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Data Sheet

August 13, 2026

HP / AGILENT

HP / Agilent 81130A Pulse Data Generator, 400/660 MHz and 1.32 Gb/s

Agilent 81130A Pulse/Pattern Generator with 81132A 660 MHz Output Modules The Agilent 81130A is a pulse/pattern generator mainframe in the 81100 family. With the 81132A output module it provides complementary outputs from 170 kHz (extended to 1 kHz) to 660 MHz with 0.10 Vpp to 2.50 Vpp amplitude. The 81131A 400 MHz / 3.8 V module is the alternate (not mixed with 81132A in one mainframe). Pattern memory is 65504 bits per channel with NRZ, DNRZ, RZ, and R1 formats plus PRBS 2^n-1 ($n = 7$ to 15). Recommended operation is 170 kHz and above. The Agilent 81130A is a pulse/pattern generator mainframe in the 81100 family. With the 81132A output module it provides complementary outputs from 170 kHz (extended to 1 kHz) to 660 MHz with 0.10 Vpp to 2.50 Vpp amplitude. The 81131A 400 MHz / 3.8 V module is the alternate (not mixed with 81132A in one mainframe). Pattern memory is 65504 bits per channel with NRZ, DNRZ, RZ, and R1 formats plus PRBS 2^n-1 ($n = 7$ to 15). Recommended operation is 170 kHz and above. Digital logic stimulus for TTL, CMOS, and ECL; high-speed pulse and burst generation; serial pattern and PRBS stimulus for communications and ATE; two-channel complementary-output characterization; GPIB/SCPI automated pulse/pattern test.



MODEL

**HP / Agilent
81130A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81130A

LISTING

<https://aumictechlabs.com/products/81130a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81130A Pulse Data Generator is a dual-channel instrument for characterizing high-speed digital circuits and communication systems. It generates complex pulse sequences, burst patterns, and PRBS signals up to 1.32 Gb/s with selectable TTL or ECL logic levels. The instrument operates from 1 kHz to 400 MHz (81131A module) or 660 MHz (81132A module), delivering precise control over pulse width, delay, amplitude, and timing relationships with 5 ps resolution. Two output module options provide different frequency and amplitude capabilities: the 81131A reaches 400 MHz at 3.8 Vpp, while the 81132A extends to 660 MHz at 2.5 Vpp. Both modules present 50 Ω source impedance. The generator supports RZ, NRZ, and R1 signal formats, with dual-channel EXOR capability for advanced pattern synthesis. A 64 kbit segmentable memory enables complex sequence storage and playback.

Technical Specifications
Frequency Range: 1 kHz to 400 MHz (81131A) or 1 kHz to 660 MHz (81132A)
Data Rate: Up to 1.32 Gb/s
Output Amplitude: 100 mV to 3.8 Vpp (81131A) or 100 mV to 2.5 Vpp (81132A)
Output Impedance: 50 Ω
Pulse Width Range: 1.25 ns to (period – 1.25 ns) for 81131A; 750 ps to (period – 750 ps) for 81132A
Variable Delay Range: 2.5 ns to 1 ms (81131A) or 1.5 ns to 1 ms (81132A)
Transition Time: 800 ps or 1.6 ns selectable (81131A); 500 ps typical (81132A)
Timing Resolution: 5 ps
Pulse Width Accuracy: $\pm 0.5\% \pm 150$ ps
Delay Accuracy: $\pm 0.5\% \pm 150$ ps
Memory: 64 kbit, segmentable
Logic Levels: Selectable TTL or ECL

Key Features
Single- or dual-channel operation with internal EXOR for pattern combination
Pulse, burst, and sequenced PRBS pattern generation modes
Period RMS jitter: 0.00 ns to 3.00 μ s
Multiple trigger modes: continuous, external triggered, external gain, external width, manual
Signal format options: RZ, NRZ, R1
Typical Applications
High-speed digital circuit characterization and protocol validation
Communication system testing and timing validation
Complex pulse sequence generation for device qualification

Compatibility & Integration
The 81131A and 81132A output modules are not compatible within a single 81130A mainframe; select one module type per instrument configuration.

81130A Characteristics / Specifications

PARAMETER	VALUE
Model	81130A with 81132A
Manufacturer	Agilent / Hewlett-Packard / Keysight
Instrument Type	Pulse / pattern generator mainframe with output module
Alias	Agilent 81130A; HP 81130A; 81132A 660 MHz module
Channels	1 or 2 (81132A modules)
Frequency Range 81132A	170 kHz (extended 1 kHz) to 660 MHz
Frequency Range 81131A Alternate	170 kHz (extended 1 kHz) to 400 MHz
Frequency Resolution	4 digits (2 ps best case)
Period Range 81132A	1.50 ns to 5.9 us (below 170 kHz: 1.5 ns to 1.0 ms)
Period Accuracy	plus/minus 100 ppm
RMS Jitter Internal Ref Clock	0.001 percent + 15 ps (width and delay); period jitter 0.001 percent + 5 ps on family table
Width Range 81132A	750 ps to (period minus 750 ps)
Width Resolution	4 digits (2 ps best case)
Width Accuracy 81132A	plus/minus (100 ppm + 200 ps); below 170 kHz 0.06 percent of period
Variable Delay Range	0 to 3.00 us independent of period
Delay Accuracy	plus/minus (0.01 percent + 100 ps) relative to zero delay
Deskew Range	plus/minus 25 ns
Transition Time 81132A Typical	500 ps typical (10/90); less than 350 ps (200 ps class) at ECL 20/80
Amplitude 81132A	0.10 Vpp to 2.50 Vpp
Level Window 81132A	-2.00 V to +3.00 V
Level Accuracy 81132A	plus/minus (5 percent + 50 mV) after typical 30 ns settling, 50 ohm into 50 ohm
Level Resolution	3 digits (10 mV best case)
Output Impedance 81132A	50 ohm plus/minus 5 percent typical
Maximum External Voltage 81132A	-2.0 V to +4.0 V

PARAMETER	VALUE
Short Circuit Current 81132A	-80 mA to +120 mA
Baseline Noise 81132A	8 mV RMS typical
Overshoot Ringing 81132A	plus/minus (5 percent + 100 mV) of amplitude typical
Pattern Length	65504 bit per channel
PRBS Polynomial	$2^n - 1$, $n = 7, 8, \dots, 15$ (CCITT 0.151)
Burst Count	2 to 65504
Duty Cycle Range	0.1 percent to 99.9 percent (subject to width limits)
Clock Input Frequency	170 kHz to 660 MHz at 50 percent plus/minus 10 percent duty cycle
External Input Frequency	DC to 330 MHz
PLL Reference Frequencies	1, 2, 5, or 10 MHz
Clock Input Connector	SMA (f) 3.5 mm; 50 ohm
Power Requirements	100 to 240 Vac plus/minus 10 percent, 50 to 60 Hz; 100 to 120 Vac plus/minus 10 percent, 400 Hz
Power Consumption	300 VA maximum
Dimensions	89 mmHx 426 mmWx 521 mmDWeight: 9.2 kg net; 13.8 kg shipping
Operating Temperature	0 C to +55 C
Storage Temperature	-40 C to +70 C
Humidity	95 percent RH up to 40 C
Recalibration Period	one year recommended

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to +70 C
Operating temperature	0 C to +55 C
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Humidity	95 percent RH up to 40 C
Recalibration Period	one year recommended Notes Specs from Agilent 81100 Family Pulse/Pattern Generators datasheet (5980-1215 class) for 81130A with 81132A. Do not mix 81131A and 81132A in one mainframe. Confirm installed module (81131A vs 81132A) and channel count 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	
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Frequency Range 81131A Alternate	170 kHz (extended 1 kHz) to 400 MHz
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Period Accuracy	plus/minus 100 ppm
RMS Jitter Internal Ref Clock	0.001 percent + 15 ps (width and delay); period jitter 0.001 percent + 5 ps on family table
Width Range 81132A	750 ps to (period minus 750 ps)
Width Resolution	4 digits (2 ps best case)
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Variable Delay Range	0 to 3.00 us independent of period
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Deskew Range	plus/minus 25 ns
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Duty Cycle Range	0.1 percent to 99.9 percent (subject to width limits)
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Clock Input Connector	SMA (f) 3.5 mm; 50 ohm
Power Requirements	100 to 240 Vac plus/minus 10 percent, 50 to 60 Hz; 100 to 120 Vac plus/minus 10 percent, 400 Hz
Power Consumption	300 VA maximum
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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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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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.