Analog Arts

LP885

LP665

Product Specifications

REV 05.12.2019.A

Logic Analyzer (Typical)		
Model	**LP885**	**LP665**
Internal Clock *The internal clock makes the memory address counter follow the rising edges of the internally generated programmable clock.* Range Resolution Period Period Accuracy	 100 KHz - 100 MHz 1 Hz 10 nS - 1 uS ± 0.01%	 100 KHz - 200 MHz 1 Hz 10 nS - 1 uS ± 0.01%
External Clock *The external clock makes the memory address counter follow the rising edges of the externally generated clock.* Range Logic	 100 KHz - 100 MHz TTL, CMOS (1.8 V to 5 V)	
Input Logic	TTL, CMOS (1.8 V to 5 V)	
Maximum Sample Rate 8 Channels 16 Channels 32 Channels	 - - 100 MHz	 200 MHz 100 MHz -
Minimum Sample Rate Internal Clock External Clock	 100 KHz 100 KHz	
Minimum Detectable Pulse Width	15 nS	
Input/ Output Channels Number of Channels Input Levels Output Levels - Logic Analyzer Channel-to-Channel Skew Input Impedance Maximum External Voltage Coupling	 32 TTL, CMOS (1.8 V to 5 V) 3.3 LVCMOS 1 nS 100 kΩ, parallel 2 pF -2V to 5 V DC	 16 TTL, CMOS (1.8 V to 5 V) 1.8 LVCMOS 1 nS 100 kΩ, parallel 2 pF -2V to 5 V DC

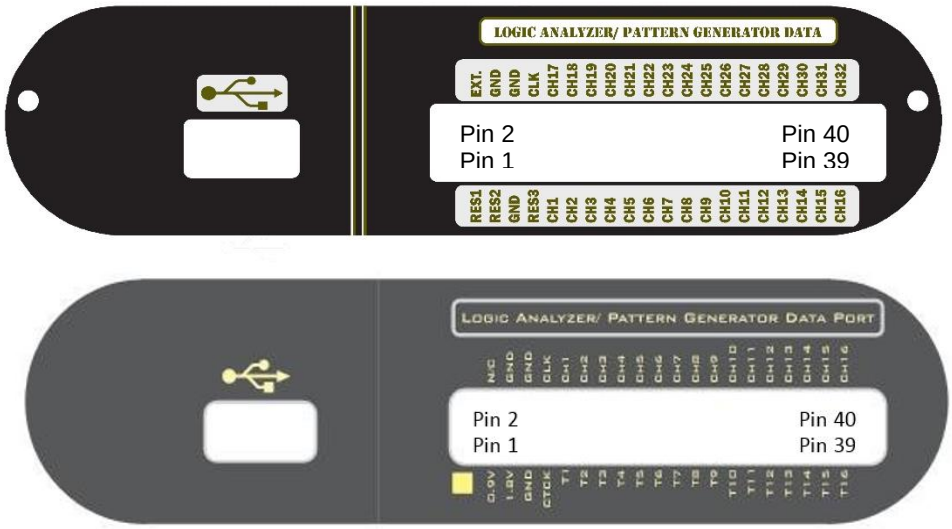
Output Logic Output Amplitude Accuracy Offset Accuracy Overshoot / pre-shoot / ringing Rise / Fall Time Short Circuit Current	3.3 LVCMOS ±(5% Amplitude + 10 mV) ± 20 mV ±2% ± 10 mV < 2ns ±30mA	1.8 LVCMOS ±(5% Amplitude + 10 mV) ± 20 mV ±2% ± 10 mV < 2ns ±30mA
Timing accuracy	100 ppm	
Trigger Types	Edge, pattern, pulse width, pattern width	
Memory/ Channel Parameters Number of Input Channels Data Length (32 channels) Data Length (16 channels) Data Length (8 channels)	32 524 K - -	16/ 8 - 524 K 1048 K
Protocols	I2C, SIM, 1-Wire,SPI, Quad SPI, RS232, Custom	
Data Editor	Math, Line, Text, Data Wizard	

Patten Generator (Typical)		
Model	**LP885**	**LP665**
The output is a pattern event. The pattern is programmable, or may be selected from a library of pre-configured patterns. The graphical and the math editor enables the user to seamlessly create any desired pattern.		
Internal Clock *The internal clock makes the memory address counter follow the rising edges of the internally generated programmable clock.* Range Resolution Period Period Accuracy	 100 KHz - 100 MHz 1 Hz 10 nS - 1 uS ±0.01%	
External Clock *The external clock makes the memory address counter follow the rising edges of the externally generated clock.* Range Logic	 100 KHz - 100 MHz	
Input Logic	TTL, CMOS (1.8 V to 5 V)	
Maximum Sample Rate 32/ 16 Channels	100 MHz	
Minimum Sample Rate Internal Clock External Clock	 100 KHz 100 KHz	
Minimum Detectable Pulse Width	15 nS	
Input/ Output Channels Number of Channels Source Impedance Output Levels Input Levels	 32 200 Ω, selectable 3.3 LVCMOS TTL, CMOS (1.8 V to 5 V)	 16 200 Ω, selectable 1.8 LVCMOS TTL, CMOS (1.8 V to 5 V)

Channel-to-Channel Skew Input Impedance Maximum External Voltage Coupling	1 nS 100 kΩ parallel 2 pF -2 V to 5 V DC	
Pulse / Level Parameters Output Amplitude Accuracy Offset Accuracy Overshoot / pre-shoot / ringing Rise / Fall Time Source Impedance Short Circuit Current	 3.3 LVCMOS ±(5% Amplitude + 10 mV) ± 20 mV ±2% ± 10 mV < 2ns 200 Ω [1] ±30mA	 1.8 LVCMOS ±(5% Amplitude + 10 mV) ± 20 mV ±2% ± 10 mV < 2ns 200 Ω [1] ±30mA
Timing accuracy	100 ppm	
Trigger Types	Edge, pattern, pulse width, pattern width	
Memory/ Channel Parameters Number of Output Channels Data length (16 channels)	 32 -	 16/ 8 524 K
Protocols	I2C, SIM, 1-Wire,SPI, Quad SPI, RS232	
Data Editor	Data Wizard, Graphical, Line, Math, Function	

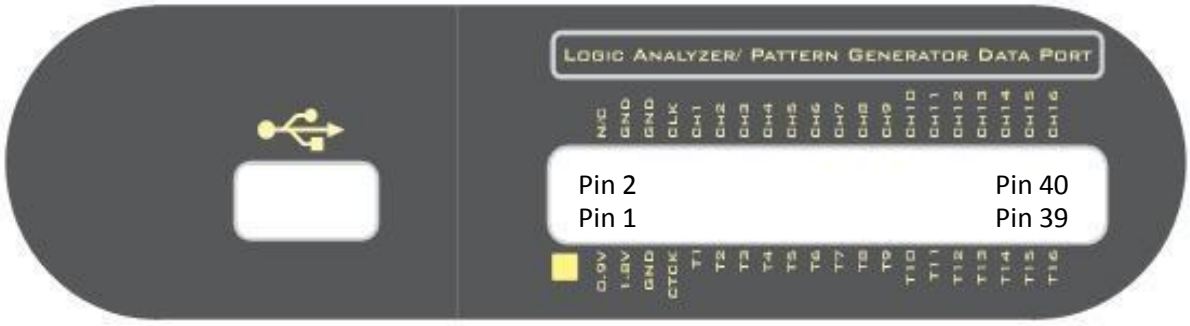
1. For other impedance values, please contact the factory.

LP885 PIN ASSIGNMENT



Pin N0.	Pin Name	Pin Assignment	Pin No.	Pin Name	Pin Assignment
1	RES1	N.C.	2	EXT.	**External Trigger**
3	RES2	N.C.	4	GND	**Capture**
5	GND	**Ground**	6	GND	**Ground**
7	RES3	**Ground**	8	CLK	**Clock In/ Out**
9	CH1	**Channel 17**	10	CH17	**Channel 1**
11	CH2	**Channel 18**	12	CH18	**Channel 2**
13	CH3	**Channel 19**	14	CH19	**Channel 3**
15	CH4	**Channel 20**	16	CH20	**Channel 4**
17	CH5	**Channel 21**	18	CH21	**Channel 5**
19	CH6	**Channel 22**	20	CH22	**Channel 6**
21	CH7	**Channel 23**	22	CH23	**Channel 7**
23	CH8	**Channel 24**	24	CH24	**Channel 8**
25	CH9	**Channel 25**	26	CH25	**Channel 9**
27	CH10	**Channel 26**	28	CH26	**Channel 10**
29	CH11	**Channel 27**	30	CH27	**Channel 11**
31	CH12	**Channel 28**	32	CH28	**Channel 12**
33	CH13	**Channel 29**	34	CH29	**Channel 13**
35	CH14	**Channel 30**	36	CH30	**Channel 14**
37	CH15	**Channel 31**	38	CH31	**Channel 15**
39	CH16	**Channel 32**	40	CH32	**Channel 16**

LP665 PIN ASSIGNMENT



Logic Analyzer/ Pattern Generator Back panel

Pin N0.	Pin Name	Pin Assignment	Pin No.	Pin Name	Pin Assignment
1	RES1	N.C.	2	EXT	**External Trigger**
3	RES2	N.C.	4	GND	**Capture**
5	RES3	**Ground**	6	GND	**Ground**
7	RES4	**Ground**	8	CLK	**Clock In/ Out**
9	T1	N.C. / Channel 17	10	CH1	**Channel 1 Output**
11	T2	N.C. / Channel 18	12	CH2	**Channel 2 Output**
13	T3	N.C. / Channel 19	14	CH 3	**Channel 3 Output**
15	T4	N.C. / Channel 20	16	CH 4	**Channel 4 Output**
17	T5	N.C. / Channel 21	18	CH 5	**Channel 5 Output**
19	T6	N.C. / Channel 22	20	CH 6	**Channel 6 Output**
21	T7	N.C. / Channel 23	22	CH 7	**Channel 7 Output**
23	T8	N.C. / Channel 24	24	CH 8	**Channel 8 Output**
25	T9	N.C. / Channel 25	26	CH 9	**Channel 9 Output**
27	T10	N.C. / Channel 26	28	CH 10	**Channel 10 Output**
29	T11	N.C. / Channel 27	30	CH 11	**Channel 11 Output**
31	T12	N.C. / Channel 28	32	CH 12	**Channel 12 Output**
33	T13	N.C. / Channel 29	34	CH 13	**Channel 13 Output**
35	T14	N.C. / Channel 30	36	CH 14	**Channel 14 Output**
37	T15	N.C. / Channel 31	38	CH 15	**Channel 15 Output**
39	T16	N.C. / Channel 32	40	CH 16	**Channel 16 Output**

Physical Properties	
Dimensions	128.0 x 77.0 x 31.6 (mm), 5.0 x 3.0 x 1.2 (inches)
Weight	260 grams, 9 Ounces
Other	
PC Requirements Recommended	Operating system: 32/ 64-bit edition of Microsoft Windows XP (SP3), Vista, Windows 7/ Windows 8/ Windows 10 Ports: USB 2.0/ 3.0 compliant port
Environmental Operating environment Temperature range Humidity **Storage environment** Temperature range Humidity	 0 °C to 40 °C for normal operation 15 °C to 32 °C for quoted accuracy 5% to 80% RH, non–condensing -20 °C to +60 °C 5% to 95% RH, non–condensing
Software	Save setting, recall setting, save plot, recall/print plot, zoom in vertical, zoom in horizontal, pen editor, line editor, DSP, variable sampling rate