

TEKTRONIX

TLA5201B

The Tektronix TLA5201B is a 34-channel portable logic analyzer belonging to the TLA5000B Series. It is designed to offer high-speed timing resolution, fast state acquisition, deep memory, and advanced triggering capabilities, making it ideal for digital design debugging, timing verification, and state analysis.

SPECIFICATIONS

General

Interfaces	LAN (10/100/1000 Base-T RJ-45), 4x USB 2.0 (2 front, 2 rear), SVGA, Parallel, Serial, PS/2
Display	10.4-inch Active-matrix color TFT LCD, 1024 × 768 (XGA)
Warm-up Time	30 minutes

Physical

Power Supply	90 to 250 VAC, 45 to 66 Hz, 350 W maximum
Operating Temperature	+5 °C to +45 °C °C
Dimensions (W×H×D)	437 mm × 285 mm × 378 mm mm
Weight	12.0 kg
Cooling Clearance	51 mm (2 in) on left, right, and rear

Acquisition

Number of Channels	34 (32 data, 2 clock)
Maximum State Clock Rate	235 MHz
Maximum Timing Sample Rate (Half Channel)	2 GHz (500 ps)
Maximum Timing Sample Rate (Full Channel)	1 GHz (1 ns)
MagniVu Timing Resolution	125 ps (8 GHz) on all channels
MagniVu Record Length	16 Kb per channel
Record Length (Per Channel)	2 Mb / 8 Mb / 32 Mb (option dependent)
Minimum Pulse Width	1.25 ns (typical), 125 ps (MagniVu)
Channel Configuration	34 channels (32 data, 2 clock/qualifier)

Triggering

Trigger State Sequences	16 states
Word Recognizers	16 (each 140 bits wide)
Transition Recognizers	4
Range Recognizers	4
Counter/Timers	2 (32-bit)
Glitch/Violation Triggering	Setup/Hold violation
Trigger Position	Any point in record (0% to 100%)
External Trigger Input Impedance	1.5 k Ω nominal
External Trigger Output Impedance	50 Ω nominal
External Trigger Output Level	High: ≥ 2.0 V into 50 Ω ; Low: ≤ 0.4 V into 50 Ω

Probing & Input

Supported Probes	P6417, P6418, P6419, P6434
Input Resistance	20 k Ω
Input Capacitance	1.4 pF (with P6417/P6418)
Threshold Range	-2.5 V to +5.0 V
Threshold Accuracy	$\pm(100$ mV + 3% of threshold setting)
Maximum Input Voltage	± 15 V
Minimum Input Voltage Swing	300 mV (single-ended)

System & Processing

Operating System	Microsoft Windows XP Professional
Storage Capacity	≥ 80 GB HDD
Removable Media	DVD $\pm$ RW

Software & Analysis

Analog-Digital Time Correlation	iView™ technology
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External Connections

External Trigger Input	BNC connector, TTL compatible
External Trigger Output	BNC connector, TTL compatible

Environmental & Compliance

Storage Temperature	-20 °C to +60 °C
Relative Humidity	20% to 80% (non-condensing)
Operating Altitude	Up to 3,000 m (10,000 ft)
Safety Certifications	UL61010-1, CAN/CSA-C22.2 No. 61010-1, EN61010-1

Performance Options

State Clock Speed (Standard)	100 MHz
State Clock Speed (Option 1S)	235 MHz
Record Length (Standard)	64 Kb per channel
Record Length (Option 1M)	256 Kb per channel
Record Length (Option 2M)	1 Mb per channel
Record Length (Option 3M)	4 Mb per channel
Record Length (Option 4M)	8 Mb per channel

Input Properties

Number of Clocks	2
Number of Qualifiers	2

I/O Ports

USB Ports	6 x USB 2.0 (2 front, 4 rear)
LAN Port	1 x RJ-45 (10/100/1000 Base-T)
External Display Output	15-pin D-sub (SVGA)
Serial Port	9-pin D-sub (RS-232)
Parallel Port	25-pin D-sub
PS/2 Ports	2 (Keyboard, Mouse)

Power Requirements

Line Voltage Range	90 to 264 VAC
Line Frequency Range	45 to 66 Hz
Power Consumption	300 W maximum

Environmental

Operating Shock	15 g, half-sine, 11 ms duration
Non-operating Shock	30 g, half-sine, 11 ms duration
Operating Vibration	0.31 g RMS, 5 Hz to 500 Hz
Non-operating Vibration	2.46 g RMS, 5 Hz to 500 Hz

Signal Outputs

Probe Calibration Output Level	High: 1.0 V $\pm$ 10% into 50 Ω ; Low: <0.1 V into 50 Ω
Probe Calibration Output Frequency	1 MHz $\pm$ 10%
Probe Calibration Output Impedance	50 Ω nominal

TECHNOLOGY

Logic Analyzer

APPLICATIONS

Digital system debugging, hardware verification, state and timing analysis

