

**Aumictech**

Test & measurement · bought, sold, repaired, calibrated

Data Sheet

August 12, 2026

HP / AGILENT

HP / Agilent 5359A Time Synthesizer

The 5359A is a high-resolution time synthesizer that generates precise, low-jitter digital delays and pulse widths. It is used to calibrate radar/navigation timing systems, create precision delayed sweeps for oscilloscopes, gate frequency counters, and simulate delay lines in component tests. An automatic calibration sequence compensates temperature and aging before critical delay generation. Alias: 5359A; Agilent 5359A; HP 5359A; Keysight 5359A Jitter external trigger to output: less than 100 ps Calibration time: about 3 seconds for 5 internal parameters Repetition: selectable internal or external; events mode; triggered frequency



MODEL

HP / Agilent 5359A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

5359A

LISTING

<https://aumictechlabs.com/products/5359a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 5359A Time Synthesizer generates precision time delays and pulse widths with exceptional stability and low jitter for time-domain metrology, calibration, and synchronization applications. This instrument produces two independently selectable outputs T_d (delay) and T_w (pulse width) - with 50 ps resolution across ranges up to 160 ms, making it suitable for demanding scientific and engineering measurement tasks requiring nanosecond-level accuracy. Technical Specifications Time Delay (T_d) Range: 0 ns to 160 ms Pulse Width (T_w) Range: 5 ns to 160 ms Step Size: 50 ps increments Combined Limit: $T_d + T_w \leq 160$ ms Jitter: Typically 100 ps RMS; maximum 200 ps RMS for delays to 10 ms Insertion Delay: Fixed <150 ns; selectable 100 ns Repetition Rate: 10 MHz maximum Accuracy: ± 1 ns $\pm$ time base error; ± 100 ps $\pm$ time base error

after external calibration Output Amplitude: 0.5 V to 5 V into 50 Ω Transition Time: <5 ns Sync Output: 1 V into 50 Ω ; 5 V into 1 M Ω Time Base Oscillator: 10 MHz High Stability Oven Oscillator Aging Rate: $<5 \times 10^{-10}$ /day Temperature Coefficient: $<4.5 \times 10^{-9}$ (0° to 50° C) Line Voltage Coefficient: $<1 \times 10^{-10}$ ($\pm 10\%$ nominal) Operating Modes Internal Trigger Mode: Period or frequency selection with programmable pulse width External Trigger Mode: Delay and width control from sync output Events Mode: External input substitution up to 100 MHz; delay and width specified in event counts Triggering Frequency Mode: Burst output synchronized to external trigger Calibration Mode: Internal correction for delay differences Connectivity HP-IB (IEEE-488): Programmable control of all functions except trigger levels External Trigger Input: -2 V to +2 V, slope selectable Output Options: Positive or negative polarity; offset -1 V to 1 V or OFF; logic true/complement modes Physical Dimensions: 426 mm W $\times$ 133 mm H $\times$ 521 mm D Weight: 13.5 kg

Features & description

From manufacturer datasheet

Features

- Dual precise delays T_d and T_w from the keyboard
- Automatic multi-parameter calibration in about 3 seconds
- HP-IB programmable
- Fully synchronous to external trigger
- Selectable polarity and true/complement output modes
- Displayable pulse amplitude and offset

Applications

- Radar, Loran, DME, and Tacan timing calibration
- Precision oscilloscope delayed-sweep generation
- Accurate external-gate timing for frequency counters
- Delay-line simulation in component and circuit tests

5359A Characteristics / Specifications

PARAMETER	VALUE
Model	5359A
Manufacturer	HP / Agilent
Instrument Type	Time Synthesizer
Alias	5359A; Agilent 5359A; HP 5359A; Keysight 5359A
Delay range	0 to 160 ms
Pulse width range	5 ns to 160 ms
Resolution / step size	50 ps
Jitter external trigger to output	less than 100 ps
Interface	HP-IB
Calibration time	about 3 seconds for 5 internal parameters
Repetition	selectable internal or external; events mode; triggered frequency Notes Specs from HP/Agilent 5359A product literature. Confirm installed options and timebase reference on the unit.

5359A Specifications

PARAMETER	VALUE
HP / Agilent 5359A Time Synthesizer	Overview
Applications	- Radar, Loran, DME, and Tacan timing calibration
Key Features	- Dual precise delays Td and Tw from the keyboard
Technical Specifications	Model: 5359A
Notes	Specs from HP/Agilent 5359A product literature. Confirm installed options and timebase reference on the unit.

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	5359A
Manufacturer	HP / Agilent
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Specifications

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Notes

Specs from HP/Agilent 5359A product literature. Confirm installed options and timebase reference on the unit.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
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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.