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**Contact us:** (888) 88-SOURCE | sales@artisantg.com | [www.artisantg.com](http://www.artisantg.com)
Digital Storage Oscilloscopes
TDS210 • TDS220 • TDS224

Characteristics

SIGNAL ACQUISITION SYSTEM

Bandwidth -
TDS210: 60 MHz
TDS220: 100 MHz
TDS240: 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

<table>
<thead>
<tr>
<th>2 mV to 200 mV/div ±2 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;200 mV to 5 V/div ±50 V</td>
</tr>
</tbody>
</table>

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 -
TDS210 and TDS220: Two 2,500 point reference waveforms
TDS224: Four 2,500 point reference waveforms

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

<table>
<thead>
<tr>
<th>Dimensions mm in.</th>
<th>Weight kg lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width 304.8 12.0</td>
<td></td>
</tr>
<tr>
<td>Height 151.4 5.96</td>
<td></td>
</tr>
<tr>
<td>Depth 120.7 4.75</td>
<td></td>
</tr>
<tr>
<td>Oscilloscope only 1.5 3.25</td>
<td></td>
</tr>
<tr>
<td>w/accessories 1.7 3.75</td>
<td></td>
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Product(s) are manufactured in ISO registered facilities.


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