HP 5371A, HP 5372A, and HP 5373A Summary

Basic Performance

- Continuous measurements to a 10 MHz rate (13.3 MHz rate using the HP 5372A or HP 5373A fast-measurement mode)
- 125 mHz to 500 MHz frequency range. 100 MHz to 2 GHz in optional Channel C (HP 5372A or HP 5373A)
- −4.0 to +4.0 s or 10 ns to 8 s time-interval range
- 150 ps rms single-shot time-interval resolution, 10 digits per second frequency resolution
- 1 ns minimum input pulsewidth
- 2 mV trigger level resolution; auto-trigger capabilities
- Selection of input pods: 50 Ω, 1 MΩ, or 10 kΩ, 2 pf active

Arming and Triggering Capabilities

- Measurement holdoff by time, events, or signal edge
- Measurement sample by time, events, signal edge, or parity
- Arm on any of 3 input channels: external arm, input A, or input B

Measurements

Function	Range
Frequency A[1], B[1]	125 mHz to 500 MHz 8 kHz to 500 MHz[3]
Frequency C[1] (HP 5372A/73A)	100 MHz to 2 GHz
Frequency A&B, A&C, B&C, A+B, A+C, B−A, C−A, B+C, C−B, A/B, B/A, A/C, C/A, B/C, C/B	250 mHz to 500 MHz (A and B) 16 kHz to 500 MHz (A and B)[3] 100 MHz to 2 GHz (C)
Period A[1], B[1]	2 ns to 8 seconds 2 ns to 131 μs[3]
Period C[1] (HP 5372A/73A)	500 ps to 10 ns
Period A&B, A&C, B&C, A+B, A+C, B−A, C−A, B+C, C−B, A/B, B/A, A/C, C/A, B/C, C/B	2 ns to 4.0 s (A and B) 2 ns to 65 μs (A and B)[3] 500 ps to 10 ns (C)
Totalize A, B, A&B, A+B, A−B, B−A, A/B, B/A	0 to (2^{32} − 1) events, each channel
Time Interval A, B, A−>, B−>A	10 ns to 8.0 seconds 10 ns to 131 μs[3]
Continuous Time Interval A[1], B[1]	100 ns to 8.0 seconds 75 ns to 131 μs[3]
± Time Interval A, B, A−>B, B−>A	−4.0 s to +4.0 s including 0 s −65 μs to +65 μs including 0 s[3]
Rise and Fall Time A[2]	1 ns to 100 μs (auto-trigger)
Positive and Negative Pulsewidth A[2]	1 ns to 1 ms (auto-trigger)
Duty Cycle A[2]	0% to 100% for pulsewidths >1 ns and periods <1 ms (auto-trigger)
Phase A rel B, B rel A	0° to > ±360°
Peak Amplitudes A, B	1 kHz to 200 MHz, 200 mV peak-to-peak to 2 V peak-to-peak

[1] Maximum sample rate for these measurements is 10 MHz (100 ns), and up to 13.3 MHz (75 ns) using the HP 5372A or HP 5373A fast-measurement mode. For all other measurements, maximum sample rate is 5 MHz (200 ns) in the normal measurement mode and 7.7 MHz (135 ns) in the fast-measurement mode.
[2] Requires 8 ns setup time between measurements.
[3] Fast measurement mode values (HP 5372A or HP 5373A).

HP-IB Performance and Features

- Up to 20,000 measurements/second throughput (HP 5371A), 25,000 for HP 5372A and HP 5373A (binary format)
- Three output formats: ASCII, floating-point, or binary
- Full programmability
- Direct graphics output to printer or plotter

Analysis Features

- Time variation of measurements: frequency versus time, time interval versus time, and phase versus time. Averaged plots to improve vertical resolution are obtainable using the HP 5372A or HP 5373A.
- Histogram
- Fast time-interval histogram (HP 5372A or HP 5373A; histograms computed at measurement rate)
- Event timing plots
- Limit test
- Statistics: mean, minimum, maximum, standard deviation, variance, rms
- Allan variance, root Allan variance
- Window margin analysis (HP 5372A only)
- Modulation parameters: center frequency, peak-peak deviation, modulation rate
- Frequency deviations from a linear chirp (HP 5373A only)
- Function keys for pulsed signal analysis: PRF, PRI, % AM envelope measurements (HP 5373A only)

HP 5364A Microwave Mixer/Downconverter

- 2 to 18 GHz input frequency range
- 10 to 500 MHz IF output range
- 2.2 GHz to 18 GHz local oscillator input range
- Built-in manual attenuator
- 73 dB RF input dynamic range for pulse signals, 53 dB for CW signals
- APC 3.5 (m) connectors for RF and LO inputs
- <7.5 ns video output risetime
- Less than 1 ns group delay over 500 MHz IF output range

HP 53700A Continuous Measurement Software

These compiled subroutines simplify and speed binary programming for the HP 5371A and HP Series 300 computers. Sample programs are included. Software is supported with the HP 5371A only.

Ordering Information	Price
HP 5371A Frequency and Time Interval Analyzer	$24,500
HP 5372A Frequency and Time Interval Analyzer The HP 5371A and HP 5372A both include 2 HP 54002A 50 Ω input pods and ½-day applications consulting.	$30,000
HP 5373A Modulation Domain Pulse Analyzer Includes 1 HP 53702A 500-MHz envelope detector pod, 1 HP 54002A 50 Ω input pod, and ½-day consulting	$32,000
Options	
Opt 060 Rear-Panel Inputs (50 Ω BNC) for channels A and B. 1 MΩ BNC for external arm. Deletes front panel inputs (HP 5371A, HP5372A only)	$0
Opt W30 Extended Repair Service (see page 671)	
Opt W32 Calibration Service (see page 671)	
Additional Options for HP 5372A and HP 5373A	
Opt 001 Delete ½-day Application Consulting	−$925
Opt 020 FastPort Data Output	+$1,600
Opt 030 2-GHz Channel C (front-panel input)	+$2,150
Opt 090 Rear Panel Inputs for Channels A, B, and C 1 MΩ BNC for External Arm, 50 Ω BNC for channels A and B, type N connector for C. Deletes front panel inputs (HP 5372A only)	+$2,150
HP 5364A Microwave Mixer/Detector	$13,650
HP 53700A Continuous Measurement Software (supported with HP 5371A only)	$1,250
Accessories	
HP 54001A 1-GHz Active Pod (10:1, 10 K Ω)	$795
HP 54002A 50 Ω Pod	$145
HP 54003A 1 MΩ Pod (with 10:1 scope probe)	$690
HP J06-59992A Time Interval Calibrator	$3,000