

TEKTRONIX

TLA5203B

The Tektronix TLA5203B is a 102-channel, high-performance logic analyzer belonging to the TLA5000B Series. It combines high-speed timing resolution, fast state acquisition, deep memory, and sophisticated triggering to provide robust debug capabilities for digital designs. Featuring an integrated Windows PC controller, a 10.4-inch XGA display, and simultaneous 125 ps MagniVu timing acquisition, it enables detailed inspection of complex digital signals.

SPECIFICATIONS

General

Display	10.4-in. Active-matrix color TFT LCD, 1024×768 (XGA)
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Physical

Power Supply	90 to 264 V AC @ 45 to 66 Hz, 360 W maximum
Dimensions (W×H×D)	438 mm × 285 mm × 288 mm mm
Weight	12 kg kg

Acquisition Specifications

Number of Channels	102 (96 data, 4 clock, 2 qualifier)
MagniVu Timing Resolution	125 ps (8 GHz)
MagniVu Memory Depth	16 Kb per channel
Conventional Timing Sample Rate (Half Channel)	2.0 GHz (500 ps)
Conventional Timing Sample Rate (Full Channel)	1.0 GHz (1 ns)
Conventional Timing Memory Depth (Half Channel)	4 Mb / 16 Mb / 64 Mb (option dependent)
Conventional Timing Memory Depth (Full Channel)	2 Mb / 8 Mb / 32 Mb (option dependent)
Maximum State Clock Rate	235 MHz
Maximum State Data Rate	470 Mb/s
State Memory Depth (Half Channel)	4 Mb / 16 Mb / 64 Mb (option dependent)
State Memory Depth (Full Channel)	2 Mb / 8 Mb / 32 Mb (option dependent)
Minimum State Setup and Hold Window	1.5 ns
Minimum Detectable Pulse Width	1.25 ns

Triggering System

Trigger States	16
Trigger Sequence Rate	235 MHz
Word Recognizers	16
Range Recognizers	4
Transition Recognizers	16
Counter/Timers	2 (32-bit)
Glitch Detector	Yes
Setup and Hold Violation Detector	Yes
Trigger Position	0% to 100% of record
Trigger In to Trigger Out Delay	<55 ns (typical)

Probing and Signal Input

Supported Probe Interfaces	P6400 series
Input Resistance	20 k Ω (probe dependent, e.g., P6417)
Input Capacitance	1.4 pF (probe dependent, e.g., P6417)
Threshold Voltage Range	-2.0 V to +4.5 V
Threshold Setting Resolution	10 mV
Minimum Input Voltage Swing	300 mV (single-ended)
Maximum Input Voltage (Non-destruct)	± 15 V

System and Platform Characteristics

Operating System	Microsoft Windows XP Professional
Internal Display Size	10.4 in.
Internal Display Resolution	1024 $\times$ 768
Internal Display Type	Active-matrix color TFT LCD
Optical Drive Type	CD-RW/DVD-ROM
System Memory	1 GB
Hard Disk Drive Capacity	80 GB (or larger)

Connectivity and I/O Interfaces

LAN Port (Ethernet)	10/100/1000 Mb/s (RJ-45)
USB Ports	5 $\times$ USB 2.0 (2 front, 3 rear)
External Display Output	15-pin SVGA
GPIB Interface	IEEE 488.2
Serial Port	9-pin D-sub RS-232
Parallel Port	25-pin D-sub
Trigger Input	BNC
Trigger Output	BNC
System Clock Output	BNC

Software and Analysis Capabilities

Logic Analyzer Application Software	TLA Application Software
Time-correlated Analog-Digital View	iView™ technology
Programmatic Control Interfaces	GPIB, LAN (TCP/IP) via TLA Application Software API

Power and Mechanical

Line Voltage Range	90 to 264 V AC
Line Frequency Range	45 to 66 Hz
Power Consumption	360 W maximum
Height	285 mm
Width	438 mm
Depth	288 mm
Net Weight	12.0 kg

Environmental and Compliance

Operating Temperature Range	5 to 50 °C
Non-operating Temperature Range	-20 to 60 °C
Operating Altitude	Up to 3,000 m (10,000 ft.)
Non-operating Altitude	Up to 12,190 m (40,000 ft.)
Safety Certifications	UL3111-1, CSA1010.1, EN61010-1, IEC61010-1
Electromagnetic Compatibility (EMC)	89/336/EEC, EN61326 Class A

PC Platform

Processor	Intel Celeron M 1.5 GHz (or faster)
PS/2 Ports	2 (1 keyboard, 1 mouse)

Channel Integration

Channel Breakdown	96 data, 4 clock, 2 qualifier channels
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Probing

Compatible Probes	P6417, P6418, P6419, P6434
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Acquisition System

Memory Depth Options	64 Kb, 256 Kb, 1 Mb, 4 Mb, 8 Mb
Data Channels	96
Clock Channels	4
Qualifier Channels	2
Probe Connectors	6
Maximum State Speed Options	235 MHz (Standard) / 450 MHz (Option 450)
Maximum State Data Rate Options	235 Mb/s (Standard) / 450 Mb/s (Option 450)
Threshold Voltage Accuracy	±(35 mV + 1% of setting)
Input Dynamic Range	-2.0 V to +4.5 V
Minimum Input Slew Rate	0.5 V/ns (typical)
Threshold Selection Group Size	17 channels

Environmental

Random Vibration (Operating)	0.31 gRMS, 5 Hz to 500 Hz
Random Vibration (Non-operating)	2.46 gRMS, 5 Hz to 500 Hz

PC System & Interfaces

Front Panel USB Ports	1 × USB 2.0
Rear Panel USB Ports	4 × USB 2.0
Ethernet Port Speed	10/100/1000 Mb/s

Physical & Environmental

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

Logic Analyzer

APPLICATIONS

Digital design debug and state/timing analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.