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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz HMO3042 Mixed Signal Oscilloscope 500 MHz

Sibling HMO3032: 300 MHz, 2 analog channels Sibling HMO3052: 500 MHz, 2 analog channels Interfaces: VGA, RS-232, USB, Ethernet (module dependent) Specs from the R&S HMO3000 series brochure/data sheet. Confirm firmware, logic probe, serial-bus licenses, and whether HV452 bandwidth upgrade is installed. This file is the 400 MHz 2-channel HMO3042. Sibling HMO3052: 500 MHz, 2 analog channels Interfaces: VGA, RS-232, USB, Ethernet (module dependent) Specs from the R&S HMO3000 series brochure/data sheet. Confirm firmware, logic probe, serial-bus licenses, and whether HV452 bandwidth upgrade is installed. This file is the 400 MHz 2-channel HMO3042.



MODEL

**Rohde & Schwarz
HMO3042**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

HMO3042

LISTING

<https://aumictechlabs.com/products/hmo3042-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz HMO3042 is a 2-channel mixed-signal oscilloscope delivering 400 MHz bandwidth and 4 GSa/s real-time sampling for simultaneous analog and digital signal analysis. Built on the R&S®HMO3000 Series platform, this instrument combines deep 8 Mpts memory with integrated MSO functionality and 8 or 16 logic channels via optional probes, making it ideal for

embedded systems debugging and complex signal characterization. Technical Specifications

Analog Channels: 2 Bandwidth: 400 MHz (upgradeable to 500 MHz via software voucher) Real-Time Sample Rate: 4 GSa/s maximum (2 GSa/s non-interleaved) Memory Depth: 8 Mpts (4 Mpts per channel configurable) Vertical Sensitivity: 1 mV/div to 5 V/div Vertical Resolution: 8 bits standard; HiRes up to 16 bits Maximum Input Voltage: 40 Vp (display) Input Impedance: 1 MΩ || 13 pF or 100 kΩ || 4 pF Input Coupling: DC Display: 16.5 cm (6.5") VGA color screen

Key Features

Low-noise flash A/D converter for clean signal capture Hardware-accelerated serial bus triggering and protocol decode: I2C, SPI, UART/RS-232, CAN, LIN Advanced trigger modes: Slope (A/B), Pulse Width, Video, Logic, Hold-off, Runt Segmented memory option (R&S®H0014/HV114): up to 1,000 segments, 200,000 Wfm/s acquisition rate, <3 μs re-arm time Adjustable logic threshold per probe Mixed-signal analysis with 8 or 16 logic channels via R&S®HO3508 logic probes

Typical Applications

Embedded system design and validation Serial protocol debugging (I2C, SPI, CAN, LIN) High-speed digital and analog signal correlation Complex waveform characterization requiring deep memory

Compatibility & Integration

Logic probes (R&S®HO3508) are compatible with all R&S®HMO oscilloscopes. Minimum firmware version 5.520 recommended for optimal operation.

Features & description

From manufacturer datasheet

Features

• Bandwidth upgrade path HV452 (400 MHz to 500 MHz, 2-channel) • MSO pods: CH1, CH2, POD1, POD2 • Segmented memory option HOO14/HV114, re-arm less than 3 μ s • HO730 USB/Ethernet typical; HO720 RS-232/USB; HO740 GPIB • Weight 3.6 kg class

Applications

• Mixed analog/digital debug to 400 MHz • Serial bus trigger/decode (I2C, SPI, UART, CAN, LIN options) • FFT harmonic analysis • Service DVM on analog channels • Embedded firmware and power-rail work

HMO3042 Characteristics / Specifications

PARAMETER	VALUE
Model	HMO3042
Manufacturer	Rohde & Schwarz
Instrument Type	Mixed signal oscilloscope
Alias	HMO 3042; R&S HMO3042; Hameg HMO3042
Analog Bandwidth 5 mV to 5 V	400 MHz (minus 3 dB)
Analog Bandwidth 1 mV 2 mV	200 MHz
Analog Channels	2
Digital Channels	16 (with logic probe)
Sample Rate	4 GSa/s
Memory Depth	8 MPts
Rise Time	less than 0.875 ns (10 percent to 90 percent, calculated)
DC Gain Accuracy	2 percent of full scale
Input Sensitivity	1 mV/div to 5 V/div (1 M Ω and 50 ohm)
Input Impedance	1 M Ω parallel 13 pF plus/minus 2 pF (50 ohm switchable)
Coupling	DC, AC, GND
Lower AC Bandwidth	2 Hz
Bandwidth Limit	about 20 MHz, switchable
Max Input 50 ohm	5 Vrms, max 30 Vp
Logic Thresholds	TTL, CMOS, ECL, user minus 2 V to plus 8 V
Logic Impedance	100 k Ω parallel 4 pF
Logic Max Input	40 Vp
Display	16.5 cm (6.5 inch) VGA color, 640 × 480
Backlight	500 cd/m2 LED
FFT Points	up to 65536
DVM	three-digit, simultaneous on analog channels

PARAMETER	VALUE
Logic Probe	HO3508 / HO3516
Bandwidth Upgrade	HV452 to 500 MHz (2-channel)
Sibling HMO30	400 MHz, 4 analog channels
Weight	3.6 kg
Interfaces	VGA, RS-232, USB, Ethernet (module dependent) Notes Specs from the R&S HMO3000 series brochure/data sheet. Confirm firmware, logic probe, serial-bus licenses, and whether HV452 bandwidth upgrade is installed. This file is the 400 MHz 2-channel HMO3042.
MSO pods	CH1, CH2, POD1, POD2
Bandwidth	is 400 MHz (5 mV/div to 5 V/div) or 200 MHz at 1 mV/div and 2 mV/div. Real-time sample rate is 4 GSa/s with 8 MPts memory. Rise time is less than 0.875 ns. Sixteen digital channels are standard MSO capability with the HO3508 logic probe. A 6.5 inch V

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
Model	HM03042
Manufacturer	Rohde & Schwarz
Instrument Type	Mixed signal oscilloscope
Alias	HMO 3042; R&S HM03042; Hameg HM03042
Analog Bandwidth 5 mV to 5 V	400 MHz (minus 3 dB)
Analog Bandwidth 1 mV 2 mV	200 MHz
Analog Channels	2
Digital Channels	16 (with logic probe)
Sample Rate	4 GSa/s
Memory Depth	8 MPts
Rise Time	less than 0.875 ns (10 percent to 90 percent, calculated)
DC Gain Accuracy	2 percent of full scale
Input Sensitivity	1 mV/div to 5 V/div (1 MΩ and 50 ohm)
Input Impedance	1 MΩ parallel 13 pF plus/minus 2 pF (50 ohm switchable)
Coupling	DC, AC, GND
Lower AC Bandwidth	2 Hz
Bandwidth Limit	about 20 MHz, switchable
Max Input 1 MΩ: 200 Vp	
Specifications	
PARAMETER	VALUE
Max Input 50 ohm	5 Vrms, max 30 Vp
Logic Thresholds	TTL, CMOS, ECL, user minus 2 V to plus 8 V
Logic Impedance	100 kΩ parallel 4 pF
Logic Max Input	40 Vp
Display	16.5 cm (6.5 inch) VGA color, 640 x 480

PARAMETER	VALUE
Backlight	500 cd/m2 LED
FFT Points	up to 65536
DVM	three-digit, simultaneous on analog channels
Logic Probe	H03508 / H03516
Bandwidth Upgrade	HV452 to 500 MHz (2-channel)
Sibling HM03044	400 MHz, 4 analog channels
Sibling HM03032	300 MHz, 2 analog channels
Sibling HM03052	500 MHz, 2 analog channels
Weight	3.6 kg
Interfaces	VGA, RS-232, USB, Ethernet (module dependent)

Notes

Specs from the R&S HM03000 series brochure/data sheet. Confirm firmware, logic probe, serial-bus licenses, and whether HV452 bandwidth upgrade is installed. This file is the 400 MHz 2-channel HM03042.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

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

Aumictech

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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.