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Data Sheet

August 14, 2026

HP / AGILENT

HP / Agilent 81104A Pulse Pattern Generator, 80 MHz

HP Agilent 81104A 80 MHz Pulse Pattern Generator The Agilent 81104A is an 80 MHz pulse/pattern generator mainframe in the 81100 family, typically used with the 81105A output channel module. OEM family datasheets specify 1 mHz–80 MHz frequency, 12.5 ns–999.5 s period, variable transitions from 3 ns, pattern mode with PRBS, and optional second channel with analog addition for multilevel signals. Designed for testing CMOS, TTL, LVDS, and ECL logic, simulating reflections and distortions with channel addition, generating three/four-level codes, and migrating ATE programs across the SCPI-compatible 81100 series. The Agilent 81104A is an 80 MHz pulse/pattern generator mainframe in the 81100 family, typically used with the 81105A output channel module. OEM family datasheets specify 1 mHz–80 MHz frequency, 12.5 ns–999.5 s period, variable transitions from 3 ns, pattern mode with PRBS, and optional second channel with analog addition for multilevel signals. Designed for testing CMOS, TTL, LVDS, and ECL logic, simulating reflections and distortions with channel addition, generating three/four-level codes, and migrating ATE programs across the SCPI-compatible 81100 series.



MODEL

**HP / Agilent
81104A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

81104A

LISTING

<https://aumictechlabs.com/products/81104a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The HP/Agilent 81104A is an 80 MHz pulse pattern generator designed for digital circuit testing and characterization. It delivers precise control over pulse parameters including width, delay, and amplitude, with flexible pattern generation for research, development, and manufacturing applications. The instrument combines low output jitter with fast, well-defined transitions to enable accurate timing measurements and high-speed digital analysis.

Technical Specifications

- Frequency Range: 80 MHz maximum output frequency
- Output Impedance: 50 ohms
- Pulse Width: Precisely adjustable for timing analysis
- Delay: Programmable for signal synchronization
- Rise/Fall Times: Controllable transitions for real-world signal simulation
- Output Amplitude: Variable amplitude with user adjustment
- Jitter: Low output jitter for accurate timing measurements
- Triggering: Internal and external trigger capabilities with synchronized operation support

Key Features

- Single-channel output configurable for specific pattern generation
- Flexible pattern generation including PRBS and user-defined sequences
- Fast, well-defined output transitions minimizing measurement uncertainty
- High accuracy and stability in pulse parameters for repeatable results
- BNC connectors for RF output and trigger synchronization
- Front panel display with rotary encoders and input keys for parameter adjustment
- GPIB (IEEE-488) remote control capability for test system automation
- Standard AC mains power input

Typical Applications

- Digital circuit characterization and validation
- High-speed signal timing analysis
- Custom pulse sequence generation
- Synchronized multi-instrument test setups

Compatibility & Integration

The 81104A interfaces via BNC connectors for output and trigger signals, with GPIB support enabling integration into automated test environments. External trigger inputs accept standard logic voltage levels, supporting synchronized operation with complementary test equipment.

81104A Characteristics / Specifications

PARAMETER	VALUE
Frequency range	1 mHz to 80 MHz
Period range	12.5 ns to 999.5 s
Variable delay range	0.00 ns to 999.5 s
Period RMS jitter	0.01% + 15 ps (0.001% + 15 ps with internal PLL)
Width range	6.25 ns to 999.5 s
Amplitude range into 50 ohm	100 mV to 20.0 V (depends on source impedance)
Transition time range 10% to 90%	3.00 ns to 200 ms
Source impedance	50 ohm or 1 k Ω
Dropout and glitch free timing change	yes
Number of channels	1 or 2 with 81105A modules
Channel output type	single ended
Timing resolution	3.5 digits, 5 ps best case
Width accuracy family	$\pm 5\%$ ± 250 ps class
Minimum transition time	≤ 3 ns
Pattern mode	available from 80 MHz models
PRBS support	yes in pattern mode
Channel addition	analog addition on dual-channel instruments
Remote programming	GPIB SCPI compatible with 8110A
Operating temperature	0 °C to 55 °C
Warm up	30 minutes for warranted specs
Mainframe height class	8.9 cm full rack width family
Frequency max	80 MHz
Frequency min	1 mHz
Period min	12.5 ns
Transition min	3.00 ns

PARAMETER	VALUE
Output module	81105A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 °C to 55 °C
Operating Temperature	0 °C to 55 °C
Warm up	30 minutes for warranted specs
Mainframe height class	8.9 cm full rack width family
Frequency max	80 MHz
Frequency min	1 mHz
Period min	12.5 ns
Transition min	3.00 ns
Output module	81105A Notes Numeric rows are taken from the Agilent 81100 Family Pulse/Pattern Generator technical specification table for 81104A/81105A. Output module 81105A must be installed for channel output; dual-channel figures require two modules.

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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Width accuracy family	±5% ±250 ps class
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Pattern mode	available from 80 MHz models
PRBS support	yes in pattern mode
Channel addition	analog addition on dual-channel instruments
Remote programming	GPIO SCPI compatible with 8110A
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Frequency min	1 mHz
Period min	12.5 ns
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Output module	81105A

Notes

Numeric rows are taken from the Agilent 81100 Family Pulse/Pattern Generator technical specification table for 81104A/81105A. Output module 81105A must be installed for channel output; dual-channel figures require two modules.

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.