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Data Sheet

August 3, 2026

KEYSIGHT

Keysight MSO6104A Mixed Signal Oscilloscope: 1 GHz, 4 Analog Plus 16 Digital Channels

Keysight MSO6104A Mixed Signal Oscilloscope: 1 GHz, 4 Analog Plus 16 Digital Channels The Agilent/Keysight MSO6104A is a 6000 Series InfiniiVision mixed-signal oscilloscope with 1 GHz bandwidth, 4 analog channels plus 16 digital channels, MegaZoom III deep memory, and up to 4 GSa/s sample rate (half-channel interleaved). Waveform update rates reach 100,000 wfms/s. Standard connectivity includes USB, LAN, GPIB, and XGA out (LXI compliant). Mixed-signal embedded debug; FPGA and digital timing correlation with 1 GHz analog; serial bus decode (with options); portable/lab general-purpose MSO work. The Agilent/Keysight MSO6104A is a 6000 Series InfiniiVision mixed-signal oscilloscope with 1 GHz bandwidth, 4 analog channels plus 16 digital channels, MegaZoom III deep memory, and up to 4 GSa/s sample rate (half-channel interleaved). Waveform update rates reach 100,000 wfms/s. Standard connectivity includes USB, LAN, GPIB, and XGA out (LXI compliant). Mixed-signal embedded debug; FPGA and digital timing correlation with 1 GHz analog; serial bus decode (with options); portable/lab general-purpose MSO work.

No photo

MODEL

**Keysight
MSO6104A**

CALIBRATION

**N/A — off-catalog
OEM datasheet**

CONDITION

**See OEM
documentation**

STATUS

**Not listed on
Aumictech
inventory**

RFQ / SKU

MSO6104A

LISTING

**Off-catalog — OEM dat
asheet only**

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

Features & description

From manufacturer datasheet

Features

- Bandwidth: 1 GHz (−3 dB)
- Channels: 4 analog + 16 digital
- Sample rate: 4 GSa/s half-channel; 2 GSa/s each channel
- Equivalent-time sample rate: 400 GSa/s (when real-time mode off)
- Memory: up to 8 Mpts / 4 Mpts (2 ch / 4 ch interleaved maximum); standard 2 Mpts class MegaZoom III, optional 8 Mpts
- Update rate: 100,000 waveforms/s
- Rise time (calculated $0.35/BW$): 350 ps
- Vertical resolution: 8 bits; high-resolution mode to 12 bits under stated conditions
- Digital: 2 GSa/s one pod / 1 GSa/s each pod; max input frequency 250 MHz; 2 ns glitch detect

MSO6104A Characteristics / Specifications

PARAMETER	VALUE
Keysight MSO6104A Mixed Signal Oscilloscope	1 GHz, 4 Analog Plus 16 Digital Channels Overview The Agilent/Keysight MSO6104A is a 6000 Series InfiniiVision mixed-signal oscilloscope with 1 GHz bandwidth, 4 analog channels plus 16 digital channels, MegaZoom III deep memory, and up to 4 GSa/s sample rate (half-channel interleaved). Waveform update rates reach 100,000 wfms/s. Standard connectivity includes USB, LAN, GPIB, and XGA out (LXI compliant).
Model	MSO6104A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Mixed Signal Oscilloscope (6000 Series)
Alias	MSO6104A; Agilent MSO6104A; HP MSO6104A Analog Vertical
AC Coupled	3.5 Hz to 1 GHz
Calculated Rise Time	350 ps
Channels	4 analog + 16 digital
Range	2 mV/div to 5 V/div (1 M Ω); 2 mV/div to 1 V/div (50 Ω)
Max Input	CAT I 300 Vrms, 400 Vpk; transient 1.6 kVpk
Vertical Resolution	8 bits; high-resolution mode to 12 bits under stated conditions
Peak Detect	250 ps
Averaging	2 to 65536 selectable
Max Memory Depth	8 Mpts (2 ch) / 4 Mpts (4 ch)
Update Rate	up to 100,000 wfms/s (MegaZoom III) Digital (MSO)
Sample Rate	4 GSa/s half-channel; 2 GSa/s each channel
Max Input Frequency	250 MHz
Memory	up to 8 Mpts / 4 Mpts (2 ch / 4 ch interleaved maximum); standard 2 Mpts class MegaZoom III, optional 8 Mpts
Threshold	± 8.0 V in 10 mV steps; accuracy $\pm(100$ mV + 3% of threshold)
Min Swing	500 mV p-p; Max input ± 40 V peak CATIGlitch Detection: 2 ns min pulse width Horizontal

PARAMETER	VALUE
Resolution	2.5 ps Connectivity USB, LAN, GPIB, XGA out; LXI; AutoProbe; 10 MHz ref in/out; optional battery Operational Notes Do not confuse with DSO6104A (no digital) or 66104A DC supplies. Prefer Agilent 6000 Series datasheet for MSO6104A warranted tables.
Bandwidth	1 GHz (–3 dB)
Equivalent-time sample rate	400 GSa/s (when real-time mode off)
Rise time (calculated 0.35/BW)	350 ps
Digital	2 GSa/s one pod / 1 GSa/s each pod; max input frequency 250 MHz; 2 ns glitch detect
Rise Time	(calculated 0.35/BW): 350 ps - Vertical resolution: 8 bits; high-resolution mode to 12 bits under stated conditions - Digital: 2 GSa/s one pod / 1 GSa/s each pod; max input frequency 250 MHz; 2 ns glitch detect

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Channels	16 (D15-D0)
Sample Rate	2 GSa/s one pod; 1 GSa/s each pod
Max Input Frequency	250 MHz
Memory	8 Mpts / 4 Mpts one pod / both pods (scope channels off)
Threshold	±8.0 V in 10 mV steps; accuracy ±(100 mV + 3% of threshold)
Min Swing	500 mV p-p; Max input ±40 V peak CAT I
Glitch Detection	2 ns min pulse width
Specifications	
PARAMETER	VALUE
Model	MS06104A
Manufacturer	Keysight Technologies (Agilent)
Instrument Type	Mixed Signal Oscilloscope (6000 Series)
Alias	MS06104A; Agilent MS06104A; HP MS06104A
Specifications	
PARAMETER	VALUE
Analog Vertical	Bandwidth (−3 dB): DC to 1 GHz
AC Coupled	3.5 Hz to 1 GHz
Calculated Rise Time	350 ps
Single-Shot Bandwidth: 1 GHz (half-channel mode)	
Specifications	
PARAMETER	VALUE
Channels	Ch 1-4 simultaneous
Range	2 mV/div to 5 V/div (1 MΩ); 2 mV/div to 1 V/div (50 Ω)
Max Input	CAT I 300 Vrms, 400 Vpk; transient 1.6 kVpk

PARAMETER	VALUE
Vertical Resolution	8 bits
Peak Detect	250 ps
Averaging	2 to 65536 selectable

High-Resolution Mode: 12 bits when $\geq 10 \mu\text{s}/\text{div}$ @ 4 GSa/s or $\geq 20 \mu\text{s}/\text{div}$ @ 2 GSa/s

Acquisition
Real-Time Sample Rate: 4 GSa/s (2 channels interleaved); 2 GSa/s each channel
Equivalent-Time: 400 GSa/s
Max Memory Depth: 8 Mpts (2 ch) / 4 Mpts (4 ch)
Update Rate: up to 100,000 wfms/s (MegaZoom III)
Digital (MS0)

Specifications

PARAMETER	VALUE
Channels	16 (D15-D0)
Sample Rate	2 GSa/s one pod; 1 GSa/s each pod
Max Input Frequency	250 MHz
Memory	8 Mpts / 4 Mpts one pod / both pods (scope channels off)
Threshold	$\pm 8.0 \text{ V}$ in 10 mV steps; accuracy $\pm(100 \text{ mV} + 3\% \text{ of threshold})$
Min Swing	500 mV p-p; Max input $\pm 40 \text{ V}$ peak CATIGlitch Detection: 2 ns min pulse width

Horizontal
Range: 500 ps/div to 50 s/div
Resolution: 2.5 ps

Connectivity
USB, LAN, GPIB, XGA out; LXI; AutoProbe; 10 MHz ref in/out; optional battery

Operational Notes
Do not confuse with DS06104A (no digital) or 66104A DC supplies. Prefer Agilent 6000 Series datasheet for MS06104A warranted tables.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: N/A — off-catalog OEM datasheet. See OEM documentation · Not listed on Aumictech inventory.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.