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Data Sheet
August 14, 2026

HP / AGILENT

HP / Agilent 8131A High-Speed Pulse Generator, 500 MHz

HP Agilent 8131A High Speed Pulse Generator The HP 8131A isafully programmable high-speed pulse generator with less than 200 ps transition times and repetition rates to 500 MHz (transducer mode to 1 GHz). OEM specifications emphasize clean edges for ECL and GaAs characterization, differential outputs to 5 V levels into 50 ohm, and full HP-IB programmability. Intended for high-speed digital parametric and functional testing, ECL/CMOS/GaAs component characterization, production ATE needing programmable 200 ps edges, and research benches requiring repeatable sub-nanosecond pulses. The HP 8131A isafully programmable high-speed pulse generator with less than 200 ps transition times and repetition rates to 500 MHz (transducer mode to 1 GHz). OEM specifications emphasize clean edges for ECL and GaAs characterization, differential outputs to 5 V levels into 50 ohm, and full HP-IB programmability. Intended for high-speed digital parametric and functional testing, ECL/CMOS/GaAs component characterization, production ATE needing programmable 200 ps edges, and research benches requiring repeatable sub-nanosecond pulses.

MODEL **HP / Agilent 8131A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **8131A**	LISTING **https://aumictechlabs.com/products/8131a-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The HP/Agilent 8131A is a high-speed pulse generator engineered for precise characterization of advanced digital circuits and components. Operating at a maximum repetition rate of 500 MHz (1 GHz in Transducer Mode), it delivers sub-200 ps transition times and 10 ps timing resolution. The instrument generates variable-width pulses with configurable delay across a 20 ns to 99.9 ms range, supporting amplitudes from 100 mV to 5 Vp-p at 50 Ohm output impedance. Its six operational modes Auto, Trigger, Manual, Gate, External Width, and External Burst - combined with an exclusive Transducer Mode for shaping external sinewaves into 1 GHz squarewaves, make it suitable for BiCMOS, ECL, GaAs, and CMOS device validation. The instrument excels at setup and hold time measurement, clock and data signal simulation, glitch testing down to 500 ps spike widths, and excess-voltage immunity characterization. Fully HP-IB programmable with single-channel architecture (dual-channel available via Option 020), it operates from 0°C to 55°C with a 30-minute warm-up requirement. Technical Specifications Maximum Repetition Rate: 500 MHz (1 GHz in Transducer Mode) Pulse Transition Times: <200 ps (10%–90%), typically 150 ps (20%–80%) Timing Resolution: 10 ps Amplitude Range: 100 mV to 5 Vp-p, 10 mV resolution Output Impedance: 50 Ohms Pulse Width: Variable, 10 ps resolution Pulse Delay: 20 ns to 99.9 ms, 10 ps resolution Period: 2 ns to 99.9 ms Minimum Spike Simulation Width: 500 ps Operating Temperature: 0°C to 55°C Warm-up Time: 30 minutes Key Features Single channel with complementary outputs Six standard operation modes plus exclusive Transducer Mode Transducer Mode converts external sinewaves to 1 GHz squarewaves with 200 ps transitions Optional second channel (Option 020) HP-IB programmable interface Typical Applications High-frequency circuit characterization and digital IC testing Setup and hold time measurement on ECL and GaAs devices Clock and data signal generation for cell characterization Glitch and crosstalk analysis via spike simulation Excess-voltage immunity evaluation Production parametric and functional test environments Compatibility & Integration BiCMOS, ECL, GaAs, and CMOS technology support HP-IB programmability for automated test systems Available options: second channel (020), rear panel connectors (001), rack mount flange (908)

8131A Characteristics / Specifications

PARAMETER	VALUE
Timing resolution	3 digits, 10 ps best case
Period range	2 ns to 99.9 ns
Fixed delay trigger out to main out	20 ns
Variable delay range	0 ns to 99.9 ms (max less than period)
Double pulse spacing	2 ns to 99.9 ms (period at least 5.00 ns)
Width range	500 ps to 99.9 ms (max less than period)
Transition time 10% to 90%	less than 200 ps (300 mV to 3 V, period ≤ 1 µs)
Transition time 20% to 80%	less than 200 ps (100 mV to 5 V)
High level into 50 ohm	−4.90 V to +5.00 V
Low level into 50 ohm	−5.00 V to +4.90 V
Level resolution	3 digits, 10 mV best case
Settling time	10 ns
External input impedance	50 ohm ±2.5 ohm
External input threshold	−5 V to +5 V
External input frequency	dc to 500 MHz
External input minimum pulse width	1 ns
External input sensitivity	≥300 mV peak to peak
Transducer input frequency	10 MHz to 1 GHz
Transducer input sensitivity	≥600 mV peak to peak
Trigger output levels	high 0 V, low −0.6 V
Delay external input to trigger output	16 ns
Burst count	1 to 9999
Minimum burst period	5 ns
Operating temperature	0 °C to 55 °C
Storage temperature	−40 °C to +65 °C

PARAMETER	VALUE
Power	100/120/220/240 Vrms ±10%, 400 VA max, 48 to 66 Hz
Weight	20 kg
Dimensions	145 mm H × 426 mm W × 525 mmDRecalibration period: 1 year recommended

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	−40 °C to +65 °C
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Dimensions	145 mm H × 426 mm W × 525 mmDRecalibration period: 1 year recommended Notes Specifications are from Hewlett-Packard 8131A Pulse Generator published specification sheets (50 ohm load, 30 minute warm-up, 0 °C to 55 °C). Levels double into open circuit; outputs disable if levels exceed ±6.5 V or amplitude exceeds 6.5 V per OEM text.

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 emphasize clean edges for ECL and GaAs characterization, differential outputs to 5 V levels into 50 ohm, and full HP-IB programmability.

Applications
Intended for high-speed digital parametric and functional testing, ECL/CMOS/GaAs component characterization, production ATE needing programmable 200 ps edges, and research benches requiring repeatable sub-nanosecond pulses.

Key Features
Less than 200 ps leading and trailing edges with selectable limit protection
Differential outputs with independent high and low level programming
Auto, trigger, gate, external-width, burst, and transducer operating modes
Double-pulse capability mutually exclusive with variable delay
Store/recall of complete settings and complement/disable controls
Full HP-IB programmability of modes and parameters

Technical Specifications

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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

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