

TEKTRONIX

TDS460A

The Tektronix TDS460A is a professional-grade 400 MHz, 4-channel digital storage oscilloscope featuring a real-time sample rate of 100 MS/s on all channels simultaneously. Designed for precision laboratory measurements and debugging, it offers a robust vertical DC gain accuracy of $\pm 1.5\%$ and a standard 30k point record length (upgradeable to 120k with Option XL). It also includes a built-in floppy disk drive, extensive automatic measurements, advanced triggering (including video triggers), and flexible acquisition modes like 10 ns Peak Detect.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2) standard; RS-232, Centronics Parallel, and VGA video output available with Option 13
Display	7-inch monochrome CRT, 640 × 480 pixels

Physical

Dimensions (W×H×D)	362 mm × 191 mm × 471 mm mm
Weight	8.6 kg kg

Vertical System

Number of Channels	4
Analog Bandwidth (-3 dB)	400 MHz
Calculated Rise Time	0.875 ns
Vertical Resolution	8 bits
Input Sensitivity Range	1 mV/div to 10 V/div
DC Gain Accuracy	$\pm 1.5\%$
Input Coupling	AC, DC, GND
Input Impedance (1 M Ω)	1 M Ω $\pm 1\%$ in parallel with 15 pF ± 2 pF
Input Impedance (50 Ω)	50 Ω $\pm 1\%$
Maximum Input Voltage (50 Ω)	5 V RMS
Offset Range	± 1 V (1 to 99.5 mV/div), ± 10 V (100 mV to 995 mV/div), ± 100 V (1 V to 10 V/div)
Hi-Res Mode Resolution	Up to 12 bits (acquisition mode dependent)
Input Capacitance (1 M Ω)	15 pF

Horizontal System

Maximum Real-Time Sample Rate (All Channels)	100 MS/s
Standard Record Length	30,000 points per channel
Maximum Record Length (Option XL)	120,000 points per channel

Trigger System

Trigger Modes	Auto, Normal, Single Sequence
Trigger Coupling	DC, AC, HF Reject, LF Reject, Noise Reject

Waveform Measurements & Analysis

Automatic Measurements	25 built-in measurements
Waveform Math Operations	Addition, Subtraction, Multiplication
Advanced Math & FFT (Option XL)	FFT, Integration, Differentiation

Display & User Interface

Display Graticule	Full, Grid, Crosshair, Frame
Waveform Display Formats	YT, XY

Connectivity & I/O

Probe Compensator Output	0.5 V into >1 M Ω , 1 kHz
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Storage

Floppy Disk Drive	3.5-inch 1.44 MB or 720 KB (MS-DOS compatible)
Internal Setup Storage	10 setups
Internal Waveform Storage	4 reference waveforms

Physical Characteristics

Form Factor	Benchtop
Height	191 mm
Width	362 mm

Power System

Line Voltage	90 to 250 VAC
Line Frequency	45 to 440 Hz
Power Consumption	$\leq$ 240 W

Connectivity

GPIO Interface	IEEE-488.2 standard
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Options

Rackmount Option	Option 1R
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Acquisition Modes

Average Acquisition Limit	2 to 10000 acquisitions
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Waveform Analysis

Waveform Limit Testing	Standard, comparisons against reference templates
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TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Electronic design, debugging, manufacturing test, and educational laboratories

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