

TEKTRONIX

TDS220

The Tektronix TDS220 is a highly popular, dual-channel 100 MHz digital storage oscilloscope (DSO) known for its compact form factor, user-friendly interface, and high-speed real-time sample rate of 1.0 GS/s per channel.

SPECIFICATIONS

General

Interfaces	None standard; RS-232, GPIB, and Centronics parallel ports are available via optional TDS2CM or TDS2MM communication modules
Display	High-contrast monochrome LCD with backlighting, 320 × 240 pixels, contrast adjustment

Physical

Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	304.8 mm × 151.4 mm × 120.7 mm mm
Weight	1.5 kg (instrument only) kg

Vertical System

Number of Channels	2
Analog Bandwidth	100 MHz
Calculated Rise Time	3.5 ns
Input Coupling	AC, DC, GND
Input Sensitivity Range	2 mV/div to 5 V/div in a 1-2-5 sequence
Vertical Resolution	8 bits (1 part in 256)
DC Gain Accuracy	±3% for Sample or Average acquisition mode
Maximum Input Voltage	300 V RMS CAT II (derated above 100 kHz to 13 V peak AC at 3 MHz and above)
Position Range	±2 V for 2 mV/div to 200 mV/div; ±50 V for 500 mV/div to 5 V/div
Analog Bandwidth Limit	20 MHz

Horizontal System

Time Base Range	5 ns/div to 5 s/div in a 1-2-5 sequence
-----------------	---

Trigger System

Trigger Types	Edge (rising or falling), Video
Trigger Sources	CH1, CH2, EXT, EXT/5, AC Line
External Trigger Input Impedance	1 MΩ in parallel with 20 pF
External Trigger Maximum Input	300 V RMS CAT II

Acquisition System

Max Real-Time Sample Rate	1.0 GS/s per channel
Record Length	2500 samples per channel
Acquisition Modes	Sample, Peak Detect, Average
Peak Detect Glitch Capture Width	Captures high-frequency and random glitches as narrow as 10 ns
Average Acquisition Mode	Selectable from 4, 16, 64, or 128 waveforms
Non-Volatile Waveform Storage	Two 2500-point reference waveforms
Non-Volatile Setup Storage	5 instrument setups

Waveform Measurements and Math

Automatic Measurements	Period, Frequency, Cycle RMS, Mean, Peak-to-Peak
Cursor Measurements	Voltage difference (ΔV) and Time difference (Δt , $1/\Delta t$)
Waveform Math Operations	CH1 + CH2, CH1 - CH2
FFT Analysis	Available via optional TDS2MM extension module (Hanning, Flat Top, Rectangular windows)

Display and User Interface

Display Resolution	320 × 240 pixels
Multi-Language User Interface	English, French, German, Italian, Spanish, Portuguese, Japanese, Korean, Simplified Chinese, Traditional Chinese
Autoset Menu	Automatically adjusts vertical, horizontal, and trigger controls for a stable display

Connectivity and Expansion

Extension Module Interface	Rear slot for optional communications and feature-expansion modules
Optional Modules	TDS2CM (adds RS-232, GPIB, Centronics), TDS2MM (adds RS-232, GPIB, Centronics, FFT, Rise/Fall times)
Probe Compensator Output	Approximately 5 V into $\geq 1 \text{ M}\Omega$ load, 1 kHz frequency

Physical Characteristics

Height	151.4 mm
Width	304.8 mm
Depth	120.7 mm

Environmental and Safety

Storage Temperature	-20 °C to +60 °C
Operating Altitude	Up to 3,000 meters
Non-Operating Altitude	Up to 15,000 meters
Safety Certification	UL3111-1, CSA1010.1, EN61010-1
Electro-Magnetic Compatibility	Meets directive 89/336/EEC, EN 55011 Class A, EN 50082-1

Trigger

Trigger Level Range (Internal)	±8 divisions from center of screen
Trigger Level Range (External)	±1.6 V
Trigger Level Range (External/10)	±16 V
Trigger Holdoff Range	500 ns to 10 s

Measurements

Automatic Measurement Types	Period, Frequency, Cycle RMS, Mean, Peak-to-Peak
Cursor Measurement Types	Voltage (ΔV), Time (ΔT), Frequency ($1/\Delta T$)

General Specifications

Probe Compensator Output Voltage	Approximately 5 V into $\geq 1\text{ M}\Omega$ load
Probe Compensator Output Frequency	Approximately 1 kHz
Calibration Interval	1 year (recommended)

Safety & Compliance

Overvoltage Category (Inputs)	CAT II 300 Vrms
Overvoltage Category (Mains)	CAT II
Pollution Degree	Pollution Degree 2 (indoor use only)

Display

Active Display Area	115 mm × 86 mm (4.5 in × 3.4 in)
---------------------	----------------------------------

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Electronic design, debugging, troubleshooting, education, service, and repair

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