

TEKTRONIX

DSA70804C

The Tektronix DSA70804C is a high-performance Digital Serial Analyzer (oscilloscope) featuring an 8 GHz bandwidth, up to 25 GS/s real-time sample rate across all 4 channels, and advanced serial analysis software integrated as standard. It is engineered to deliver exceptional signal fidelity and comprehensive analysis for high-speed serial data standards.

SPECIFICATIONS

General

Interfaces	GPIB, LAN (10/100/1000 Base-T, LXI Class C), USB 2.0 host (5 ports), USB device, Auxiliary Input, Auxiliary Output, Reference Clock Input, Reference Clock Output, DVI-I Out
Display	12.1 in. (307 mm) Liquid Crystal Active Matrix Color TFT touchscreen, 1024 × 768 pixels (XGA)
Warm-up Time	20 minutes
LXI Compliance	LXI Class C Version 1.3

Physical

Power Supply	100 to 240 V AC ±10% at 50 to 60 Hz, or 115 V AC ±10% at 400 Hz; <1200 VA maximum
Operating Temperature	5 to 45 °C
Dimensions (W×H×D)	451 × 298 × 489 mm
Weight	24 kg

Vertical System - Analog Channels

Analog Bandwidth (-3 dB)	8 GHz
Calculated Rise Time (10% to 90%)	54 ps
Calculated Rise Time (20% to 80%)	39 ps
Number of Input Channels	4
Input Coupling	DC, GND
Input Impedance	50 Ω ±1.5%
Input Sensitivity Range	10 mV/div to 1 V/div
Vertical Resolution	8-bit (>11-bit in Hi-Res)
DC Gain Accuracy	±2% of full scale
Offset Range	±1 V at 10 mV/div to 99.5 mV/div; ±10 V at 100 mV/div to 1 V/div

Horizontal System

Timebase Range	20 ps/div to 1000 s/div
Timebase Accuracy	±1.5 ppm (initial accuracy)
Channel-to-Channel Deskew Range	±75 ns
Timebase Delay Time Range	-5.0 s to 250 s
Internal Reference Frequency	10 MHz

Acquisition System

Maximum Real-Time Sample Rate	25 GS/s on all 4 channels
Maximum Record Length (Standard)	31.25 Mpts per channel
Maximum Record Length (Optional)	up to 250 Mpts (option-dependent)
Waveform Capture Rate	>300,000 wfm/s (FastAcq mode)
Acquisition Modes	Sample, Peak Detect, Averaging, Envelope, Hi-Res, FastAcq, Waveform Database

Trigger System

Trigger Sources	Ch 1, Ch 2, Ch 3, Ch 4, Auxiliary In, Line
Trigger Modes	Auto, Normal, Single
Trigger Coupling	DC, AC, HF Rej, LF Rej, Noise Rej
Trigger Holdoff Range	250 ns to 12 s
Standard Trigger Types	Edge, Glitch, Width, Runt, Window, Timeout, Transition (Rise/Fall), Pattern, State, Setup/Hold, Sequence
Advanced / Protocol Trigger Types	Comm Trigger, Serial Pattern Trigger (up to 6.25 Gb/s with hardware recovery)
Trigger Jitter	<100 fs RMS (typical with Enhanced Triggering)

Waveform Measurements and Analysis

Automatic Measurements	53 automatic measurements
Waveform Math Operators	Basic, Advanced, Equation Editor
FFT Window Types	Rectangular, Hamming, Hanning, Kaiser-Bessel, Blackman-Harris, Gaussian, Flattop2, TekExponential
Jitter and Eye Diagram Analysis	DPOJET Jitter & Eye Diagram Analysis (Standard)
Limit / Mask Testing	Standard

Display and User Interface

Waveform Display Formats	YT, XY
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Environmental and Compliance

Storage Temperature Range	-30 °C to +60 °C
Operating Humidity	8% to 80% RH (non-condensing)
Operating Altitude	3,000 m (9,843 ft.)

Physical Characteristics

Form Factor	Benchtop (rackmount kit available)
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Vertical System

Maximum Input Voltage	150 mV RMS at <50 mV/div, 1.2 V RMS at ≥50 mV/div
Channel-to-Channel Isolation	≥100:1 at ≤100 MHz, ≥30:1 at >100 MHz to 2.5 GHz, ≥15:1 at >2.5 GHz to 8 GHz
Vertical Position Range	±5 divisions

Computer System

Operating System	Windows 7 Ultimate (64-bit)
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Compliance

Safety Compliance	UL 61010-1, CAN/CSA-C22.2 No. 61010-1, EN 61010-1, IEC 61010-1
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Inputs & Outputs

Input Connectors	TekConnect
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Serial Analysis

Hardware Clock Recovery Range	1.5 MBaud to 3.125 GBaud
Pattern Triggering Data Rate	Up to 6.25 Gbps

PC System

System Memory	8 GB
Storage Drive	Removable HDD, ≥160 GB

Acquisition

Equivalent Time Sample Rate	Up to 5 TS/s
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TECHNOLOGY

Digital Phosphor / Digital Serial Analyzer (DSA)

APPLICATIONS

High-speed serial bus verification, characterization, and compliance testing

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