

TEKTRONIX

TLA613-1P

The Tektronix TLA613-1P is a 102-channel portable logic analyzer from the TLA600 Series. Featuring a built-in active-matrix color TFT display and MagniVu™ acquisition technology, it delivers 2 GHz (500 ps) high-speed timing resolution simultaneously with up to 200 MHz state acquisition on all channels. The "-1P" configuration bundle includes six P6418 17-channel logic probes, making it a comprehensive, out-of-the-box debugging solution for complex digital systems.

SPECIFICATIONS

General

Interfaces	10/100 Base-T LAN (RJ-45), RS-232, Parallel (LPT), External SVGA, PS/2 Keyboard, PS/2 Mouse
Display	10.4-inch active-matrix color TFT LCD, 640 x 480 pixels

Physical

Power Supply	90 to 250 V AC (45 to 66 Hz) or 100 to 132 V AC (360 to 440 Hz), 300 W maximum
Operating Temperature	+5 °C to +45 °C °C
Dimensions (W×H×D)	445 mm x 343 mm x 394 mm mm
Weight	15.5 kg kg

Acquisition Characteristics

Number of Channels	102 (96 data channels, 6 clock/qualifier channels)
Max Timing Analysis Sample Rate	250 MHz
Max State Analysis Clock Rate	200 MHz
MagniVu Timing Resolution	500 ps (2 GHz) on all channels
Memory Depth per Channel	64 Kb / 256 Kb / 1 Mb (configuration dependent)
MagniVu Memory Depth	2 Kb per channel
Glitch Detection Minimum Width	2.0 ns
Setup and Hold Window Range	-15 ns to +15 ns relative to clock edge
Setup and Hold Window Resolution	500 ps
Maximum State Voltage Threshold Range	-2.0 V to +4.5 V
Threshold Setting Resolution	50 mV
Input Dynamic Range	-3.0 V to +6.0 V
Minimum Input Voltage Swing	500 mVp-p
Channel-to-Channel Skew	1.0 ns (typical)

Triggering System

Trigger State Machine Levels	16
Word Recognizers	16
Transition Recognizers	2
Range Recognizers	4
Counter/Timers	2 (16-bit)
Glitch/Minimum Pulse Width Triggers	Yes
Setup/Hold Violation Triggers	Yes
Trigger Position Range	0% to 100%
Trigger Action Types	Trigger, Trigger All, Go to State, Increment Counter, Decrement Counter, Reset Counter, Start Timer, Stop Timer, Reset Timer, Signalling Out
Trigger Sequencer States	16
Counter/Timer Width	16 bits

Clocking and Timebase

Supported Clock Modes	Single clock, Demultiplexed clock
Number of External Clocks	6
Demultiplexing Clock Options	3 channels
Timebase Accuracy	+/-100 ppm
Timebase Resolution	500 ps

Probing and Interfacing

Recommended Passive Probes	P6418 (17-channel logic analyzer probe)
Probe Loading (Capacitive)	1.4 pF (typical with P6418)
Probe Loading (Resistive)	20 kOhm (typical with P6418)
Included Probes	6x P6418 17-channel general purpose logic probes

Host System and Interface

Form Factor / Enclosure Type	Portable
Controller Processor Type	Intel Celeron 366 MHz
System Memory Capacity	128 MB SDRAM
Operating System	Windows 98 Second Edition
Internal Storage Capacity	6.4 GB (or larger hard disk drive)
External Monitor Support	Up to 1280 x 1024 resolution

Connectivity and I/O Ports

LAN Interface Speed	10/100 Mbps (RJ-45)
External Trigger Input BNC	BNC, TTL-compatible
External Trigger Output BNC	BNC, TTL-compatible

Software and Analysis Features

Analysis Software Application Suite	TLA Application Software Suite
Integrated View (iView) Support	Yes (works with Tektronix TDS Digital Storage Oscilloscopes)
State and Timing Display Formats	Waveform, Listing, State Table
Source Code Correlation Support	Yes (correlates high-level language source with real-time trace)

Power Specifications

Line Voltage Range	90 V to 250 V AC (at 45 Hz to 66 Hz) or 100 V to 132 V AC (at 360 Hz to 440 Hz)
Line Frequency Range	45 Hz to 66 Hz / 360 Hz to 440 Hz
Power Consumption (Maximum)	300 W

Physical Characteristics

Overall Width	445 mm
Overall Height	343 mm
Overall Depth	394 mm
Net Weight	15.5 kg (34 lb. 3 oz.)

Environmental and Reliability

Operating Temperature Range	+5 °C to +45 °C
Non-Operating Temperature Range	-20 °C to +60 °C
Operating Humidity Range	20% to 80% RH (non-condensing)
Operating Altitude Limit	3,000 m (10,000 ft)
Non-Operating Altitude Limit	12,190 m (40,000 ft)
Vibration Resistance Standards	Meets MIL-T-28800E Class 3
Mechanical Shock Rating	Meets MIL-T-28800E Class 3

Storage

Floppy Disk Drive	3.5-inch 1.44 MB
Optical Drive	Internal CD-ROM

Connectivity

Parallel Port	1x DB-25 female (Centronics)
Serial Port	1x RS-232 (DB-9 male)
Keyboard Port	1x PS/2
Mouse Port	1x PS/2

Compliance & Safety

Safety Standards	UL3111-1, CSA1010.1, EN61010-1, IEC61010-1
EMC Standards	EN61326, FCC Part 15 Class A

Acquisition System

Maximum Non-Destructive Input Voltage	±15 V
Threshold Accuracy	±(100 mV + 3% of threshold setting)
Threshold Presets	TTL, ECL, CMOS
Minimum State Pulse Width	2.2 ns
Number of Clock Channels	4
Number of Qualifier Channels	2

Display & Video

Internal Display Size	10.4 in (26.4 cm)
Internal Display Type	Active-matrix color TFT LCD
Internal Display Resolution	640 x 480
External Monitor Resolution	Up to 1024 x 768

Physical & Cooling

Required Cooling Clearance	51 mm (2 in) on sides and rear
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TECHNOLOGY

Logic Analysis

APPLICATIONS

Digital hardware debugging, timing analysis, state analysis, microprocessor and bus debugging, cross-domain analog/digital debugging

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