

Digital Storage Oscilloscopes

TDS210



Digital Storage Oscilloscopes

TDS210 * TDS220 * TDS224



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This product is discontinued.

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Check [long term product support](#) status.

CHARACTERISTICS

Signal Acquisition System

Bandwidth -

TDS210: 60 MHz.

TDS220: 100 MHz.

TDS224: 100 MHz.

Sample Rate -

1 GS/s on each channel.

Channels -

TDS210 and TDS220: 2 identical channels plus external trigger.

TDS224: 4 identical channels.

Sensitivity (with calibrated fine adjustment) -

2 mV to 5 V/div (bandwidth limited to 20 MHz at 2 mV/div and 5 mV/div, in all modes, and 20 MHz at 10 mV/div in Peak Detect mode).

Vertical Zoom -

Vertically expand or compress a live or stopped waveform.

Calibrated Position Range

Volts/Div Setting	Offset Range
2 mV to 200 mV/div	±2 V
>200 mV to 5 V/div	±50 V

DC Gain Accuracy - ±3%. (±4% at 2 mV/div and 5 mV/div).

Vertical Resolution -

8-Bit (256 levels over 10.24 vertical divisions).

Automatic Measurements

Period, frequency, cycle RMS, mean, peak-to-peak.

Acquisition Modes

Sample, Average, Peak Detect - High frequency and random glitch capture; captures glitches as narrow as 10 ns using acquisition hardware at all time/div settings between 5 µs/div and 5 s/div.

Time Base System (main and Window)

Horizontal Zoom - Horizontally expand or compress a live or stopped waveform.

Time/Division Range - 5 ns to 5 s/div.

Record Length - 2,500 sample points per channel.

Horizontal Accuracy - ±0.01%.

Nonvolatile Storage

Waveform Display - Two 2,500 point reference waveforms.

Waveform Storage - Two 2,500 point reference waveforms (TDS210, TDS220), four 2,500 point reference waveforms (TDS224).

Setups - 5 front panel setups.

Triggering System (main Only)

Trigger Type - Edge (rising or falling), video, set to 50%.

Video Trigger Type - Triggers on fields or lines from composite video; triggers on broadcast standard NTSC, PAL or SECAM video.

Trigger Modes - Auto, normal, single sweep.

Trigger Source -

TDS210 and TDS220: CH1, CH2, Ext, Ext/5 and AC Line.

TDS224: CH1, CH2, CH3, CH4 and AC Line.

Trigger View - Displays trigger signal while trigger view button depressed.

Cursors

Types - Voltage, time.

Measurements - Delta T, 1/Delta T, Delta V.

Waveform Processing

Arithmetic Operators - Add, subtract.

Sources - CH1±CH2, CH3±CH4 (TDS224).

Autoset - Single button automatic setup on selected input signal for vertical, horizontal and trigger systems.

Display System

Robust, backlit LCD with adjustable multilevel contrast.

Interpolation - Sin(x)/x.

Display Modes - Vectors, dots.

Persistence - Off, 1 sec, 2 sec, 5 sec, infinite.

Format - YT and XY.

Hardcopy Capability (requires Modules)

Printer/File Formats - Thinkjet, Deskjet, Laserjet, Epson (9- or 24-Pin), BMP, PCX, IMG, EPS, DPU 411, DPU 412.

Hardcopy Layout - Landscape or portrait.

TDS2CM Communications Extension Module

Centronics-type Parallel Port

RS-232 Programmability - Full talk/listen modes. Control of all modes, settings and measurements. Baud rate up to 19,200. 9-Pin, DTE.

GPIB Programmability - Full talk/listen modes. Control of all modes, settings and measurements (IEEE Std 488-1987).

Includes WaveStar™ Software for Oscilloscopes 30 day product demo.

TDS2MM Measurement Extension Module

FFT - Windows: Hanning, Flat Top, Rectangular.

Sample points: 2,048.

Automatic Measurements - Rise/fall time, positive/negative pulse width.

Interface - Centronics, RS-232, GPIB.

Environmental and Safety

Temperature -

Operating: 0°C to +50°C.

Nonoperating: -20°C to +60°C.

Humidity -

Up to 90% RH at or below +40°C;

Up to 60% RH from 41°C to 50°C (operating and nonoperating).

Altitude -

Up to 3,000 m (operating).

EMC -

Meets Directive 89/336/EEC, GOST.

Safety - UL3111-1, CSA1010.1, IEC61010-1, EN61010-1.

Physical Characteristics

Dimensions	mm	in.
Width	304.8	12.0
Height	151.4	5.96
Depth	120.7	4.75
Weight	kg	lb.
Oscilloscope only	1.5	3.25
w/accessories	1.7	3.75

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Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.



Tektronix Measurement products are manufactured in ISO registered facilities.



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