AT-LA500
Much More Than A Logic Analyzer

AT-LA500 instrument is part of the Active Technologies instrument series called "hardware platforms". The main advantage of those instruments is their FPGA based architecture that provides them with the remote hardware reconfiguration capability.

This makes it possible to modify, with just a software update, the instrument hardware in order to improve it, to add it new features or to easily make customizations.

Thanks to this technology the AT-LA500 integrates much more than standard logic analyzer functionalities. The same instrument integrates:

➤ Serial Protocol Analyzer
➤ Mixed Signal Analyzer
➤ Digital Pattern Generator - Sampler
➤ Logic Analyzer

Serial Protocol Analyzer

Thanks to a dedicated hardware the AT-LA500 serial protocol analyzer provides the most advanced triggering capabilities on the market.

A graphical user interface provides easy instrument setup and data analysis in graphical and tabular representations. Command interpretation is provided in both representation as well with cross probing features that allow to detect critical events very easily.
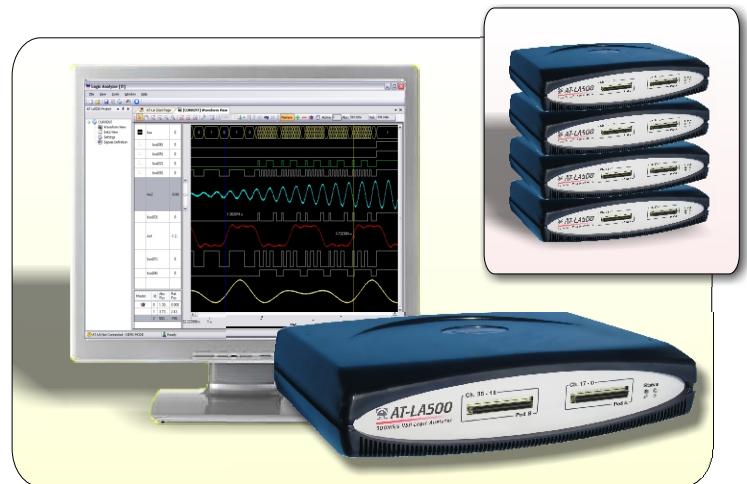
The most popular serial protocols are supported (check on www.activetechnologies.it web site for a complete list).
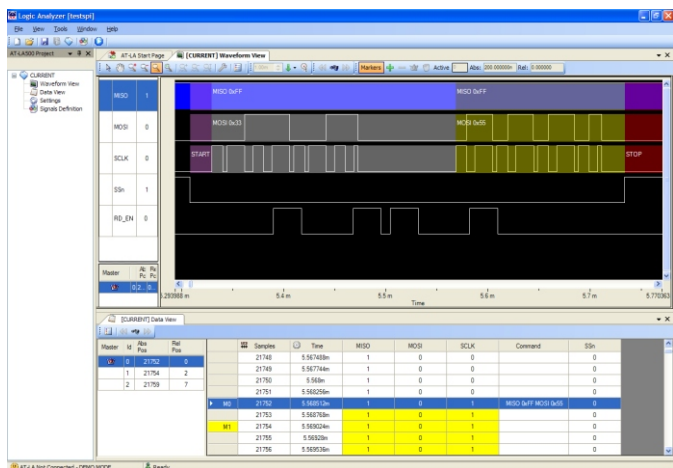
Mixed Signal Analyzer

AT-LA500 can be tightly integrated with most popular oscilloscopes to provide a complete high performance and low cost mixed signal test solution.

Oscilloscope integration is easily done through a dedicated expansion bus, called AT-XSS, that provides expandability and synchronization with external instruments. The synchronization is bidirectional: the oscilloscope and the logic analyzer can be in turn the trigger master. At most two BNC cable connections are required to set up the new mixed signal system.

The integration is also powered by the software interface that hides all the communication details between the AT-LA500 and the oscilloscope. The system configuration interface is very intuitive but powerful at the same time. Mixed analog/digital acquisitions can be displayed in the advanced mixed signal waveform window which provides:

➤ Simultaneous display of multiple analogue / digital traces
➤ Independent trace size, zooming and properties
➤ Analog representation of digital busses
➤ Add, remove, drag & drop signals
➤ Expand and collapse busses
➤ Advanced pattern/edge searches
➤ Multiple cursors and time measurements
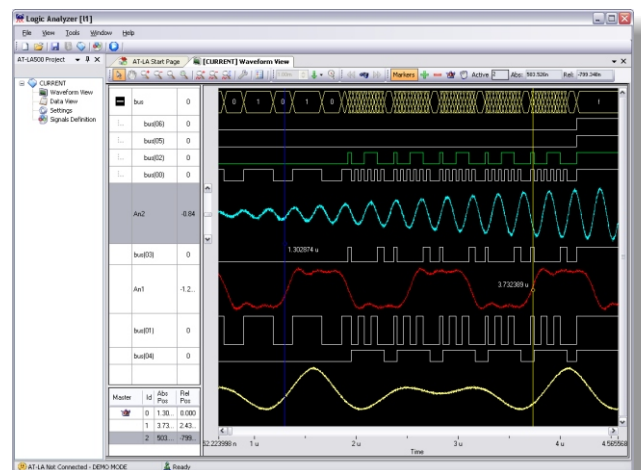
Active Technologies

Digital Pattern Generator-Sampler

AT-LA500 can be configured to work as a powerful pattern generator-sampler. In this working mode AT-LA500 provides the capability to emulate standard serial or parallel bus transactions or custom digital interfaces for system or device debugging and characterization.

Its architecture is based on a vector/command memory and a powerful sequencer that defines the vector/command execution flow.

As pattern generator-sampler AT-LA500 provides:

➤ 125MHz generation rate, 250MHz acquisition rate
➤ 2Msample acquisition memory
➤ 640 vector/commands and 512 sequencer instructions
➤ 36 Bits with 2 independent directions
➤ Parallel or 1, 2 or 4 wire serial operating mode
➤ Conditional or unconditional execution flow
➤ Programmable edge/level event detector
➤ Programmable clock generator
➤ Programmable sampling frequency
➤ Multi-device synchronization with AT-XSS

Digital waveforms (vectors and commands) can be edited in tabular format or by means of a powerful and very intuitive digital waveform editor that provides tools for advanced pattern definitions: clock, count and random patterns over a selection or the entire signal or bus.
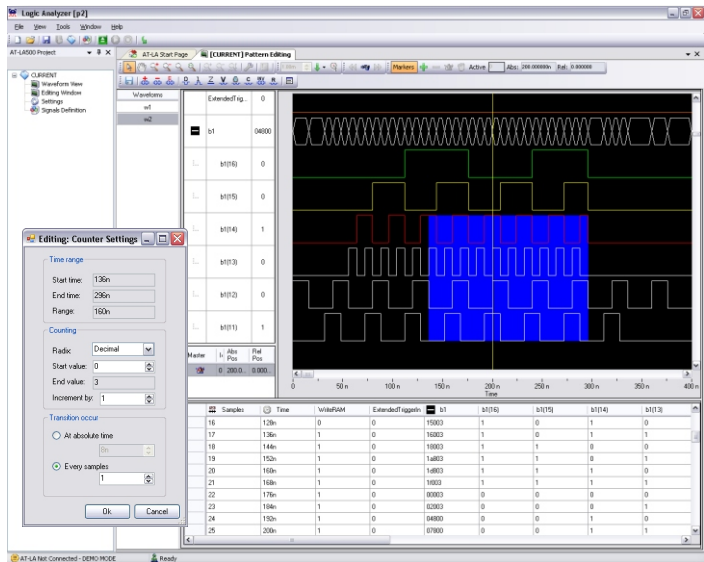
The execution flow of the edited waveforms can be easily defined with a dedicated sequencer editor form.
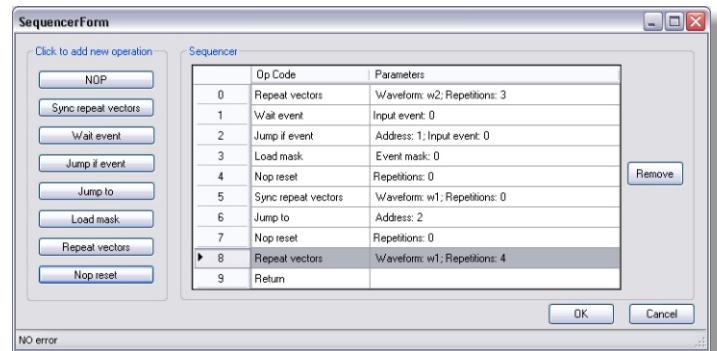

Logic Analyzer

AT-LA500 logic analyzer provides high performance and expandability:

➤ 36 Channels @ 500MS/s
➤ *GigaView*: 36 channels @ 1.5GS/s
➤ 200 MHz DDR/100 MHz SDR state analysis
➤ 31 trigger levels
➤ 2 / 4 Million Samples per channel
➤ 4 independent thresholds on each instrument
➤ 3 hot pluggable probe sets
➤ Expandable at up to 288 channels with AT-XSS

A powerful software provides advanced instrument control through a user-friendly graphical interface with multiple data visualization windows.
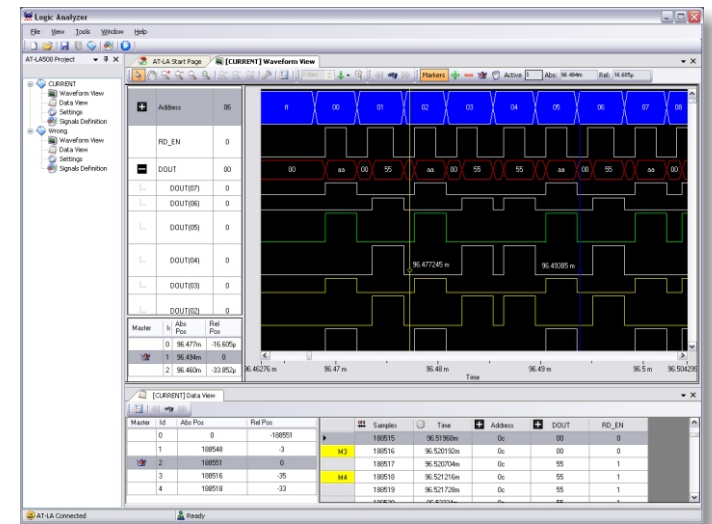
AT-LA500 is a test equipment instrument designed and made in Italy by Active Technologies.
The company was founded in 2002 by a staff of engineers expert in semiconductor test equipment and instrumentation design.
Active Technologies is a supplier of innovative and avant-garde Automated Test Equipment and electronic instrumentation to European and Middle East semiconductor company leaders.

AT-LA500 Digital Pattern Generator - Sampler Tech Specs:

Channels:	36	
Vector Memory Depth:	640	
Acquisition Memory Depth:	2 M	
Update Frequency:	125 Msps	
Sampling Frequency:	250 Msps	
Sequencer Memory Depth:	512	
Direction Control:	Same direction for every 18 channels	
Output Voltage High Level:	3.3V fixed	
Trigger Module Levels:	1	
Operation Modes:	36 Ch. Pattern Generator or 36 Ch. Logic Analyzer	
External I/O:	36 Bits Digital I/O	Connector type: SCSI
	AT-XSS expansion bus.	Connector type: SCSI
Dimensions (WxLxH):	17.3 x 27.3 x 6.7 cm	
Weight:	700g	
Interface:	USB 2.0 (compatible with USB 1.1)	
Power Supply:	12 VDC	

AT-LA500 is a test equipment instrument designed and made in Italy by Active Technologies.
The company was founded in 2002 by a staff of engineers expert in semiconductor test equipment and instrumentation design.
Active Technologies is a supplier of innovative and avant-garde Automated Test Equipment and electronic instrumentation to world wide semiconductor company leaders.