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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5328B 100 MHz Universal Counter

HP Agilent 5328B Universal Counter 100 MHz The HP/Agilent 5328B is a programmable 9-digit universal counter for bench and HP-IB systems. Channel A covers to 100 MHz with 25 mV rms sensitivity to 40 MHz; Option 031 adds a 1.3 GHz Channel C. Frequency period ratio and time-interval measurements in ATE, microwave LO checks with Option 031, and programmable trigger/arm automation over HP-IB. 10 ns single-shot time interval resolution; 10 ps with averaging The HP/Agilent 5328B is a programmable 9-digit universal counter for bench and HP-IB systems. Channel A covers to 100 MHz with 25 mV rms sensitivity to 40 MHz; Option 031 adds a 1.3 GHz Channel C. Frequency period ratio and time-interval measurements in ATE, microwave LO checks with Option 031, and programmable trigger/arm automation over HP-IB. 10 ns single-shot time interval resolution; 10 ps with averaging HP-IB programming and external arming standard



MODEL

HP / Agilent 5328B

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5328B

LISTING

<https://aumictechlabs.com/products/5328b-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 5328B is a 100 MHz universal counter engineered for precise frequency, period, time interval, and ratio measurements in laboratory and production test environments. This instrument delivers 8-digit resolution on direct frequency counts and supports multiple measurement modes with configurable trigger levels and attenuation settings. The 5328B integrates into automated test systems and accepts input signals from 25 mVrms across its

measurement channels, with dual-channel capability for ratio and time interval averaging operations. Technical Specifications Frequency Measurement Range: 0 to 100 MHz Resolution: Up to 8 digits/s (direct count) Sensitivity: 25 mVrms to 40 MHz; 50 mVrms from 40 to 100 MHz Attenuators: X1, X10 switch selectable Period Measurement Range: 100 ns to 10 seconds Resolution: 10 ns Period Average Resolution: 1 fs Time Interval Measurement Resolution: 10 ns Time Interval Averaging Resolution: 10 ps Average Range: 0.1 ns to 1 second Minimum Dead Time: 40 ns Ratio Measurement Channel A: 0 to 10 MHz Channel B: 0 to 100 MHz Totalize Range: 0 to 10^{12} counts Input Characteristics Channel A Sensitivity: 25 mVrms to 100 Vrms Channel B Sensitivity: 25 mVrms to 30 Vrms Trigger Level Range: -5 V to +5 V Trigger Level Programmability: 10 mV steps (x1); 100 mV steps (x10) Trigger Level Accuracy (Remote, x1): ± 35 mV Time Base Standard Crystal: 10 MHz, $< 3 \times 10^{-7}$ /month aging, $< 2.5 \times 10^{-5}$ temperature stability (0–50°C) Optional Oven Crystal: 10 MHz, $< 5 \times 10^{-9}$ /day aging, $< 1 \times 10^{-10}$ rms/s short-term stability, 20-minute warm-up Timebase Accuracy & Stability: ± 1 ppm Optional DVM (Option 021) Range: ± 10 V, ± 100 V, ± 1000 V DC and Autorange Input Impedance: 10 M Ω nominal (floating pair) Maximum Input: ± 1100 V (Hi to Low); ± 500 V (Low to Chassis) Sensitivity: 10 μ V to 100 mV depending on measurement window 1300 MHz C-Channel (Option 031) Frequency Range: 90 MHz to 1300 MHz Sensitivity: 20 mVrms (-21 dBm) Maximum Input: 5 Vrms, ± 5 Vdc Key Features Multi-channel measurement with independent trigger controls Programmable attenuation and trigger level adjustment via 10 mV or 100 mV steps Dual time base options: standard crystal for general use or oven oscillator for precision applications Optional C-channel extends capability to 1.3 GHz for RF counting Optional DVM provides DC voltage measurement to ± 1100 V High-resolution time interval averaging to 10 ps Period averaging achieves 1 fs resolution Typical Applications Frequency and period verification of oscillators and timing circuits Time interval and jitter measurement in digital systems Ratio measurements for frequency divider validation Event counting and totalization in production test High-stability frequency measurement with optional oven timebase Compatibility & Integration The 5328B interfaces with automated test systems through remote control of trigger levels and measurement modes. Modular options allow field configuration: the DVM option (021) adds DC voltage measurement capability; the C-channel option (031) extends frequency measurement to 1300 MHz. Both channels support floating input pairs with independent sensitivity and trigger settings.

5328B Characteristics / Specifications

PARAMETER	VALUE
ChannelA Frequency Range	0 to 100 MHz class (20 Hz minimum stated on some listings)
ChannelA Sensitivity to 40 MHz	25 mV rms
ChannelA Sensitivity 40 to 100 MHz	50 mV rms
ChannelA Maximum Input	5 V class
ChannelA Input Impedance	1 MOhm
ChannelA Coupling	AC or DC
ChannelB Frequency Range	to 100 MHz class
ChannelB Sensitivity	25 mV rms class
ChannelB Input Impedance	1 MOhm
ChannelB Coupling	AC or DC
Time Interval Resolution Single Shot	10 ns
Time Interval Resolution Averaged	10 ps
Period Resolution Single Shot	10 ns
Period Resolution Averaged	1 fs class
Display Digits	9
Trigger Level Program Step X	100 mV
Timebase Stability Standard Class	3e-7 per month class
Measurement Functions	Frequency Period Ratio Time Interval Totalize class
Remote Interface	HP-IB IEEE-488
Form Factor	Benchtop / rack universal counter

5328B Specifications

PARAMETER	VALUE
HP Agilent 5328B Universal Counter 100 MHz	Overview
Key Features	9 digit LED display
Technical Specifications	Channel A Frequency Range: 0 to 100 MHz class (20 Hz minimum stated on some listings)

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
ChannelAFrequency Range	0 to 100 MHz class (20 Hz minimum stated on some listings)
ChannelASensitivity to 40 MHz	25 mV rms
ChannelASensitivity 40 to 100 MHz	50 mV rms
ChannelAMaximum Input	5 V class
ChannelAInput Impedance	1 MOhm
ChannelACoupling	AC or DC
ChannelBFrequency Range	to 100 MHz class
ChannelBSensitivity	25 mV rms class
ChannelBInput Impedance	1 MOhm
ChannelBCoupling	AC or DC

Option 031 ChannelCFrequency Range: 90 MHz to 1300 MHz

Specifications

PARAMETER	VALUE
Time Interval Resolution Single Shot	10 ns
Time Interval Resolution Averaged	10 ps
Period Resolution Single Shot	10 ns
Period Resolution Averaged	1 fs class
Display Digits	9
Trigger Level Program Step X1	10 mV
Trigger Level Program Step X10	100 mV
Timebase Stability Standard Class	3e-7 per month class
Measurement Functions	Frequency Period Ratio Time Interval Totalize class
Remote Interface	HP-IB IEEE-488

Option 010: High stability timebase
Option 020 or 021: Digital voltmeter
Option 040: Expanded GPIB control
Form Factor: Benchtop / rack universal counter

Notes

Specs from Agilent/HP 5328B universal counter product literature and operating manuals. Option-dependent ChannelCand DVM rows apply only when installed.

Ordering Information

OPTION	DESCRIPTION
Option 031	adds a 1.3 GHz Channel C.
Option 020	or 021: Digital voltmeter

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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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.