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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 5371A Frequency and Time Interval Analyzer

HP Agilent 5371A Frequency and Time Interval Analyzer The HP/Agilent 5371A is a modulation-domain frequency and time-interval analyzer capturing frequency phase and time interval versus time with zero dead time. Continuous measurements support modulation rates to 10 MHz within a 125 mHz to 500 MHz carrier range. Jitter analysis VCO step response and settling, frequency and phase modulation characterization, Allan variance stability, and fast-hopping radio measurements. More than 10 million measurements per second zero dead time The HP/Agilent 5371A is a modulation-domain frequency and time-interval analyzer capturing frequency phase and time interval versus time with zero dead time. Continuous measurements support modulation rates to 10 MHz within a 125 mHz to 500 MHz carrier range. Jitter analysis VCO step response and settling, frequency and phase modulation characterization, Allan variance stability, and fast-hopping radio measurements. More than 10 million measurements per second zero dead time Over 60 arming and triggering configurations



MODEL

HP / Agilent 5371A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5371A

LISTING

<https://aumictechlabs.com/products/5371a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 5371A is a frequency and time interval analyzer engineered for precision measurement of frequency, time interval, phase, and pulse characteristics. Built on continuous

measurement time sampling architecture, the instrument eliminates dead time between measurements and delivers over 10 million measurements per second with zero latency - enabling rapid data acquisition for telecommunications, metrology, and research applications. Technical Specifications Measurement Range & Resolution Frequency range: up to 500 MHz Time interval single-shot resolution: 150 ps rms Time interval averaging resolution: 1 ps Minimum positive time interval: 10 ns Throughput: over 10 million measurements/second (internal); up to 20,000 measurements/second via HP-IB Event Capture Data latching speed: every 100 ns Start-stop pair recording: every 200 ns Measurement block size: up to 1,000 measurements (standalone); up to 4,095 measurements (computer-interfaced) Analysis Functions +/- time interval measurement with zero-crossing intervals Pulse width measurement (positive or negative) Rise/fall time measurement Duty cycle measurement Totalize and peak amplitude measurement Frequency stability via calculated Allan Variance and Root Allan Variance Zero dead-time frequency measurement for accurate stability analysis Key Features Over 60 arming and triggering configurations Built-in statistics: mean, maximum, minimum, standard deviation Graphical display with histogram visuals Math and limit testing functionality Typical Applications Jitter analysis and VCO transient/steady-state characterization Frequency and phase modulation examination Frequency stability measurement Computer peripheral analysis Fast hopping radio signal measurement Radar pulse width and stability characterization Compatibility & Integration HP-IB (IEEE-488) interface for high-speed data transfer and computer integration.

5371A Characteristics / Specifications

PARAMETER	VALUE
Frequency Range	125 mHz to 500 MHz
Modulation Rate Continuous	to 10 MHz within carrier range
Time Interval Range	minus 4.0 s to +4.0 s including 0 s
Single Shot Time Interval Resolution	150 ps rms
Frequency Resolution Class	10 digits per second
Minimum Input Pulse Width	1 ns
Trigger Level Resolution	2 mV
Auto Trigger	yes
Measurement Throughput Continuous	greater than 10 million measurements per second
HP IB Throughput	up to 20000 measurements per second
Allan Variance	calculated and displayed
Root Allan Variance	calculated and displayed
Measurement Types	Frequency Period Time Interval Pulse Width Rise Fall Duty Cycle Totalize Phase Peak Amplitude
Display	Graphic with histograms
Arming Configurations	more than 60
Size Width	425 mm
Size Height	190 mm
Size Depth	630 mm
Power	115 or 230 VAC
Remote Interface	HP-IB
Form Factor	Benchtop modulation domain analyzer
Extension Path Class	microwave downconverter companions in family literature
Histogram Analysis	yes
Limit Testing	yes

PARAMETER	VALUE
Math Functions	yes

5371A Specifications

PARAMETER	VALUE
HP Agilent 5371A Frequency and Time Interval Analyzer	Overview
Key Features	More than 10 million measurements per second zero dead time
Graphic display with histograms	HP-IB throughput up to 20000 measurements per second
Technical Specifications	Frequency Range: 125 mHz to 500 MHz
Notes	Specs from Keysight/HP 5371A Frequency and Time Interval Analyzer product literature and dimensional data.

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	
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Notes

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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.