



Specifications

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Lu-La-USB TECHNICAL SPECIFICATIONS

Internal sampling rates	MHz: 200, 100, 50, 25, 10, 5, 2.5, 1 kHz: 500, 250, 100, 50, 25, 10, 5, 2.5
No. of channels	16
Data buffer :	1Meg (1048 000 decimal) samples/channel
<u>Trigger methods:</u> Pattern (Pattern valid for any duration) Pattern valid < Duration Pattern valid > Duration Edge: Mouse /Keyboard Edge/Pattern combinations : Continuous:	1,0, and "don't care" ("X") conditions selectable on all channels. The pattern must be valid for at least 10ns. Glitch Capture. Pattern duration may be specified in steps of 20ns to 1 ms. Duration tolerance of ± 20 ns Pattern duration may be specified in steps of 20ns to 1 ms. Duration tolerance of ± 20 ns Triggers on: Rising edge, falling edge, either rising or falling edge (change-of-state), of any one channel Trigger may be forced. <u>Edge</u> : Rising edge, falling edge, Change of state <u>Pattern:</u> <u>Edge OR pattern</u> : Edge or pattern condition that occurs first will cause a trigger <u>Edge AND Pattern</u> : For a trigger the edge condition must occur while the pattern condition is valid. The pattern must be valid for at least 20ns before the edge and 20ns after the edge. <u>Edge THEN Pattern / Pattern THEN Edge:</u> The first condition is required before the second condition. At least 30ns is required from detection of the first condition to the second. <u>Unconditionally Continuous</u> : Trigger forced internally and display updated with regular intervals. <u>Conditionally Continuous</u> : Display updated when a trigger condition is detected. Any of the above trigger conditions may be set as described above.
Digital logger	1 Second to 1-hour sampling rates.
Threshold voltage	1.2V..2.2V (0.1V steps)
Pre-trigger and post-trigger buffer setting:	The data buffer is divided in pre- and post trigger sections. The pre-/post-trigger buffer relation may be changed in 1000 samples steps.
<u>Multitasking environment</u> Windows: Ease of use: User UUT application program launching:	Windows 98,ME,2000,XP or later compatible versions. The power of the Windows multitasking environment is utilised to run the analyzer software and user's unit under test (UUT) software simultaneously (if the UUT is PC based). Hardware that interfaces with the PC may be driven from the PC while real-time measurements are performed on the hardware. (The logic analyzer and UUT software are simultaneously run on the same PC). The analyzer and the user program may be viewed simultaneously in the Windows environment. The software is very easy to use. Most functions are directly selectable by means of function buttons on the main screen. The user application program may be run from the analyzer program menu or from Windows.
<u>Display :</u> No. of channels: Channel names Display order : Multiple channel selection	Any number of channels may be displayed. User specified signal names Channel display order user specified Select multiple channels for changing channel names, colors, show/hide, etc.

Colors Zooming:	Specify colors for individual signals, background. Data zoom :
Single capture Continuous capture display:	All captured data may be viewed on one screen. Zooming in to only a few samples displayed on the screen Easy data display window sizing using the mouse. Captures a single set of data <u>Unconditionally</u> : Continuously captures and displays data at a fixed update period. <u>Conditionally</u> : Updates the display each time a specified edge or pattern trigger condition is met. T-trigger line: Indicates trigger position. P-trigger line : Indicates trigger condition-1 position in case of condition-1 THEN condition-2 setting. S-Cursor line indicates data search positions. X, Y and Z-cursor for time measurements. The values of the X and Y cursor lines, where they intersect the signal lines are shown. The time differences between any two cursor lines or trigger line may be displayed. Take measurement easily by clicking mouse on first edge and on second edge to get the time difference. The time difference may also be indicated as a frequency.
Cursors :	Cursors (X, Y & Z) snap to signal edges for accurate time measurements. (Especially useful when the display is zoomed out such that one screen pixel represents more than one data sample).
Time measurements :	The signal edges to which the cursors lines have been snapped are indicated Any channel conditions may be searched for. 1, 0 and "don't care" conditions specified.. Search from specified starting points. Also repeated search
Edge snapping	
Pattern search	
Printed output	The timing diagrams, bitmaps, binary and hex data, may be. Landscape and portrait.
Power requirements:	Capturing data: 2.5W Max Lu-La-Usb not capturing: 100mW Max The Lu-La-Usb will be fused with a 1.6A (or less) Resettable fuse. Remove power for 3 minutes to reset
Power supply	+5V obtained from USB port. No external PSU is necessary. External power may also be applied at the external power input: +5V, 3% ripple max. 2.5mm power jack input. The external power input is intended to power the unit when front-end modules are attached, which may require extra power. E.g.. ADC, DAC or multiplexer modules.
Internal sampling clock stability	100 PPM
External clock	Input to channel 15. Unsynchronised capture: 25Mhz Max Synchronised capture: 10 MHz Max, 30ns data valid on channel 0-14 before and after the clock signal on channel 15 changes. Ring buffer configuration: Operates with pre and post trigger buffer. Linear buffer configuration: Start capture immediate or from trigger. No initial clock pulses are missed with either immediate or from trigger capture.
Logger sampling clock	Timing obtained from PC
<u>Cursor to T-line accuracy</u>	T-Line onscreen: ± 1 sampling clock period (2.5kHz to 200 MHz)

	T-Line not onscreen (due to "large" ECT): 200 MHz: 140ns. 100 MHz: 180ns. 50 MHz down to 1.25 MHz: 10 x sampling clock period.
<u>Digital inputs</u>	
Input voltage:	0 – 7V
Input bandwidth:	50MHz min
Input impedance:	270k \pm 1% minimum , 8pF
Lu-La-Usb unit weight	210 g
Lu-La-Usb unit dimensions	150mm x 86mm x 26mm
Lu-La-Usb packaged	
Weight:	\pm 900g
Dimensions:	320mm x 130mm x 76mm
Operating Temperature:	10 C - 40 C. (50 F-105 F)
Connection to PC	USB 1.1 / USB2.0 full speed mode

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