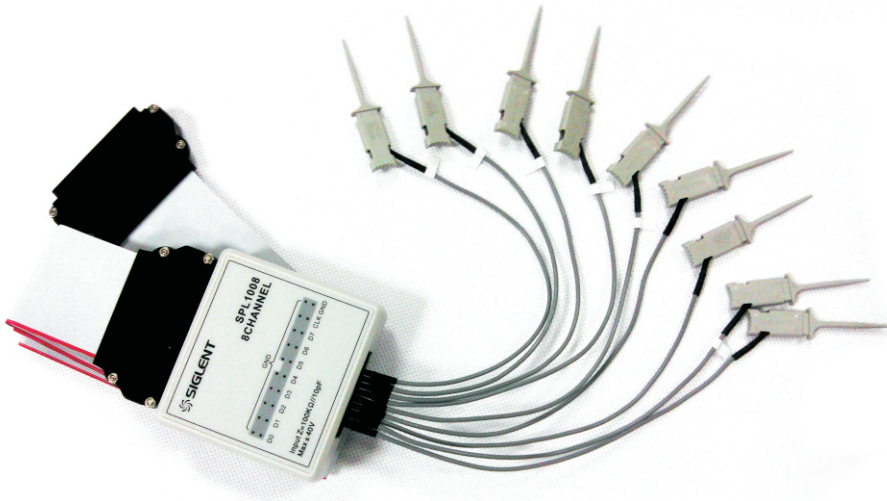


# Specifications: Logic Analyzer Probe SPL1008



## Features

- Input Capacitance: 10pF
- Input Resistance: 100K $\Omega$
- Supports common logic standards
- Flexible flying leads and clips

## Applications

- General purpose hardware testing
- Serial Bus debugging
- A/D converter debugging

Parameter	Value
Number of inputs	8
Number of external clock inputs	1
Input capacitance	10PF
DC impedance*	100K $\Omega$
Input dynamic range	-5V to +5V
Maximum non-destructive input voltage	$\pm 40V$
Threshold range	-3V to +3V
Default thresholds	TTL =1.5V : CMOS= ( 1.65V ) : LVCMOS3.3V=(1.65V):LVCMOS2.5V (1.25V)
Threshold accuracy ( no lead ) **	$\pm 400mV$
Minimum voltage swing	800mV
Input level limiting	TTL ( $0V \leq V_L \leq 0.8V; 2.4V \leq V_H \leq 5V$ )
	CMOS ( $0V \leq V_L \leq 1.5V; 3.5V \leq V_H \leq 5V$ )
	LVCOMS3.3V ( $0V \leq V_L \leq 0.7V; 2V \leq V_H \leq 3.3V$ )
	LVCOMS2.5V ( $0V \leq V_L \leq 0.7V; 1.7V \leq V_H \leq 2.5V$ )
Plus Width Resolution ( single channel )	TTL:15ns
	CMOS:15ns
	LVCOMS3.3V:15ns
Minimum input slew rate***	75mV/us
Maximum data rate ( single channel )	120Mbps
Timing sampling rate	500MHz
Status sampling rate	60MHz
Cable length	80cm $\pm$ 2cm
Connection to circuit	Flying leads

- \* When the logic probe is connected to the oscilloscope, the impedance is specified as a DC resistance of 100k  $\Omega$ . As the signal frequency increases, the input impedance reduces because of input capacitance. For example, Input impedance will be 270  $\Omega$  at 60MHz. Therefore please ensure the current-drive capability of your circuit is sufficient to maintain normal operating voltage with the load of the probe attached. If not then the oscilloscope might display an incorrect result.
- \*\* Threshold accuracy is influenced by the flying leads. In a conductor, the speed of an electromagnetic wave, is approximately 3 x10<sup>8</sup>m/s. This means the wavelength ( $\lambda$ ) in the conductor and flying lead is of a similar magnitude at higher frequencies. It is therefore possible for a standing wave to occur in the flying leads at these higher frequencies. This can adversely influence the threshold accuracy. To improve the threshold accuracy, use as short a ground lead as possible.
- \*\*\* The logic probe has a hysteresis window for stability. It can't capture the timing of a transition correctly when the input signal has a slew-rate slower than 75mV/us. This means that if the input signal is a sinusoidal waveform, then its frequency must be greater than 4kHz and V<sub>pp</sub> must be greater than 3V.

Please Note: The SR (slew rate) is defined by following equation : $SR=2\pi fV_{pp}$