KEYSIGHT TECHNOLOGIES (AGILENT HP)

DSO3202A

The Keysight (formerly Agilent) DSO3202A is a legacy 3000 Series 2-channel digital storage oscilloscope, offering a 200 MHz bandwidth, 1 GSa/s real-time sample rate, and 4 kpts memory depth. Designed for general-purpose bench testing, education, and troubleshooting, it features a 5.7-inch color display, 20 automatic measurements, advanced triggering, and USB connectivity.

SPECIFICATIONS

General

Interfaces	USB Host (front panel for flash drive storage), USB Device (rear panel for PC connectivity)
Display	15-cm (5.7-inch) color LCD, 320 x 240 pixel resolution
Standard Accessories	Two 10:1 passive probes, USB cable, power cord, user guide, CD-ROM
Included Software	Agilent Scope Connection software

Physical

Power Supply	100 to 240 VAC (±10%), 50/60 Hz (±10%) or 400 Hz, 50 VA max
Operating Temperature	0 °C to 40 °C °C
Dimensions (W×H×D)	322 mm × 150 mm × 130 mm mm
Weight	2.4 kg

Vertical System

Analog Bandwidth	200 MHz
Calculated Rise Time	1.8 ns
Number of Channels	2 channels + external trigger
Input Impedance	1 MΩ ± 1% || 15 pF
Input Coupling	AC, DC, GND
Vertical Resolution	8 bits
Input Sensitivity Range	2 mV/div to 10 V/div
Maximum Input Voltage	400 V (DC + AC peak) @ 1 MΩ
DC Gain Accuracy	±3% for 10 mV/div to 10 V/div; ±4% for 2 mV/div to 5 mV/div
Hardware Bandwidth Limit	20 MHz
Probe Attenuation Factors	1x, 10x, 100x, 1000x
Low Frequency Limit (AC Coupled)	< 10 Hz (at -3 dB)

Horizontal System

Timebase Range	2 ns/div to 50 s/div
Timebase Accuracy	±100 ppm
Delayed Sweep	Supported with split-screen display
Timebase Modes	Main, Delayed, Roll, X-Y
X-Y Phase Difference	±3° at 100 kHz

Acquisition System

Maximum Real-Time Sample Rate	1 GSa/s (single-channel), 500 MSa/s (dual-channel)
Maximum Record Length	4 kpts
Segmented Memory	Sequence mode for capturing up to 1000 trigger events
Acquisition Modes	Normal, Peak Detect, Average
Peak Detect Mode	Captures high-frequency glitches as narrow as 10 ns
Averages Mode	Selectable from 4, 16, 32, 64, 128, 256

Trigger System

Trigger Sources	Channel 1, Channel 2, External, AC Line
Trigger Modes	Auto, Normal, Single
Trigger Coupling	AC, DC, LF Reject, HF Reject
Trigger Holdoff Range	100 ns to 1.5 s
Standard Trigger Types	Edge, Pulse Width, Video
Video Trigger Standards	NTSC, PAL, SECAM (line-selectable)
Pulse Width Trigger Range	20 ns to 10 s

Measurements and Analysis

Automatic Measurements	20 measurements (Vpp, Vmax, Vmin, Vtop, Vbase, Vamp, Vavg, Vrms, Overshoot, Preshoot, Period, Frequency, Rise Time, Fall Time, +Width, -Width, +Duty, -Duty, Delay rising, Delay falling)
Waveform Math Operators	Addition, Subtraction, Multiplication, FFT
FFT Window Types	Hanning, Hamming, Blackman, Rectangular
Limit / Mask Testing	Supported (Go/No-Go testing with pass/fail outputs)

Display and User Interface

Waveform Display Formats	YT, XY
Graticules	8 x 12 divisions

Connectivity and Interfaces

External Trigger Input	BNC connector on front panel

Environmental and Compliance

Storage Temperature Range	-20 °C to +60 °C
Operating Humidity	95% RH at 40 °C
Operating Altitude	Up to 3,000 meters (9,842 feet)

Trigger

Internal Trigger Sensitivity	1.0 div (DC to 10 MHz), 1.5 div (10 MHz to 200 MHz)
External Trigger Sensitivity	100 mV (DC to 10 MHz), 150 mV (10 MHz to 200 MHz)
Internal Trigger Level Range	±6 divisions from center of screen
External Trigger Level Range	±1.2 V
External Trigger Input Impedance	1 MΩ ±2% in parallel with 15 pF ±3 pF

Performance

FFT Length	1024 points

Storage

Internal Storage Capacity	10 setups and 10 waveforms

Safety & Compliance

Safety Rating	CAT II 300 Vrms, CAT I 400 Vpk
Pollution Degree	Pollution Degree 2

Measurements

Integrated Frequency Counter	6-digit resolution, range from 10 Hz to 200 MHz
Cursor Measurements	Manual, Track, Auto

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Electronic troubleshooting, education, R&D, bench testing