

TEKTRONIX

TDS320

The Tektronix TDS320 is a 100 MHz, two-channel digital storage oscilloscope designed for electronic testing and troubleshooting. It offers a 500 MS/s real-time sampling rate on each channel, an 8-bit vertical resolution, and advanced horizontal and vertical systems for accurate waveform measurement and analysis. With the Option 14 computer interface, it supports comprehensive GPIB, RS-232, and hardcopy capabilities.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), RS-232, Centronics-type parallel (with Option 14)
Display	Monochrome CRT

Physical

Power Supply	90 to 250 VAC continuous, 45 Hz to 440 Hz, < 65 W
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	362 mm × 165 mm × 472 mm mm
Weight	6.5 kg kg

Vertical System

Analog Bandwidth (-3 dB)	100 MHz
Number of Input Channels	2
Input Sensitivity Range	2 mV/div to 10 V/div
Vertical Resolution (ADC)	8 bits
Vertical Divisions	256 levels over 10.24 vertical divisions
Channel Invert Function	Supported on each channel
Input Impedance	1 MΩ ±1% in parallel with 20 pF ±2 pF
Input Coupling	AC, DC, GND
Maximum Input Voltage	400 V (DC + peak AC)
DC Gain Accuracy	±2%

Horizontal System

Maximum Real-Time Sampling Rate	500 MS/s on each channel
Maximum Record Length	1000 sample points per channel
Time Base Range	5 ns/div to 5 s/div
Time Base System	Main and Delayed
Time Base Accuracy	±0.01%
Waveform Interpolation	Sin(x)/x

Trigger System

Trigger Sources/Types	Edge, Video
Trigger System Capabilities	Main Only
Trigger Coupling	AC, DC, HF Reject, LF Reject, Noise Reject
External Trigger Input Impedance	Not supported
External Trigger Max Input Voltage	Not supported

Waveform Measurements and Analysis

Automatic Measurements	Supported
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Connectivity and Ports

GPIO Interface Option	IEEE-488.2 programmable (Option 14)
RS-232 Interface Option	RS-232 programmable (Option 14)
Video Output Port	Not supported
Hardcopy Port	Centronics-type parallel or RS-232 (Option 14)
Graphics Interface File Formats	Interleaf (.img), TIFF, PCX, BMP, Encapsulated Postscript (EPS) (Option 14)
Supported Printer Formats	HP ThinkJet, DeskJet, LaserJet, Epson (9 & 24 Pin), Seiko DPU 411/II, DPU 412 (Option 14)
Printer DC Power Output	Provided for Seiko printers (Option 14)

Acquisition System

Acquisition Modes	Sample, Envelope, Average, Peak Detect
Glitch Capture (Peak Detect)	10 ns

Measurement & Math

Waveform Math Functions	CH1 + CH2, CH1 - CH2, CH2 - CH1
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Storage & Save

Storage (Reference Waveforms)	Two 1k point reference waveforms (Ref1, Ref2)
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Auxiliary Outputs

Probe Compensator Output Voltage	5.0 V into $\geq 1\text{ M}\Omega$ load
Probe Compensator Output Frequency	1.2 kHz

Power & Environmental

Power Consumption	$\leq 65\text{ W}$ (90 VA)
Operating Altitude	4,570 m (15,000 ft)
Non-Operating Altitude	12,190 m (40,000 ft)

Setup & Waveform Storage

Setup Storage Capacity	10 front-panel setups
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Certifications & Compliance

Safety Compliance

UL 1244, CSA C22.2 No. 231, EN 61010-1

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Electronic design, debugging, troubleshooting, and education

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