KEYSIGHT TECHNOLOGIES (AGILENT HP)

81130A

The Keysight (Agilent) 81130A is a precision Pulse Data Generator mainframe offering advanced delay and width accuracy driven by a high-stability PLL oscillator. It provides robust pattern generation capabilities, including segmentable memory, sequenced PRBS, and complex loop structures for digital device testing and data communication applications. The mainframe requires one or two specific output modules (81131A or 81132A) to function, dictating the maximum frequency, transition times, and output voltage.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232
Display	Backlit LCD
Warm-Up Time	30 minutes

Physical

Operating Temperature	0 to 55 °C
Rack Height	2U

General System Characteristics

Maximum Number of Channels	1 or 2 (requires output modules)
Supported Output Modules	Keysight 81131A, Keysight 81132A (cannot be mixed in one mainframe)
Maximum Frequency	400 MHz (with 81131A module) / 660 MHz (with 81132A module)
Maximum Data Rate	Up to 1.32 Gbps (with 81132A module)
Operating Modes	Pulse, Burst, Pattern
Oscillator Architecture	Precision PLL (Phase-Locked Loop), non-triggerable

Timing Characteristics

Transition Time (10% to 90%)	Selectable 800 ps or 1.6 ns (81131A module); Fixed 500 ps (81132A module)
Timing Edges	4 independent timing edges (when channels are combined)

Output Characteristics

Amplitude Range (into 50 Ohms)	Up to 3.8 Vpp (81131A module); Up to 2.5 Vpp (81132A module)
Output Impedance	50 Ω
Channel Addition	Internal EXOR channel addition supported

Data and Pattern Capabilities

Data Memory Depth (per channel)	64 kbit (segmentable)

Performance

Supported Pattern Formats	NRZ, RZ, R1
Timing Resolution	4 digits

Inputs & Outputs

Trigger Input Connector	BNC
Trigger Input Impedance	50 Ω / 10 kΩ (selectable)
Trigger Input Threshold	-10 V to +10 V

Environmental

Storage Temperature	-40 °C to +70 °C

Remote Control

Command Set	SCPI

TECHNOLOGY

Pulse/Pattern Generation

APPLICATIONS

Data communication testing, Serial data validation, Digital logic testing