

KEYSIGHT TECHNOLOGIES (AGILENT HP)

DSO6014L

The Keysight (Agilent) DSO6014L is a 100 MHz, 4-channel digital storage oscilloscope designed in a compact, space-saving 1U rack-mountable form factor. Part of the 6000L Series, it delivers up to 2 GSa/s sample rate and 8 Mpts of deep memory, offering full remote control capability and 100% software compatibility with the 6000A Series portable oscilloscopes.

SPECIFICATIONS

General

Interfaces	USB 2.0 Host/Device, LAN (LXI Class C), GPIB, XGA video output
Display	None (headless 1U rackmount), XGA video output for external monitor
Standard Accessories	Four N2862A 10:1 passive probes, 1U rackmount kit, power cord, Agilent IO Libraries Suite software

Physical

Power Supply	100 - 240 V AC, 50/60 Hz; or 100 - 120 V AC, 400 Hz; 80 W maximum
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	435.6 mm x 43.6 mm x 272 mm mm
Weight	3.2 kg kg

Vertical System - Analog Channels

Analog Bandwidth (-3 dB)	100 MHz
Number of Input Channels	4
Calculated Rise Time (10% to 90%)	3.5 ns
Vertical Resolution	8 bits
Input Impedance	1 MΩ ± 1% 14 pF, or 50 Ω ± 1%
Input Coupling	AC, DC, GND
Input Sensitivity Range	2 mV/div to 5 V/div (1 MΩ), 2 mV/div to 1 V/div (50 Ω)
DC Gain Accuracy	±2.0% full scale
Hardware Bandwidth Limits	20 MHz
Maximum Input Voltage	CAT I 300 Vrms (1 MΩ), 5 Vrms (50 Ω)
Channel-to-Channel Isolation	≥ 40 dB from DC to 100 MHz
Offset Range	±2 V (2 mV/div to 200 mV/div), ±50 V (201 mV/div to 5 V/div) in 1 MΩ

Acquisition System

Maximum Real-Time Sample Rate	2 GSa/s (interleaved), 1 GSa/s (all channels)
Maximum Record Length (Memory Depth)	8 Mpts (interleaved), 4 Mpts (all channels)
Acquisition Modes	Normal, Peak Detect, Averaging, High Resolution
Peak Detect Resolution	1 ns
Averaging	Selectable from 2, 4, 8, 16 to 65536
High Resolution Mode	Up to 12 bits of resolution (at $\geq 20 \mu\text{s}/\text{div}$)
Interleaved Sample Rate	2 GSa/s (1 GSa/s per channel with all channels active)
Interleaved Memory Depth	8 Mpts (4 Mpts per channel with all channels active)

Horizontal System

Timebase Range	5 ns/div to 50 s/div
Timebase Accuracy	± 15 ppm
Channel-to-Channel Deskew Range	± 100 ns
Horizontal Vernier	Provides continuous adjustment between horizontal scale settings

Trigger System

Trigger Sources	Ch 1, Ch 2, Ch 3, Ch 4, Line, External
Trigger Modes	Auto, Normal, Single
Trigger Coupling	AC, DC, LF Reject, HF Reject, Noise Reject
Trigger Holdoff Range	60 ns to 10 s
Standard Trigger Types	Edge, Pulse Width, Pattern, TV/Video, Duration, Sequence
Advanced/Protocol Trigger Options	CAN, LIN, I2C, SPI, USB (optional/standard by model)
Trigger Sensitivity (Internal)	0.6 div or 1.0 mV (DC to 100 MHz)
Trigger Sensitivity (External)	40 mV (DC to 100 MHz) in 1.0 V range; 200 mV (DC to 100 MHz) in 5.0 V range
Trigger Level Range	Internal: ± 6 div from center of screen; External: ± 1 V (1.0 V range) or ± 5 V (5.0 V range)
Trigger Level Resolution	0.1 div or 2 mV, whichever is greater

Waveform Measurements and Analysis

Automatic Voltage Measurements	Peak-to-Peak, Maximum, Minimum, Amplitude, Top, Base, Overshoot, Preshoot, Average, RMS
Automatic Time Measurements	Period, Frequency, Rise Time, Fall Time, +Width, -Width, Duty Cycle
Measurement Statistics	Displays mean, min, max, standard deviation, and count
Waveform Math Operators	Addition, Subtraction, Multiplication, FFT
FFT Window Types	Hanning, Flat Top, Rectangular

Display and User Interface

Display Type	External monitor required (headless unit)
Display Resolution	XGA (1024 x 768) via video output
Built-in Graphical Web Interface	Yes, visual front panel remote control via web browser
Software Compatibility	100% software compatible with 6000A Series portable oscilloscopes

Connectivity and Interfaces

USB Host Ports	1 x Front Panel, 1 x Rear Panel
USB Device Port	1 x Rear Panel (supports USBTMC)
LAN Interface	10/100Base-T RJ-45 (LXI Class C)
GPIB Interface	IEEE 488.2
External Trigger Input	Rear panel BNC
Reference Clock Input/Output	BNC, supports 10 MHz reference clock in/out
Video Output Port	15-pin D-sub XGA
LXI Compliance	LXI Class C compliant

Power Specifications

Power Supply Voltage Range	100 - 240 V AC ($\pm 10\%$)
Power Supply Frequency Range	47 - 440 Hz (at 100 - 120 V), 47 - 63 Hz (at 100 - 240 V)
Power Consumption	80 W maximum

Environmental and Compliance

Operating Temperature Range	0 °C to +50 °C
Storage Temperature Range	-40 °C to +70 °C
Operating Humidity	95% relative humidity 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

Physical Characteristics

Form Factor	1U High, Rack-mountable
-------------	-------------------------

Performance

Waveform Update Rate	Up to 100,000 waveforms/s
----------------------	---------------------------

Vertical System

Vertical Offset Accuracy	$\pm(0.1 \text{ div} \pm 2 \text{ mV} \pm 1\% \text{ of offset value})$ for 2 mV/div to 200 mV/div; $\pm(0.1 \text{ div} \pm 20 \text{ mV} \pm 1\% \text{ of offset value})$ for >200 mV/div to 5 V/div
--------------------------	--

Environmental

Vibration Standard	MIL-PRF-28800F Class 3 Random
Shock Standard	MIL-PRF-28800F Class 3 (30 g, half-sine, 11 ms)

Software & Control

Command Language	SCPI (Standard Commands for Programmable Instruments)
------------------	---

Probing

Active Probe Support	Requires external probe power supply (does not support AutoProbe directly)
----------------------	--

Waveform Math

FFT Number of Points	1024 points
----------------------	-------------

Interfaces & Connectivity

LAN IP Configuration	DHCP, Auto-IP, Manual (Static) IP
----------------------	-----------------------------------

TECHNOLOGY

Digital Storage Oscilloscope (DSO)

APPLICATIONS

Automated Test Systems, Remote Monitoring, Rackmount Integration

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