

TEKTRONIX

DSA72004C

The Tektronix DSA72004C is a high-performance 20 GHz Digital Signal Analyzer (oscilloscope) designed for complex serial data compliance testing, jitter analysis, and high-speed signal characterization. Combining ultra-low noise floor characteristics with standard advanced analysis tools, it provides exceptional measurement fidelity across 4 analog channels with real-time sample rates of up to 100 GS/s.

SPECIFICATIONS

General

Interfaces	USB 2.0, LAN (10/100/1000 Base-T, LXI Class C), GPIB, DVI-I, VGA, RS-232
Display	12.1-inch color TFT-LCD with resistive touchscreen, 1024 × 768 pixels (XGA)

Physical

Power Supply	100 to 240 V AC ±10% at 50/60 Hz, or 115 V AC ±10% at 400 Hz; <980 VA maximum
Operating Temperature	5 °C to +45 °C °C
Dimensions (W×H×D)	457 mm × 298 mm × 513 mm mm
Cooling Clearance	76 mm (3 in.) minimum on left side, right side, and rear

Vertical System

Analog Bandwidth (-3 dB)	20 GHz
Number of Input Channels	4
Calculated Rise Time (10% to 90%)	22 ps
Calculated Rise Time (20% to 80%)	15 ps
Input Impedance	50 Ω ± 2%
Input Coupling	DC
Vertical Resolution	8-bit (11-bit with Hi-Res)
DC Gain Accuracy	±2% of full scale
Input Sensitivity Range	10 mV/div to 500 mV/div
Input Connector Type	TekConnect
Hardware Bandwidth Limits	250 MHz or 4.2 GHz (DSP-limited filters down to 10 GHz in 1 GHz steps)
Position Range	±5 divisions

Horizontal System

Timebase Range	6.25 ps/div to 1000 s/div
Channel-to-Channel Deskew Range	±75 ns
Internal Reference Clock Stability	±1.5 ppm

Acquisition System

Maximum Real-Time Sample Rate	100 GS/s (on 2 channels), 50 GS/s (on 4 channels)
Standard Record Length (Option 5XL)	50 MS (4 channels), 100 MS (2 channels)
Maximum Record Length (with Option 20XL)	250 MS (4 channels), 500 MS (2 channels)
Waveform Capture Rate	>300,000 wfm/s
Acquisition Modes	Sample, Peak Detect, Averaging, Envelope, Hi-Res, Waveform Database

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Jitter	<100 fs RMS (typical, with Enhanced Triggering)
Trigger Coupling	DC, AC, Low Frequency Reject, High Frequency Reject, Noise Reject
Standard Trigger Types	Edge, Glitch, Width, Runt, Window, Timeout, Pattern, State, Setup/Hold, Transition
Advanced Trigger Types	Comm Trigger, Serial Pattern Trigger
Serial Pattern Trigger Rate	Up to 6.25 Gbps

Waveform Measurements and Analysis

Automatic Measurements	53 automatic measurements
Waveform Math Operators	Algebraic expressions, calculus, filtering, FFT
Limit / Mask Testing	Standard (includes user-defined and standard templates)
Jitter and Eye Diagram Analysis	Standard (DPOJET Advanced)

Connectivity and Interfaces

USB Host Ports	5× USB 2.0 Host ports (1 front, 4 rear)
USB Device Port	1× USB 2.0 Device port (rear)
External Trigger Input	Front-panel BNC connector
Reference Clock Input	BNC connector, 10 MHz
Video Output	DVI-I and DisplayPort

Environmental and Compliance

Storage Temperature	-20 °C to +60 °C
Operating Humidity	8% to 80% RH (non-condensing) at up to +32 °C
Operating Altitude	3,000 m (9,843 feet)
Non-Operating Altitude	12,000 m (39,370 feet)

Physical Characteristics

Form Factor	Benchtop (rackmount kit available)
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Computer System

Operating System	Windows 7 Ultimate (64-bit)
System Memory	8 GB
Internal Storage	Rear-panel removable Hard Disk Drive (≥250 GB)
Optical Drive	External, USB connected

Power and Environmental

Power Consumption	<1200 VA
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Connectivity

LXI Compliance	LXI Class C v1.3
GPIB Interface	Rear panel, IEEE488.2 standard

Environmental

Random Vibration (Operating)	0.22 g RMS, 5 Hz to 500 Hz
Random Vibration (Non-operating)	2.28 g RMS, 5 Hz to 500 Hz

TECHNOLOGY

Digital Signal Analyzer (Oscilloscope)

APPLICATIONS

High-speed serial compliance, jitter characterization, spectral analysis, and advanced debug

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