



Analog Arts

LP665

Product Specifications

Logic Analyzer (Typical)

Model	LP665
<p>Internal Clock</p> <p><i>The internal clock makes the memory address counter follow the rising edges of the internally generated programmable clock.</i></p> <p>Range Resolution Period Period Accuracy</p>	<p>100 KHz - 200 MHz 1 Hz 10 nS - 1 uS ± 0.01%</p>
<p>External Clock</p> <p><i>The external clock makes the memory address counter follow the rising edges of the externally generated clock.</i></p> <p>Range Logic</p>	<p>100 KHz - 100 MHz TTL, CMOS (1.8 V, 2.5 V, 3.3 V, 5 V)</p>
<p>Input Logic</p>	<p>TTL, CMOS (1.8 V, 2.5 V, 3.3 V, 5 V)</p>
<p>Maximum Sample Rate</p> <p>8 Channels 16 Channels</p>	<p>200 MHz 100 MHz</p>
<p>Minimum Sample Rate</p> <p>Internal Clock External Clock</p>	<p>1 MHz 100 KHz</p>
<p>Minimum Detectable Pulse Width</p>	<p>15 nS</p>
<p>Input/ Output Channels</p> <p>Number of Channels Input Levels Output Levels - Logic Analyzer Channel-to-Channel Skew Input Impedance Maximum External Voltage Coupling</p>	<p>16 TTL, CMOS (1.8 V, 2.5 V, 3.3 V, 5 V) 1.8 LVCMOS 1 nS 100 kΩ, parallel 2 pF -2V to 5 V DC</p>

Pulse / Level Parameters Output Amplitude Accuracy Offset Accuracy Overshoot / pre-shoot / ringing Rise / Fall Time Short Circuit Current	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 (16 channels) Data Length (8 channels)	16/ 8 524 K 1048 K
Protocols	I2C, SIM, 1-Wire,SPI, Quad SPI, RS232 (includes data wizard)

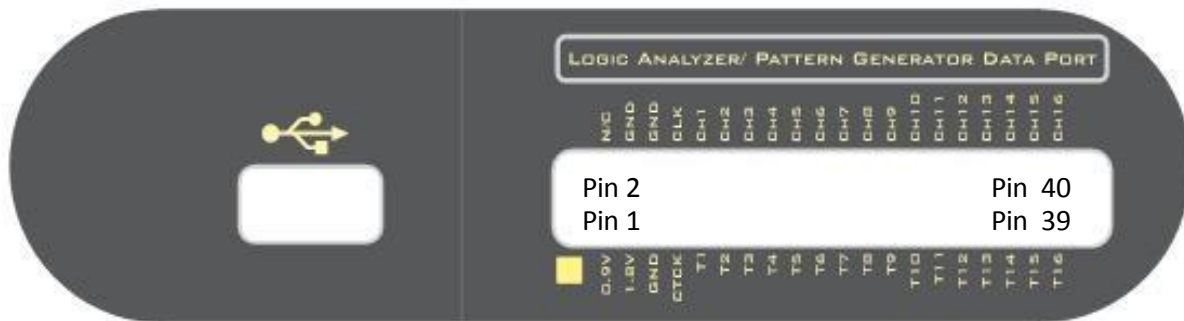
Patten Generator (Typical)

Model	LP665
<p>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.</p>	
<p>Internal Clock <i>The internal clock makes the memory address counter follow the rising edges of the internally generated programmable clock.</i></p> <p>Range Resolution Period Period Accuracy</p>	<p>100 KHz - 100 MHz 1 Hz 10 nS - 1 uS ±0.01%</p>
<p>External Clock <i>The external clock makes the memory address counter follow the rising edges of the externally generated clock.</i></p> <p>Range Logic</p>	<p>100 KHz - 100 MHz</p>
Input Logic	TTL, CMOS (1.8 V, 2.5 V, 3.3 V, 5 V)
<p>Maximum Sample Rate 16 Channels</p>	<p>100 MHz</p>
<p>Minimum Sample Rate Internal Clock External Clock</p>	<p>1 MHz 100 KHz</p>
Minimum Detectable Pulse Width	15 nS
<p>Input/ Output Channels Number of Channels Source Impedance Output Levels Input Levels</p>	<p>16 200 Ω, selectable 1.8 LVCMOS TTL, CMOS (1.8 V, 2.5 V, 3.3 V, 5 V)</p>

Channel-to-Channel Skew Input Impedance Maximum External Voltage Coupling	1 nS 100 k Ω 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	1.8 LVCMOS $\pm(5\%$ Amplitude + 10 mV) ± 20 mV $\pm 2\%$ ± 10 mV < 2ns 200 Ω [1] ± 30 mA
Timing accuracy	100 ppm
Trigger Types	Edge, pattern, pulse width, pattern width
Memory/ Channel Parameters Number of Output Channels Data length (16 channels)	16/ 8 524 K
Protocols	I2C, SIM, 1-Wire,SPI, Quad SPI, RS232 (includes data wizard)
Editor - Pattern Generator	Graphical, Line, Math, and function

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

Logic Analyzer/ Pattern PIN ASSIGNMENT



Logic Analyzer/ Pattern Generator Back panel

Pin NO.	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	RRES4	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

2. From pin 7 to pin 40, all odd pins are internally connected to the corresponding even pins.

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