

KEYSIGHT TECHNOLOGIES (AGILENT HP)

MSOX6004A

The Keysight MSOX6004A is a high-performance 4-channel Mixed Signal Oscilloscope (MSO) from the InfiniiVision 6000 X-Series. It features a base bandwidth of 1 GHz (upgradable up to 6 GHz), 16 digital channels, a maximum sample rate of 20 GSa/s, and a 12.1-inch capacitive multi-touch display. It is designed with hardware zone touch triggering, multi-language voice control, and an industry-leading update rate to capture infrequent anomalies.

SPECIFICATIONS

General

Display	12.1-inch capacitive multi-touch LCD
Operating System	Embedded RTOS

Physical

Power Supply	100 to 240 V at 50/60 Hz; 100 to 120 V at 400 Hz
Operating Temperature	0 to +50 °C °C

General Specifications

Bandwidth	1 GHz base (upgradable to 2.5 GHz, 4 GHz, 6 GHz)
Number of Analog Channels	4
Number of Digital Channels	16

Vertical System (Analog Channels)

Input Impedance	1 MΩ ± 1%, 50 Ω ± 1.5%
Input Coupling	AC, DC
Vertical Resolution	8 bits

Acquisition System

Maximum Sample Rate (Half Channel)	20 GSa/s
Maximum Sample Rate (All Channels)	10 GSa/s
Maximum Memory Depth	4 Mpts standard
Waveform Update Rate	≥ 450,000 wfms/s
Segmented Memory	Standard
High Resolution Mode	Yes (up to 12 bits)

Trigger System

Trigger Modes	Normal, Auto, Single
Zone Triggering	Hardware zone touch trigger standard

Waveform Measurements and Math

Integrated Digital Voltmeter	3-digit (Standard)
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Integrated Arbitrary Waveform Generator (Optional)

Integrated Arbitrary Waveform Generator	Optional dual-channel 20 MHz
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Display System

Display Size	12.1-inch
Display Type	Capacitive multi-touch LCD

Control and Software

Voice Control	Multi-language voice control standard
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Connectivity

USB Host Ports	3x USB 2.0 (2 front, 1 rear)
USB Device Port	1x USB 2.0 (rear)

Digital Channels

Maximum Toggle Rate	400 MHz
Threshold Selections	TTL, CMOS, ECL, PECL, User-defined

Environmental

Operating Humidity	Up to 80% RH at or below +40 °C (non-condensing)
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Vertical System

Vertical Sensitivity (1 MΩ)	1 mV/div to 5 V/div
Vertical Sensitivity (50 Ω)	1 mV/div to 1 V/div
DC Vertical Gain Accuracy	±2.0% full scale
Channel-to-Channel Isolation	≥ 100:1 (DC to 1 GHz)

Horizontal System

Timebase Accuracy	±1.6 ppm initial (+ 0.5 ppm/year aging)
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Digital Channels (MSO)

Digital Channel Minimum Voltage Swing	400 mVpp
Digital Channel Input Capacitance	8 pF (typical)

Waveform Math

FFT Points	Up to 64 kpts
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TECHNOLOGY

Mixed Signal Oscilloscope (MSO)

APPLICATIONS

Embedded system design, analog/digital troubleshooting, signal integrity analysis, and high-speed serial bus testing.

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