

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8110A

The Keysight (Agilent) 8110A is a highly precise 150 MHz pulse pattern generator designed to simulate real-world digital signals. It provides precise edge positioning and true-to-life signals to verify hardware designs, optimize test yields, and enhance measurement credibility when paired with oscilloscopes or logic analyzers. Operating with one or two Agilent 81103A output modules, it supports both single- and dual-channel configurations with flexible transition times and pattern generation capabilities.

SPECIFICATIONS

General

Interfaces	GPIO (IEEE-488.2)
Display	Graphical LCD display with backlighting

Timing & Frequency Specifications

Frequency Range	1.00 Hz to 150 MHz
Period Range	6.65 ns to 999 ms
Pulse Width Range	3.30 ns to 999 ms
Delay Range	0.00 ns to 999 ms
Double Pulse Spacing Range	6.65 ns to 999 ms

Pulse & Transition Characteristics

Rise/Fall Time Range	2.00 ns to 200 ms (variable, 10/90%)
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Output Channels & Voltage Levels

Number of Channels	1 or 2 channels (module configuration dependent)
Output Impedance	50 Ohm
Amplitude Range into 50 Ohms	100 mV to 10.0 V (peak-to-peak)
Amplitude Range into Open Circuit	200 mV to 20.0 V (peak-to-peak)
Offset Range into 50 Ohms	-9.95 V to +9.95 V
Offset Range into Open Circuit	-19.9 V to +19.9 V
High Level Range into 50 Ohms	-9.90 V to +10.0 V
Low Level Range into 50 Ohms	-10.0 V to +9.90 V
High Level Range into Open Circuit	-19.8 V to +20.0 V
Low Level Range into Open Circuit	-20.0 V to +19.8 V
Voltage Resolution	10 mV
Output Connector Type	BNC (front panel)

Pattern & Data Generation

Data Rate Range	1.00 b/s to 150 Mb/s
Pattern Memory Depth per Channel	4096 bits (4 kb) per channel with variable pulse parameters
Data Formats	RZ (Return-to-Zero), NRZ (Non-Return-to-Zero)
Channel Addition/Combining Modes	Analog addition of channels enables 3-level signals (requires two Agilent 81103A modules)

Trigger, Sync, and External Inputs

External Trigger Input Frequency Range	Up to 150 MHz
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Configuration & Ordering Options

Required Output Module	Agilent 81103A (150 MHz, 10 V output module; 1 or 2 required)
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APPLICATIONS

Digital design verification, receiver characterization, telecom and datacom device testing

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