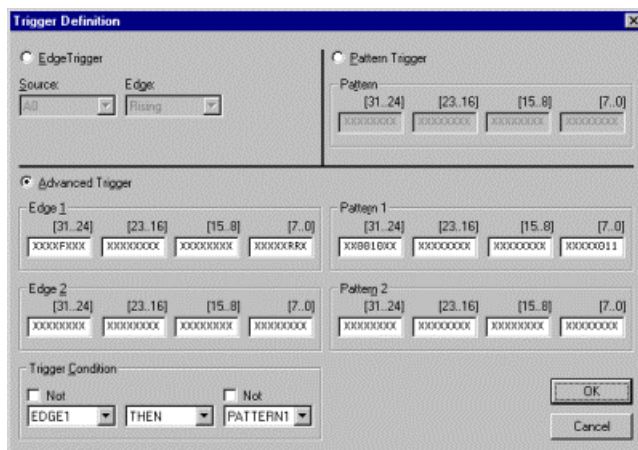
PA4032A Logic State Analyzers can work in two different operation modes: Timing mode and State mode. Timing mode is useful when recording the input data at a constant rate determined by a fixed timebase. As a result, the waveform display represents time in linear form on the X-axis and logical state on the Y-axis. In State mode, instead, an external sample clock is provided, thus synchronizing sampled data with state transitions that occur in the circuit under test.



Standard SMD probe

Advanced Trigger Conditions

PA4032A Logic State Analyzer feature powerful triggering conditions, such as edge trigger, pattern trigger and advanced trigger specification, in order to trigger data storage at the very specific event needed to properly debug the circuit under test.



The Trigger Definition Dialog Box

In addition, storage filters control input data storage. They work both in Timing mode and State mode and can be used to control under which condition sampled data is effectively stored into the acquisition memory. When one or both of the storage filters is enabled, data will be stored by the analyzer only if the signal connected to the enabled filter is logically true. PA4032A Logic State Analyzer provide a feature that helps extend their triggering capabilities and allows you to use them with other instruments: the Trigger Output. The Trigger Output signal (available on the BNC on the frontal panel) is generated when the analyzer's trigger condition is satisfied; thus, it can be used to trigger an external measurement system or other device. For example, you may want to use the Trigger Output signal to trigger an oscilloscope.

Bus Grouping

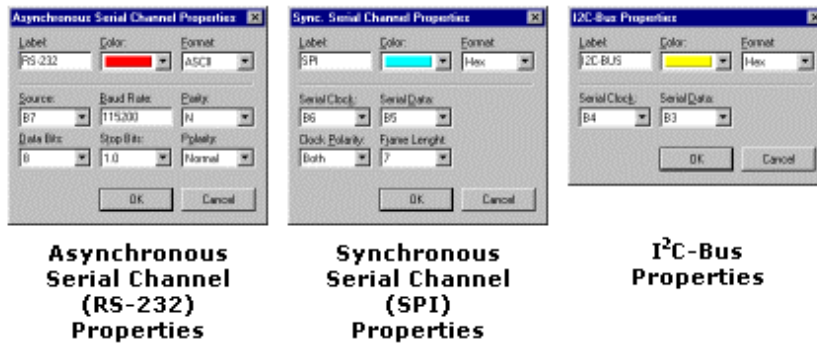
PA4032A Logic State Analyzer allows you to group input channels into bus items. The user interface will display the acquired data by grouping the input channels as specified. The order with which the input channels build a bus is used to determine the numeric value of bus at each sampling, which is also displayed by the analyzer.

Serial Analysis

PA4032A Logic State Analyzer, additionally, feature a series of serial data analysis-sets of algorithms that perform a special analysis on the raw acquired data. By defining an item as one of the three available serial analysis functions (asynchronous serial channel, generic synchronous serial channel, I2C-bus), the user interface will automatically display the appropriate serial character or packet characteristics.



PA4032A Logic State Analyzer package includes a set of probes, a parallel cable, a power adapter, an ISA bidirectional LPT port, user's manual and the user interface software



Glitch Detection

To avoid missing fast events or short pulses, PA4032A Logic State Analyzer feature a glitch capture logic, which is capable to detect signal transitions finer than the sampling rate (down to a minimum time resolution of 50 ns).

Powerful User Interface

All this features are accessible from a user-friendly yet powerful user interface running under Windows 9x/Me/2000/NT. A Waveform window displays the acquired data in a graphical fashion. Input channels are grouped up into customizable items for meaningful representation. Additionally, a Listing window provides an alternate presentation for sampled data. The sampled data is displayed as a list of numerical logic values instead that as a waveform graphical representation. An interface library (DLL) is also provided (as option) so that you can interface your own programs directly with the analyzer.