

TEKTRONIX

TDS3014C

The Tektronix TDS3014C is a 100 MHz, 4-channel Digital Phosphor Oscilloscope (DPO) that combines continuous high waveform capture rates, advanced triggering, and analysis tools in a compact, portable, and battery-capable design. Equipped with standard USB and LAN interfaces, it provides accurate real-time signal visualization and analysis for engineering and test applications.

SPECIFICATIONS

General

Interfaces	USB 2.0 Host (front), USB 2.0 Device (rear), LAN RJ-45 (10Base-T Ethernet) standard; GPIB, RS-232, and VGA output available via optional TDS3GV module
Display	6.5-inch (165.1 mm) color TFT LCD, 640 × 480 pixels (VGA)

Physical

Power Supply	100 to 240 V AC $\pm 10\%$ (47 to 440 Hz); power consumption less than 75 W; supports optional TDS3BATC battery pack
Operating Temperature	0 to +50 °C
Dimensions (W×H×D)	375 × 176 × 149 mm
Weight	3.2 kg
Security Lock Slot	Kensington-style lock slot

Vertical System

Analog Bandwidth	100 MHz
Analog Channels	4
Calculated Rise Time	3.5 ns
Hardware Bandwidth Limits	20 MHz
Input Coupling	AC, DC, GND
Input Impedance	1 M Ω $\pm 1\%$ in parallel with 13 pF ± 2 pF, or 50 Ω $\pm 1\%$
Input Sensitivity Range	1 mV/div to 10 V/div (with 1 M Ω input); 1 mV/div to 1 V/div (with 50 Ω input)
Vertical Resolution	9 bits
DC Vertical Gain Accuracy	$\pm 2\%$ ($\pm 1.5\%$ with offset and position set to 0)
Channel-to-Channel Isolation	$\geq 100:1$ at 100 MHz
Vertical Position Range	± 5 divisions
Maximum Input Voltage (50 Ω)	5 V _{rms} with peaks < ± 30 V

Horizontal System

Timebase Range	4 ns/div to 10 s/div
Timebase Accuracy	±20 ppm

Acquisition System

Max Real-time Sample Rate	1.25 GS/s on all channels
Max Record Length	10k points on all channels
Acquisition Modes	Sample, Peak Detect, Envelope, Average, Single Sequence
Peak Detect Resolution	High-frequency and random glitch capture as narrow as 4 ns
Waveform Capture Rate	Up to 3,600 wfms/s (continuous)

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Types	Edge, Video, Pulse (Width, Runt, Slew Rate), Logic (Pattern, State)
Trigger Holdoff Range	250 ns to 8 s
Video Trigger Formats	NTSC, PAL, SECAM, custom
Trigger Level Range (Internal)	±8 divisions from screen center
Trigger Level Range (External)	±850 mV
Trigger Level Range (External/10)	±8.5 V
Trigger Level Accuracy (Internal)	±(0.2 div + 5% of trigger level setting) for signals within 4 divisions from center screen
B-Trigger Time Delay Range	13.2 ns to 50 s
B-Trigger Event Delay Range	1 to 9,999,999 events

Waveform Analysis & Tools

Automatic Measurements	25 measurements (including Period, Frequency, Rise/Fall Time, Duty Cycle, Overshoot, High/Low, Max/Min, Peak-to-Peak, RMS, Area, Phase, Delay)
Waveform Math Operators	Add, Subtract, Multiply, Divide
FFT Window Types	Rectangular, Hanning, Hamming, Blackman-Harris
Waveform Anomaly Detection	WaveAlert® automatic anomaly detection

Display and Interface

Display Size	6.5 inches (165.1 mm) diagonal
Display Type	Color TFT LCD
Display Resolution	640 × 480 pixels
Graticule Types	Full, Grid, Crosshair, Frame

Connectivity & Interfaces

LAN Interface	RJ-45 connector, 10Base-T Ethernet
USB Host Ports	1x USB 2.0 on front panel (supports USB flash drives)
Probe Interface	TekProbe® Level II Interface (supports active, differential, and current probes)

Power Specifications

AC Input Voltage Range	100 to 240 V AC $\pm 10\%$
AC Input Frequency Range	47 to 440 Hz
Power Consumption	75 W maximum
Battery Power Support	Optional TDS3BATC rechargeable Li-Ion battery pack
Battery Operating Life	Up to 3 hours (with TDS3BATC)

Physical Characteristics

Width	375 mm
Height	176 mm
Depth	149 mm
Net Weight without Battery	3.2 kg (7.0 lbs)
Net Weight with Battery	4.5 kg (9.8 lbs)

Environmental & Compliance

Non-Operating Temperature	-20 °C to +60 °C
Operating Humidity	Up to 95% RH at or below +30 °C; up to 75% RH up to +50 °C
Operating Altitude	Up to 3,000 meters
Non-Operating Altitude	Up to 15,000 meters
Safety Certifications	UL61010B-1, CAN/CSA-C22.2 No. 1010.1, EN61010-1
EMC Compliance	EN61326 Class A, FCC Part 15 Subpart B Class A

Ordering & Option Modules

Included Standard Probes	4x P3010 100 MHz 10X passive probes
Communication Modules	TDS3GV (adds GPIB, RS-232, and VGA output)
Warranty Period	3 years

Outputs

Probe Compensator Output Voltage	5.0 V into $\geq 1\text{ M}\Omega$ load
Probe Compensator Output Frequency	1 kHz

Storage

Internal Setup Storage Capacity	10 instrument setups
Internal Waveform Storage Capacity	4 reference waveforms

Display

Display Color Palettes	Normal, Temperature, Spectral, Liquid Crystal, Monochrome
Display Persistence	Off, Infinite, Variable (250 ms to 10 s)

Trigger

Internal Trigger Sensitivity (DC Coupled)	0.35 div from DC to 50 MHz, increasing to 1 div at 100 MHz
---	--

User Interface

Multi-language User Interface	English, French, German, Italian, Spanish, Portuguese, Russian, Japanese, Traditional Chinese, Simplified Chinese, Korean
-------------------------------	---

Environmental

Vibration (Operating)	0.31 g RMS from 5 Hz to 500 Hz, 10 minutes per axis, 3 axes
Vibration (Non-operating)	2.46 g RMS from 5 Hz to 500 Hz, 10 minutes per axis, 3 axes
Mechanical Shock (Operating)	50 g, 11 ms, half-sine

Power

Battery Charge Time	Approx. 32 hours (internal charging), approx. 6 hours (external charger)
---------------------	--

Connectivity & I/O

Direct Print Support	PictBridge-compatible printers via front-panel USB host port
----------------------	--

TECHNOLOGY

Digital Phosphor Oscilloscope (DPO)

APPLICATIONS

Electronic design, debugging, manufacturing test, and service

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.