TEKTRONIX

TBS1202B

The Tektronix TBS1202B is a 200 MHz, 2-channel digital storage oscilloscope designed for students, hobbyists, and engineers. Featuring a high-resolution 7-inch WVGA display, 2.0 GS/s sampling rate, and built-in educational and analysis tools, it delivers robust performance and precise waveform analysis.

SPECIFICATIONS

General

Interfaces	USB 2.0 Host (front panel), USB 2.0 Device (rear panel)
Display	7 in. (177.8 mm) WVGA (800 x 480) active TFT color display
Recommended Calibration Interval	2 years
User Interface Languages	English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Simplified Chinese, Spanish, Traditional Chinese

Physical

Power Supply	100 to 240 V AC ±10% (50/60 Hz, 100 to 120 V AC at 400 Hz), 30 W maximum
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	326.3 mm x 158.0 mm x 124.2 mm mm
Weight	2.0 kg kg
Kensington Lock Slot	Rear-panel security slot aligns with standard Kensington-style locks
Rackmount Options	RM1000B rackmount kit compatible

Vertical System

Analog Bandwidth (-3 dB)	200 MHz
Calculated Rise Time (10% to 90%)	1.75 ns
Number of Input Channels	2
Input Coupling	AC, DC, GND
Input Impedance	1 MΩ ±2% in parallel with 20 pF ±3 pF
Input Sensitivity Range	2 mV/div to 5 V/div
Vertical Resolution	8 bits
Maximum Input Voltage	300 VRMS CAT II
DC Gain Accuracy	±3% for 10 mV/div to 5 V/div; ±4% for 2 mV/div to 5 mV/div
Hardware Bandwidth Limits	20 MHz
Common Mode Rejection Ratio	100:1 at 60 Hz, decreasing to 10:1 at 50 MHz
Channel-to-Channel Isolation	>100:1 at 60 Hz, >100:1 at 100 MHz, >100:1 at 150 MHz, and >100:1 at 200 MHz (with equal Volts/div settings)
Vertical Position Range	2 mV/div to 200 mV/div: ±1.8 V; >200 mV/div to 5 V/div: ±45 V
Supported Probe Attenuation Factors	1X, 10X, 100X, 1000X

Horizontal System

Timebase Range	2.5 ns/div to 50 s/div
Timebase Accuracy	±50 ppm
Pre-Trigger Delay Range	10 divisions
Post-Trigger Delay Range	50 s

Acquisition System

Maximum Real-Time Sample Rate	2.0 GS/s (on each channel)
Maximum Record Length	2.5k points
Acquisition Modes	Sample, Peak Detect, Average
Peak Detect Mode	Captures high-frequency and random glitches as narrow as 12 ns

Trigger System

Trigger Sources	CH1, CH2, Ext, Ext/5, AC Line
Trigger Modes	Auto, Normal, Single Sequence
Trigger Coupling	AC, DC, Noise Reject, HF Reject, LF Reject
Trigger Holdoff Range	500 ns to 10 s
Trigger Types	Edge, Pulse Width, Video
Video Trigger Formats	NTSC, PAL, SECAM
Trigger Level Range	Internal (CH1, CH2): ±8 divisions from screen center; External: ±1.6 V; External/5: ±8 V
Trigger Sensitivity (Edge Trigger, DC)	Internal (CH1, CH2): 1 div from DC to 10 MHz, 1.5 div from 10 MHz to 200 MHz; External: 100 mV from DC to 100 MHz, 150 mV from 100 MHz to 200 MHz; External/5: 500 mV from DC to 100 MHz, 750 mV from 100 MHz to 200 MHz

Measurements & Analysis

Automatic Measurements	34 automated measurements
Waveform Math Operators	Add, Subtract, Multiply, FFT
FFT Window Types	Hanning, Flat Top, Rectangular
FFT Resolution	2048 points
Integrated Frequency Counter	6-digit resolution on all trigger sources
Limit / Mask Testing	Standard automated limit-testing capability
TrendPlot Function	Records measurement values over long periods

Display & UI

Waveform Display Formats	YT, XY

Environmental

Storage Temperature Range	-40 to +71 °C
Operating Humidity	Up to 85% RH at or below +40 °C; up to 45% RH up to +50 °C
Operating Altitude	Up to 3,000 m (9,843 ft)
Safety Certifications	UL 61010-1, CAN/CSA-C22.2 No. 61010-1, EN 61010-1, IEC 61010-1
Electromagnetic Compatibility (EMC)	Directive 2004/108/EC, EN 61326-1 Class A, EN 61326-2-1

Storage

Internal Setup Storage	Up to 10 front-panel setups
Internal Waveform Storage	Two 2.5k point reference waveforms

Accessories

Standard Probes Included	TPP0201 (200 MHz, 10X passive probe, one per channel)
Standard Passive Probe Model	TPP0201 (one per channel)

Probe Compensator

Probe Compensator Output Signal	5 V, 1 kHz square wave

Interfaces

USB Device Port Functions	Supports PC connectivity via TekSmartLab, OpenChoice software, and USBTMC protocols

Software

Software Compatibility	OpenChoice Desktop, TekSmartLab, National Instruments LabVIEW SignalExpress Tektronix Edition

Data Storage

Waveform Data Logging	Saves up to 8 hours of waveform data to a USB flash drive in CSV format

Trigger

Pulse Width Trigger Time Range	33 ns to 10 s
Video Trigger Line Numbers	1 to 525 (NTSC), 1 to 625 (PAL/SECAM)

TECHNOLOGY

Digital Storage Oscilloscope

APPLICATIONS

Electronic Design, Education, Troubleshooting, Manufacturing Test

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