

TEKTRONIX

TDS784A

Tektronix TDS784A is a high-performance 4-channel digital storage oscilloscope designed for high-speed analog and mixed-signal debug. It provides 1 GHz bandwidth with deep triggering and standard math/FFT functions, and remote control via GPIB.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2)
Display	CRT display

Physical

Operating Temperature	0 to +50 °C °C
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Vertical System

Number of Analog Channels	4
Analog Bandwidth (-3 dB)	1 GHz
Rise Time (calculated)	350 ps (0.35/BW)
Input Coupling	AC, DC, GND
Input Impedance (selectable)	1 MΩ or 50 Ω
Vertical Resolution (ADC)	8 bits
Maximum Input Voltage	150 Vrms (1 MΩ), 5 Vrms (50 Ω)
Bandwidth Limit Filters	20 MHz (selectable limit)

Horizontal System and Timebase

Real-Time Sample Rate (1 ch, interleaved)	up to 4 GS/s
Real-Time Sample Rate (2 ch)	up to 2 GS/s
Real-Time Sample Rate (4 ch)	up to 1 GS/s
Equivalent Time Sampling (ETS)	Supported for repetitive signals
Pre/Post Trigger Position	0 to 100% adjustable

Acquisition System

Interpolation	sin(x)/x
Acquisition Modes	Sample, Peak Detect, Hi-Res, Average, Envelope

Trigger System

Trigger Modes	Edge, Pulse Width, Video
Trigger Sources	CH1–CH4, External, AC Line
Trigger Coupling	AC, DC, LF reject, HF reject
External Trigger Input	Front-panel BNC

Measurements

Automatic Measurements (Amplitude)	Vpp, Vmax, Vmin, Mean, RMS
Automatic Measurements (Time)	Frequency, Period, +Width, –Width, Duty Cycle, Phase, Rise/Fall Time
Measurement Statistics	Statistical readouts on selected measurements
Cursors	Time and Voltage cursors with $\Delta T/\Delta V$ readout

Math and FFT

Standard Math Functions	Add, Subtract, Multiply, Divide
FFT Analysis	Spectrum magnitude with selectable windows
FFT Windows	Rectangular, Hanning, Hamming, Blackman-Harris
Reference Waveforms	Store/recall reference traces

Connectivity and I/O

GPIB (IEEE-488.2)	Rear-panel interface for remote control
RS-232C	Rear-panel serial port
Parallel (Centronics)	Rear-panel hardcopy/printing
Probe Interface	TekProbe interface on input channels for powered/ID probes

Data Storage and File Formats

Internal/Removable Storage	Internal setup memory; 3.5-inch 1.44 MB floppy drive
Waveform/Hardcopy Formats	Tek binary waveform and ASCII data export; printer hardcopy via Centronics/GPIB
Setup Save/Recall	Save/recall instrument setups to NVRAM or floppy

Remote Control and Software

Programming Interface	SCPI over GPIB
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Calibration

Self-Calibration	Signal Path Compensation (SPC) routine
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Power Requirements

Power Connector	IEC mains inlet
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Physical Characteristics

Rackmount Capability	Optional rackmount kit available
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