

KEYSIGHT TECHNOLOGIES (AGILENT HP)

DSO6104L

The Keysight DSO6104L (originally Agilent) is a 1 GHz, 4-channel digital storage oscilloscope designed for automated and manufacturing test systems. Packing standard 100% software-compatibility with portable InfiniiVision 6000A Series models, it is optimized for high-density applications, fitting into a space-efficient, low-profile 1U rackmount chassis.

SPECIFICATIONS

General

Interfaces	USB 2.0 (host & device), LAN (10/100Base-T), GPIB (IEEE-488), XGA video output
Display	None (requires external monitor via rear XGA out or remote web browser graphical interface)
Warm-Up Time	30 minutes
Calibration Interval	1 year

Physical

Power Supply	100 to 240 VAC, 50 to 60 Hz (automatic selection), 80 W maximum
Operating Temperature	0 °C to 50 °C °C
Dimensions (W×H×D)	437 mm × 43.6 mm × 272 mm mm
Weight	4.5 kg kg

Vertical System

Analog Bandwidth	1 GHz
Number of Analog Channels	4
Vertical Resolution	8 bits
Input Impedance	1 M Ω $\pm$ 1% or 50 Ω $\pm$ 1% (user selectable)
Input Coupling	AC, DC, GND
Maximum Input Voltage (1 M Ω)	300 Vrms CAT I, 100 Vrms CAT II
Maximum Input Voltage (50 Ω)	5 Vrms
Hardware Bandwidth Limit	20 MHz (selectable)
Input Sensitivity Range (1 M Ω)	2 mV/div to 5 V/div
Input Sensitivity Range (50 Ω)	2 mV/div to 1 V/div
DC Gain Accuracy	$\pm$ 2% of full scale
DC Offset Range (2 mV to 200 mV/div)	$\pm$ 5 V on ranges < 10 mV/div; $\pm$ 20 V on ranges 10 mV/div to 200 mV/div
DC Offset Range (201 mV to 5 V/div)	$\pm$ 75 V on ranges > 200 mV/div to 5 V/div
Dynamic Range	$\pm$ 8 divisions from screen center
Channel-to-Channel Isolation	$\geq$ 40 dB from DC to 1 GHz
Input Capacitance (1 M Ω)	13 pF

Horizontal System

Real-Time Sample Rate (Half Channel)	4 GSa/s
Real-Time Sample Rate (All Channels)	2 GSa/s
Standard Memory Depth (Half Channel)	8 Mpts
Standard Memory Depth (All Channels)	4 Mpts
Time Base Range	500 ps/div to 50 s/div
Time Base Accuracy	$\pm$ 15 ppm
Time Base Delay Range (Pre-trigger)	Greater of 1 screen width or 250 μ s
Time Base Delay Range (Post-trigger)	1 s to 500 s
Channel-to-Channel Deskew Range	$\pm$ 100 ns

Trigger System

Trigger Modes	Auto, Normal, Single
Trigger Sources	Channel 1, Channel 2, Channel 3, Channel 4, External, Line
Trigger Coupling	AC, DC, LF Reject, HF Reject, Noise Reject
Trigger Holdoff Range	60 ns to 10 s
Trigger Sensitivity (Internal, <10 MHz)	0.3 div or 3.5 mV
Trigger Sensitivity (Internal, 10 MHz to 1 GHz)	1 div or 10 mV
Trigger Sensitivity (External, DC to 100 MHz)	100 mV
Trigger Sensitivity (External, 100 MHz to 1 GHz)	200 mV
Edge Triggering	Rising, Falling, Alternating
Pulse Width Triggering	Trigger on pulse width <, >, within, or outside 2 ns to 10 s
Pattern Triggering	Trigger on logical AND, OR, NAND, NOR of channel states
TV/Video Triggering	NTSC, PAL, SECAM, HDTV (480i, 480p, 720p, 1080i, 1080p)
Sequence Triggering	Arm on A, Trigger on B with delay or event count

Acquisition System

Acquisition Modes	Normal, Peak Detect, Averaging, High Resolution
Peak Detect Performance	250 ps (1 GHz model)
Averaging Factors	Selectable from 2 to 16384
High-Resolution Mode Resolution	Up to 12 bits of resolution when bandwidth is limited
Waveform Update Rate	Up to 100,000 waveforms/sec

Waveform Measurements and Analysis

Automatic Voltage Measurements	Vp-p, Vmax, Vmin, Vtop, Vbase, Vamp, Vavg, Vrms, Overshoot, Preshoot
Automatic Time Measurements	Period, Frequency, Rise Time, Fall Time, +Width, -Width, Duty Cycle
Waveform Math Operators	Addition, Subtraction, Multiplication, FFT
FFT Window Functions	Hanning, Flat Top, Rectangular
Serial Bus Triggering Options	I2C, SPI, CAN, LIN standard / option dependent

System Connectivity & I/O Interfaces

Software Compatibility	100% compatible with 6000A Series portable oscilloscopes
LXI Compliance Class	LXI Class C
LAN Port Speed	10/100Base-T
GPIO Interface	Built-in (standard IEEE-488)
USB Host Ports	1x Front, 1x Rear (USB 2.0 High Speed)
USB Device Port	1x Rear (USB 2.0 High Speed, USBTMC compliant)
External Trigger Input	BNC, front panel
External Trigger Output	BNC, rear panel
Reference Input	10 MHz BNC, rear panel
Reference Output	10 MHz BNC, rear panel
Video Display Output Port	XGA (1024 x 768) 15-pin D-sub, rear panel
Web Browser Remote Control Support	Built-in graphical Web server (Java-based)

Physical & Rackmount Characteristics

Rack Unit (U) Height	1U
Rackmount Kit	Standard built-in 19-inch rackmount ears

Power Specifications

Line Voltage Range	100 to 240 VAC
Line Frequency Range	50 to 60 Hz
Power Consumption (Max)	80 W

Environmental and Compliance

Storage Temperature Range	-40 °C to +70 °C
Operating Humidity Range	Up to 95% RH at 40 °C (non-condensing)
Operating Altitude	Up to 4,600 m (15,000 ft)
Safety Certifications	UL61010-1, CAN/CSA-C22.2 No. 61010-1, EN61010-1
Electromagnetic Compatibility (EMC)	IEC 61326-1 / EN 61326-1

Measurements

Hardware Frequency Counter Resolution	5 digits
Hardware Frequency Counter Max Frequency	1 GHz
Cursor Measurements	Time, Amplitude, dX, dY, 1/dX

Display & Video

External Monitor Resolution	1024 x 768 (XGA)
-----------------------------	------------------

Storage

Internal Storage Capacity	10 setups and 10 waveforms
---------------------------	----------------------------

Environmental

Environmental Vibration Resistance	MIL-PRF-28800F, Class 3 (random)
------------------------------------	----------------------------------

Performance

XY Mode Phase Error	±1.8° at 1 MHz
Segmented Memory Max Segments	1000

Connectivity & Software

Waveform Storage Formats	BMP, PNG, CSV, ASCII XY, BIN
--------------------------	------------------------------

Environmental & Compliance

Operating Vibration	0.21 g rms, 5 Hz to 500 Hz
Non-operating Vibration	2.09 g rms, 5 Hz to 500 Hz
Pollution Degree	2
Measurement Category	CAT I

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Automated Test Systems, Manufacturing Test, Design Verification

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