

## TEKTRONIX

# TDS360

The Tektronix TDS360 is a 200 MHz, 2-channel Digital Real-Time (DRT) oscilloscope designed for benchtop electronic testing, featuring a high real-time sample rate of 1 GS/s on both channels simultaneously. With its integrated 3.5-inch floppy drive, 21 automatic measurements, standard FFT analysis, and optional professional I/O interfaces, the TDS360 provides precise and reliable waveform capture for high-speed glitch detection and transient signal analysis.

## SPECIFICATIONS

### General

|              |                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------|
| Interfaces   | Optional (Option 14) GPIB (IEEE-488.2), RS-232-C serial, Centronics parallel printer port, and VGA monitor output |
| Display      | 7-inch diagonal monochrome CRT, high-resolution magnetic deflection, 8 × 10 division graticule                    |
| Warm-up Time | 20 minutes                                                                                                        |

### Physical

|                       |                                             |
|-----------------------|---------------------------------------------|
| Power Supply          | 90 V to 250 V AC, 45 Hz to 440 Hz, 75 W max |
| Operating Temperature | 0 to +50 °C °C                              |
| Dimensions (W×H×D)    | 362 mm × 172 mm × 464 mm mm                 |
| Weight                | 6.8 kg                                      |

### Vertical System

|                              |                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------|
| Number of Channels           | 2                                                                                             |
| Analog Bandwidth             | 200 MHz                                                                                       |
| Calculated Rise Time         | 1.75 ns                                                                                       |
| Vertical Resolution          | 8 bits                                                                                        |
| Input Coupling               | AC, DC, GND                                                                                   |
| Input Impedance              | 1 MOhm in parallel with 20 pF                                                                 |
| Input Sensitivity Range      | 2 mV/div to 10 V/div                                                                          |
| DC Gain Accuracy             | ±2%                                                                                           |
| Maximum Input Voltage        | 400 V (DC + Peak AC)                                                                          |
| Position Range               | ±5 divisions                                                                                  |
| Bandwidth Limit              | 20 MHz                                                                                        |
| Vertical Offset Range        | ±1 V (2 mV/div to 100 mV/div), ±10 V (101 mV/div to 1 V/div), ±100 V (1.01 V/div to 10 V/div) |
| Channel-to-Channel Isolation | >= 100:1 at 100 MHz                                                                           |

## Horizontal System

|                                 |                             |
|---------------------------------|-----------------------------|
| Maximum Real-Time Sample Rate   | 1 GS/s                      |
| Maximum Record Length           | 1 K points                  |
| Time Base Range                 | 2 ns/div to 5 s/div         |
| Time Base Accuracy              | ±0.01% (100 ppm)            |
| Horizontal Zoom Expansion Range | 2x, 5x, 10x, 20x, 50x, 100x |

## Trigger System

|                                        |                                               |
|----------------------------------------|-----------------------------------------------|
| Trigger Modes                          | Auto, Normal, Single Sequence                 |
| Trigger Types                          | Edge, Video                                   |
| Trigger Source Selection               | Channel 1, Channel 2, Line, External          |
| Trigger Coupling                       | AC, DC, Noise Reject, HF Reject, LF Reject    |
| Trigger Sensitivity                    | 0.35 div (DC to 10 MHz), 1.0 div (at 200 MHz) |
| External Trigger Input Impedance       | 1 MOhm in parallel with 20 pF                 |
| External Trigger Maximum Input Voltage | 400 V (DC + Peak AC)                          |

## Acquisition Modes

|                  |                                                            |
|------------------|------------------------------------------------------------|
| Sample Mode      | Yes                                                        |
| Peak Detect Mode | 10 ns glitch capture                                       |
| Envelope Mode    | Yes (1 to 256 acquisitions or infinite)                    |
| Average Mode     | Yes (2 to 256 acquisitions)                                |
| Roll Mode        | Yes (at 50 ms/div and slower)                              |
| AutoSetup        | Yes (automatically sets vertical, horizontal, and trigger) |

## Waveform Measurements and Math

|                          |                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Automatic Measurements   | 21 automatic measurements including Period, Frequency, Rise/Fall Time, Pulse Width, Duty Cycle, Amplitude, Mean, RMS, Max, Min, Peak-to-Peak |
| Cursor Measurements      | Voltage, Time, Paired                                                                                                                        |
| Waveform Math Operations | Addition, Subtraction, FFT Analysis (standard)                                                                                               |

## Display and Interface

|                          |                                                         |
|--------------------------|---------------------------------------------------------|
| Display Accumulate Modes | Vector, Dot, Accumulate (infinite or timed persistence) |
|--------------------------|---------------------------------------------------------|

## Storage and Connectivity

|                            |                                                              |
|----------------------------|--------------------------------------------------------------|
| Removable Media Drive Type | 3.5-inch DOS-compatible floppy disk drive (1.44 MB / 720 KB) |
|----------------------------|--------------------------------------------------------------|

## Environmental and Safety

|                     |                           |
|---------------------|---------------------------|
| Storage Temperature | -51 °C to +71 °C          |
| Operating Altitude  | Up to 4,570 m (15,000 ft) |

## Triggering

|                                |                                                   |
|--------------------------------|---------------------------------------------------|
| Trigger Holdoff Range          | 250 ns to 10 s                                    |
| Video Trigger Formats          | NTSC, PAL, SECAM (field 1, field 2, or all lines) |
| Trigger Level Range (Internal) | ±4 divisions from screen center                   |
| Trigger Level Range (External) | ±1.5 V (±15 V with /10 setting)                   |

## Signal Acquisition & Processing

|                      |                                                |
|----------------------|------------------------------------------------|
| FFT Window Functions | Rectangular, Hanning, Hamming, Blackman-Harris |
|----------------------|------------------------------------------------|

## Display

|                    |                                                                                           |
|--------------------|-------------------------------------------------------------------------------------------|
| Display Graticules | Full, Grid, Crosshair, Frame                                                              |
| CRT Display Type   | 7-inch diagonal, magnetic deflection, raster-scan, monochrome CRT with internal graticule |
| CRT Phosphor Type  | P31 (Green)                                                                               |

## Memory & Storage

|                           |                                              |
|---------------------------|----------------------------------------------|
| Waveform Storage Capacity | 2 internal waveforms, 10 front-panel setups  |
| Floppy Disk Format        | 3.5 in, 1.44 MB or 720 KB, MS-DOS compatible |

## Power

|                               |                             |
|-------------------------------|-----------------------------|
| AC Line Voltage               | 90 V to 250 V AC            |
| AC Line Frequency             | 45 Hz to 440 Hz             |
| Input Voltage Range Selection | Automatic (universal input) |

## Compliance

|                               |                                                             |
|-------------------------------|-------------------------------------------------------------|
| Safety Certifications         | UL 3111-1, CSA C22.2 No. 1010.1, EN 61010-1                 |
| Electromagnetic Compatibility | EN 55011 Class A, EN 50082-1, FCC Part 15 Subpart B Class A |

## Interfaces

|                      |                                                                                     |
|----------------------|-------------------------------------------------------------------------------------|
| Option 14 Interfaces | GPIO (IEEE-488.2), RS-232-C (DB-9), Centronics parallel, VGA monitor output (DB-15) |
|----------------------|-------------------------------------------------------------------------------------|

## Acquisition System

|                      |                    |
|----------------------|--------------------|
| Interpolation Type   | Linear or sin(x)/x |
| Glitch Capture Width | 10 ns              |

## Storage

|                        |                                   |
|------------------------|-----------------------------------|
| Setup Storage Capacity | 10 nonvolatile front-panel setups |
|------------------------|-----------------------------------|

## Measurements

|                                  |    |
|----------------------------------|----|
| Number of Automatic Measurements | 21 |
|----------------------------------|----|

## Environmental

|         |                              |
|---------|------------------------------|
| Cooling | Forced-air circulation (fan) |
|---------|------------------------------|

**TECHNOLOGY**

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Digital Storage Oscilloscope (DSO)

**APPLICATIONS**

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Electronic Test & Measurement

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