

TEKTRONIX

TLA604

The Tektronix TLA604 is a high-performance 136-channel logic analyzer in the TLA600 Series designed for debugging and verifying complex digital systems. Featuring MagniVu™ acquisition technology, it provides an exceptional 2 GHz (500 ps) timing resolution simultaneously across all channels alongside state acquisition up to 200 MHz. The system integrates a 10.4-inch color TFT display and offers deep timing analysis up to 500 MHz with configuration options up to 2 Mb memory depth. With built-in iView™ capability, the TLA604 seamlessly correlates digital trace data with analog waveforms from Tektronix TDS series oscilloscopes for cross-domain analysis.

SPECIFICATIONS

General

Interfaces	LAN (10/100 Base-T), GPIB (IEEE 488.2), Centronics Parallel, RS-232 Serial, External VGA, PS/2 Keyboard, PS/2 Mouse
Display	10.4-inch Active-Matrix Color TFT, 800 × 600 Resolution
Cooling Clearance	51 mm (2 in.) sides, 76 mm (3 in.) rear

Physical

Power Supply	90 V to 250 V AC, 45 Hz to 66 Hz, 360 W maximum power consumption
Dimensions (W×H×D)	397 mm × 185 mm × 388 mm mm

Acquisition Channels

Total Acquisition Channels	136
Data Channels	128
Clock and Qualifier Channels	8

Timing Acquisition

MagniVu Timing Resolution	500 ps (2 GHz) on all channels
MagniVu Memory Depth	2 Kb per channel
Maximum Deep Timing Sample Rate (Half-Channel)	500 MHz
Maximum Deep Timing Sample Rate (Full-Channel)	250 MHz
Deep Timing Memory Depth Range	64 Kb per channel (128 Kb half-channel)
Transitional Storage	Yes (extends capture time for low-activity signals)
Minimum Glitch Detection Width	2.0 ns

State Acquisition

Maximum State Clock Rate	100 MHz (standard) / 200 MHz (with Option 1S)
Setup and Hold Window Range	15 ns
Setup and Hold Window Resolution	100 ps
Demultiplexed Channels	Yes

Triggering System

Trigger States	16
Trigger Sequences	16
Trigger Word Recognizers	16
Trigger Range Recognizers	4
Trigger Transition Recognizers	1
Trigger Counters and Timers	Two 36-bit counters and two 50-bit timers
Triggering Modes	Glitch, Setup/Hold, Transition, State, Word, Timer, Counter, Sequence

Probe Connectivity

Supported Logic Probes	P6417, P6418, P6434
Probe Input Resistance (P6417/P6418)	20 kOhm
Probe Input Capacitance (P6417)	2.0 pF

System Hardware

Operating System	Microsoft Windows 98 / Windows 2000
Processor Class	Intel Celeron
Hard Disk Drive Capacity	>= 3.2 GB
Floppy Disk Drive	3.5-inch, 1.44 MB
Optical Drive	CD-ROM

Integrated View (iView)

Analog-Digital Correlation	iView capability correlates logic analyzer data with analog waveforms from Tektronix TDS Oscilloscopes
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Inputs & Outputs

External Trigger Input	BNC connector
System Trigger Output	BNC connector

Environmental & Compliance

Storage Temperature Range	-20 °C to +60 °C
Relative Humidity	20% to 80% RH (non-condensing)
Altitude (Operating)	Up to 3,000 meters
EMC Certifications	EN 50081-1, EN 50082-1, FCC Part 15 Class A
Safety Standards Met	UL 3111-1, CSA C22.2 No. 1010.1, EN 61010-1

Probe Specifications

Threshold Voltage Range	-3.0 V to +4.5 V
Threshold Voltage Resolution	10 mV
Maximum Non-Destructive Input Voltage	±15 V

Expansion & Connectivity

PC Card Slots	Two Type II or one Type III
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Environmental

Operating Vibration	0.31 g RMS, 5 Hz to 500 Hz
Non-Operating Vibration	2.46 g RMS, 5 Hz to 500 Hz

Triggering

Trigger Word Recognizer Width	136 bits
Trigger Range Recognizer Width	32 bits
Trigger Transition Recognizer Width	136 bits
Trigger Event Counter Range	1 to 16,777,215
Trigger Timer Range	8 ns to 34.3 s
Trigger Timer Resolution	8 ns
Trigger Position	Start, center, end, or user-defined

Probes

Probe Input Capacitance (P6418)	6.5 pF
Probe Cable Length	1.8 m (6 ft)

TECHNOLOGY

Logic Analysis

APPLICATIONS

Digital System Debugging & Hardware/Software Integration

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