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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5334B 100 MHz Universal Counter

HP Agilent 5334B 100 MHz Universal Counter The HP/Agilent 5334B is a two-channel 100 MHz universal counter with 9 digits per second resolution and 2 ns single-shot time-interval resolution (200 ps with averaging). OEM literature lists automatic rise/fall, pulse width, and peak voltage measurements, full HP-IB programmability, and optional 1.3 GHz C-channel (Option 030) plus oven timebase. Bench and system frequency/period measurements to 100 MHz (1.3 GHz with Option 030), pulse characterization (width, rise/fall), time interval and ratio/totalize, and automated counting up to about 140 readings/s over HP-IB. The HP/Agilent 5334B is a two-channel 100 MHz universal counter with 9 digits per second resolution and 2 ns single-shot time-interval resolution (200 ps with averaging). OEM literature lists automatic rise/fall, pulse width, and peak voltage measurements, full HP-IB programmability, and optional 1.3 GHz C-channel (Option 030) plus oven timebase. Bench and system frequency/period measurements to 100 MHz (1.3 GHz with Option 030), pulse characterization (width, rise/fall), time interval and ratio/totalize, and automated counting up to about 140 readings/s over HP-IB.



MODEL

HP / Agilent 5334B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5334B

LISTING

<https://aumictechlabs.com/products/5334b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 5334B is a 100 MHz universal counter engineered for precision frequency, period, time interval, and ratio measurements across research, calibration, and automated test

environments. It delivers 9-digit resolution per second of gate time for frequency measurements from 0.001 Hz to 100 MHz on both channels, with single-shot time interval resolution of 2 ns and averaged resolution down to 200 ps. The instrument measures rise time, fall time, pulse width, peak amplitude, and AC/DC voltage with selectable triggering, auto-attenuation, and configurable input impedance (1 M Ω or 50 Ω). A standard 10 MHz OCXO time base ensures stability; Option 010 provides enhanced long-term accuracy with a 5×10^{-10} per day aging rate.

Technical Specifications

Frequency and Period Measurements Range: 0.001 Hz to 100 MHz (Channels A and B) Resolution: 9 digits per second of gate time Time Base: 10 MHz OCXO (standard); Option 010 with 5×10^{-10} per day aging rate after 24-hour warm-up

Time Interval Measurements Single-shot resolution: 2 ns Averaged resolution: 200 ps (100-gate averaging) Selectable delay: 1 ms to 99.999 seconds

Input Characteristics (Channels A and B) Frequency range: DC to 100 MHz (DC-coupled); 30 Hz to 100 MHz (AC-coupled, 1 M Ω); 1 MHz to 100 MHz (AC-coupled, 50 Ω) Sensitivity: 15 mV rms to 20 MHz; 35 mV rms to 100 MHz; 100 mV peak-to-peak minimum for 5 ns pulses Dynamic range: 45 mV to 5 V peak-to-peak to 20 MHz; 100 mV to 2.5 V peak-to-peak to 100 MHz Impedance: 1 M Ω or 50 Ω (switch-selectable) Coupling: AC or DC (switch-selectable) Attenuator: Manual (X1 or X10) and Auto modes Low-pass filter: 100 kHz nominal (Channel A, switchable) Triggering Trigger level: ± 5.1 V adjustable range (X attn), displayed in 20 mV steps Auto trigger: 100 Hz to 100 MHz (DC-coupled); 100 Hz to 100 MHz (AC-coupled, 1 M Ω); 1 MHz to 100 MHz (AC-coupled, 50 Ω) Trigger slope: Independent $\pm$ slope selection for START and STOP Sensitivity control: 15 mV rms to 150 mV rms variable range

Key Features Independent trigger slope selection for START and STOP signals Auto-triggering across DC and AC coupling modes Switchable 100 kHz low-pass filter on Channel A Manual and automatic attenuation modes for simplified operation

Typical Applications Research and development signal characterization Precision calibration laboratory measurements Automated test equipment (ATE) integration Time interval and pulse parameter analysis

Compatibility & Integration The 5334B accepts signals from both 1 M Ω and 50 Ω sources with AC or DC coupling, supporting integration into mixed-impedance test environments.

5334B Characteristics / Specifications

PARAMETER	VALUE
Frequency Range ChannelsAB	to 100 MHz
Frequency Resolution	9 digits per second of gate time
Time Interval Single Shot Resolution	2 ns
Time Interval Averaged Resolution	200 ps
Sensitivity Class	15 mV rms class (product summaries)
Input Channels Standard	2 matched channels
Measurement Functions	Frequency, Period, Time Interval, Delay, Ratio, Totalize
Automatic Measurements	Rise time, Fall time, Pulse width, Peak amplitude
System Reading Rate Class	up to 140 readings/s
Rear Inputs Option	available for system applications
MATE Interface	optional
External Arming Gating	supported for synchronizing to external events
Auto Trigger	yes
Auto Attenuation	yes
Display	universal counter LED readout
Oven Timebase	optional high stability
Form Factor	bench/system 100 MHz universal counter
ChannelCOption Code	030
Math Functions	offset, normalize, average
Pulse Characterization	rise/fall/width at push of a button
Peak Voltage Measurement	ac/dc peaks of input signal
Attenuation	yes

5334B Specifications

PARAMETER	VALUE
HP Agilent 5334B 100 MHz Universal Counter	Overview
Key Features	Matched dual 100 MHz input channels
Math offset normalize and average functions	Optional 1.3 GHz Channel C and high-stability oven
Technical Specifications	Frequency Range Channels A B: to 100 MHz

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

Frequency Range ChannelsAB: to 100 MHz

Frequency Resolution: 9 digits per second of gate time

Optional ChannelCFrequency: to 1.3 GHz (Option 030)

Specifications

PARAMETER	VALUE
Time Interval Single Shot Resolution	2 ns
Time Interval Averaged Resolution	200 ps
Sensitivity Class	15 mV rms class (product summaries)
Input Channels Standard	2 matched channels
Measurement Functions	Frequency, Period, Time Interval, Delay, Ratio, Totalize
Automatic Measurements	Rise time, Fall time, Pulse width, Peak amplitude

HP-IB Programmability: standard

Specifications

PARAMETER	VALUE
System Reading Rate Class	up to 140 readings/s
Rear Inputs Option	available for system applications
MATE Interface	optional
External Arming Gating	supported for synchronizing to external events
Auto Trigger	yes
Auto Attenuation	yes
Display	universal counter LED readout
Oven Timebase	optional high stability
Form Factor	bench/system 100 MHz universal counter
ChannelCOption Code	030
Math Functions	offset, normalize, average
Pulse Characterization	rise/fall/width at push ofabutton
Peak Voltage Measurement	ac/dc peaks of input signal

Notes

Headline performance from HP 5334A/5334B electronic counters brochure and product summaries. Detailed

sensitivity vs frequency and TI uncertainty tables are in the 5334B operating/service manual for the serial prefix.

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.